A data report from the New York City Health Department

NYC Health

NYC Vital Signs

New York City Department of Health and Mental Hygiene November 2010 Volume 9, No. 6

Improving Traffic Safety in New York City

New York City's traffic fatality rate is approximately one quarter of the national rate (3.5 vs. 12.2 per 100,000 in 2008) and has declined twice as rapidly as the national rate in recent decades (-64% vs. -32% since 1990). Traffic fatalities in New York City are at an all-time low, but remain an important public health problem. Traffic crashes are a leading cause of injury-related death and hospitalization for many New Yorkers, including child and older-adult pedestrians and young adult drivers.

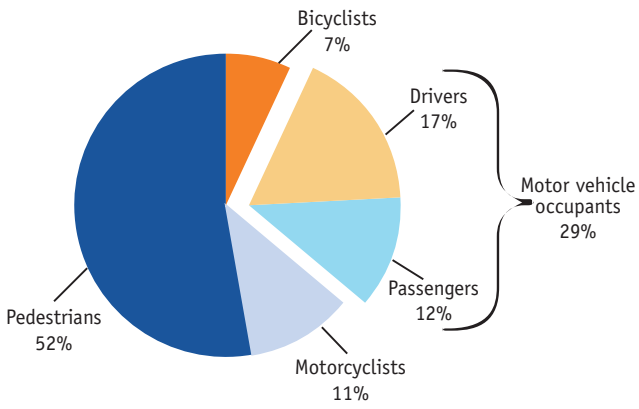
While most New Yorkers use mass transit and active travel modes such as walking and biking, motor vehicles are a major component of the movement of people and goods in New York City. Nearly 3.5 million New Yorkers are licensed to drive and 1.3 million motor vehicles are registered in New York City.

With intensive use of both motorized (buses, trucks, and cars) and non-motorized (bicycles and walking) transportation, traffic safety is a high priority for all New Yorkers. The City is committed to further decreasing traffic fatalities and injuries through continued safety improvements in street design and focused enforcement of traffic laws.

This report examines traffic fatalities over the past five years and highlights factors that contributed to those deaths. Recommendations to improve traffic safety in New York City are provided on Page Four.

Pedestrians account for half of New York City traffic fatalities

Victims of NYC Traffic Fatalities, 2005-2009



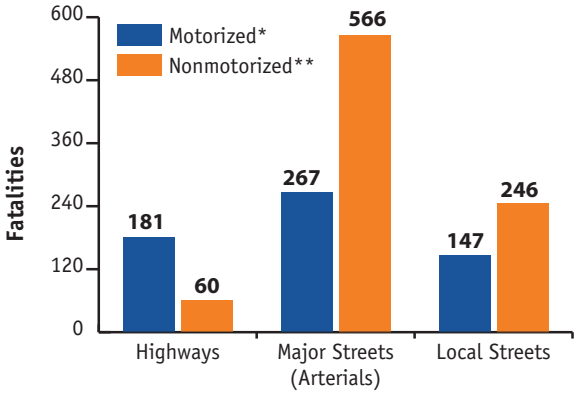
Source: NYC DOT Traffic Fatality Database, 2005-2009.
Percents do not add to 100 due to rounding
Total fatalities = 1,467

- Between 2005 and 2009, New York City experienced 1,467 traffic fatalities. During this period, annual fatalities decreased 20% from 321 in 2005 to 256 in 2009.
- Pedestrians account for half of traffic fatalities (52%), followed by motor vehicle occupants (29%), motorcyclists (11%), and bicyclists (7%).
- Males comprise 48% of NYC residents and 56% of registered drivers, but 70% of New Yorkers killed in traffic crashes were male, including 60% of pedestrians, 87% of cyclists, 87% of drivers, and 98% of motorcyclists.
- People in their 20s make up 36% of the drivers and passengers who die in motor vehicle crashes—a higher proportion than any other age group.

The data in this report are from the NYC Department of Transportation's (DOT) Traffic Fatality Database, the primary source of traffic-related death and injury statistics in New York City. Data are compiled from MV-104AN reports prepared by New York City Police Department (NYPD) precincts, the Accident Investigation Squad (AIS) of the NYPD (e.g., police reports), and DOT's investigation/analysis team reports. Data include time and date, fatality type, age and sex of the decedent, vehicle, and environment and human factors contributing to the fatal crash. This Vital Signs report uses the most recently available data from 2005 through 2009. These data are augmented with information from the New York State Department of Motor Vehicles' Department of Transportation Accident Files from 2005 to 2009, which provide detailed MV-104AN report information on all state traffic crashes. More specific contributing factors related to vehicle, pedestrian, and bicycle crashes in the city can be found in this database.

Traffic fatalities in NYC disproportionately occur on major streets

NYC Traffic Fatalities by Roadway and Transportation Modes, 2005-2009



Source: NYC DOT Traffic Fatality Database, 2005-2009
*Motor vehicle occupants; **Pedestrians and cyclists
Total fatalities = 1,467

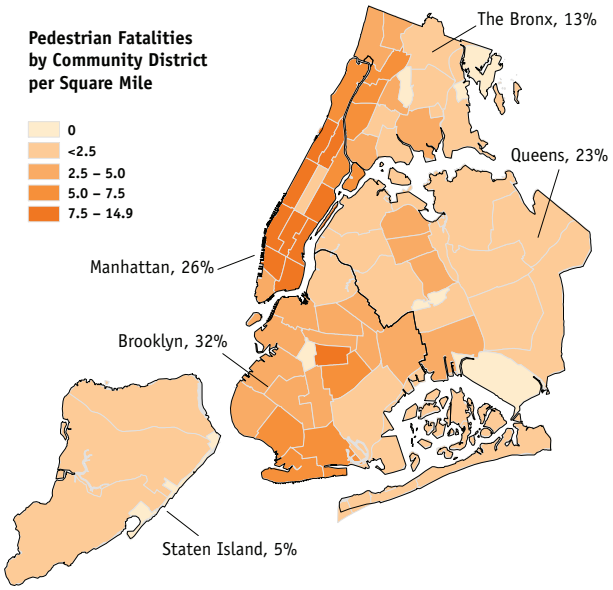
- Major streets (arterials) comprise 15% of NYC's roadways, yet 57% of traffic-related fatalities occurred on these streets. The disproportionate number of fatalities on arterial roadways is primarily due to higher vehicle speeds—frequently in excess of speed limits.
- Only 3% of NYC's roads are highways, but 16% of all traffic fatalities occurred on these roadways.
- Pedestrians and cyclists are less likely to use highways in NYC, so deaths among these groups are more common on arterial and local roadways. Arterial roads pose the greatest risk of death among non-motorized travelers.

Roadways in NYC. Streets are classified into three categories: highways, arterial roads (major streets), and local streets. Highways are controlled-access roadways (i.e., those with on-ramps rather than intersections) that allow for high vehicle speed and volume. Arterial roads are major streets that typically carry a high volume of traffic. These usually include bus/truck routes and roadways with multiple lanes, such as Woodhaven Boulevard in Queens. Local streets are roadways with less traffic that usually moves at slower speeds.

Pedestrian fatalities occur most often at intersections along major streets

- Between 2005 and 2009, 770 pedestrians died in NYC as the result of a motor vehicle crash. Although Manhattan had the highest number of pedestrian fatalities per square mile, Brooklyn had the highest percentage of these fatalities overall (32%).
- Two thirds (66%) of pedestrian fatalities occurred at intersections. Two thirds (66%) of those were at intersections with traffic signals.
- Among pedestrians killed in traffic crashes at intersections with signals, 45% were crossing with the signal, 38% were crossing against, 15% were crossing outside the crosswalk, and 2% were not in the road.
- More than one third (38%) of pedestrian fatalities occurred among adults age 65 years and older, although only 12% of the NYC population is in this age group.

Pedestrian Fatalities in NYC, 2005-2009



Source: NYC DOT Traffic Fatality Database, 2005-2009
Total fatalities = 1,467

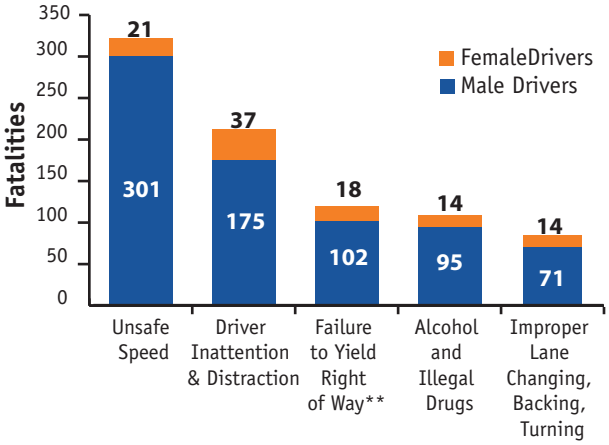
Recent traffic-safety reports from the NYC Departments of Transportation and Health:

- **NYC Pedestrian Safety Study and Action Plan, www.nyc.gov/html/dot/html/about/pedsafetyreport.shtml**
- **Bicyclist Fatalities and Serious Injuries in NYC, www.nyc.gov/html/doh/downloads/pdf/episrv/episrv-bike-report.pdf**
- **NYC Vital Signs: Physical Activity and Commuting, www.nyc.gov/html/doh/downloads/pdf/survey/survey-2009commuting.pdf**

Risky driver behavior contributes to NYC's traffic fatalities

- More than one in four (26%) traffic fatalities in NYC involved unsafe speed; this is a conservative estimate because speed is frequently under-reported as a contributing factor.
- Other driver behaviors that contributed to NYC traffic fatalities included driver inattention (17%), failure to yield (10%) and alcohol/drug use (9%).
- Data on seatbelt use are available for only 21% of occupants killed in traffic crashes. However, of those incidents with data, more than four in ten drivers killed (44%) were not wearing their seatbelt and nearly six in ten passengers killed (57%) were not wearing a seatbelt.

NYC Traffic Fatalities* by Driver Gender and Contributing Factor, 2005-2008



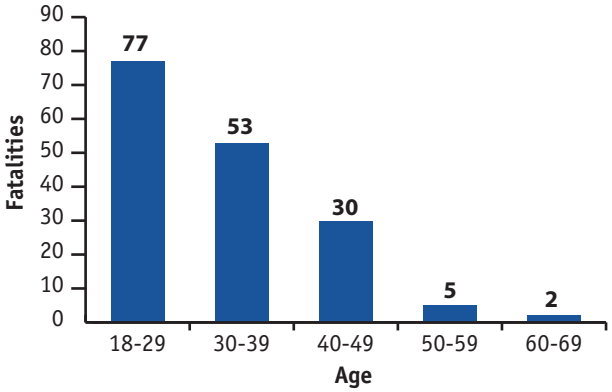
Sources: NYC DOT Traffic Fatality Database and NYS Department of Motor Vehicles/NYS Department of Transportation Accident Files.
Contributing factor information is reported for 1,236 fatal crashes for which the gender of at least one driver is known. These crashes resulted in 1,299 fatalities (89% of total traffic fatalities). Multiple factors may be reported for one case. Not all contributing factors are listed above.
*Includes all types of traffic fatalities (motorized and non-motorized).
**Includes failure to yield to pedestrians.

Seatbelts and Car Seats. Seatbelts save lives and help prevent serious injuries in a traffic crash. NYS law requires seatbelt use by adults and appropriate child restraint systems (car seats) for children. Additional information on the types of child restraints, including a child safety seat, harness, vest, or booster seat, can be found at **http://www.safeny.com**.

Traffic Calming: Designing for Safety. The speed limit on nearly all City streets is 30 mph; driving at excessive speed is a major safety issue. Traffic calming is an approach to street design that aims to reduce vehicle speeds and driver aggression. Reducing speeds decreases both the number of crashes and their severity, and is especially effective in reducing pedestrian injuries and fatalities. A pedestrian struck at 40 mph is four times more likely to die than one struck at 30 mph; a pedestrian struck at 30 mph is six times more likely to die than one struck at 20 mph. In NYC, successful traffic calming techniques have included pedestrian refuge islands, bulb-outs (which extend the curb to shorten pedestrian crossing distances), bike lanes, and road diets (removing excess lanes to reduce speeding).

Motorcyclists account for a disproportionate share of traffic fatalities

Motorcyclist Fatalities by Age, 2005-2009



Source: NYC DOT Traffic Fatality Database, 2005-2009
Total fatalities = 1,467

- Between 2005 and 2009, 11% of all traffic-related fatalities were among motorcyclists even though they represent only about 2% of all NYC motor vehicle registrations.
- Motorcycle registrations in NYC increased by 31% between 2005 and 2009.
- More than three quarters of New Yorkers who died in motorcycle crashes were younger than 40 years: 46% were 18- to 29-year-olds and 32% were 30- to 39-year-olds.
- Nearly half (46%) of all fatal motorcycle crashes are related to speed. Driver inexperience (i.e., young drivers) was a factor in 21% of fatal motorcycle crashes.

Recommendations

Safety on the streets is everyone's responsibility.

- **Drive at or under the posted speed limit, which is 30 miles per hour on most NYC streets.**
- **Never use a cell phone or text while driving. A new state law prohibits the use of hand-held cell phones while driving.**
- **Always yield to pedestrians, particularly when making left-hand turns. At a red light or STOP sign, stop before the crosswalk.**
- **Never drink and drive. If you have to travel by motor vehicle, either abstain from drinking or designate another person to drive.**
- **Wear your seat belt and make sure children use proper restraint systems.**
- **When walking, always cross at intersections and do not cross against the light.**
- **Older adults in particular should give themselves the most time to cross streets by waiting for a newly turned green or walk signal.**

Partnership can advance traffic safety legislation, enforcement, and education.

- **NYC agencies and community partners should endorse legislation that expands the use of red light and speed cameras at high-injury intersections and streets and also requires crossover mirrors on large vehicles to reduce blind spots.**
- **State and City agencies should work together to support the State Department of Motor Vehicles in tailoring driver education programs for the NYC environment and to improve collection of traffic safety data.**

Good street designs can boost safety. In 2010-2011, the NYC Department of Transportation will:

- Install countdown signals at 1,500 intersections, focusing on wide arterial streets.
- Re-engineer 60 miles of streets to improve pedestrian safety, prioritizing locations based on corridor crash data. Typical projects include building pedestrian refuge islands, removing excess roadway space, installing bicycle lanes, and changing signal timing to reduce speeding.
- Re-engineer 20 intersections on major Manhattan two-way streets to improve pedestrian safety.
- Pilot a neighborhood 20 mph zone program in collaboration with local communities.

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