



Distracted Driving 2009

Highlights

- In 2009, 5,474 people were killed on U.S. roadways and an estimated additional 448,000 were injured in motor vehicle crashes that were reported to have involved distracted driving (FARS and GES).
- Of those people killed in distracted-driving-related crashes, 995 involved reports of a cell phone as a distraction (18% of fatalities in distraction-related crashes).
- Of those injured in distracted-driving-related crashes, 24,000 involved reports of a cell phone as a distraction (5% of injured people in distraction-related crashes).
- Sixteen percent of fatal crashes in 2009 involved reports of distracted driving.
- Twenty percent of injury crashes in 2009 involved reports of distracted driving.
- The age group with the greatest proportion of distracted drivers was the under-20 age group – 16 percent of all drivers younger than 20 involved in fatal crashes were reported to have been distracted while driving.
- Of those drivers involved in fatal crashes who were reportedly distracted, the 30- to 39-year-olds had the highest proportion of cell phone involvement.

Methodology

The data sources include NHTSA's Fatality Analysis Reporting System (FARS) and National Automotive Sampling System (NASS) General Estimates System (GES). FARS annually collects fatal crash data from all 50 States, the District of Columbia, and Puerto Rico, and is a census of all fatal crashes that occur on the Nation's roadways. NASS GES contains data from a nationally representative sample of police-reported crashes of all severities, including those that result in death, injury, or property damage. Data presented from NASS GES are estimates and are used to describe police-

reported crashes that occur on the Nation's roadways. The national estimates produced from GES data are based on a probability sample of crashes—not a census of all crashes—and hence are subject to sampling errors.

As defined in the *Overview of the National Highway Traffic Safety Administration's Driver Distraction Program* (DOT HS 811 299), "distraction" is a specific type of inattention that occurs when drivers divert their attention from the driving task to focus on some other activity instead. It is worth noting that *distraction* is a subset of *inattention* (which also includes fatigue, physical conditions of the driver, and emotional conditions of the driver).

There has been a revision in NHTSA's classification of *distracted driving* since the September 2009 Research Note, *An Examination of Driver Distraction as Recorded* in NHTSA Databases (DOT HS 811 216). With this change, there will be fewer crashes, fatalities and injuries that reportedly involve driver distraction than would have been reported with the previous definition. For a full explanation of the change and the corresponding coding changes within NHTSA databases, please see Appendix A.

There are inherent limitations in the data for distracted-driving-related crashes and the resulting injuries and fatalities. These limitations are being addressed through efforts in and out of NHTSA as detailed in the *Overview of NHTSA's Driver Distraction Program*. Appendix B describes limitations in the distracted-driving data. Appendix C discusses the specific coding for distracted driving data from the National Motor Vehicle Crash Causation Survey (NMVCCS).

Presentation of Data

Fatalities in Crashes With Driver Distraction

In 2009, there were 30,797 fatal crashes in the United States, which involved 45,230 drivers. In those crashes, 33,808 people were killed. Distraction was reported for 11 percent (5,084) of the drivers involved in fatal crashes. In these crashes reported to have involved some form of distraction, 5,474

fatalities (16% of overall fatalities) occurred. Table 1 provides information about fatal crashes with reported distraction from 2005 through 2009.

The proportion of fatalities reportedly associated with driver distraction increased from 10 percent in 2005 to 16 percent in 2009. During that time, fatal crashes with reported driver distraction also increased from 10 percent to 16 percent.

As reported for 2009, 4,898 fatal crashes occurred that involved distraction, which includes single-vehicle crashes and multivehicle crashes. For single-vehicle crashes, the driver was reported as distracted and thus the crash was reported as a distracted-driving crash. However, in multivehicle crashes, the crash was reported as a distracted-driving crash if *at least* one driver was reported as distracted. In some of these multivehicle crashes, multiple drivers were reported as distracted. In 2009, 5,084 drivers were reported as distracted in the 4,898 fatal crashes involving distraction. The portion of drivers reportedly distracted at the time of the fatal crashes increased from 7 percent in 2005 to 11 percent in 2009.

In 2009, 867 fatal crashes were reported to have involved cell phones as distraction (18% of all fatal distracted-driving crashes). For these crashes, the police reported that the cell phone was either in use at the time of the crash or was in the presence of the driver at the time of the crash. Cell phones were reported as distraction for 20 percent of the distracted drivers in fatal crashes. A total of 995 people died in fatal crashes that involved reports of a cell phone as a distraction.

Most of the distracted-driving-related fatalities (84%) were associated with the *general* classification of operating the vehicle in a careless or inattentive manner (could include cell phones [for States without cell phone identification on the reporting form], eating, talking to passenger, looking outside, etc.). It should be noted that the distracted-driving-related crashes and fatalities may be associated with multiple categories of distraction. For instance, some of the fatalities may be associated with both cell phone use and operating a vehicle in a careless or inattentive manner. Specifically related to cell phone involvement, the specific activity with the cell phone (talking, dialing, texting, etc.) is not known.

Table 1
Fatal Crashes, Drivers in Fatal Crashes, and Fatalities in Crashes, by Year

Year	Overall			Distraction		
	Crashes	Drivers	Fatalities	Crashes	Drivers	Fatalities
2005	39,252	59,220	43,510	4,026 (10%)	4,217 (7%)	4,472 (10%)
2006	38,648	57,846	42,708	5,245 (14%)	5,455 (9%)	5,836 (14%)
2007	37,435	56,019	41,259	5,329 (14%)	5,552 (10%)	5,917 (14%)
2008	34,172	50,416	37,423	5,307 (16%)	5,477 (11%)	5,838 (16%)
2009	30,797	45,230	33,808	4,898 (16%)	5,084 (11%)	5,474 (16%)

Source: NCSA, FARS 2005-2008 (Final), 2009 (ARF)

Table 2 describes 2009 fatal crash data by age of drivers with reported distracted-driving behavior and the types of vehicles driven. The age group with the greatest proportion of distracted drivers in fatal crashes was the under-20 age group – 16 percent of all under-20 drivers in fatal crashes were reported to have been distracted while driving. The age group with the next greatest proportion was 20- to 29-year-old drivers – 13 percent of all 20- to 29-year-old drivers in fatal crashes were reported to have been distracted. Light-truck drivers and motorcyclists had the greatest percentage of total drivers reported as distracted at the time of the fatal crashes (12% each). Bus drivers had the smallest percentage (6%) of total drivers involved in fatal crashes that were reported as distraction-related.

Of those drivers reportedly distracted during a fatal crash, the 30- to 39-year-old drivers were the group with the greatest proportion distracted by cell phones. Cell phone distraction was reported for 24 percent of the 30- to 39-year-old distracted drivers in fatal crashes. As for the under-20 age group drivers involved in fatal crashes, cell phone distraction was reported for 22 percent of the distracted drivers.

Table 2
Drivers Involved in Fatal Crashes by Age and Vehicle Type, 2009

	Total Drivers	Distracted Drivers	Drivers With Cell Phone* (% of Distracted Drivers)
Total	45,230	5,084 (11%)	1,006 (20%)
Drivers by Age Group			
Under 20	3,967	619 (16%)	138 (22%)
20-29	10,719	1,378 (13%)	293 (21%)
30-39	7,633	832 (11%)	196 (24%)
40-49	7,930	811 (10%)	161 (20%)
50-59	6,559	631 (10%)	124 (20%)
60-69	3,968	367 (9%)	56 (15%)
70+	3,778	408 (11%)	37 (9%)
Drivers by Vehicle Type			
Passenger Car	18,279	2,044 (11%)	386 (19%)
Light Truck	17,822	2,117 (12%)	475 (22%)
Motorcycle	4,593	562 (12%)	63 (11%)
Large Truck	3,187	257 (8%)	75 (29%)
Bus	221	14 (6%)	3 (21%)

Source: NCSA, FARS 2009 (ARF) *The police indicated that the driver was using a cell phone or a cell phone was in the presence of the driver at the time of the crash.

People Injured in Crashes Involving Driver Distraction

In 2009, an estimated 2,217,000 people were injured in motor vehicle traffic crashes. The number of people injured during a crash with reported distraction in 2009 was estimated at 448,000 (20% of all the injured people). Table 3 provides information about people injured in crashes with reported distraction from 2005 through 2009.

In 2009, an estimated 24,000 people were injured in crashes involving cell phones as a distraction. These injured people only comprise 5 percent of all people injured in distraction-related crashes. Most of the people injured in distracted-driving-related crashes were involved in crashes in which distraction or inattention was reported without known details of the specific activity (43%). Note that there could be more than one distraction associated with the crashes and resulting injured people.

The estimated number of people injured in crashes involving distracted driving fell by 26 percent from an estimated 604,000 in 2005 to 448,000 in 2009. The estimated number of people injured fell 18 percent during the same time period.

Table 3
Estimated Number of People Injured in Crashes and People Injured in Crashes Involving Distraction

Year	Overall	Distraction	
		Estimate	Percentage of Total
2005	2,699,000	604,000	22%
2006	2,575,000	503,000	20%
2007	2,491,000	448,000	18%
2008	2,346,000	466,000	20%
2009	2,217,000	448,000	20%

Source: NCSA, GES 2005-2009

Crashes of All Severity

Table 4 provides information for all police-reported crashes from 2005 through 2009 including fatal crashes, injury crashes, and property-damage-only crashes for the year.

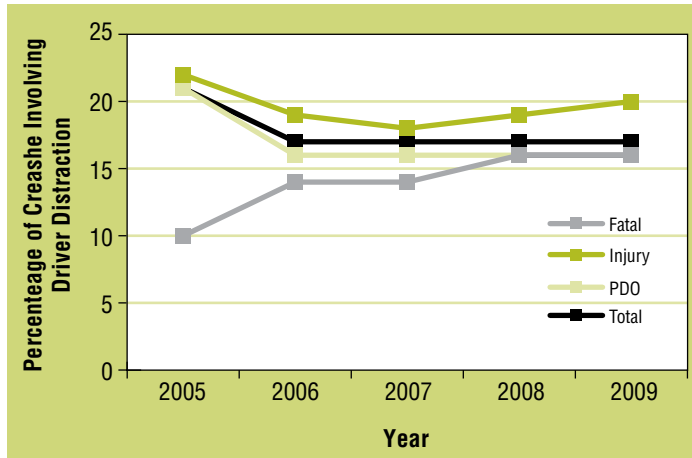
Table 4
Motor Vehicle Traffic Crashes and Crashes Involving Driver Distraction by Year

Crash by Crash Severity		Overall Crashes	Crashes Involving Distraction
2005	Fatal Crash	39,252	4,026 (10%)
	Injury Crash	1,816,000	399,000 (22%)
	PDO Crash	4,304,000	900,000 (21%)
	Total	6,159,000	1,303,000 (21%)
2006	Fatal Crash	38,648	5,245 (14%)
	Injury Crash	1,746,000	339,000 (19%)
	PDO Crash	4,189,000	676,000 (16%)
	Total	5,973,000	1,020,000 (17%)
2007	Fatal Crash	37,435	5,329 (14%)
	Injury Crash	1,711,000	309,000 (18%)
	PDO Crash	4,275,000	689,000 (16%)
	Total	6,024,000	1,003,000 (17%)
2008	Fatal Crash	34,172	5,307 (16%)
	Injury Crash	1,630,000	314,000 (19%)
	PDO Crash	4,146,000	650,000 (16%)
	Total	5,811,000	969,000 (17%)
2009	Fatal Crash	30,797	4,898 (16%)
	Injury Crash	1,517,000	307,000 (20%)
	PDO Crash	3,957,000	647,000 (16%)
	Total	5,505,000	959,000 (17%)

Source: NCSA, FARS 2005-2008 (Final), 2009 (ARF); GES 2005-2009
PDO – Property Damage Only

Figure 1 provides a graphical representation of the percentage of distracted driving crashes for a particular severity from 2005 through 2009. This graph illustrates any fluctuation during the five-year period. From 2005 to 2009 the percentage of fatal crashes involving distraction increased. The percentage of injury crashes dropped some initially, but has since increased again. Property-damage-only crashes had a high year in 2005, but have remained stable in the four subsequent years.

Figure 1
Crashes Involving Driver Distraction by Crash Severity



References

Ascone, D., Lindsey, T., & Varghese, C. (2009, September). An Examination of Driver Distraction as Recorded in NHTSA Databases. DOT HS 811 216. Washington, DC: National Highway Traffic Safety Administration. Available at <http://www-nrd.nhtsa.dot.gov/Pubs/811216.pdf>.

NHTSA. (2008, July). National Motor Vehicle Crash Causation Survey: Report to Congress. DOT HS 811 059. Washington, DC: National Highway Traffic Safety Administration. Available at <http://www-nrd.nhtsa.dot.gov/Pubs/811059.PDF>.

NHTSA. (2010, April). Overview of the National Highway Traffic Safety Administration's Driver Distraction Program. DOT HS 811 299. Washington, DC: National Highway Traffic Safety Administration. Available at http://www.distraction.gov/files/dot/6835_DriverDistractionPlan_4-14_v6_tag.pdf.

Appendix A

Using this definition of distraction, FARS and GES were accessed to retrieve crashes that indicated driver distraction. For FARS data detailing fatal crashes, driver distraction was captured as a driver-related factor. Table A shows the attributes (specific activities) that NHTSA includes as distracted driving in the FARS data.

Table A
Attributes for Driver-Related Factor in the FARS Database

Attribute	Examples
Operating the Vehicle in Careless or Inattentive Manner	Includes use of car/cell phones, text messaging, fax, GPS/head-up display systems, DVD player, etc.; driver distracted by children; driver lighting cigarette; operating or adjusting radio and other accessories; reading, talking, daydreaming, eating, looking for an address, crash in next lane, automated highway sign, approaching emergency vehicle, using electric razor, applying cosmetics, painting nails, etc.
Cellular Telephone Present in Vehicle	Includes hand-held and hands-free cellular telephones. 1991-2001: Includes the use of or presence of a phone. 2001 and later: Includes only presence in vehicle
Cellular Phone in Use in Vehicles	Includes hand-held and hands-free cellular telephone
Computer/Fax Machines/Printers	Laptop/notebook computers; PDAs; fax machines
Onboard Navigation System	
Two-Way Radio	
Head-up Display	

The GES database contains a specific variable, "Driver Distracted By," which contains attributes that NHTSA includes for determining the number of non-fatal crashes involving reports of distracted driving. Table B shows the attributes (specific activities) that NHTSA includes as distracted driving for GES data.

Table B
Attributes for Driver Distracted By in the GES Database

Attribute	Examples
By other occupant	Distracted by occupant in driver's vehicle; includes conversing with or looking at other occupant
By moving object in vehicle	Distracted by moving object in driver's vehicle; includes dropped object, moving pet, insect, cargo.
While talking or listening to cellular phone	Talking or listening on cellular phone
While dialing cellular phone	Dialing or text messaging on cell phone or any wireless email device
Other cellular phone-related (2007 and later)	Used when the police report indicated the driver is distracted from the driving task due to cellular phone involvement, but none of the specified codes are applicable (reaching for cellular phone, etc.). This code is also applied when specific details regarding cellular phone distraction / usage are not provided.
While adjusting climate controls	Adjusting air conditioner or heater
While adjusting radio, cassette or CD	Adjusting radio, cassette, or CD in vehicle
While using other devices/controls integral to vehicle	Adjusting windows, door locks, rear view manual, seat, steering wheel, adjusting seat belts, etc.
While using or reaching for device/object brought into vehicle	Radar detector, CDs, razors, portable CD player, headphones, cigarette lighter, etc.
Distracted by outside person, object, or event	Animals on roadside or previous crash. Do not use when driver has recognized object/event and driver has taken evasive action
Eating or drinking	Eating or drinking or actively related to these actions
Smoking-related	Smoking or involved in activity related to smoking
Distraction/inattention, details unknown	Distraction and/or inattention are noted on the PAR but the specifics are unknown
Inattentive or lost in thought	Driver is thinking about items other than the driving task (e.g., daydreaming)
Other distraction	Details regarding the driver's distraction are known but none of the specified codes are applicable

Please note that in the Research Note titled *An Examination of Driver Distraction as Recorded in NHTSA Databases* (DOT HS 811 216), released in September 2009, the list of attributes/activities included as distracted driving was more inclusive than Tables A and B. After further discussion across NHTSA since the release of the previous Research Note, one attribute was removed from the list in FARS and one attribute was removed from the list in GES. In the FARS database, NHTSA will no longer include "emotional (depression, angry, disturbed)" as a driver-distraction. In the GES database, NHTSA will no longer include "looked, but did not see" as a driver-distraction. Table C shows the number of distracted-driving-related fatal crashes, distracted drivers in fatal crashes, and fatalities in distracted-driving crashes using this revised, current definition as well as the same categories of data had NHTSA not revised the definition.

Table C
Comparison of Fatal Crash Data for Current and Previous Definitions for Distraction

Year	Current Definition			Previous Definition		
	Distracted-Driving Crashes	Distracted-Driving Drivers	Distracted-Driving Fatalities	Distracted-Driving Crashes	Distracted-Driving Drivers	Distracted-Driving Fatalities
2005	4,026	4,217	4,472	4,117	4,309	4,572
2006	5,245	5,455	5,836	5,323	5,536	5,917
2007	5,329	5,552	5,917	5,398	5,623	5,988
2008	5,307	5,477	5,838	5,372	5,542	5,911
2009	4,898	5,084	5,474	4,963	5,150	5,549

Source: NCSA, FARS 2005-2008 (Final), 2009 (ARF)

Table D shows the number of people injured in crashes involving distraction, as is currently defined as well as what those figures would be using the previous definition.

Table D
Comparison of People Injured in Crashes Involving Distracted Driving for the Current and Previous Definitions For Distraction

Year	Current Definition	Previous Definition
2005	604,000	674,000
2006	503,000	565,000
2007	448,000	506,000
2008	466,000	515,000
2009	448,000	508,000

Source: GES 2005-2009

Table E gives a comparison of those data for the current and previous definitions for distraction for the number of crashes by crash severity. Again, the difference is because the current definition removed the attribute, “looked, but did not see.”

Table E
Comparison of Distraction Crashes, by Severity, for the Current and Previous Definitions for Distraction

Crash by Crash Severity		Current Definition	Previous Definition
2005	Fatal Crash	4,026	4,117
	Injury Crash	399,000	448,000
	PDO Crash	900,000	1,021,000
	Total	1,303,000	1,472,000
2006	Fatal Crash	5,245	5,323
	Injury Crash	339,000	381,000
	PDO Crash	676,000	769,000
	Total	1,020,000	1,156,000
2007	Fatal Crash	5,329	5,398
	Injury Crash	309,000	349,000
	PDO Crash	689,000	787,000
	Total	1,003,000	1,142,000
2008	Fatal Crash	5,307	5,372
	Injury Crash	314,000	350,000
	PDO Crash	650,000	745,000
	Total	969,000	1,100,000
2009	Fatal Crash	4,898	4,963
	Injury Crash	307,000	348,000
	PDO Crash	647,000	729,000
	Total	959,000	1,082,000

Source: NCSA, FARS 2005-2008 (Final), 2009 (ARF); GES 2005-2009; PDO – Property Damage Only

Appendix B

NHTSA recognizes that there are limitations to the collection and reporting of FARS and GES data with regard to driver distraction. The data for FARS and GES is based on police accident reports (PARs) and investigations that are conducted after the crash has occurred.

One significant challenge for collection of distracted driving data is the PAR itself. Police accident reports vary across jurisdictions, thus creating potential inconsistencies in reporting. Many variables on the police crash report are concrete across the jurisdictions, but distraction is not one of those variables. Some police crash reports identify distraction as a distinct reporting field, while others do not have such a field and identification of distraction is based upon the narrative portion of the report. The variation in reporting forms contributes to variation in the reported number of crashes involving distracted driving. Looking at distracted drivers involved in fatal crashes by State in 2009, the range is 0 percent to 50 percent. Looking at distracted drivers involved in crashes in GES (doesn't exclude fatal sample), the range is 1 percent to 33 percent, which is based on the weighted estimates. Any national or State count of distraction-involved crashes should be interpreted with this limitation in mind due to potential under-reporting in some States/primary sampling units and over-reporting in other States/primary sampling units.

The following are potential reasons for underreporting of distracted-driving-related crashes.

- There are negative implications associated with distracted driving—especially in conjunction with a crash. Survey research shows that self-reporting of negative behavior is lower than actual occurrence of that negative behavior. There is no reason to believe that self-reporting of distracted driving to a law enforcement officer would differ. The inference herein is that the reported driver distraction during crashes is lower than the actual occurrence.
- If a driver fatality occurs in the crash, law enforcement must rely on the crash investigation in order to report on whether driver distraction was involved. Law enforcement may not have information to indicate distraction. These investigations may rely on witness account and oftentimes these accounts may not be available either.

Also to be taken into consideration is the speed at which technologies are changing and the difficulty in updating the PAR to accommodate these changes. Without broad, sweeping changes to the PAR to incorporate new technologies and features of technologies, it is difficult to capture the data that involves interaction with these devices.

In the reporting of distracted-driving-related crashes, often-times external distractions are identified as a distinct type of distraction. Some of the scenarios captured under external distractions might actually be related to the task of driving (e.g. looking at a street sign). However, the crash reports may not differentiate these driving-related tasks from other external distractions (looking at previous crash or billboard). Currently, the category of external distractions is included in the counts of distracted-driving-related crashes.

Appendix C

The National Motor Vehicle Crash Causation Survey (NMVCCS) was conducted over a 3-year period and data was collected on about 6,500 crashes to assess the critical reason underlying the critical pre-crash event in the crash and also determine other factors associated with the linear causal chain of the crash.

Data regarding distracted driving from NMVCCS was presented in the September 2009 Research Note, *An Examination of Driver Distraction as Recorded in NHTSA Databases*, DOT HS 811 216 (Ascone, Lindsey, & Varghese, 2009).

Table F details the specific variables and attributes for identifying distracted driving in the NMVCCS database.



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Table F
NMVCCS Data

Critical Reason	Examples
Internal distraction	Reserved for crashes in which the driver fails to recognize a situation requiring a response because his/her attention is directed to some event, object, person, or activity inside the vehicle. Relevant examples include tuning the radio, adjusting the heat/cooling system, engaging in a conversation with a passenger, using a cell phone, retrieving fallen objects, reading books/magazines/maps/invoices, etc.
External distraction	Crashes in which the driver fails to recognize a situation requiring a response because his/her attention is directed to some event, object, person, or activity outside the vehicle. Relevant examples include searching for a street address, construction activity, looking at a building or scenery, looking at a sign, looking at a previous crash site, etc. Distractions are distinguished from inattention in that distractions induce the driver to focus attention on the distraction.
Inattention	Used when the driver fails to recognize a situation that demands a response because his/her attention has wandered from the driving task for some non-compelling reason. In this circumstance, the driver is typically focusing on internal thoughts (i.e., daydreaming, problem-solving, worrying about family problem, etc.) and not focusing attention on the driving task.
NMVCCS Data: Associated Factors: Interior Non-Driving Activity	
Looking at other occupants	Driver distracted from the driving task by looking at the movement or actions of other occupants in the vehicle
Dialing/hanging up phone	Driver distracted from the driving task as a result of dialing or hanging up a phone, adjusting phone controls, or attempting to retrieve voicemail messages during the pre-crash phase.
Adjusting radio/CD	Driver distracted from the driving task as a result of attempting to adjust the sound system controls
Adjusting other vehicle controls	Driver distracted as a result of adjusting heat, vent, air conditioning and other OEM or aftermarket controls
Retrieving object from floor	Driver distracted as a result of attempting to retrieve an object from the floor/seat. Does not relate to smoking/eating.
Retrieving object from other location	Driver distracted as a result of attempting to retrieve an object from other than the floor/seat. Does not include eating/smoking
Eating or drinking	Driver distracted as a result of activities related to eating or drinking
Smoking	Driver distracted by activities related to smoking
Reading Map/directions/news-paper	Driver distracted as a result of looking at a map, reading directions or a newspaper or some other material
Focused on other object	Driver distracted as a result of focusing on other object in vehicle
Text messaging	Driver distracted as a result of sending text messages
NMVCCS Data: Associated Factors: Conversing	
With passenger	Driver is conversing with at least one other passenger in the vehicle during pre-crash phase
On phone	Driver is conversing on a phone (including hands free phones) during pre-crash phase
On CB radio	Driver is conversing on a CB radio during pre-crash phase
Other	Driver is engaged in conversation, but either medium or context is not described
NMVCCS Data: Associated Factors: Exterior Non-Driving Activity	
Looking at previous crash	Driver removes focus from driving task to look at previous crash
Looking at other traffic	Driver removes focus from driving task to look at other traffic
Looking for address	Driver removes focus from driving task to look for a street address
Looking at outside person	Driver removes focus from driving task to look at outside person
Looking at building	Driver removes focus from driving task to look at a building
Unspecified outside focus	Driver removes focus from driving task to look outside
Looking at animal	Driver removes focus from driving task to look at an animal
NMVCCS Data: Associated Factors: Inattentive Driver Behavior (Thinking About)	
Personal problem	Used when the driver is thinking about a personal problem (work related, office related)
Family problem	Used when the driver is thinking about a family problem (within family or between family/non-family)
Financial problem	Used when the driver is thinking about a personal financial problem
Preceding argument	Driver is thinking about a preceding argument (may have occurred more than 12 hours prior to crash)
Future event	Driver is thinking about a future event that has a pleasant connection
Inattentive (thought focus unknown)	Inattentive driver but nature of thoughts cannot be determined
Other	Driver is thinking about topic area not described in preceding elements.