



Non-Traffic Surveillance: Fatality and Injury Statistics in Non-Traffic Crashes in 2015

Summary

Based on the Non-Traffic Surveillance (NTS) system, an estimated 2,125 people were killed in non-traffic motor vehicle crashes in 2015. Over one third (39%) of these people were nonoccupants such as pedestrians and bicyclists. Additionally, an estimated 95,000 people were injured in these crashes during 2015, of which about one-third (31%) were nonoccupants.

Introduction

Non-traffic motor vehicle crashes are a class of crashes that occur off the public trafficways. These crashes, subsequently referred to as “non-traffic crashes,” are mostly single-vehicle crashes on private roads, two-vehicle crashes in parking facilities, or collisions with pedestrians in driveways. In addition, there are non-traffic incidents such as a vehicle falling on a person underneath or an unintentional carbon monoxide poisoning inside the vehicle. Both non-traffic crashes and non-traffic incidents have the potential to cause fatalities and injuries to people. Nevertheless, the information on either of these was not available until 2007, when Congress required the National Highway Traffic Safety Administration to start collecting and maintaining information pertinent to these events. Complying with the directive, NHTSA designed and implemented a virtual data collection system, Non-Traffic Surveillance, previously called Not-in-Traffic Surveillance, to provide counts and details of fatalities and injuries to people involved in non-traffic crashes and non-traffic incidents. This issue of Crash•Stats focuses only on non-traffic crashes and presents some salient statistics about occupants and nonoccupants killed and injured in such crashes in 2015.

The statistics reported in this summary are based on the NTS data for 2015. Since a complete record of all non-traffic crash fatalities and injuries from States and police jurisdictions is not available, adjusted weights

have been used to obtain national estimates. The background and details about collection of NTS data and the adjustment of weights adopted from the General Estimates System (GES) are provided in the Appendix.

People Killed in Non-Traffic Crashes in 2015

The NTS data show that during 2015, an estimated 2,125 people were killed in non-traffic crashes (Table 1.) Of these, 39 percent were nonoccupants such as pedestrians and bicyclists and 61 percent were occupants. Among nonoccupants, 44 percent were struck by vehicles moving forward and 34 percent by vehicles backing up. Rollaway vehicles (unattended with no driver in control) killed another 142 nonoccupants that account for 17 percent of all the nonoccupants killed in non-traffic crashes. The majority (97%) of the 1,298 occupants killed non-traffic crashes during 2015 were victims of single-vehicle non-traffic crashes. Additionally, 3 percent of the occupants were killed in multiple-vehicle non-traffic crashes.

Table 1. Nonoccupants and Occupants Killed in Non-Traffic Crashes From 2012 to 2014

Occupant Status of People	Killed By	2015	
		Number [†]	Percent
Nonoccupants	Forward Moving Vehicles	366	44%
	Backing Vehicles	284	34%
	Rollaway Vehicles (unattended with no driver in control)	142	17%
	Other (stopped, disabled, or parked vehicles)	35	4%
	Subtotal (39%)	827	100%
Occupants	Single-Vehicle Crashes	1,265	97%
	Multiple-Vehicle Crashes	32	3%
	Subtotal (61%)	1,298	100%
Total (100%)		2,125	100%

[†]Estimated number

Data source: NTS 2015

People Injured in Non-Traffic Crashes in 2015

The statistics in Table 2 show that during 2015, an estimated 95,000 people were injured in non-traffic crashes. Of these, 31 percent were nonoccupants – 51 percent of whom were injured by vehicles moving forward and 40 percent by vehicles backing up. Rollaway vehicles injured about 2,000 nonoccupants who made up about 7 percent of the injured nonoccupants. Most occupants (60%) injured in non-traffic crashes were victims of single-vehicle crashes and the remaining 40 percent were injured in multiple-vehicle crashes.

Table 2. Nonoccupants and Occupants Injured in Non-Traffic Crashes in 2015

Occupant Status of People	Injured By	2015	
		Number [†]	Percent [*]
Nonoccupants	Forward Moving Vehicles	15,000	51%
	Backing Vehicles	12,000	40%
	Rollaway Vehicles (unattended with no driver in control)	2,000	17%
	Other (stopped, disabled, or parked vehicles)	1,000	2%
	Subtotal (31%)	29,000	100%
Occupants	Single-Vehicle Crashes	40,000	60%
	Multiple-Vehicle Crashes	26,000	40%
	Subtotal (69%)	66,000	100%
Total (100%)		95,000	100%

[†]Estimates rounded to the nearest thousand; the column entries may not sum to the totals shown.

^{*}Percentages calculated prior to rounding.

Data source: NTS 2015

Appendix: NTS Background, Data Collection, and Adjustment Factors

In 2007, Congress required NHTSA to begin collecting and maintaining information about fatalities and injuries to people in non-traffic crashes (i.e., the crashes that occur off the public trafficways), as well as in non-traffic 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 (SAFE-TEA-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, now called Non-Traffic Sureveillance system. This is a virtual data collection system

designed to provide counts and details regarding fatalities and injuries that occur to people in non-traffic crashes and non-traffic incidents.

NHTSA uses several sources to collect information relevant to non-traffic crashes and non-traffic incidents. These sources include the police accident reports (PARs), trauma registries and hospital records, insurance companies' data, and newspaper stories. An assessment of the sources indicates that the most appropriate source of the data depended upon whether the event was a non-traffic crash or non-traffic incident and whether the crash outcome was a fatality or nonfatal injury. Accordingly, NTS was developed as a virtual system comprised of four major components. The first component of this system consists of the database of fatalities and injuries in non-traffic crashes. This component is primarily based on the PARs. The second component is a database of non-crash fatalities obtained from the death certificates. The third component is a database of non-crash 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 at www.nhtsa.gov/research-data/special-crash-investigations-sci. The statistics reported in this Crash•Stats are based on the first component, i.e., the information about non-traffic crash fatalities and injuries acquired from the PARs. NHTSA receives these reports every year through its existing crash data collection infrastructure. Nevertheless, NTS does not contain a complete record of all non-traffic crash fatalities from all States or from a sample of police jurisdictions. To account for this inherent incompleteness in the NTS data, NHTSA derives adjustment factors to arrive at national estimates related to non-traffic crashes. These factors are derived from the difference between the expected number of fatalities (based upon death certificates) and the number of fatalities registered in the NTS system. For non-traffic injury data, NHTSA relies on the States' data programs and uses information from all those States that collect information on both traffic and non-traffic crashes causing injuries. The adjustment factors for the non-traffic injury data are derived from the difference between the observed and expected number of injuries in non-traffic crashes.

The adjustment factors derived for fatalities and injuries are used to adjust weights adopted from GES. The

resulting adjusted weights applied to NTS data provide national estimates for non-traffic crashes. The information about the individual non-traffic crashes occurring in a year together with the corresponding NTS-adjusted weights is compiled into the NTS database. This database is available in the SAS format. Additional information about the definitions and attributes of the NTS variables is available in the NTS Analytical User's Manual 2008-2015 (to be made available at <https://crashstats.nhtsa.dot.gov/#/DocumentTypeList/>).

Note: In 2007, the coding for non-traffic crashes under NTS was done based upon a small set of variables. Starting in 2008, the coding began using data elements 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 (backing-vehicle crashes), although the same definition was used in NTS 2015 as in 2007, different attributes were used in 2015 to determine a backing maneuver.

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