



Epi Data Brief

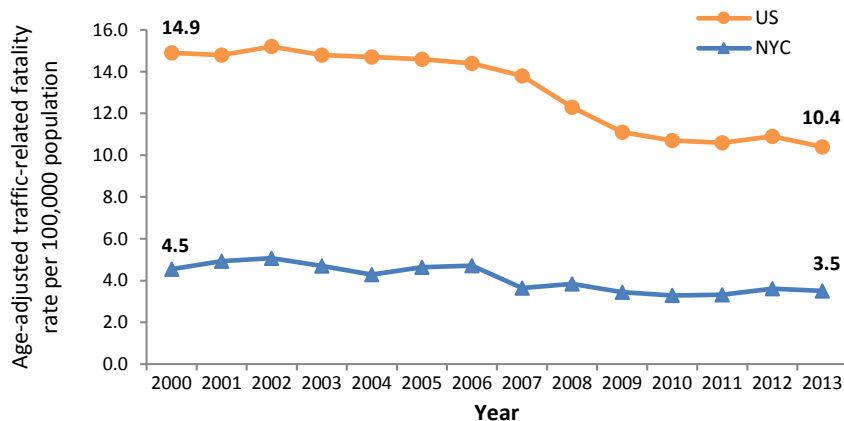
New York City Department of Health and Mental Hygiene

October 2015, No. 59

Traffic Fatalities in New York City

- Traffic-related fatalities, defined as deaths caused by injuries from a motor vehicle crash, including injuries to a motor vehicle occupant, motorcyclist, pedestrian, or bicyclist, accounted for approximately 340 deaths each year in New York City (NYC) between 2000 and 2013.¹
- The traffic-related fatality rate in both NYC and the United States (US) declined between 2000 and 2013. However, NYC had a lower traffic-related fatality rate compared with the US. This may be related to New Yorkers' widespread use of public transportation instead of personal motor vehicles: 45% of NYC households owned a motor vehicle compared with 91% in the US in 2012.²

Traffic-related fatalities, New York City vs. United States, 2000-2013

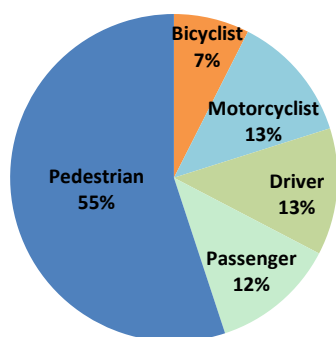


Source: NYC Bureau of Vital Statistics 2000-2013 and US WISQARS 2000-2013

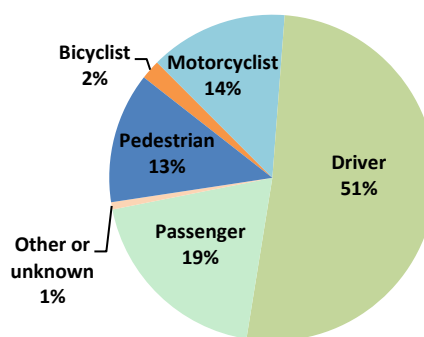
Victims of traffic-related fatalities

- Between 2009 and 2011, more than half (55%) of all traffic-related fatalities in NYC were pedestrians, compared with 13% nationwide.
- Bicyclists also accounted for a greater percentage (7%) of NYC traffic-related fatalities compared with the US (2%).

New York City Traffic Fatalities



United States Traffic Fatalities



Source: NYC Office of Chief Medical Examiner File Review and US FARS, 2009-2011

Data Sources

Bureau of Vital Statistics (BVS)

2000-2013:

The NYC Department of Health and Mental Hygiene's (DOHMH's) BVS maintains administrative data on all deaths in NYC and injury death information was obtained from death certificates. Refer to tables appendix for International Classification of Diseases (ICD)-10 codes used.

National Center for Health Statistics (NCHS) Injury matrices:

The NCHS provides frameworks designed to organize ICD coded injury data into meaningful groupings to facilitate national and international comparisons of injury statistics.

NYC Office of Chief Medical Examiner (OCME) file review 2009-2011:

Traffic fatality records were reviewed at OCME for further information on crash role and toxicology information on the victim for 2009-2011.

The Web-based Injury Statistics Query and Reporting System (WISQARS) 2000-2013:

A national online database compiled by the Centers for Disease Control (CDC's) NCHS Statistics that provides data on fatal and non-fatal injuries.

Fatality Analysis Reporting System (FARS) 2009-2011:

A database that contains national data compiled from state governments on all vehicle crashes that occur on a roadway and involve a fatality.

Intercensal Estimates:

NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2013, updated December 2014. Rates are age-adjusted to the US 2000 standard population, except those for specific age groups.

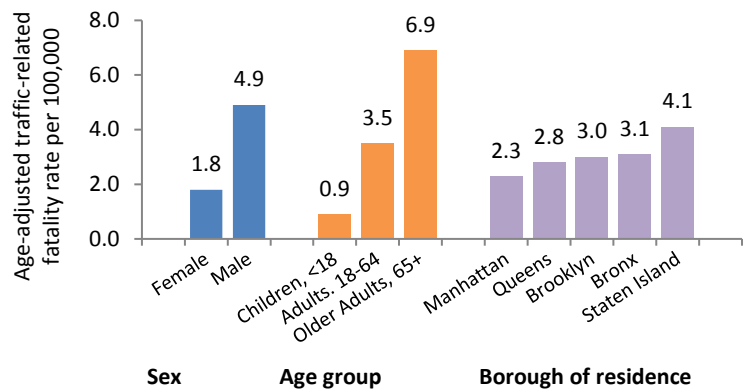
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Acknowledgements: Melanie Firestone, Matthew Roe, Will Moir, Sarah Conderino

Traffic-related fatalities vary by sex, age group, and borough of residence

- Between 2009 and 2011, the traffic-related fatality rate among males was more than two times the rate among females (4.9 vs. 1.8 per 100,000 New Yorkers).
- Older New Yorkers (aged 65 and older) had the highest traffic-related fatality rate (6.9 per 100,000) compared with children (aged 0 to 17, 0.9 per 100,000) and adults aged 18-64 (3.5 per 100,000).
- Across all ages, traffic-related fatality rates were similar among all race/ethnicity groups in NYC. However, disparities exist within narrower age groups. Among older adults, Asians had the highest traffic-related fatality rate (11.4 per 100,000) compared with other race/ethnicity groups.

New York City traffic-related fatalities by demographic characteristics, 2009-2011



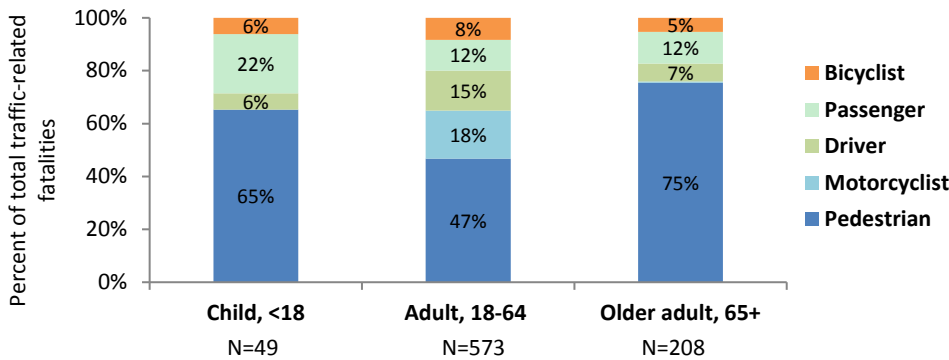
Source: NYC Office of Chief Medical Examiner File Review and NYC DOHMH Bureau of Vital Statistics, 2009-2011

- Staten Island had the highest traffic-related fatality rate (4.1 per 100,000) compared with other NYC boroughs.

Crash victims by age group and borough of crash

- Across all age groups, pedestrians made up the highest proportion of traffic fatalities. Among older adults and children, pedestrians accounted for the majority of all traffic fatalities (75% and 65%, respectively).

Traffic-related fatalities by age group and crash victim, New York City, 2009-2011



Source: NYC Office of Chief Medical Examiner File Review and NYC DOHMH Bureau of Vital Statistics, 2009-2011

- Pedestrians accounted for 69% of traffic-related fatalities in Manhattan, compared with 40% in Staten Island.
- Nearly half (45%) of all traffic-related fatalities in Staten Island were drivers and occupants.
- More than half (55%) of all bicyclist fatalities occurred in Brooklyn.

References:

- ¹Average annual counts are calculated based on traffic fatality classifications of International Classification of Diseases codes (ICD)-10 (see tables appendix) which may differ from counts based on crash reports.
- ²United States Census Bureau / American Fact Finder. "B08201: Household Size by Vehicles Available." 2012 American Community Survey. US Census Bureau's American Community Survey Office, 2011. Web 2 February 2015.

For information on NYC's traffic safety initiative, Vision Zero, visit nyc.gov/visionzero
 For trends on traffic-related injuries, visit the NYC Environment and Health Data Portal at nyc.gov/health/tracking

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Epi Data Tables

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Data Tables

- Table 1.** Traffic-related fatalities, New York City and the United States, 2000-2013
- Table 2.** Traffic-related fatalities by age, sex, race/ethnicity, borough of residence, neighborhood poverty, District Public Health Office area, and education status, New York City, 2009-2011
- Table 3.** Traffic-related fatalities, by crash victim and age group, New York City, 2009-2011

Data Sources

NYC DOHMH Bureau of Vital Statistics (BVS): BVS maintains administrative data on all deaths in NYC and injury death information was obtained from death certificates. The following International Classification for Diseases (ICD)-10 codes were used to classify traffic-related deaths: motor vehicle driver & passenger: V30-V79 (.4-.9), V83-V86 (.0-.3); motorcyclist: V20-V28 (.3-.9), V29 (.4-.9); pedal cyclist: V12-V14 (.3-.9), V19 (.4-.6); pedestrian: V02-V04 (.1-.9), V09.2; other and unspecified motor vehicle traffic-related: V81.1 V82.1, V80 (.3-.5), V87(.0-.8), V89.2.

The National Center for Health Statistics (NCHS): The NCHS provides frameworks designed to organize International Classification of Diseases (ICD) coded injury data into meaningful groupings to facilitate national and international comparisons of injury statistics. More information can be found at: http://www.cdc.gov/nchs/injury/injury_matrices.htm

Office of Chief Medical Examiner (OCME): Traffic fatality records were reviewed at OCME for further information on crash role and toxicology information on the victim for 2009-2011.

Web-based Injury Statistics Query and Reporting System (WISQARS), 2000-2013:

WISQARS is a national online database compiled by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics that provides data on fatal and non-fatal injuries. Cause of death is coded according to the International Statistical Classification of Diseases -10th Revision (ICD-10).

Fatality Analysis Reporting System (FARS), 2009-2011:

FARS is a database that contains national data compiled from state governments on all vehicle crashes that occur on a roadway and involve a fatality. More information is available at: <http://www-fars.nhtsa.dot.gov/Main/index.aspx>



Table 1. Traffic-related fatalities, New York City and the United States, 2000-2013*Sources: CDC WISQARS and NYC DOHMH Bureau of Vital Statistics*

Year	NYC		US	
	Number	Rate ¹	Number	Rate ¹
2000	364	4.5	41,994	14.9
2001	400	4.9	42,443	14.8
2002	412	5.1	44,065	15.2
2003	383	4.7	43,340	14.8
2004	347	4.3	43,432	14.7
2005	378	4.6	43,667	14.6
2006	384	4.7	43,664	14.4
2007	300	3.6	42,031	13.8
2008	319	3.8	37,985	12.3
2009	289	3.4	34,485	11.1
2010	279	3.3	33,687	10.7
2011	283	3.3	33,783	10.6
2012	311	3.6	34,935	10.9
2013	304	3.5	33,804	10.4

¹Rates are age-adjusted to the US 2000 standard population and presented per 100,000 population

Table 2. Traffic-related fatalities by age, sex, race/ethnicity, borough of residence, neighborhood poverty, District Public Health Office area, and education status, New York City, 2009-2011

Source: NYC DOHMH Bureau of Vital Statistics

Demographic factor	Child (ages 0-17) ¹			Adult (ages 18-64) ¹			Older adult (ages 65+) ¹			Total ¹		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Sex												
Male	31	63%	1.1	437	76%	5.6	114	55%	9.5	582	70%	4.9
Female	18	37%	0.7	136	24%	1.6	94	45%	5.2	248	30%	1.8
Race/ethnicity²												
Non-Hispanic White	18	38%	1.3	191	34%	3.5	103	50%	7.2	312	38%	3.4
Non-Hispanic Black	14*	29%	1.0	143	26%	3.9	26	13%	4.0	183	23%	3.2
Hispanic	10*	21%	0.5	167	30%	3.7	41	20%	6.8	218	27%	3.2
Asian	6*	13%	1.0	57	10%	2.5	35	17%	11.4	98	12%	3.2
Borough of Residence³												
Bronx	5*	11%	0.5	99	20%	3.8	24	12%	5.4	128	17%	3.1
Brooklyn	19	40%	1.1	158	32%	3.2	56	29%	6.4	233	32%	3.0
Manhattan	5*	11%	0.7	60	12%	1.8	52	27%	8.0	117	16%	2.3
Queens	11*	23%	0.8	134	27%	3.0	54	28%	6.2	199	27%	2.8
Staten Island	7*	15%	2.1	45	9%	5.0	8*	4%	4.5	60	8%	4.1
Neighborhood Poverty⁴												
Low	10*	22%	1.1	83	18%	2.5	41	23%	5.4	134	20%	2.6
Medium	16*	36%	0.9	166	37%	2.7	77	43%	6.5	259	38%	2.7
High	9*	20%	0.7	124	28%	3.2	45	25%	6.7	178	26%	3.0
Very High	10*	22%	0.8	77	17%	2.7	17	9%	4.3	104	15%	2.4
District Public Health Office (DPHO)⁵												
Bronx	0	0%	0.0	19	3%	1.9	6*	3%	4.5	25	3%	1.7
East and Central Harlem	1*	2%	0.6	17	3%	3.1	5*	2%	5.5	23	3%	2.8
Brooklyn	6*	12%	1.1	46	8%	3.3	8*	4%	4.1	60	7%	2.8
Outside DPHO	42	86%	1.0	491	86%	3.7	189	91%	7.3	722	87%	3.4
Education⁶												
High school graduate or less										389	58%	15.4
Some college or associate's degree										112	17%	9.7
Bachelor's degree										95	14%	8.6
Advanced or professional degree										59	9%	7.7
Total⁷	49	6%	0.9	573	69%	3.5	208	25%	6.9	830	100%	3.3

¹Figures represent three year (2009-2011) totals, percentages are column percentages, and total rates are age-adjusted to the US 2000 standard population per 100,000.

²Race/ethnicity was not noted for 11 decedents.

³Only among decedents who lived in New York City; 93 decedents lived outside of New York City.

⁴Neighborhood poverty is based on resident ZIP Code and is defined as proportion of residents in a ZIP Code with incomes below 100% of the Federal Poverty Level (FPL), per American Community Survey (2007-2011), in four categories: Low (<10% FPL), Medium (10% to <20% FPL), High (20% to <30% FPL), and Very High Poverty (≥30% FPL); 93 decedents lived outside of New York City decedents and 62 decedents did not have a resident zip code noted to determine neighborhood poverty.

⁵DPHOs were established in 2002 to promote health equity and reduce health disparities across NYC in high need neighborhoods. For more information, please visit:

<http://www.nyc.gov/html/doh/html/diseases/dpho-homepage.shtml>. DPHOs were categorized by resident of zip code of decedent.

⁶Education status shown only among person ages 25+; rates are calculated based on the US Census Bureau, 2009-2011 American Community Survey obtained from the Population Division - New York City Department of City Planning, updated Jan 2013

⁷Figures represent three year (2009-2011) totals, percentages are row percentages, and rates are age-adjusted to the US 2000 standard population per 100,000.

* Estimate should be interpreted with caution due to small cell size.

Table 3. Traffic-related fatalities by crash victim and age group, New York City, 2009-2011*Source: NYC Office of Chief Medical Examiner File Review*

Crash Victim	Child (ages 0-17) ¹		Adult (ages 18-64) ¹		65+) ¹		Totals	
	N	Percent	N	Percent	N	Percent	N	Percent
Bicyclist	3*	6	48	8	11*	5	62	7
Motorcyclist	0	0	104	18	1*	0	105	13
Motor Vehicle Driver	3*	6	87	15	14*	7	104	13
Motor Vehicle Passenger	11*	22	66	12	25	12	102	12
Pedestrian	32	65	268	47	157	75	457	55
Total	49	100	573	100	208	100	830	100

¹Figures represent three year (2009-2011) totals, and percentages are column percentages.

* Estimate should be interpreted with caution due to small cell size.