# Data Report: Pedestrian-Traffic Injuries

New York State Department of Health Bureau of Occupational Health and Injury Prevention August, 2016

### **Executive summary**

#### Introduction

This report serves to aggregate relevant surveillance data about pedestrian injuries in New York State. It includes information about the health outcomes of pedestrian injuries, and the demographics of those who sustain them.

#### **Problem Identification**

Any pedestrian injury or death is a preventable injury or death. In New York State each year over 15,000 people are treated at a hospital for injuries sustained as a pedestrian, and over 300 die. This means that each day, on average, 41 pedestrians are injured and one person dies. These injuries are a leading cause of unintentional injury related death for nearly all ages. While people aged 20-25 are the most likely group to sustain a pedestrian injury, older adults are the most vulnerable to severe injuries, resulting in the highest rates of hospitalization and death. Over \$236 million dollars are spent on hospital treatment as a result of car crashes across the state each year, with 85% of that spent on severe injuries that result in a hospital admission. The average hospital admission among pedestrians lasts 8 days, with 37% of the cases sustaining a traumatic brain injury. Injuries sustained by pedestrians can pose burdens far beyond the immediate cost of acute care, such as long term care and rehabilitation costs, lost wages, and mental stress.

#### Geography

New York's urban centers have the highest rates of pedestrian related emergency department visits. Such areas include New York City's five boroughs including Brooklyn, Queens, Bronx, Manhattan, and Staten Island; long island including Nassau and Suffolk Counties, as well as upstate urban areas including Albany, Erie, Rockland, Schenectady, and Westchester counties. These counties each contain large population centers around built urban environments, which expectedly increases the amount of pedestrians utilizing road space. The most severe injuries, including hospitalizations and deaths follow a similar trend, with New York City, Long Island, and the Lower Hudson Valley dominating the high rate range. However, several counties appear to have high rates of hospitalizations or deaths despite their rural status, including Sullivan County with a high rate of hospitalization and Ontario County with high rates of death.

#### **Data Sources**

Data depicting hospital treatment comes from the Statewide Planning and Research Cooperative System which collects billing information for inpatient and outpatient treatment at all hospitals within the State of New York. Billing information, prior to October 1st 2015 (for which all data utilized in this report includes), is documented using the International Classification of Diseases Ninth Revision Clinical Modification (ICD-9-CM), where pedestrian injuries are identified by having codes of E810-E819 (.7). This dataset does not contain information on people who sought treatment outside the state, or at a non-hospital based health facility such as an urgent care center. It does however capture people who may not have sought immediate treatment following a crash, people who may not have been documented at a crash site, and people involved in crashes

that were not documented entirely. Although it is expected that this data may undercount the number of minor injuries sustained by pedestrians, who may have sought treatment outside of a hospital, it is also expected to accurately capture the number of severe cases which must be treated at a hospital.

Data about pedestrian deaths comes from death certificate information from New York State Vital Records. This data is coded using the International Classification of Diseases tenth revision (ICD-10), where pedestrian deaths are identified by having codes of V02-V04 (.1, .9) or V09.2. This data contains all people who died within the State of New York. All data in this report, unless otherwise specified, is analyzed based on location of documented residence and is analyzed by, and using the resources of, the Bureau of Occupational Health and Injury Prevention within the New York State Department of Health.

### Leading Causes of Death Due To Injuries Leading Causes by Age Group New York State Residents, 2012-2014

					Age (	Group				
Rank	0<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Total
	Suffocation	Homicide	Homicide	Suicide	Suicide	Poisoning	Poisoning	Poisoning	Fall	Poisoning
_						J	ŭ			Ğ
1	27 (33%)	17 (27%)	7 (24%)	14 (27%)	65 (26%)	152 (25%)	762 (36%)	825 (33%)	1,132 (47%)	1,858 (23%)
	Homicide	Suffocation	Fire / Flame	MVT^, Pedestrian	Homicide	Homicide	Suicide	Suicide	Suicide	Suicide
2	10 (13%)	7 (11%)	5 (18%)	7 (14%)	55 (22%)	138 (23%)	490 (23%)	671 (27%)	275 (12%)	1,632 (20%)
	MVT^, Occupant	Fire / Flame	MVT^, Unspecified	Homicide	MVT^, Occupant	Suicide	Homicide	Fall	Unspecified	Fall
_	*	5 ( 8%)	5 (16%)	5 (11%)	29 (12%)	115 (19%)	268 (13%)	179 ( 7%)	180 ( 8%)	1,379 (17%)
3		3 (8%)	3 (10%)	5 (11%)	29 (12/6)	115 (15%)	208 (13%)	1/3 ( //0)	100 ( 0%)	1,379 (17/6)
	Fire / Flame	MVT^, Pedestrian	MVT^, Pedestrian	MVT^, Pedal Cyclist	Poisoning	MVT^, Unspecified	MVT^, Unspecified	Homicide	Suffocation	Homicide
4	*	4 ( 6%)	4 (15%)	4 ( 7%)	26 (10%)	47 ( 8%)	81 ( 4%)	122 ( 5%)	145 ( 6%)	660 ( 8%)
	Unspecified	Fall	Suffocation	Fire / Flame	MVT^, Unspecified	MVT^, Occupant	MVT^, Occupant	MVT^, Pedestrian	MVT^, Pedestrian	MVT^, Unspecified
5	*	3 ( 5%)	*	3 ( 7%)	17 ( 7%)	41 ( 7%)	70 ( 3%)	98 ( 4%)	101 ( 4%)	316 ( 4%)
	MVT^, Unspecified	MVT <sup>^</sup> , Occupant	Suicide	MVT^, Unspecified	MVT^, Pedestrian	MVT <sup>^</sup> , Pedestrian	MVT^, Pedestrian	MVT^, Unspecified	Poisoning	MVT^, Pedestrian
6	*	2 ( 4%)	*	3 ( 7%)	11 ( 4%)	19 ( 3%)	68 ( 3%)	79 ( 3%)	91 ( 4%)	312 ( 4%)
			Natural /	Transport, Non-						
	Fall	MVT^, Unspecified	Environmental	Traffic	· ·	MVT^, Motorcyclist		MVT^, Occupant	MVT^, Occupant	MVT^, Occupant
7	*	2 ( 3%)	*	2 ( 5%)	9 ( 4%)	18 ( 3%)	67 ( 3%)	58 ( 2%)	90 ( 4%)	292 ( 4%)
	Natural /	Natural /	Pedestrian, Non-	<b>5.</b> II	Pedestrian, Non-	<b>5.</b> II	F. II	0.00	A 43 (TA   11	6. (6
	Environmental	Environmental	Traffic	Fall	Traffic	Fall	Fall	Suffocation	MVT^, Unspecified	Suffocation
8	*	*	*	*	4 ( 2%)	8 ( 1%)	51 ( 2%)	46 ( 2%)	81 ( 3%)	250 ( 3%)
	MVT^, Pedestrian	Poisoning	Poisoning	Natural / Environmental	MVT^, Pedal Cyclist	Fire / Flame	Unspecified	Unspecified	Fire / Flame	Unspecified
9	*	*	*	*	4 ( 2%)	5 ( 1%)	20 ( 1%)	40 ( 2%)	56 ( 2%)	248 ( 3%)
9			Transport, Non-	Pedal Cyclist, Non-	4 ( 2/0)	Pedestrian, Non-	20 ( 1/0)	40 ( 2/0)	Natural /	240 ( 3/0)
		Unspecified	Traffic	Traffic	Fall	Traffic	Suffocation	MVT^, Motorcyclist	Environmental	MVT^, Motorcyclist
10		*	*	*	3 ( 1%)	5 ( 1%)	18 ( 1%)	39 ( 2%)	37 ( 2%)	141 ( 2%)
				,	Yearly Average (percen	t of age group)				

MVT<sup>^</sup> = Motor Vehicle Traffic

\*Data based on three year total frequencies of less than six are not reportable

Pedestrian Injuries

Non-Pedestrian Injuries

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury prevention/

### Leading Causes of Hospitalizations Due To Injuries Leading Causes by Age Group New York State Residents, 2012-2014

					Age (	Group				
Rank	0<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Total
	Fall	Fall	Fall	Fall	Self-Inflicted	Self-Inflicted	Fall	Fall	Fall	Fall
1	337 (37%)	805 (30%)	804 (42%)	650 (25%)	1,432 (26%)	1,363 (19%)	4,873 (19%)	14,375 (37%)	52,416 (72%)	75,738 (48%)
	Hot Object / Scald	Poisoning	Natural / Environmental	Self-Inflicted	Assault	Assault	Self-Inflicted	Poisoning	Unspecified	Self-Inflicted
2	117 (13%)	402 (15%)	161 ( 8%)	431 (17%)	830 (15%)	1,348 (18%)	3,899 (15%)	3,986 (10%)	4,610 ( 6%)	10,685 ( 7%)
	Assault	Hot Object / Scald	MVT^, Pedestrian	Struck By, Against	Fall	Fall	Assault	Self-Inflicted	Poisoning	Poisoning
3	82 ( 9%)	395 (15%) Natural /	112 ( 6%)	221 ( 9%)	658 (12%)	820 (11%)	3,142 (12%)	2,920 ( 8%)	2,044 ( 3%)	9,715 ( 6%)
	Unspecified	Environmental	Struck By, Against	MVT^, Pedestrian	MVT^, Occupant	MVT^, Occupant	Poisoning	Unspecified	MVT^, Occupant	Unspecified
4	75 ( 8%)	255 (10%)	107 ( 6%)	184 ( 7%)	463 ( 8%)	772 (10%)	2,293 ( 9%)	2,594 ( 7%)	1,532 ( 2%)	9,005 ( 6%)
	Poisoning	Struck By, Against	Hot Object / Scald	Assault	Struck By, Against	Poisoning	MVT^, Occupant	MVT^, Occupant	Natural / Environmental	Assault
5	45 ( 5%)	100 ( 4%)	86 ( 4%)	122 ( 5%)	303 ( 5%)	521 ( 7%)	1,652 ( 6%)	1,612 ( 4%)	1,065 ( 1%)	7,531 ( 5%)
	Natural /			Natural /						
	Environmental	Unspecified	Poisoning	Environmental	Poisoning	MVT^, Motorcyclist	Unspecified	Assault	Struck By, Against	MVT^, Occupant
6	44 ( 5%)	72 ( 3%)	75 ( 4%)	104 ( 4%)	272 ( 5%)	234 ( 3%)	1,192 ( 5%)	1,605 ( 4%)	935 ( 1%)	6,207 ( 4%)
	6. ((	A In	Pedal Cyclist, Non-	Pedal Cyclist, Non-	10/71 D. L	ANGE DE LES CO	Natural /	Natural /	6. (()	St. I B. A. St.
	Suffocation	Assault	Traffic	Traffic	MVT^, Pedestrian	MVT^, Pedestrian	Environmental	Environmental	Suffocation	Struck By, Against
7	41 ( 5%)	59 ( 2%)	65 ( 3%)	102 ( 4%)	193 ( 3%)	218 ( 3%)	800 ( 3%)	1,287 ( 3%)	787 ( 1%)	3,405 ( 2%)
	Struck By, Against	MVT^, Pedestrian	MVT^, Occupant	Poisoning	Unspecified	Unspecified	Struck By, Against	MVT^, Pedestrian	MVT^, Pedestrian	MVT^, Pedestrian
8	21 ( 2%)	48 ( 2%)	61 ( 3%)	77 ( 3%)	129 ( 2%)	210 ( 3%)	694 ( 3%)	906 ( 2%)	679 ( 1%)	3,027 ( 2%)
					Natural /					
	MVT^, Occupant	Suffocation	Cut / Pierce	Unspecified	Environmental	Struck By, Against	MVT^, Pedestrian	Struck By, Against	Self-Inflicted	Cut / Pierce
9	7 ( 1%)	48 ( 2%)	57 ( 3%)	72 ( 3%)	127 ( 2%)	201 ( 3%)	685 ( 3%)	822 ( 2%)	632 ( 1%)	1,870 ( 1%)
	Fire / Flame	MVT^, Occupant	Unspecified	MVT^, Occupant	Transport, Non- Traffic	Natural / Environmental	MVT^, Motorcyclist	Cut / Pierce	Overexertion	Hot Object / Scald
10	6 ( 1%)	37 ( 1%)	50 ( 3%)	70 ( 3%)	113 ( 2%)	179 ( 2%)	633 ( 2%)	602 ( 2%)	483 ( 1%)	1,800 ( 1%)
				,	Yearly Average (percen	t of age group)				

MVT<sup>^</sup> = Motor Vehicle Traffic

\*Data based on three year total frequencies of less than six are not reportable

Pedestrian Injuries

Non-Pedestrian Injuries

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury\_prevention/

### Leading Causes of Emergency Department<sup>†</sup> Visits Due To Injuries Leading Causes by Age Group New York State Residents, 2012-2014

					Age (	Group				
Rank	0<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Total
	Fall	Fall	Fall	Fall	Struck By, Against	Fall	Fall	Fall	Fall	Fall
					, ,					
1	7,031 (51%)	41,824 (41%)	30,665 (35%)	28,559 (27%)	25,010 (20%)	21,750 (15%)	76,114 (18%)	94,291 (30%)	101,704 (58%)	423,481 (29%)
	Struck By, Against	Struck By, Against	Struck By, Against	Struck By, Against	Fall	Struck By, Against	Struck By, Against	Overexertion	Unspecified	Struck By, Against
2	1,228 ( 9%)	14,716 (14%)	17,215 (20%)	25,827 (24%)	21,542 (17%)	17,169 (12%)	44,094 (11%)	27,803 ( 9%)	13,238 ( 8%)	182,276 (12%)
_	, , , ,	Natural /	Natural /	-,- ( . ,	,, ,,	,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,	, , , ,	. , . , . ,
	Unspecified	Environmental	Environmental	Overexertion	Overexertion	Assault	Overexertion	Struck By, Against	Struck By, Against	Overexertion
3	850 ( 6%)	9,074 ( 9%)	6,710 ( 8%)	10,770 (10%)	13,928 (11%)	15,079 (11%)	43,710 (11%)	27,630 ( 9%)	9,387 ( 5%)	122,516 ( 8%)
	Natural /									
	Environmental	Unspecified	Cut / Pierce	Unspecified	Assault	MVT^, Occupant	Cut / Pierce	Unspecified	MVT^, Occupant	Unspecified
4	715 ( 5%)	5,623 ( 6%)	4,914 ( 6%)	6,048 ( 6%)	11,010 ( 9%)	15,050 (11%)	40,617 (10%)	27,319 ( 9%)	8,046 ( 5%)	112,404 ( 8%)
	MVT^, Occupant	Cut / Pierce	Unspecified	Cut / Pierce	MVT^, Occupant	Cut / Pierce	MVT^, Occupant	Cut / Pierce	Cut / Pierce	Cut / Pierce
5	510 ( 4%)	3,848 ( 4%)	4,515 ( 5%)	5,643 ( 5%)	9,588 ( 8%)	13,908 (10%)	39,769 (10%)	26,252 ( 8%)	7,732 ( 4%)	111,898 ( 8%)
	Hot Object / Scald	Overexertion	Overexertion	Assault	Cut / Pierce	Overexertion	Unspecified	MVT^, Occupant	Overexertion	MVT^, Occupant
	• •			4,176 ( 4%)	•		•	26,021 ( 8%)		
6	429 ( 3%)	3,135 ( 3%)	3,413 ( 4%)	4,176 ( 4%) Natural /	8,687 ( 7%)	12,975 ( 9%)	35,943 ( 9%)	26,021 ( 8%) Natural /	6,559 ( 4%) Natural /	106,612 ( 7%)
	Poisoning	Poisoning	MVT^, Occupant	Environmental	Unspecified	Unspecified	Assault	Environmental	Environmental	Assault
7	371 ( 3%)	3,095 ( 3%)	2,678 ( 3%)	4,129 ( 4%)	8,116 ( 6%)	10,753 ( 8%)	34,667 ( 8%)	14,286 ( 5%)	5,798 ( 3%)	82,115 ( 6%)
	371 (370)	3,033 (370)	Pedal Cyclist, Non-	4,123 (470)	Natural /	Natural /	Natural /	14,200 ( 3/0)	3,730 (370)	Natural /
	Cut / Pierce	MVT^, Occupant	Traffic	MVT^, Occupant	Environmental	Environmental	Environmental	Assault	Poisoning	Environmental
8	295 ( 2%)	2,039 ( 2%)	2,018 ( 2%)	2,912 ( 3%)	4,142 ( 3%)	5,635 ( 4%)	16,384 ( 4%)	14,022 ( 4%)	1,480 ( 1%)	66,874 ( 5%)
	, ,	, , ,	, , ,	Pedal Cyclist, Non-	, , ,	, , ,	, , ,	, , ,	, , ,	, , ,
	Overexertion	Hot Object / Scald	Assault	Traffic	Self-Inflicted	Self-Inflicted	Hot Object / Scald	Poisoning	Assault	Poisoning
9	223 ( 2%)	1,989 ( 2%)	1,157 ( 1%)	2,663 ( 2%)	2,476 ( 2%)	1,673 ( 1%)	4,128 ( 1%)	3,112 ( 1%)	1,392 ( 1%)	16,210 ( 1%)
					Pedal Cyclist, Non-					Pedal Cyclist, Non-
	Suffocation	Suffocation	Hot Object / Scald	Self-Inflicted	Traffic	Poisoning	Poisoning	MVT^, Pedestrian	MVT^, Pedestrian	Traffic
10	143 ( 1%)	624 ( 1%)	839 ( 1%)	1,037 ( 1%)	1,710 ( 1%)	1,584 ( 1%)	4,104 ( 1%)	3,076 ( 1%)	1,218 ( 1%)	14,123 ( 1%)
		· ·	•		Yearly Average (percen	t of age group)		•	•	•

MVT^ = Motor Vehicle Traffic

<sup>t</sup>The incidence of ED visits does not include patients who were subsequently admitted to the hospital

\*Data based on three year total frequencies of less than six are not reportable

Pedestrian Injuries
Non-Pedestrian Injuries

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury\_prevention/

### Leading Traffic Related Causes of Death Due To Injuries Leading Causes by Age Group New York State Residents, 2012-2014

					Age (	Group				
Rank	0<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Total
1	MVT^, Occupant *	MVT^, Pedestrian 4 (46%)	MVT^, Unspecified 5 (48%)	MVT^, Pedestrian 7 (47%)	MVT^, Occupant 29 (42%)	MVT^, Unspecified 47 (37%)	MVT^, Unspecified 81 (28%)	MVT^, Pedestrian 98 (34%)	MVT^, Pedestrian 101 (36%)	MVT^, Unspecified 316 (29%)
2	MVT^, Unspecified *	MVT^, Occupant 2 (29%)	MVT^, Pedestrian 4 (45%)	MVT^, Pedal Cyclist 4 (24%)	MVT^, Unspecified 17 (25%)	MVT^, Occupant 41 (32%)	MVT^, Occupant 70 (24%)	MVT^, Unspecified 79 (27%)	MVT^, Occupant 90 (32%)	MVT^, Pedestrian 312 (28%)
3	MVT^, Pedestrian *	MVT^, Unspecified 2 (25%)	MVT^, Occupant *	MVT^, Unspecified 3 (22%)	MVT^, Pedestrian 11 (15%)	MVT^, Pedestrian 19 (15%)	MVT^, Pedestrian 68 (23%)	MVT^, Occupant 58 (20%)	MVT^, Unspecified 81 (29%)	MVT^, Occupant 292 (27%)
4			MVT^, Pedal Cyclist *	MVT^, Occupant *	MVT^, Motorcyclist 9 (13%)	MVT^, Motorcyclist 18 (14%)	MVT^, Motorcyclist 67 (23%)	MVT^, Motorcyclist 39 (14%)	MVT^, Motorcyclist 6 ( 2%)	MVT^, Motorcyclist 141 (13%)
5				MVT^, Motorcyclist *	MVT^, Pedal Cyclist 4 ( 6%)	MVT^, Pedal Cyclist	MVT^, Pedal Cyclist 9 ( 3%)	MVT^, Pedal Cyclist 13 ( 5%)	MVT^, Pedal Cyclist 4 ( 1%)	MVT^, Pedal Cyclist 36 ( 3%)
6										
7										
8										
9										
10										
				,	Yearly Average (percen	t of age group)				

MVT<sup>^</sup> = Motor Vehicle Traffic

<sup>\*</sup>Data based on three year total frequencies of less than six are not reportable



Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury\_prevention/

# Incidence of Unintentional Motor Vehicle Traffic Injury Deaths, Hospitalizations, and Emergency Department<sup>†</sup> (ED) Visits Pedestrian New York State Residents, 2000-2014

	Dea	iths	Hospital	lizations	ED† \	/isits
Year of		Rate per		Rate per		Rate per
Discharge	Annual	100,000	Annual	100,000	Annual	100,000
/ Death	Frequency	Residents	Frequency	Residents	Frequency	Residents
2000	347	1.8	3,697	19.5	n/a	n/a
2001	379	2.0	3,563	18.7	n/a	n/a
2002	373	1.9	3,710	19.4	n/a	n/a
2003	322	1.7	3,643	19.0	n/a	n/a
2004	308	1.6	3,420	17.8	n/a	n/a
2005	317	1.6	3,389	17.6	12,004	62.3
2006	312	1.6	3,529	18.3	12,204	63.2
2007	272	1.4	3,458	17.9	11,745	60.9
2008	275	1.4	2,981	15.3	11,670	59.9
2009	269	1.4	3,214	16.4	12,121	62.0
2010	313	1.6	3,201	16.4	13,136	67.1
2011	289	1.5	2,963	15.2	11,910	61.2
2012	332	1.7	3,118	15.9	11,852	60.6
2013	329	1.7	3,074	15.6	13,450	68.4
2014	275	1.4	2,890	14.6	12,216	61.9

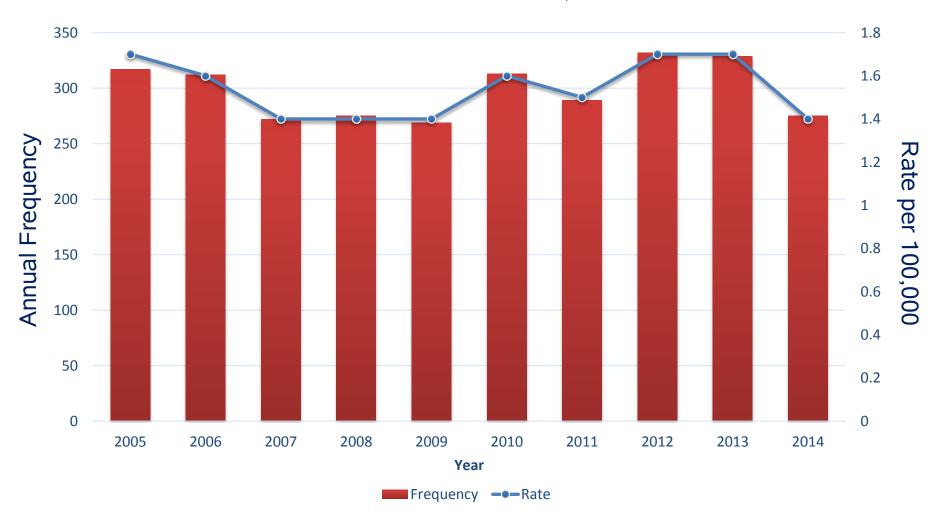
<sup>†</sup>The incidence of ED visits does not include patients who were subsequently admitted into the hospital Rate = Frequency/Population \*100,000

<sup>\*</sup>Data based on frequencies of less than six are not reported

<sup>\*\*</sup>Caution: Rates calculated using frequencies of less than 20 are unstable

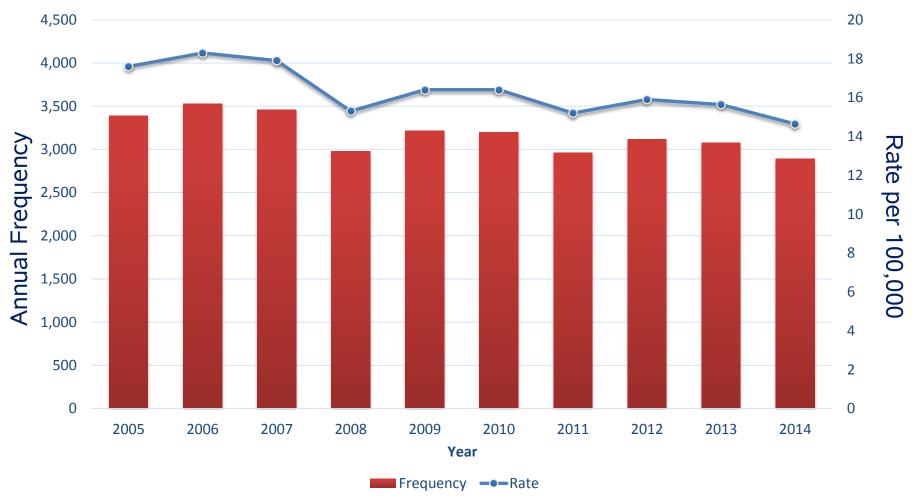
### **Incidence of Unintentional Motor Vehicle Traffic Injuries**

Pedestrian Deaths
New York State Residents, 2005-2014



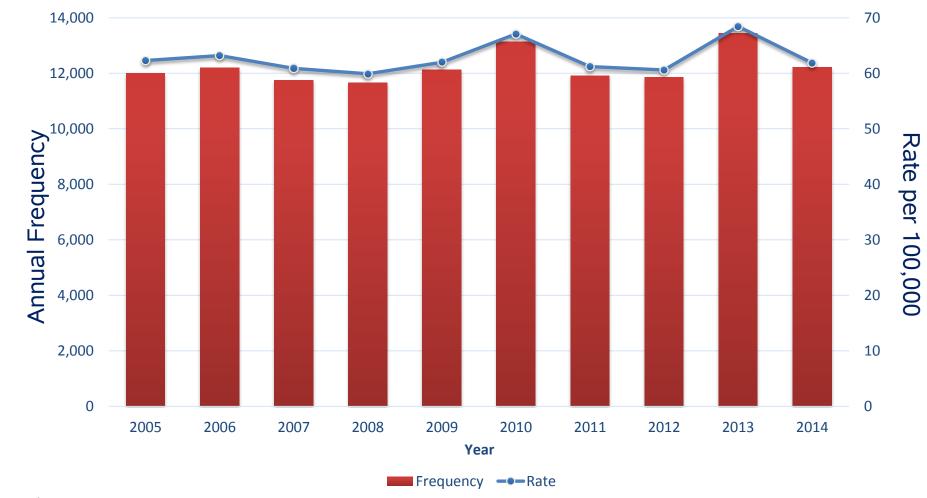
### **Incidence of Unintentional Motor Vehicle Traffic Injuries**

Pedestrian Hospitalizations New York State Residents, 2005-2014



### **Incidence of Unintentional Motor Vehicle Traffic Injuries**

Pedestrian Emergency Department<sup>†</sup> (ED) Visits New York State Residents, 2005-2014



<sup>&</sup>lt;sup>†</sup> The incidence of ED visits does not include patients who were subsequently admitted into the hospital

# Incidence of Pedestrian Injuries Deaths, Hospitalizations, and Emergency Department<sup>†</sup> (ED) Visits New York State Residents, 2012-2014

		De	aths	Hospita	lizations	ED	Visits	
		Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000	
		Frequency	Residents	Frequency	Residents	Frequency	Residents	
	Total	312	1.6	3,027	15.4	12,506	63.6	
	0<1	*	*	3	1.1**	16	6.8	
	1-4	4	0.4**	48	5.2	237	25.3	
0	5-9	4	0.4**	112	9.7	484	42.1	
Group	10-14	7	0.6	184	15.6	900	76.3	
Ğ	15-19	11	0.8	193	15.0	1,224	95.4	
Age	20-24	19	1.3	218	15.1	1,500	104.0	
۹	25-44	68	1.3	685	12.9	3,851	72.3	
	45-64	98	1.9	906	17.2	3,076	58.3	
	65+	101	3.6	679	24.0	1,218	43.0	
er	Male	200	2.1	1,687	17.7	6,435	67.5	
Gender	Female	112	1.1	1,340	13.2	6,071	60.0	
g	Unknown	0	n/a	0	n/a	0	n/a	
ercen	t Traumatic	5	6%	37%		1	.0%	
rain Ir	njury	<u> </u>	070	3770		10%		
lean (	Charge per							
Iospita	alization or ED	r	ı/a	\$65	,997	\$2	,928	
isit								
	One Year Total		,					
Hospitalization or ED		r	ı/a	\$199,7	95,367	\$36,6	12,206	
isit Ch	narges Year Total							
		,		AF00 200 400		4.00.000.00		
Hospitalization or ED		r	n/a	\$599,386,100		\$109,836,619		
isit Ch								

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n/a

Average Length of

Hospital Stay (Days)

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention www.health.ny.gov/prevention/injury\_prevention/

n/a

SPARCS July 2016

 $<sup>^{\</sup>dagger}$ The incidence of ED visits does not include patients who were subsequently admitted into the hospital Rate = Frequency / Population \* 100,000

<sup>\*</sup>Data based on frequencies less than six not reported

<sup>\*\*</sup>Caution: Rates calculated using frequencies of less than 20 are unstable

## Incidence of Pedestrian Injuries Involving A Traumatic Brain Injury Deaths, Hospitalizations, and Emergency Department<sup>†</sup> (ED) Visits New York State Residents, 2012-2014

		De	aths	Hospita	alizations	ED \	/isits
		Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000
		Frequency	Residents	Frequency	Residents	Frequency	Residents
	Total	175	0.9	1,124	5.7	1,255	6.4
	0<1	*	*	3	1.1**	3	1.3**
	1-4	3	0.3**	19	2.0	44	4.7
	5-9	2	0.2**	43	3.7	61	5.3
Group	10-14	5	0.5**	79	6.7	74	6.3
	15-19	7	0.6	84	6.6	134	10.4
Age	20-24	12	0.8	91	6.3	138	9.6
Q	25-44	41	0.8	244	4.6	325	6.1
	45-64	52	1.0	315	6.0	306	5.8
	65+	52	1.8	247	8.7	170	6.0
er	Male	114	1.2	654	6.9	653	6.9
Gender	Female	61	0.6	470	4.6	602	5.9
ဖွဲ	Unknown	0	n/a	0	n/a	0	n/a

Mean Charge per Hospitalization or ED Visit	n/a	\$78,676	\$4,945
Mean One Year Total Hospitalization or ED Visit Charges	n/a	\$88,405,664	\$6,208,003
Three Year Total Hospitalization or ED Visit Charges	n/a	\$265,216,992	\$18,624,008

Average Length of	n/a	0	n/a
Hospital Stay (Days)	11/ a	9	11/ a

 $<sup>^{\</sup>dagger}$ The incidence of ED visits does not include patients who were subsequently admitted into the hospital Rate = Frequency / Population \* 100,000

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention <u>www.health.ny.gov/prevention/injury\_prevention/</u>

SPARCS July 2016

<sup>\*</sup>Data based on frequencies less than six not reported

 $<sup>\</sup>ensuremath{^{**}\text{Caution:}}$  Rates calculated using frequencies of less than 20 are unstable

## Incidence of Pedestrian Injuries Among Males Deaths, Hospitalizations, and Emergency Department<sup>†</sup> (ED) Visits New York State Residents, 2012-2014

		Deaths		alizations	ED Visits	
	Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000
	Frequency	Residents	Frequency	Residents	Frequency	Residents
Total	200	2.1	1,687	17.7	6,435	67.5
0<1	0	0.0	1	1.1**	9	7.1
1-4	2	0.5**	31	6.5	149	31.1
5-9	3	0.5**	76	12.9	305	51.9
10-14	4	0.7**	119	19.7	523	86.7
15-19	7	1.1	108	16.6	610	93.2
20-24	13	1.8	137	18.8	798	109.6
25-44	51	1.9	418	15.9	1,984	75.4
45-64	64	2.5	496	19.5	1,514	59.6
65+	56	4.7	301	25.2	544	45.6
0 1 5 1 2 4	<1 -4 -9 0-14 5-19 0-24 5-44 5-64	Total         200           <1	Fotal         200         2.1           <1	Total         200         2.1         1,687           <1	Total         200         2.1         1,687         17.7           <1	Total         200         2.1         1,687         17.7         6,435           <1

Percent Traumatic Brain Injury	57%	39%	10%
Mean Charge per			
Hospitalization or ED	n/a	\$69,962	\$3,039
Visit			
Mean One Year Total			
Hospitalization or ED	n/a	\$118,025,831	\$19,552,672
Visit Charges			
Three Year Total	,	40-10-100	4=0.0=0.04=
Hospitalization or ED	n/a	\$354,077,492	\$58,658,015
Visit Charges			

Average Length of	n/2	۵	n/a
Hospital Stay (Days)	nya	9	n/a

 $<sup>^\</sup>dagger$ The incidence of ED visits does not include patients who were subsequently admitted into the hospital Rate = Frequency / Population \* 100,000

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention www.health.ny.gov/prevention/injury\_prevention/

SPARCS July 2016 Death File June 2016

<sup>\*</sup>Data based on frequencies less than six not reported

<sup>\*\*</sup>Caution: Rates calculated using frequencies of less than 20 are unstable

# Incidence of Pedestrian Injuries Among Females Deaths, Hospitalizations, and Emergency Department<sup>†</sup> (ED) Visits New York State Residents, 2012-2014

		Deaths		Hospitalizations		ED Visits	
		Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000	Mean Annual	Rate per 100,000
		Frequency	Residents	Frequency	Residents	Frequency	Residents
	Total	112	1.1	1,340	13.2	6,071	60.0
	0<1	*	*	*	*	8	6.6
	1-4	*	*	17	3.7	88	19.1
٥	5-9	*	*	36	6.4	179	31.9
lno	10-14	3	0.5**	65	11.2	377	65.4
Ď	15-19	4	0.6**	85	13.4	614	97.6
Age	20-24	6	0.9**	82	11.4	702	98.3
٩	25-44	17	0.6	268	9.9	1,868	69.3
	45-64	34	1.2	409	15.0	1,562	57.1
	65+	45	2.7	378	23.1	674	41.2

Percent Traumatic Brain Injury	55%	35%	10%
Mean Charge per			
Hospitalization or ED	n/a	\$61,007	\$2,810
Visit			
Mean One Year Total			
Hospitalization or ED	n/a	\$81,769,536	\$17,059,535
Visit Charges			
Three Year Total			
Hospitalization or ED	n/a	\$245,308,608	\$51,178,604
Visit Charges			

Average Length of	n/a	7	n/a
Hospital Stay (Days)	ii, a	,	n/a

 $<sup>^{\</sup>dagger}$ The incidence of ED visits does not include patients who were subsequently admitted into the hospital Rate = Frequency / Population \* 100,000

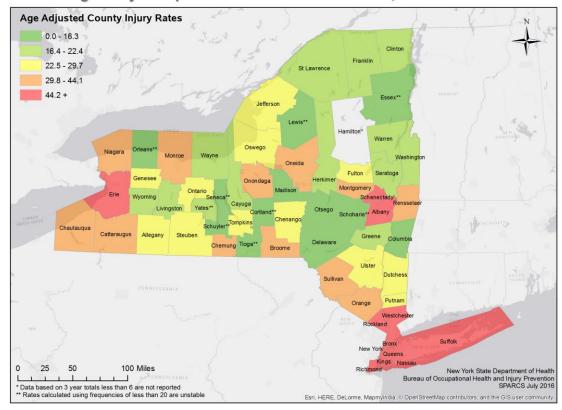
Source: NYSDOH, Bureau of Occupational Health and Injury Prevention www.health.ny.gov/prevention/injury\_prevention/

SPARCS July 2016

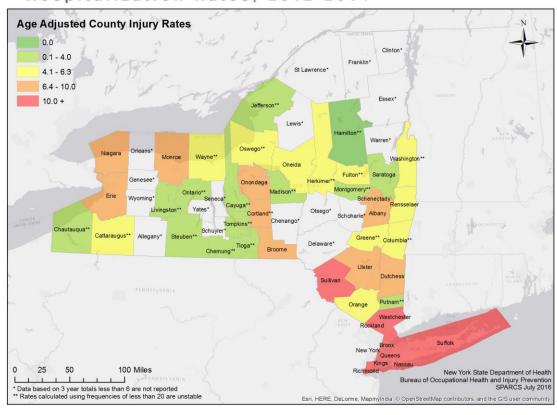
<sup>\*</sup>Data based on frequencies less than six not reported

<sup>\*\*</sup>Caution: Rates calculated using frequencies of less than 20 are unstable

#### New York State Pedestrian-Traffic Age Adjusted Emergency Department Visit Rates, 2012-2014



### New York State Pedestrian-Traffic Age Adjusted Hospitalization Rates, 2012-2014



### **Incidence of Pedestrian-Traffic Injury Deaths**

### Mean Annual Frequency and Rate by County New York State Residents, 2012-2014

County	Mean Annual Frequency	Crude Rate / 100,000 Residents	Age- Adjusted Rate / 100,000 Residents
Albany	5	1.5**	1.4**
Allegany	*	*	*
Broome	2	1.0**	1.3**
Cattaraugus	*	*	*
Cayuga	*	*	*
Chautauqua	3	2.0**	2.1**
Chemung	0	0.0**	0.0**
Chenango	*	*	*
Clinton	0	0.0**	0.0**
Columbia	*	*	*
Cortland	*	*	*
Delaware	*	*	*
Dutchess	2	0.7**	0.6**
Erie	11	1.2	1.1
Essex	*	*	*
Franklin	*	*	*
Fulton	*	*	*
Genesee	*	*	*
Greene	*	*	*
Hamilton	0	0.0**	0.0**
Herkimer	*	*	*
Jefferson	*	*	*
Lewis	*	*	*
Livingston	*	*	*
Madison	*	*	*
Monroe	8	1.1	1.1
Montgomery	0	0.0**	0.0**
Nassau	32	2.4	2.2
Niagara	4	1.9**	1.7**
Oneida	4	1.6**	1.4**
Onondaga	6	1.2**	1.1**
Ontario	2	2.1**	2.1**
Orange	2	0.6**	0.6**

County	Mean Annual Frequency	Crude Rate / 100,000 Residents	Age- Adjusted Rate / 100,000 Residents
Orleans	*	*	*
Oswego	*	*	*
Otsego	*	*	*
Putnam	*	*	*
Rensselaer	*	*	*
Rockland	4	1.1**	1.0**
St. Lawrence	*	*	*
Saratoga	3	1.2**	1.1**
Schenectady	2	1.3**	1.1**
Schoharie	0	0.0**	0.0**
Schuyler	0	0.0**	0.0**
Seneca	*	*	*
Steuben	*	*	*
Suffolk	35	2.4	2.3
Sullivan	*	*	*
Tioga	*	*	*
Tompkins	*	*	*
Ulster	*	*	*
Warren	*	*	*
Washington	*	*	*
Wayne	*	*	*
Westchester	9	1.0	0.9
Wyoming	*	*	*
Yates	*	*	*
Bronx	24	1.7	1.6
Kings	50	1.9	1.9
New York	26	1.6	1.5
Queens	47	2.0	1.9
Richmond	9	1.8	1.7
New York City	155	1.8	1.8
Rest of State	155	1.4	1.3
STATEWIDE	312	1.6	1.5

Age-adjusted rates are helpful in comparing counties with different age distributions

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury prevention/

 $<sup>\</sup>ensuremath{^{\ast}}\xspace \ensuremath{\text{Data}}$  based on three year totals less than six are not reported

 $<sup>\</sup>hbox{**Caution: Rates calculated using frequencies of less than 20 (three year total) are unstable} \\$ 

### **Incidence of Pedestrian-Traffic Injury Hospitalizations**

### Mean Annual Frequency and Rate by County New York State Residents, 2012-2014

County	Mean Annual Frequency	Crude Rate / 100,000 Residents	Age- Adjusted Rate / 100,000 Residents
Albany	26	8.6	8.2
Allegany	*	*	*
Broome	16	7.9	7.6
Cattaraugus	5	5.9**	6.3**
Cayuga	4	4.6**	4.0**
Chautauqua	5	3.8**	3.7**
Chemung	4	4.1**	3.9**
Chenango	*	*	*
Clinton	*	*	*
Columbia	4	5.9**	6.0**
Cortland	3	6.1**	6.5**
Delaware	*	*	*
Dutchess	27	9.1	8.8
Erie	83	9.0	8.8
Essex	*	*	*
Franklin	*	*	*
Fulton	2	3.7**	4.4**
Genesee	*	*	*
Greene	3	6.2**	6.1**
Hamilton	0	0.0**	0.0**
Herkimer	3	4.7**	4.3**
Jefferson	3	2.5**	2.8**
Lewis	*	*	*
Livingston	2	3.6**	3.3**
Madison	3	3.7**	3.3**
Monroe	60	8.1	7.9
Montgomery	2	4.7**	4.0**
Nassau	307	22.7	22.2
Niagara	14	6.4	6.5
Oneida	13	5.7	5.6
Onondaga	34	7.3	7.3
Ontario	4	3.7**	3.3**
Orange	21	5.7	5.8

County	Mean Annual Frequency	Crude Rate / 100,000 Residents	Age- Adjusted Rate / 100,000 Residents
Orleans	*	*	*
Oswego	6	4.9**	5.0**
Otsego	*	*	*
Putnam	4	4.0**	4.0**
Rensselaer	7	4.6	4.6
Rockland	35	11.0	10.9
St. Lawrence	*	*	*
Saratoga	8	3.7	3.5
Schenectady	16	10.1	10.0
Schoharie	*	*	*
Schuyler	*	*	*
Seneca	*	*	*
Steuben	2	2.4**	2.2**
Suffolk	192	12.8	12.4
Sullivan	8	10.5	10.5
Tioga	*	*	*
Tompkins	3	2.9**	2.9**
Ulster	15	8.1	8.2
Warren	*	2.6	2.4
Washington	3	4.2**	5.0**
Wayne	5	5.8**	6.2**
Westchester	125	12.9	12.4
Wyoming	*	*	*
Yates	*	*	*
Bronx	383	26.9	27.2
Kings	572	22.1	22.3
New York	315	19.4	19.1
Queens	505	22.0	21.1
Richmond	156	33.0	33.0
New York City	1,931	23.0	22.8
Rest of State	1,095	9.7	9.5
STATEWIDE	3,027	15.4	14.9

Age-adjusted rates are helpful in comparing counties with different age distributions

Source: NYSDOH, Bureau of Occupational Health and Injury Prevention

www.health.ny.gov/prevention/injury prevention/

 $<sup>\</sup>ensuremath{^{\ast}}\xspace \ensuremath{\text{Data}}$  based on three year totals less than six are not reported

 $<sup>\</sup>hbox{**Caution: Rates calculated using frequencies of less than 20 (three year total) are unstable} \\$ 

### Incidence of Pedestrian-Traffic Injury Emergency Department (ED)<sup>†</sup> Visits

### Mean Annual Frequency and Rate by County New York State Residents, 2012-2014

			Age-
	Mean	Crude Rate /	Adjusted
County	Annual	100,000	Rate /
	Frequency	Residents	100,000
			Residents
Albany	151	49.3	49.7
Allegany	10	21.5	23.1
Broome	67	33.9	35.1
Cattaraugus	22	28.3	30.1
Cayuga	16	20.6	20.5
Chautauqua	52	39.1	40.9
Chemung	27	30.9	31.9
Chenango	10	20.2	22.8
Clinton	16	20.0	19.6
Columbia	9	14.4	14.6
Cortland	6	11.5**	11.5**
Delaware	7	15.6	16.0
Dutchess	86	28.8	29.7
Erie	452	49.1	50.0
Essex	5	12.9**	13.9**
Franklin	11	21.3	21.0
Fulton	15	27.5	29.0
Genesee	17	29.1	29.5
Greene	9	17.9	17.8
Hamilton	*	*	*
Herkimer	13	20.3	22.4
Jefferson	31	25.9	25.6
Lewis	3	11.0**	12.4**
Livingston	11	16.5	16.5
Madison	9	12.9	13.3
Monroe	321	42.9	43.5
Montgomery	19	38.1	40.5
Nassau	717	53.0	53.9
Niagara	89	41.4	43.2
Oneida	81	34.9	35.5
Onondaga	150	32.0	33.7
Ontario	23	21.4	23.2
Orange	165	43.9	44.1

County	Mean Annual Frequency	Crude Rate / 100,000 Residents	Age- Adjusted Rate / 100,000 Residents
Orleans	5	11.8**	12.5**
Oswego	32	26.4	25.3
Otsego	9	15.2	16.3
Putnam	22	22.1	22.5
Rensselaer	61	38.4	40.0
Rockland	146	45.5	46.5
St. Lawrence	23	20.6	20.6
Saratoga	42	18.6	18.5
Schenectady	90	58.1	60.2
Schoharie	3	9.4**	9.6**
Schuyler	2	10.8**	9.7**
Seneca	5	15.2**	15.0**
Steuben	23	23.3	24.4
Suffolk	650	43.3	44.4
Sullivan	26	34.0	35.1
Tioga	5	10.0**	11.2**
Tompkins	27	25.7	23.5
Ulster	50	27.8	27.9
Warren	13	19.4	21.6
Washington	12	18.6	20.4
Wayne	16	17.7	18.0
Westchester	564	58.2	59.5
Wyoming	9	20.9	21.1
Yates	4	14.5**	19.5**
Bronx	1,663	117.0	115.5
Kings	2,725	105.1	105.4
New York	1,173	72.1	71.2
Queens	2,157	93.9	93.9
Richmond	324	68.5	68.5
New York City	8,042	95.6	95.4
Rest of State	4,460	39.7	40.5
STATEWIDE	12,506	63.6	63.7

<sup>†</sup>The incidence of ED visits does not include patients who were subsequently admitted into the hospital.

Age-adjusted rates are helpful in comparing counties with different age distributions

<sup>\*</sup>Data based on three year totals less than six are not reported

<sup>\*\*</sup>Caution: Rates calculated using frequencies of less than 20 (three year total) are unstable