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Not-in-Traffic Surveillance: Fatality and Injury Statistics in Nontraffic Crashes, 2008 to 2011

Summary

Based on the Not-in-Traffic Surveillance (NiTS) system, on an average, 1,621 people were killed each year in nontraffic motor vehicle crashes during the four year period, 2008 to 2011. About 39 percent of these people were nonoccupants such as pedestrians and bicyclists. Additionally, on an average, 91,000 people were injured in these crashes each year, of which 35 percent were nonoccupants.

Introduction

The nontraffic motor vehicle crashes are a class of crashes that occur off the public traffic ways. These crashes, subsequently referred to as "nontraffic crashes," are mostly single-vehicle crashes on private roads, two-vehicle crashes in parking facilities, or collisions with pedestrians on driveways. Then there are also noncrash incidents such as a vehicle falling on a person underneath or unintentional carbon monoxide poisoning. Both nontraffic crashes and noncrash incidents have the potential to kill or injure people. Nevertheless, the information on neither of these was available until 2007, when Congress required National Highway Traffic Safety Administration (NHTSA) to start collecting and maintaining information pertinent to these events. Complying with the directive, the NHTSA designed and implemented a virtual data collection system, NiTS that would provide counts and details of the fatalities and injuries to people involved in nontraffic crashes and noncrash incidents. This Crash•Stats focuses only on nontraffic crashes and presents some salient statistics about occupants and nonoccupants killed and injured in such crashes during 2008–2011.

The statistics reported in this statistical summary are based on the NiTS data 2008–2011. Since a complete record of all nontraffic crash fatalities from States and police jurisdictions is not available, adjusted weights have been used to obtain national estimates. The background and details about collection of the NiTS data and the adjustment of weights adopted from the General Estimates System (GES) are provided in the appendix.

People Killed in Nontraffic Crashes During 2008 to 2011

The NiTS data show that during the four year period 2008–2011, an estimated total of 6,483 people were killed in nontraffic crashes (Table 1.) This amounts to an average of 1,621 people killed each year in such crashes. Nonoccupants accounted for 39 percent of these people—41 percent of whom were struck by forward-moving vehicles and 37 percent had been hit by backing vehicles. Rollaway vehicles (unattended with no driver in control) killed a total of 370

Table 1. Nonoccupants and Occupants Killed in Nontraffic Crashes During 2008 to 2011

Occupant Status of Persons	Killed By	2008		2009		2010		2011		Total	Average	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent		Number	Percent
Nonoccupants	Forward Moving Vehicles	251	40%	275	48%	223	35%	280	42%	1,029	257	41%
	Backing Vehicles	274	44%	196	34%	267	41%	189	28%	926	232	37%
	Rollaway Vehicles (unattended with no driver in control)	46	7%	64	11%	116	18%	144	21%	370	93	15%
	Other (stopped, disabled, or parked vehicles)	55	9%	40	7%	38	6%	59	9%	192	48	8%
	Subtotal (39%)	**626**		**575**		**644**		**672**		**2,517**	**629**	
Occupants	Single-Vehicle Crashes	968	99%	871	99%	1,026	96%	1,025	99%	3,890	973	98%
	Multiple-Vehicle Crashes	11	1%	10	1%	41	4%	13	1%	75	19	2%
	Subtotal (61%)	**979**		**881**		**1,067**		**1,038**		**3,965**	**991**	
Total (100%)		**1,605**		**1,456**		**1,711**		**1,710**		**6,483**	**1,621**	

Data source: NiTS 2008–2011

nonoccupants during the four-year period. This made up an average of about 15 percent of the nonoccupants killed in nontraffic crashes each year. A vast majority (98% on average) of the 3,965 occupants killed during this period were victims of single-vehicle nontraffic crashes. Additionally, on average, multiple-vehicle nontraffic crashes killed about 2 percent of the occupants each year.

People Injured in Nontraffic Crashes During 2008–2011

The statistics in Table 2 show that over the four-year period (2008–2011), an estimated total of 363,000 people were injured in nontraffic crashes. This amounts to an average of 91,000 people injured each year in such crashes. Of all the people injured in nontraffic crashes, 35 percent were nonoccupants—50 percent of whom were injured by forward-moving vehicles and 41 percent by backing vehicles. On average, rollaway vehicles injured about 2,000 nonoccupants each year. This made up an average of about 6 percent of the injured nonoccupants. The majority of the occupants (68% on average) injured in nontraffic crashes were victims of single-vehicle crashes and the remaining 32 percent injured occupants had been involved in multiple-vehicle crashes.

Table 2. Nonoccupants and Occupants Injured in Nontraffic Crashes During 2008 to 2011

Occupant Status of Persons	Injured By	2008		2009		2010		2011		Total	Average	
		Number†	Percent*	Number†	Percent*	Number†	Percent*	Number†	Percent*		Number†	Percent*
Nonoccupants	Forward Moving Vehicles	16,000	48%	14,000	47%	17,000	52%	16,000	51%	63,000	16,000	50%
	Backing Vehicles	13,000	40%	13,000	43%	14,000	42%	12,000	39%	52,000	13,000	41%
	Rollaway Vehicles (unattended with no driver in control)	3,000	8%	1,000	3%	1,000	4%	3,000	8%	8,000	2,000	6%
	Other (stopped, disabled, or parked vehicles)	1,000	4%	2,000	7%	1,000	2%	1,000	2%	5,000	1,000	4%
	Subtotal (35%)	**33,000**		**30,000**		**32,000**		**32,000**		**127,000**	**32,000**	
Occupants	Single-Vehicle Crashes	48,000	75%	42,000	68%	31,000	63%	40,000	66%	161,000	40,000	68%
	Multiple-Vehicle Crashes	17,000	25%	20,000	32%	18,000	37%	20,000	34%	75,000	19,000	32%
	Subtotal (65%)	**65,000**		**62,000**		**49,000**		**60,000**		**236,00**	**59,000**	
Total (100%)		**98,000**		**92,000**		**82,000**		**92,000**		**363,000**	**91,000**	

† Estimates rounded off to the nearest thousand; the column entries may not sum to the totals shown.
*Percentages calculated prior to rounding off.
Data source: NiTS 2008–2011

Appendix: NiTS — Background, Data Collection, and Adjustment Factors

In 2007, Congress required NHTSA to begin collecting and maintaining information about fatalities and injuries to people in crashes that occur off the public traffic ways, as well as in noncrash incidents such as a vehicle falling on a person underneath or unintentional carbon monoxide poisoning. This was made mandatory under Public Law Number 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and under Public Law Number 110-189, the Cameron Gulbransen Kids Transportation Safety Act of 2007 (K.T. Safety Act). To comply with this directive, NHTSA designed and implemented the Not-in-Traffic Surveillance system. This is a virtual data collection system designed to provide counts and details regarding fatalities and injuries that occur to people in nontraffic crashes and noncrash incidents.

NHTSA considered several sources to collect NiTS relevant information. These included police reports, trauma registries and hospital records, insurance company data, and newspaper stories. An assessment of the sources indicated that the most appropriate source of the data depended upon whether the event was a nontraffic crash or noncrash incident and whether the crash outcome was a fatality or nonfatal injury. Accordingly, the NiTS system was developed as a virtual system comprised of four major components. The first component consists of the database of fatalities and injuries in nontraffic crashes. This component is primarily based on police reports. The second component is a database of noncrash fatalities obtained from death certificates. The third component is a database of noncrash injuries, which is based on a nationally representative sample of emergency department records. The fourth component is a collection of detailed investigations of particular types of incidents conducted by NHTSA under its Special Crash Investigations (SCI) program. More information about the SCI is available on the Web site: www.nhtsa.dot.gov/portal/site/nhtsa.

This Crash•Stats is based on the first component, i.e. the information about nontraffic crash fatalities and injuries from police reports. NHTSA receives these reports during each year through its existing crash data collection infrastructure. Nevertheless, NiTS does not contain a complete record of all nontraffic crash fatalities from all States or from a sample of police jurisdictions. To account for this incom-

pleteness in the NiTS system, NHTSA derives adjustment factors from the difference between the expected number of fatalities (based upon death certificates) and the number of fatalities registered in the NiTS system. For nontraffic injury data, NHTSA relies on the State Data Program and uses information from States that collect information on both traffic and nontraffic crashes causing injuries. The adjustment factors for the nontraffic injury data are derived from the difference between the expected and observed number of injuries in nontraffic crashes. The adjustment factors derived for fatalities and injuries are used to obtain national estimates related to nontraffic crashes. The information about the individual nontraffic crashes occurring in a year and the corresponding adjustment factors (weights) is compiled into the NiTS database. This database is available in SAS format. Additional information about the definitions and attributes of the NiTS variables is available in the *NiTS Analytical User's Manual 2008–2011*.

Note:

In 2007, the coding for NiTS nontraffic crashes was done based upon a small set of variables, while starting in 2008, the coding is being done using data elements that are similar to those used in the National Automotive Sampling System—General Estimates System (NASS-GES). For this reason, the estimates presented in this Crash•Stats may not be compared with the similar estimates reported in 2007. Regarding backovers (i.e., backing vehicle crashes), although the same definition was used in NiTS 2008–2011 as in NiTS 2007, different attributes were used in 2008–2011 to determine a backing maneuver.

For More Information

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