U.S. Department of Transportation
National Highway Traffic Safety Administration

Emergency Medical Services:

A Summary of Findings from NHTSA Surveys

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16. Abstract

This report presents information related to emergency medical services (EMS) that was obtained in two national telephone surveys of the driving-age public (age 16 and older) conducted for the National Highway Traffic Safety Administration (NHTSA). Those surveys are the 1995 NHTSA Customer Satisfaction Survey and the 1994 Motor Vehicle Occupant Safety Survey.

In general, the public expresses confidence in EMS. Almost three-quarters (70%) expect an ambulance will arrive within ten minutes of being called, and two-thirds (67%) are very confident that the emergency workers would know what to do regardless of the type of emergency. More than 90 percent are aware of an emergency 9-1-1 number. Confidence in EMS varied by ethnic and racial characteristics.

When asked what concerns they might have about stopping to help injured crash victims, most persons asserted that they would have no concerns and would stop. Yet many persons may be ill-equipped to provide the needed assistance. Fewer than one-third of the public (31%) have taken any kind of emergency or first aid training in the past five years. Prior training in emergency or first aid procedures was more prevalent among those who had completed more years of schooling. But these also were the persons who tended to voice the greatest reluctance to stop and help at a crash scene.

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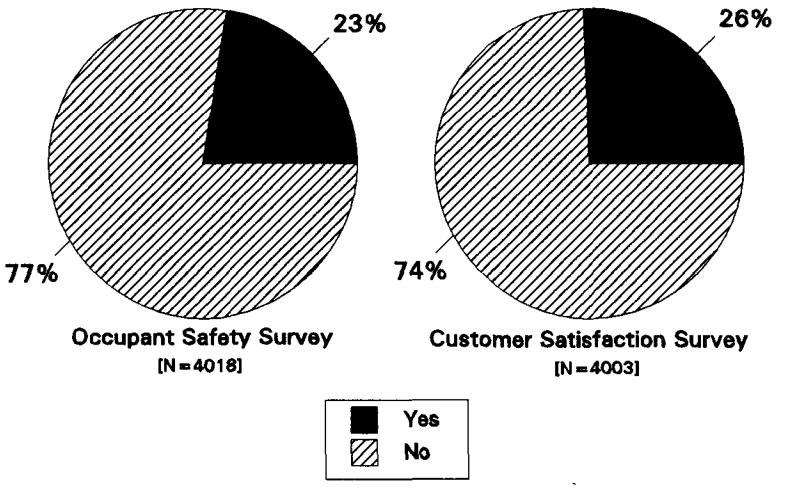
EMERGENCY MEDICAL SERVICES

The need for emergency medical services (EMS) for injuries sustained in motor vehicle crashes is well-documented. This report presents information related to EMS that was obtained in two surveys of the driving-age public (age 16 and older) conducted for the National Highway Traffic Safety Administration (NHTSA). The personal injury data summarized in this report are taken primarily from the 1995 NHTSA Customer Satisfaction Survey; all other information comes from the 1994 NHTSA Motor Vehicle Occupant Safety Survey[1]. Data are weighted to national estimates, but N-sizes in tables and figures are the actual numbers of people who received the question.

INJURIES IN VEHICLE CRASHES

Based on results from two NHTSA surveys, about one fourth of the population age 16 and older had, at some time in their life, been in a motor vehicle crash in which they received an injury that required medical attention (Figure 1).[2]

FIGURE 1: CRASH INJURY EXPERIENCE



Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
[Base: Total population]

[1] Information about these surveys may be obtained by contacting NHTSA.

[2] The small disparity between the surveys is discussed in Appendix A. All subsequent references to injury in this report refer to the more recent data, from the Customer Satisfaction Survey.

About one third of those who have ever been injured in a motor vehicle crash incurred a crash-related injury within the past five years (Table 1).

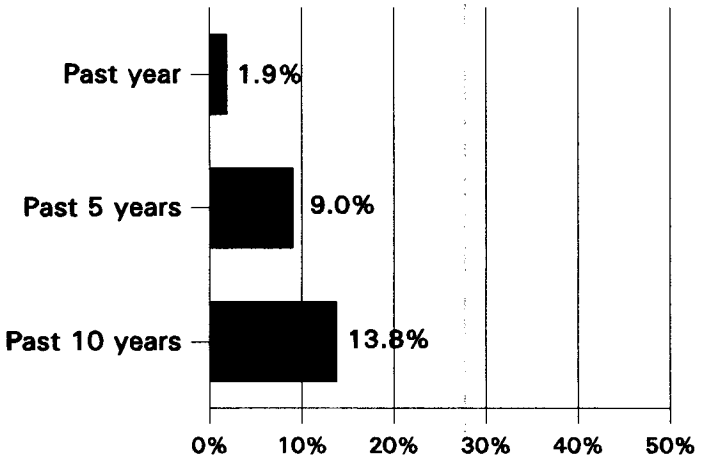
TABLE 1: WHEN CRASH-RELATED INJURY OCCURRED

Within the past year.....	7%	6-9 years ago.....	12%
1 year ago.....	6%	10-14 years ago.....	13%
2 years ago.....	6%	15-19 years ago.....	10%
3 years ago.....	6%	20-29 years ago.....	17%
4 years ago.....	5%	30 or more years ago.....	12%
5 years ago.....	5%	Don't know/refused.....	2%

Qx: How long ago did that (most recent) accident occur?
[Base: Have been injured in a vehicle crash; N = 1086]
Source: NHTSA 1995 Customer Satisfaction Survey

Overall, of people who are currently age 16 and older, one in seven was injured in a motor vehicle crash within the past 10 years, 9% within the past five years, and almost 2% in the past year alone (Figure 2).

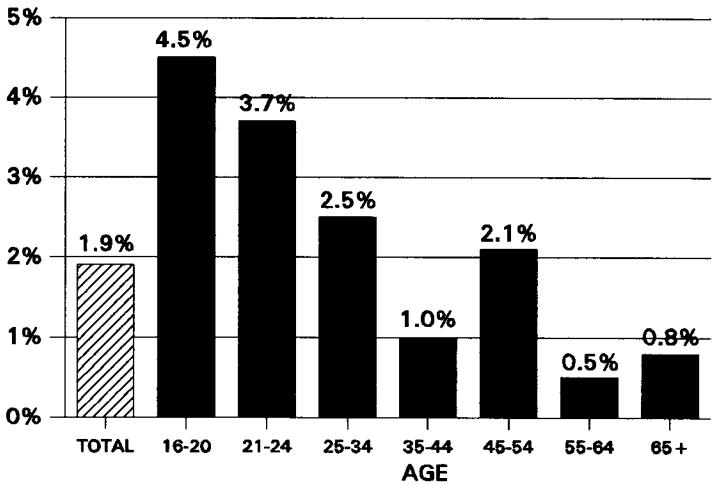
FIGURE 2: PERCENTAGE OF TOTAL POPULATION AGE 16 AND OLDER INJURED IN A VEHICLE CRASH IN PAST YEAR, PAST 5 YEARS, PAST 10 YEARS



Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
Qx: How long ago did that (most recent) accident occur?
[Base: Total population; N = 4003]
Source: NHTSA 1995 Customer Satisfaction Survey

The prevalence of crash-related injury in the past year is highest among those age 16-20 (4.5%) and generally declines with age (Figure 3). Comparing the crash injury rates for youth and adults makes the contrast clearer: those age 16-24 were almost three times as likely as those age 25 and older (4.1% versus 1.4%) to have been injured in a motor vehicle crash in the past year.

FIGURE 3: INJURED IN A VEHICLE CRASH IN THE PAST YEAR, BY AGE



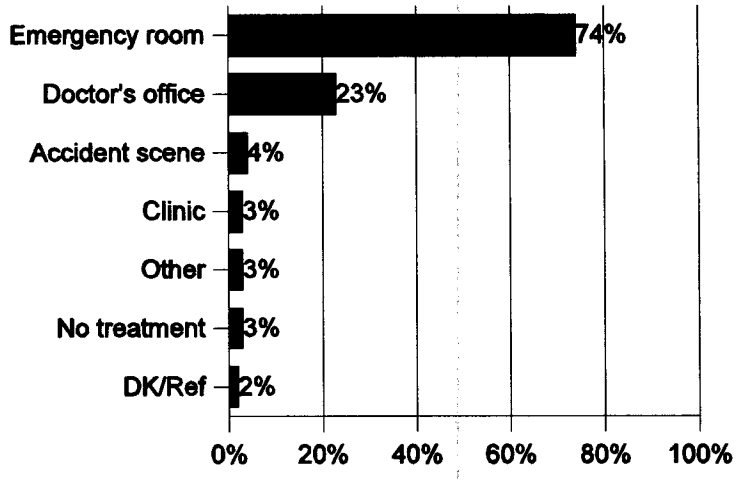
Qx: Have you ever been injured in a vehicle crash? Only count injuries that required medical attention.
Qx: How long ago did that (most recent) accident occur?
[Base: Total population; N = 4003]
Source: NHTSA 1995 Customer Satisfaction Survey

No differences were observed between residents of metropolitan and non-metropolitan (rural) areas in lifetime crash injury experience.

WHERE TREATED FOR CRASH-RELATED INJURIES, PAST 5 YEARS

Those who had received a crash-related injury in the past five years that required medical attention were asked to say where they had been treated for the injuries they sustained in the crash. They were given the opportunity to report more than one type of treatment site, if they had indeed received treatment for their injuries at more than one place. About three fourths (74%) of those who had received a crash-related injury in the past five years that required medical attention had been treated for their injuries at a hospital emergency room/department (Figure 4). About a fourth (23%) had been treated at a doctor's office for their injuries, 4% received medical treatment at the crash scene, and 3% had gone to a clinic for treatment.

FIGURE 4: WHERE TREATED FOR CRASH-RELATED INJURIES, PAST 5 YEARS*



52f. Where were you treated for the injuries you sustained in the accident?
[Base: Injured in vehicle crash in past 5 years; N = 361]
Source: NHTSA 1995 Customer Satisfaction Survey

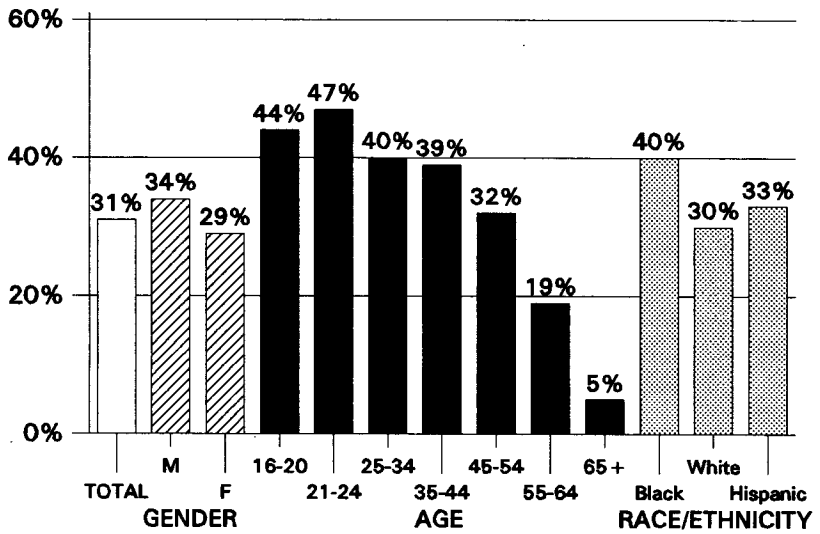
* Total exceeds 100% due to the fact that multiple responses were accepted.

Approximately 10% of those who received crash-related injuries (or about 30 respondents) reported having been treated at more than one location. Most went to the emergency room/department and also to a doctor's office, probably for follow-up care.

TRAINING IN EMERGENCY OR FIRST AID PROCEDURES

About one third of the driving age public have received some kind of emergency or first aid training in the past five years, including more than 40% of those under age 45 and nearly half of those age 21-24 (Figure 5). Males are somewhat more likely than females (34% vs. 29%) to have taken emergency or first aid training in the past five years, and blacks are more likely to have done so than whites (40% vs. 30%).

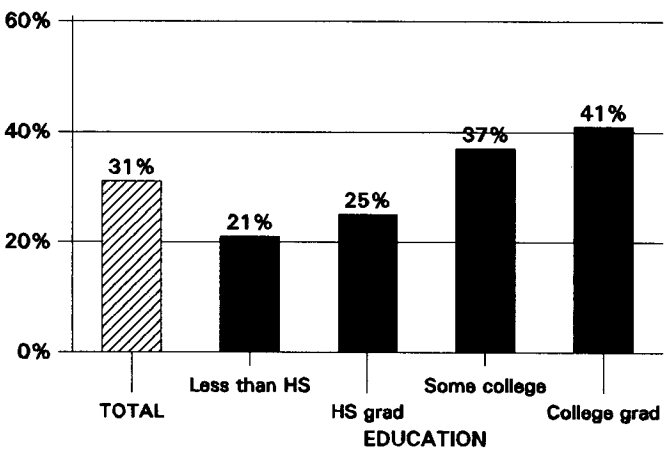
FIGURE 5: HAD EMERGENCY TRAINING IN PAST 5 YEARS, BY DEMOGRAPHICS



Qx: In the past five years, have you taken any kind of emergency or first aid training?
[Base: Total population; N=4018]

The higher the level of education a person has completed, the more likely he/she is to have had emergency or first aid training in the past 5 years (Figure 6).

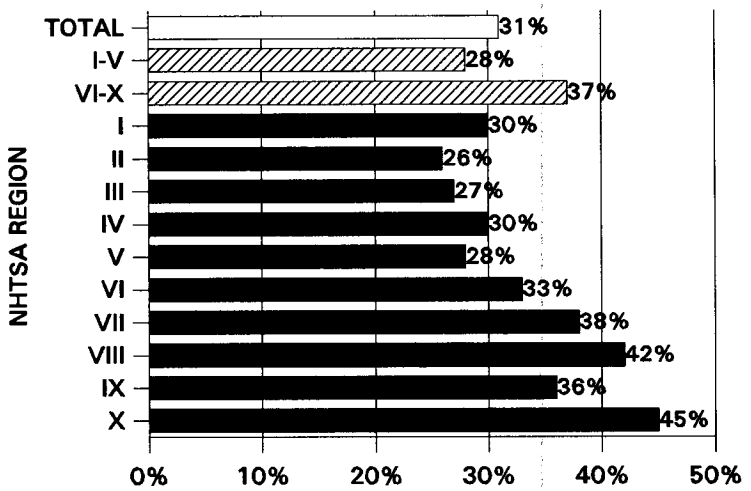
FIGURE 6: HAD EMERGENCY OR FIRST AID TRAINING IN PAST 5 YEARS, BY EDUCATION



Qx: In the past five years, have you taken any kind of emergency or first aid training?
[Base: Total population; N=4018]

The likelihood of having received emergency or first aid training varies by geographic region. NHTSA segments the states into ten regions for purposes of programmatic outreach (see list of regions below). The data show that the percentage of persons who have received training varies substantially across NHTSA regions, ranging from 26% in Region II to 45% in Region X (Figure 7). Comparing the five regions in the eastern part of the United States (Regions I-V) with the five regions primarily in the west (VI-X) shows that western residents are more likely than eastern residents (37% vs. 28%) to have received emergency or first aid training in the past 5 years.

FIGURE 7: HAD EMERGENCY OR FIRST AID TRAINING IN PAST 5 YEARS, BY REGION

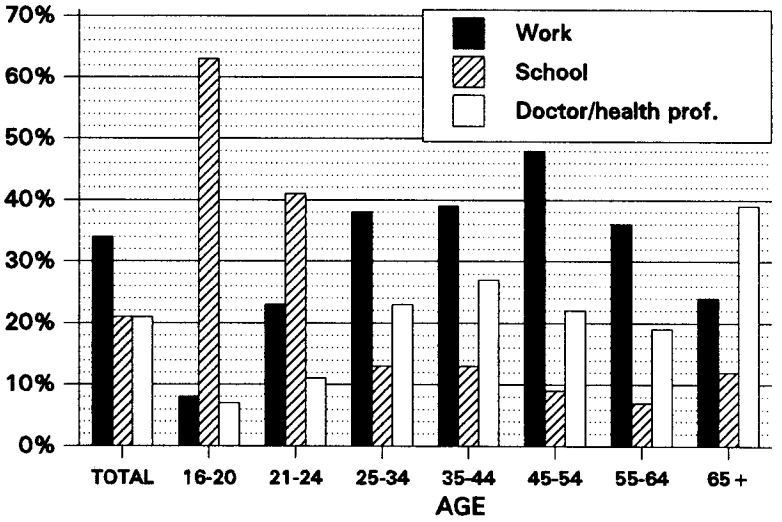


Qx: In the past five years, have you taken any kind of emergency or first aid training?
[Base: Total population; N = 4018]

REGION	STATES
I	CT, ME, MA, NH, RI, VT
II	NY, NJ
III	DE, DC, MD, PA, VA, WV
IV	AL, FL, GA, KY, MS, NC, SC, TN
V	IL, IN, MI, MN, OH, WI
VI	AR, LA, NM, OK, TX
VII	IA, KS, MO, NE
VIII	CO, MT, ND, SD, UT, WY
IX	AZ, CA, HI, NV
X	AK, ID, OR, WA

Those age 25-64 had most often received emergency or first aid training at work and those age 16-24 usually received their training at school (Figure 8). Among those age 65 and older, a doctor or other health professional was most often the provider of the training.

FIGURE 8: WHERE RECEIVED EMERGENCY OR FIRST AID TRAINING, BY AGE



Qx: Who provided the emergency/first aid training?
[Base: Took training in the past 5 years; N = 1356]

CONCERNS ABOUT STOPPING AT A CRASH

A majority of the driving age public (59%) say they would have no concerns about stopping to help if they saw a crash where no one was at the scene to help; they would stop (Table 2). The most commonly mentioned reasons for not stopping are concerns about one's own safety or the safety of occupants in one's own vehicle (including concerns related to traffic, crime, disease, and other perceived health and safety risks), a sense of one's inability to help, and the fear of lawsuits.

Males are somewhat more likely than females (63% vs. 56%) to say they have no concerns about stopping at a crash scene. Females are more likely than males to express concerns about their ability to help (15% vs. 9%) and their personal safety (16% vs. 13%), and less likely to be concerned about lawsuits (8% vs. 13%).

TABLE 2: CONCERNS ABOUT STOPPING TO HELP AT A VEHICLE CRASH, BY GENDER

Qx: Suppose that you are driving. You see an accident happen and no one is there at the scene to help. What concerns might you have about stopping to help?
[Multiple responses were accepted.]

	TOTAL	MALE	FEMALE
Base (Total population)	*4018*	*1759*	*2259*
No concerns/would stop to help	59%	63%	56%
Personal safety (net)	15%	13%	16%
Concern for own safety	5%	4%	6%
Ploy to hurt innocent people	5%	4%	5%
Fear of contracting disease	3%	3%	3%
Risk of fire, explosion	2%	2%	2%
Depends on time of day/location	2%	1%	2%
Concern for safety of family	1%	<1%	1%
Traffic (sub-net)	3%	3%	2%
Being hit by another car	1%	1%	1%
Ability to stop safely in traffic	1%	1%	1%
Other cars' inability to stop	1%	1%	<1%
Assistance (net)	12%	9%	15%
Don't know how to help/what to do	8%	6%	10%
Not qualified or able to help	3%	2%	4%
Getting someone else to stop/help	1%	1%	1%
Lawsuits/liability for improper assistance	10%	13%	8%
Victim's safety (net)	8%	9%	8%
Possibility of causing further injury	3%	3%	3%
Extent of injuries	3%	3%	2%
Safety of the injured victim	2%	2%	2%
Depends on seriousness of crash	1%	1%	1%
Other	1%	1%	1%
Don't know/refused/no answer	5%	3%	6%

Overall, blacks are more likely than whites or Hispanics (70% vs. 58-59%) to say they would have no concerns about stopping to help at a crash scene (Table 3).

Whites are at least twice as likely as blacks and somewhat more likely than Hispanics to express concerns about personal safety, being unable to provide proper assistance, and lawsuits.

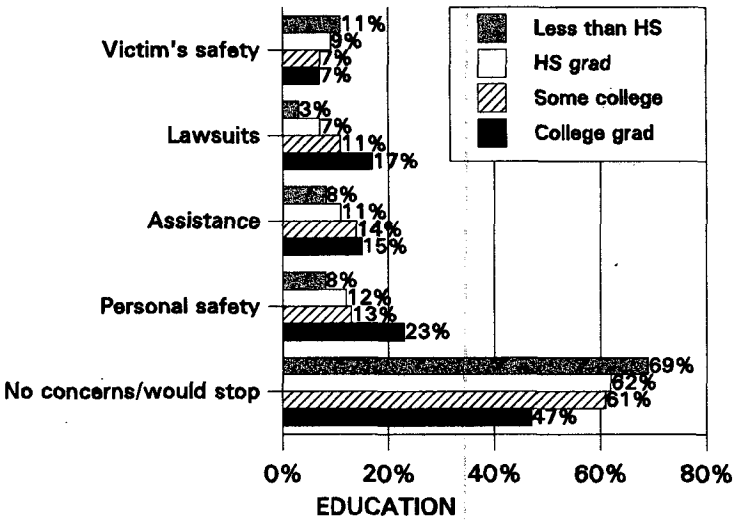
TABLE 3: CONCERNS ABOUT STOPPING TO HELP AT A VEHICLE CRASH, BY RACE/ETHNICITY

Qx: Suppose that you are driving. You see an accident happen and no one is there at the scene to help. What concerns might you have about stopping to help?
[Multiple responses were accepted.]

	BLACK	WHITE	HISPANIC
Base (Total population)	*414*	*3138*	*290*
No concerns/would stop to help	70%	58%	59%
Personal safety (net)	8%	16%	11%
Concern for own safety	3%	5%	4%
Ploy to hurt innocent people	4%	5%	5%
Fear of contracting disease	1%	3%	1%
Risk of fire, explosion	1%	2%	1%
Depends on time of day/location	0%	1%	<1%
Concern for safety of family	<1%	1%	0%
Traffic (sub-net)	1%	3%	2%
Being hit by another car	1%	1%	1%
Ability to stop safely in traffic	1%	1%	<1%
Other cars' inability to stop	0%	1%	1%
Assistance (net)	6%	13%	11%
Don't know how to help/what to do	4%	9%	8%
Not qualified or able to help	<1%	3%	3%
Getting someone else to stop/help	2%	1%	1%
Lawsuits/liability for improper assistance	3%	11%	6%
Victim's safety (net)	10%	8%	11%
Possibility of causing further injury	3%	3%	3%
Extent of injuries	4%	2%	6%
Safety of the injured victim	2%	2%	4%
Depends on seriousness of crash	1%	1%	2%
Other	1%	1%	1%
Don't know/refused/no answer	6%	4%	7%

People with college degrees express greater concerns about stopping and assisting at a crash site than do people with less formal education, despite their being more likely to have received emergency or first aid training. Less than half (47%) of college graduates said they would have no concerns and would stop to help, compared to more than 60% of others (Figure 9). College graduates are more than twice as likely as others to be concerned about the personal safety of themselves or their passengers (23% vs. 11%) and about lawsuits (17% vs. 8%).

FIGURE 9: CONCERNS ABOUT STOPPING TO HELP AT A CRASH, BY EDUCATION



Qx: Suppose that you are driving. You see an accident happen and no one is there at the scene to help. What concerns might you have about stopping to help?

[Base: Total population; N=4018]

WHAT WOULD PREVENT PEOPLE FROM STOPPING AT A CRASH

The previous section discussed what concerns people *might* have about stopping to help at a crash. This section looks at what they think would actually prevent them from stopping. People who cited one or more concerns about stopping at a crash scene were asked which of these concern(s), if any, would most likely prevent them from stopping. Those who did not mention any concerns about stopping were asked if they could think of anything that would prevent them from stopping to help. Table 4 shows the combined results of these two questions. Overall, the concerns that are most likely to prevent people from stopping to help at a crash scene are personal safety and a feeling of being unqualified or unable to help.

TABLE 4: WHAT WOULD PREVENT PEOPLE FROM STOPPING TO HELP AT A VEHICLE CRASH

Qx: Suppose that you are driving, you see an accident happen and no one is there at the scene to help. What concerns might you have about stopping to help?
Qx: Which of these concerns, if any, do you think would prevent you from stopping?
Qx: Can you think of anything that would prevent you from stopping to help?
Qx: What would prevent you from stopping to help?
[Multiple responses were accepted.]

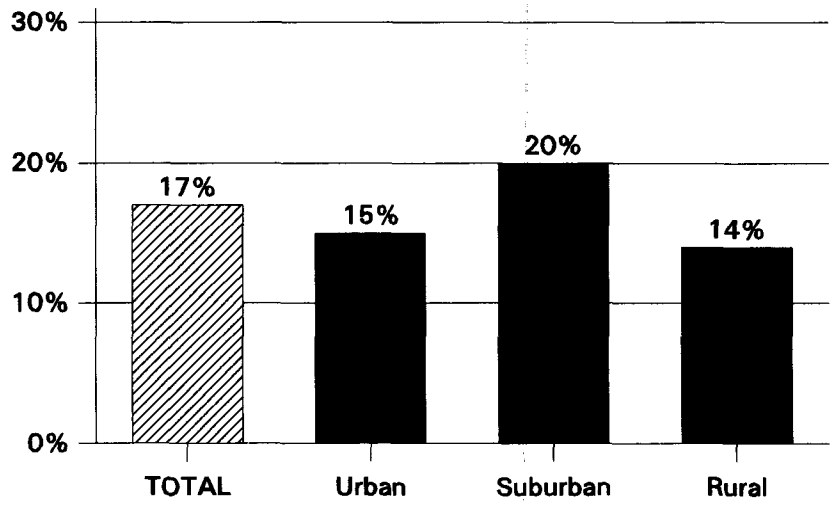
	TOTAL	MALE	FEMALE
Base (Total population)	*4018*	*1759*	*2259*
Nothing would prevent me from stopping to help	49%	52%	46%
Personal safety (net)	21%	18%	23%
Concern for own safety	5%	5%	6%
Traffic (sub-net)	4%	4%	4%
Ability to stop safely in traffic	2%	3%	2%
Traffic/lots of traffic (unspecif.)	2%	2%	2%
Being hit by another car	<1%	<1%	<1%
High crime/isolated area	4%	3%	4%
If looked suspicious/threatening	3%	3%	3%
Fear of being killed/threatened by weapon	2%	3%	2%
Risk of fire, explosion	2%	2%	2%
Depends on time of day/location	2%	1%	3%
Accident was a fake/ploy/set-up	2%	1%	2%
Fear of contracting disease	1%	1%	1%
Concern for safety of family	1%	1%	2%
Assistance (net)	8%	7%	9%
Not qualified or able to help	3%	2%	3%
Don't know how to help/what to do	2%	2%	2%
If I saw emergency help already there	2%	2%	1%
If I saw a lot of other people helping	2%	2%	3%
Lawsuits/liability for improper assistance	4%	5%	3%
Victim's safety (net)	3%	3%	3%
Possibility of causing further injury	1%	1%	1%
Depends on seriousness of crash	1%	1%	1%
Not hurt really bad/seriously	<1%	<1%	<1%
Not really hurt/injured	<1%	<1%	<1%
Miscellaneous	1%	1%	1%
In a hurry	<1%	<1%	<1%
Emergency/If I had an emergency	<1%	< 1%	<1%
Other	<1%	< 1%	<1%
Don't know/refused/no answer	12%	12%	12%

Concerns that would *prevent* someone from stopping to help at a crash vary by level of education in much the same way as the concerns that one *might* have about stopping. The more formal education someone has, the more likely he/she is to be deterred from stopping by concerns about lawsuits and personal safety.

CELLULAR PHONES

The availability of cellular phones in motor vehicles presents an opportunity for persons to contact EMS personnel more quickly when there has been a crash. One in six drivers (17%) currently has a cellular phone in the vehicle they usually drive. Drivers living in suburban areas are more likely than those from urban or rural areas to have a cellular phone in their primary vehicle (Figure 10).

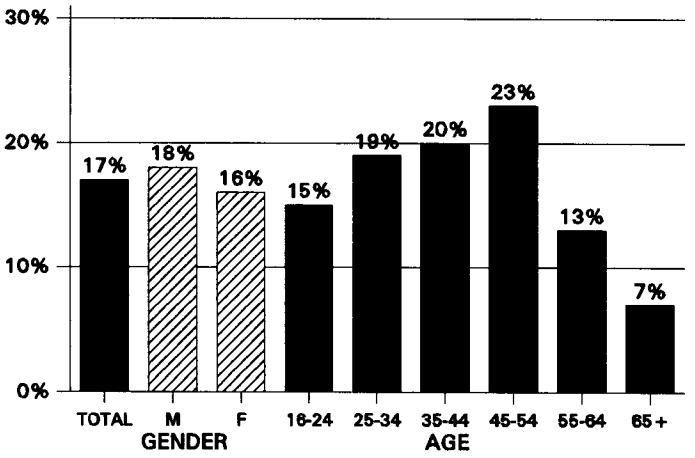
FIGURE 10: HAVE A CELLULAR PHONE IN PRIMARY VEHICLE, BY COMMUNITY TYPE



Qx: Do you have a cellular phone in the car you usually drive?
[Base: Drivers; N = 3685]

Those between the ages of 25 and 54 are more likely than younger or older people to have a cellular phone in their primary vehicle: about one in five people in this age range has a cellular phone in their vehicle (Figure 11). There is a negligible difference between males and females in the likelihood that they have a cellular phone in the vehicle they usually drive.

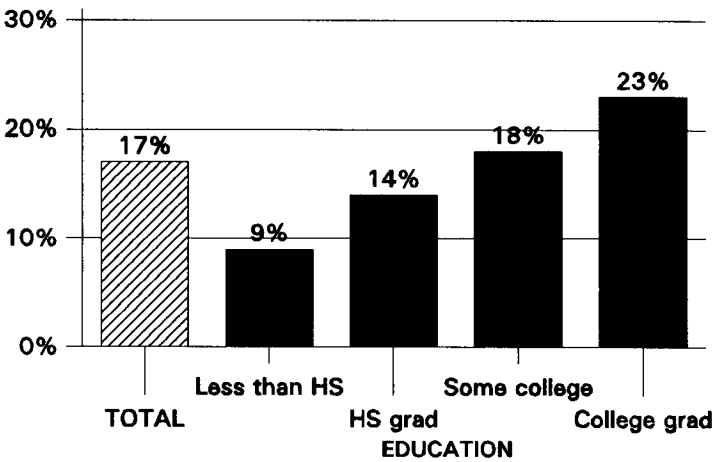
FIGURE 11: HAVE A CELLULAR PHONE IN THE PRIMARY VEHICLE, BY GENDER AND AGE



Qx: Do you have a cellular phone in the car you usually drive?
[Base: Drivers; N = 3685]

The likelihood of having a cellular phone in the primary vehicle increases with the individual's level of education. College graduates are about 1½ times as likely as high school graduates and more than twice as likely as those with less than a high school education to have a cellular phone in their vehicle (Figure 12).

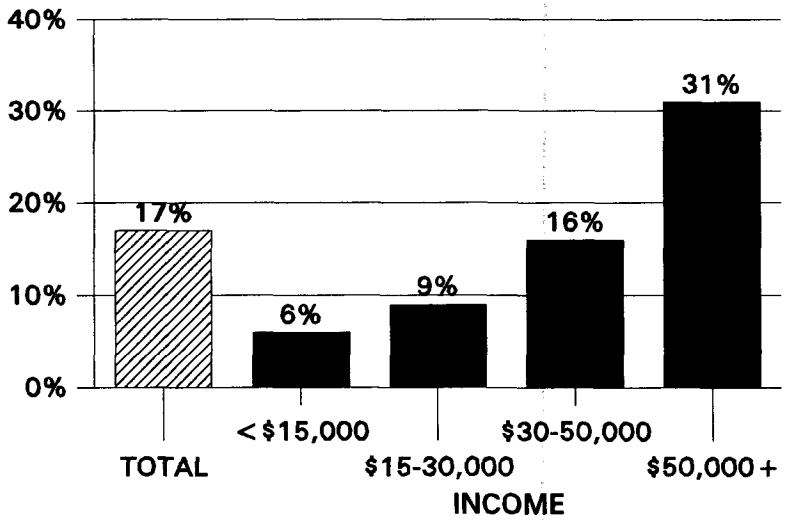
FIGURE 12: HAVE A CELLULAR PHONE IN IN THE PRIMARY VEHICLE, BY EDUCATION



Qx: Do you have a cellular phone in the car you usually drive?
[Base: Drivers; N = 3685]

Nearly one third (31%) of drivers in the highest income group ($50,000 or more per year) have a cellular phone in the vehicle they usually drive, twice the rate (16%) of drivers making $30-50,000 per year and more than three times the rate of drivers making less than $30,000 per year (Figure 13).

FIGURE 13: HAVE A CELLULAR PHONE IN THEIR PRIMARY VEHICLE, BY INCOME



Qx: Do you have a cellular phone in the car you usually drive?
[Base: Drivers; N = 3685]

TELEPHONING FOR HELP AT AN INJURY CRASH

If they observed a crash where someone was injured, but were in a situation where it was too dangerous for them to stop and help, most people (87%) indicated that *nothing* would prevent them from calling (Table 5). The few who said that something might stop them from calling most often gave unavailability of a telephone as the reason.

TABLE 5: WHAT WOULD PREVENT PEOPLE FROM CALLING TO REPORT AN INJURY CRASH

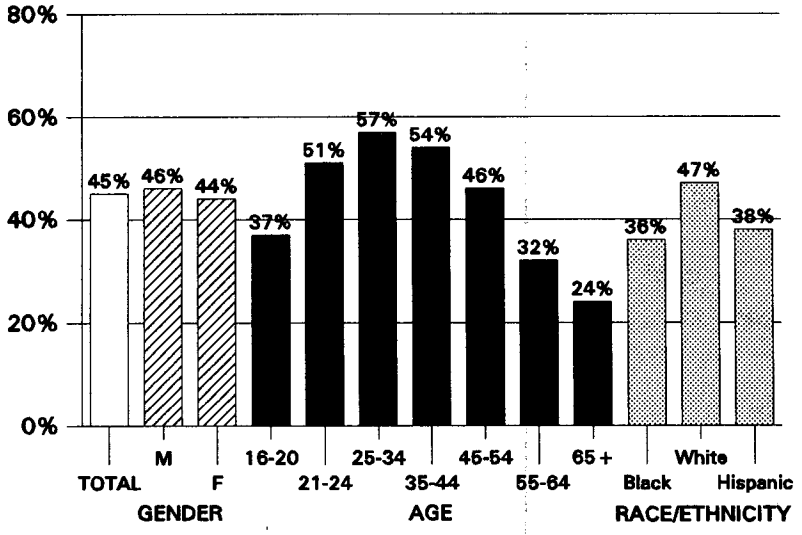
Qx: Suppose that you are driving, you see an accident and think that someone might be injured, but it is too dangerous to pull over and help at the scene. What, if anything, would prevent you from telephoning for help?

	TOTAL	MALE	FEMALE
Base (Total population)	*4018*	*1759*	*2259*
Nothing would prevent me from calling	87%	88%	86%
Telephone availability (net)	7%	7%	8%
Availability of a phone	6%	6%	7%
Don't have a car phone/cellular phone	1%	1%	1%
Safety concerns (net)	1%	1%	1%
Unsafe area to stop and call	1%	<1%	1%
Other safety concerns	<1%	0%	<1%
Miscellaneous (net)	2%	2%	2%
Traffic/traffic jam	1%	1%	1%
Other	1%	1%	1%
Don't know/refused/no answer	3%	2%	3%

KNOWLEDGE OF INITIALS "EMS"

Just under half (45%) of the population age 16 and older know that the initials "EMS" stand for "emergency medical services/systems" (Figure 14). The youngest and oldest members of the driving age public are less likely than others to know this. Lesser awareness also appears among black (36%) and Hispanic (38%) residents compared to whites (47%).

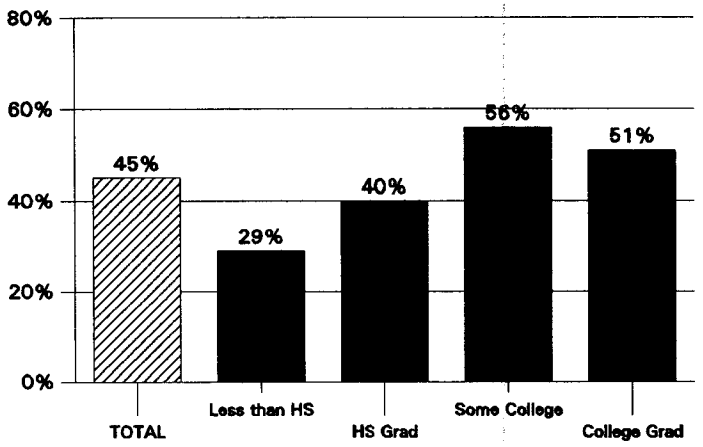
FIGURE 14: KNOW WHAT INITIALS "EMS" STAND FOR, BY DEMOGRAPHICS



Qx: Can you tell me what the initials "EMS" stand for?"
[Base: Total population; N=4018]

The highest level of awareness of the initials "EMS," by education, is among those who have had some college experience but who have not completed a degree program (Figure 15).

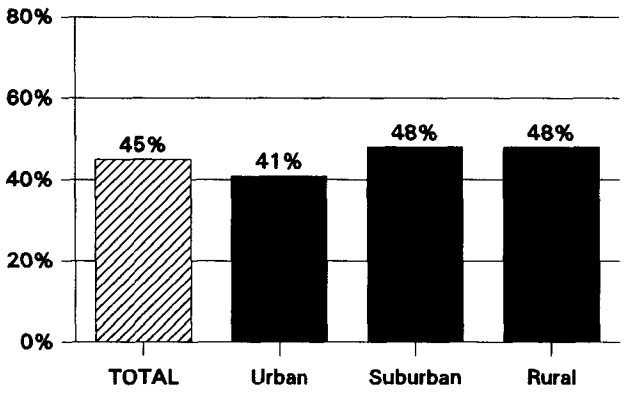
FIGURE 15: KNOW WHAT INITIALS "EMS" STAND FOR, BY EDUCATION



Qx: Can you tell me what the initials "EMS" stand for?"
[Base: Total population; N=4018]

People who live in urban areas are somewhat less likely than residents of suburban or rural areas to know what the initials "EMS" stand for (Figure 16).

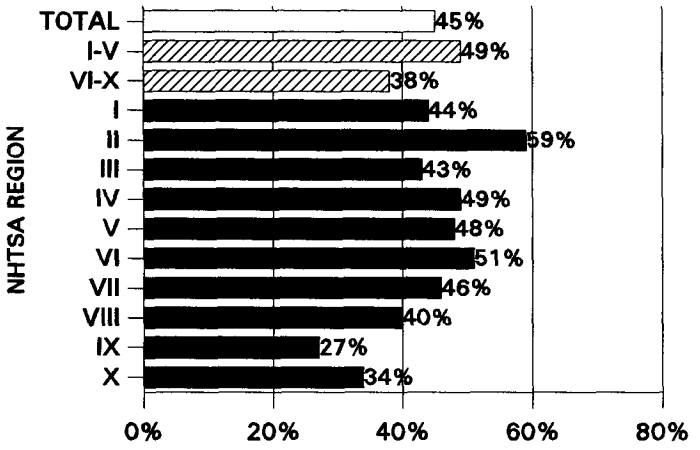
FIGURE 16: KNOW WHAT INITIALS "EMS" STAND FOR, BY COMMUNITY TYPE



Qx: Can you tell me what the initials "EMS" stand for?"
[Base: Total population; N=4018]

Knowledge that the initials "EMS" stand for emergency medical services or systems varies by NHTSA region, from a low of 27% in Region IX to 59% in Region II (Figure 17). Awareness is higher in the east than in the west (49% vs. 38%).

FIGURE 17: KNOW WHAT INITIALS "EMS" STAND FOR, BY REGION

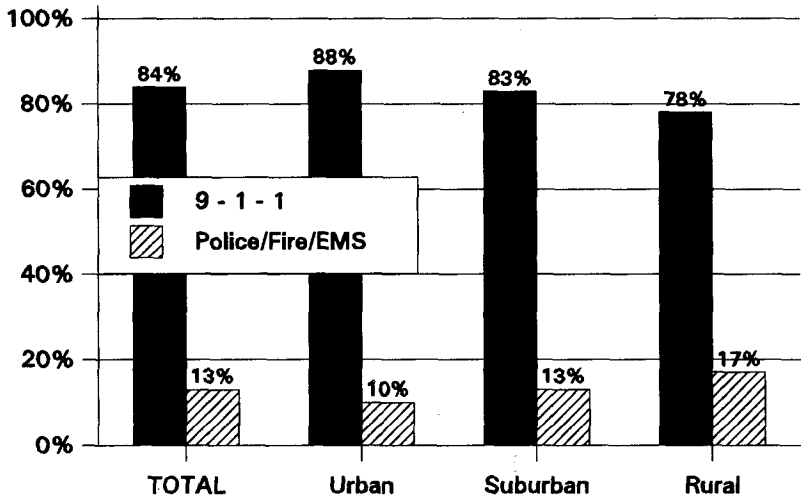


Qx: Can you tell me what the initials "EMS" stand for?"
[Base: Total population; N=4018]

TELEPHONING FOR HELP IN A MEDICAL EMERGENCY

Most people (84%) would call 9-1-1 first if they needed to get help for someone who was experiencing a medical emergency (Figure 18). People who live in urban areas are more likely than residents of suburban or rural areas to call 9-1-1 first.

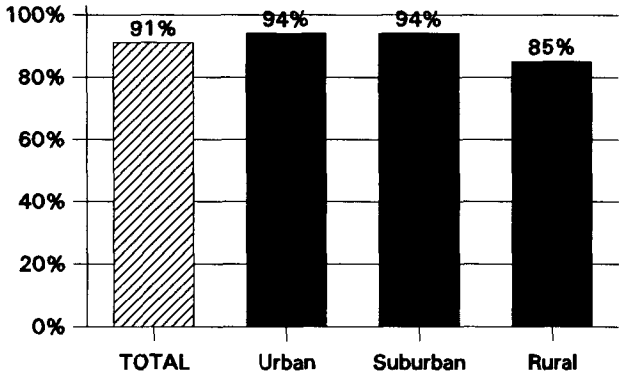
FIGURE 18: WHO PEOPLE WOULD CALL FIRST FOR HELP IN A MEDICAL EMERGENCY



Qx: If someone was experiencing a medical emergency and you needed to get help for that person, who would you call first?
[Base: Total population; N=4018]

Even though some people would not call 9-1-1 first to get help for a medical emergency, more than 90% assert that the 9-1-1 number is available (Figure 19). Awareness of 9-1-1 is lowest in rural areas which may include portions of the country where the 9-1-1 system is not yet in place or fully operational; however, even in rural areas, 85% report there is a 9-1-1 number.

FIGURE 19: AWARE OF 9-1-1 NUMBER, BY COMMUNITY TYPE

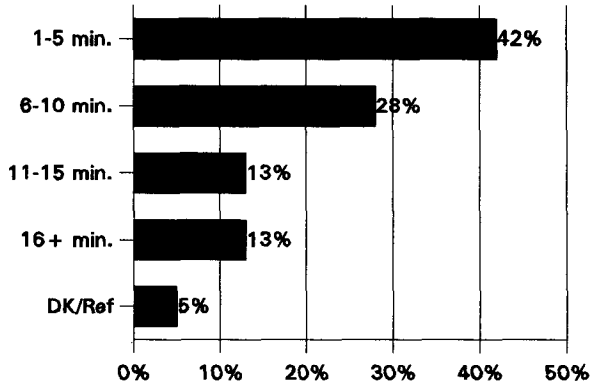


Qx: If someone was experiencing a medical emergency and you needed to get help for that person, who would you call first?
Qx: Is there a particular telephone number to call for medical emergencies in your community?
[Base: Total population; N=4018]

EXPECTED TIME FOR EMERGENCY RESPONSE

About 40% of people expect an ambulance to arrive within five minutes of being called, 70% expect it within 10 minutes, and over 80% expect it within 15 minutes (Figure 20).

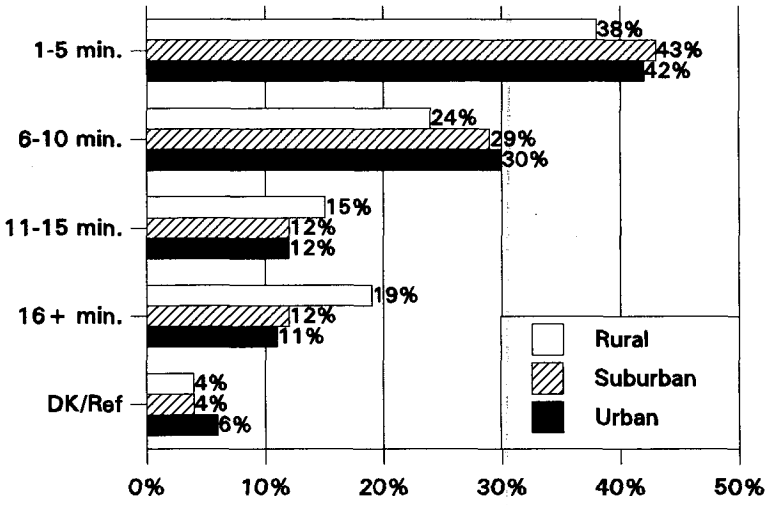
FIGURE 20: EXPECTED TIME FOR AMBULANCE TO RESPOND TO MEDICAL EMERGENCY CALL



Qx: If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive? **[Base: Total population; N=4018]**

People in rural communities expect the ambulance to take longer to arrive compared to residents of urban or suburban communities (Figure 21). In rural communities, 62% of the population think an ambulance will arrive within 10 minutes of being called, compared with 72% of those who live in urban or suburban areas. The average (mean) expected times are 10 minutes for urban and suburban areas and 12 minutes for rural areas.

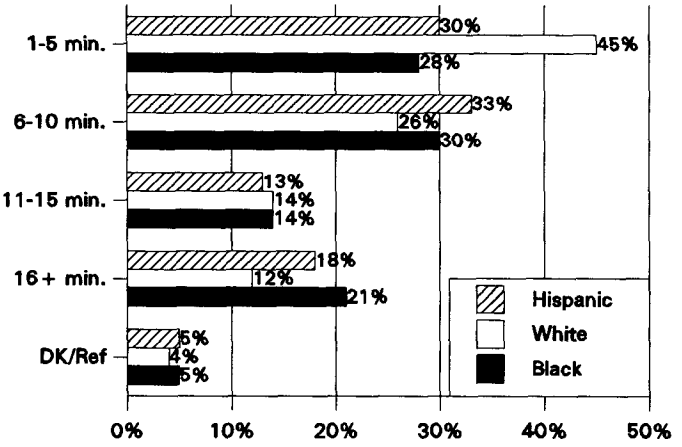
FIGURE 21: EXPECTED TIME FOR AMBULANCE TO RESPOND, BY COMMUNITY TYPE



Qx: If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive?
[Base: Total population; N=4018]

There are differences in expected ambulance response time by race and ethnicity. Whites (45%) are much more likely than blacks (28%) or Hispanics (30%) to think that an ambulance will respond in five minutes or less (Figure 22). The differences are somewhat smaller for an expected response time of 10 minutes or less: 71% of whites think an ambulance will arrive in 10 minutes or less, compared with 63% of Hispanics and 58% of blacks.

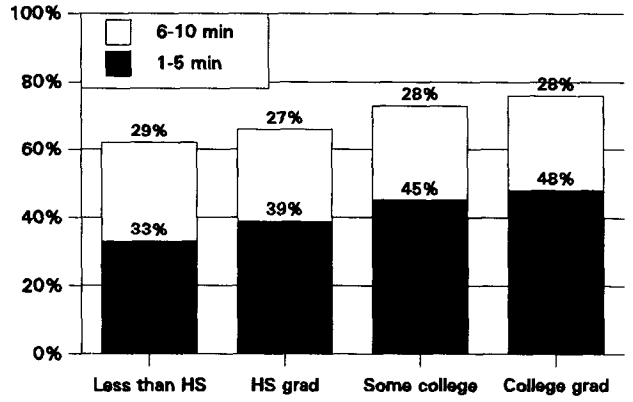
FIGURE 22: EXPECTED TIME FOR AMBULANCE TO RESPOND, BY RACE/ETHNICITY



Qx: If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive?
[Base: Total population; N=4018]

The more formal education a person has completed, the more likely he or she is to think an ambulance will arrive within five minutes or less. Nearly half (48%) of college graduates think the ambulance would arrive in five minutes or less, compared with only one third of those who have not completed high school (Figure 23).

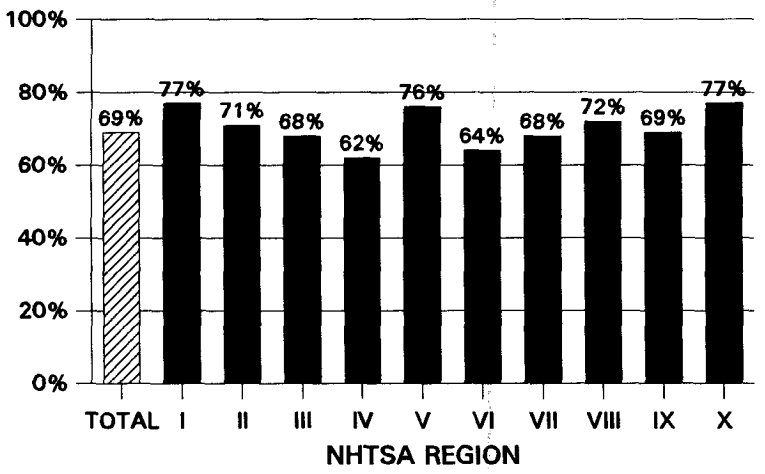
FIGURE 23: EXPECTED TIME FOR AMBULANCE TO RESPOND, BY EDUCATION



Qx: If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive? **[Base: Total population; N=4018]**

There is also some variation by NHTSA region in the expected response time for an ambulance to a medical emergency. The percentage of the driving age public who think an ambulance would arrive within 10 minutes of being called range from 62% in Region IV to 77% in Regions I and X (Figure 24).

FIGURE 24: EXPECT AN AMBULANCE TO RESPOND WITHIN 10 MINUTES, BY REGION

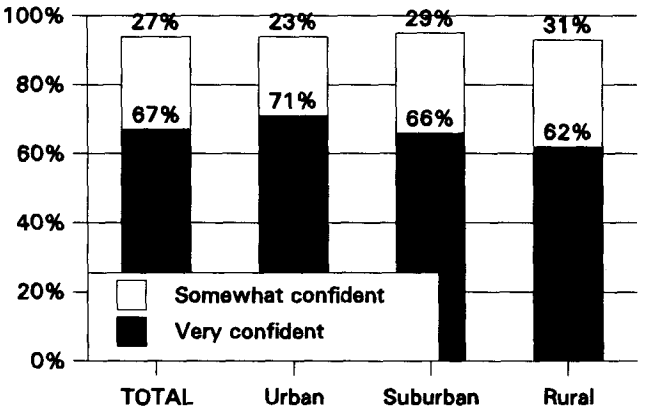


Qx: If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive?
[Base: Total population; N=4018]

CONFIDENCE IN EMERGENCY WORKERS

Two thirds of the driving age public are "very confident" that emergency workers would know what to do in a medical emergency and most other people are "somewhat confident" (Figure 25). Confidence in emergency workers is highest in urban areas and lowest in rural areas.

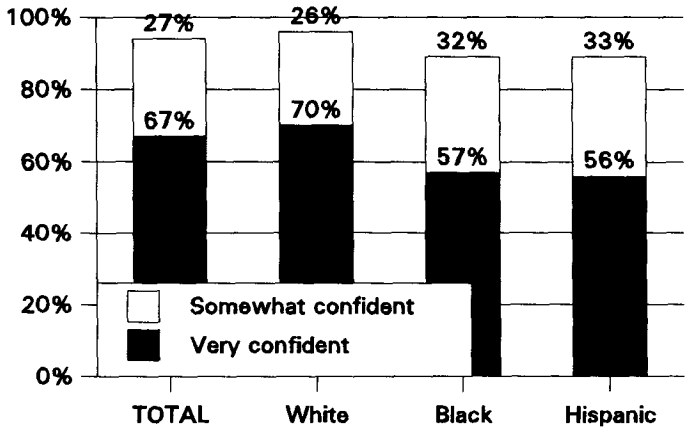
FIGURE 25: LEVEL OF CONFIDENCE THAT EMERGENCY WORKERS KNOW WHAT TO DO



Qx: Regardless of the type of medical emergency, how confident are you that the ambulance or other emergency workers would know what to do?
[Base: Total population; N=4018]

The perceived competence of emergency workers also differs by race and ethnicity: 70% of whites are "very confident" in emergency workers, compared to only 57% of blacks and 56% of Hispanics (Figure 26).

FIGURE 26: CONFIDENCE IN EMERGENCY WORKERS, BY RACE/ETHNICITY

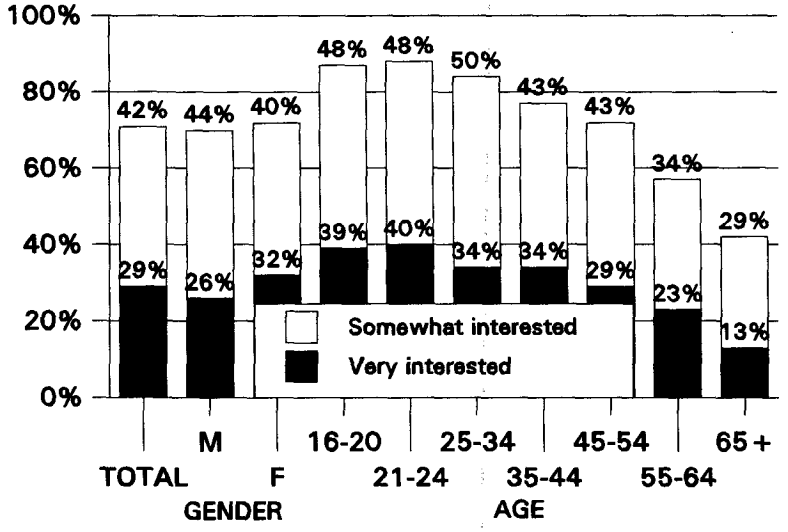


Qx: Regardless of the type of medical emergency, how confident are you that the ambulance or other emergency workers would know what to do?
[Base: Total population; N=4018]

INTEREST IN TRAINING TO ASSIST CRASH VICTIMS

Twenty-nine percent of the driving age public say they would be very interested in training on how to assist injured persons in vehicle crashes (Figure 27). Females are more likely than males (32% vs. 26%) to be very interested in this kind of training. Interest levels generally decline with age.

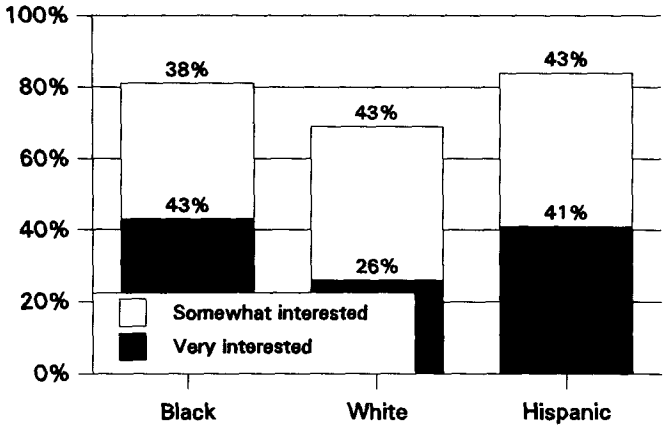
FIGURE 27: INTEREST IN TRAINING TO HELP CRASH-INJURED, BY GENDER AND AGE



Qx: Assuming it was at low cost and in a convenient location, how interested would you be in taking training on how to assist injured persons in vehicle crashes?
[Base: Total population; N=4018]

There are also differences by race and ethnicity in the degree of interest in emergency or first aid training to assist crash victims. Blacks (43%) and Hispanics (41%) are much more likely than whites (26%) to say they would be very interested in training to assist persons injured in vehicle crashes (Figure 28).

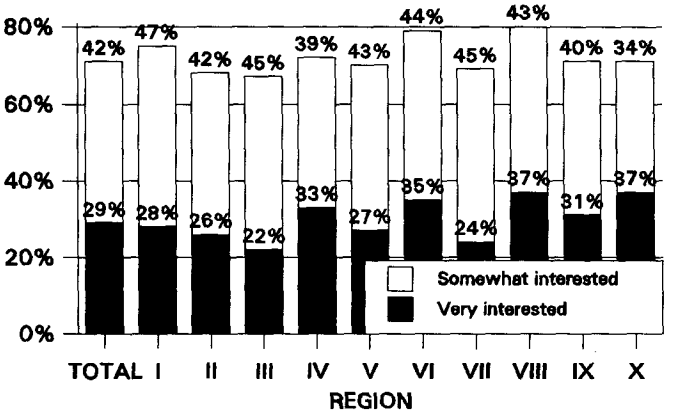
FIGURE 28: INTEREST IN TRAINING TO HELP CRASH-INJURED, BY RACE/ETHNICITY



Qx: Assuming it was at low cost and in a convenient location, how interested would you be in taking training on how to assist injured persons in vehicle crashes?
[Base: Total population; N=4018]

Interest in training to assist crash victims varies by NHTSA region. The range of those "very interested" in training extends from 22% in Region III to 37% in Regions VIII and X (Figure 29).

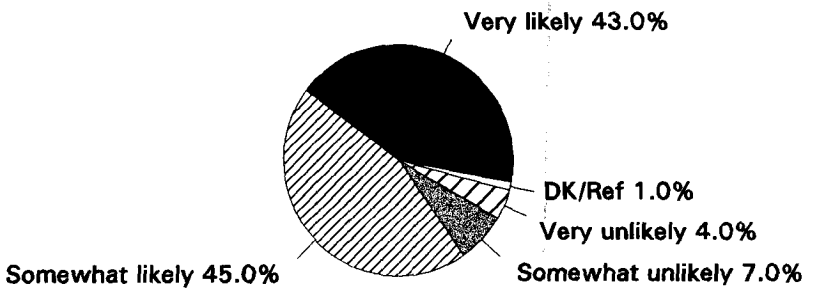
FIGURE 29: INTEREST IN TRAINING TO HELP PEOPLE INJURED IN CRASHES, BY REGION



Qx: Assuming it was at low cost and in a convenient location, how interested would you be in taking training on how to assist injured persons in vehicle crashes?
[Base: Total population; N=4018]

Among those who expressed some interest in training on how to assist injured persons in vehicle crashes, 43% said they would be very likely to take a training class that consisted of a single session lasting two to four hours (Figure 30).

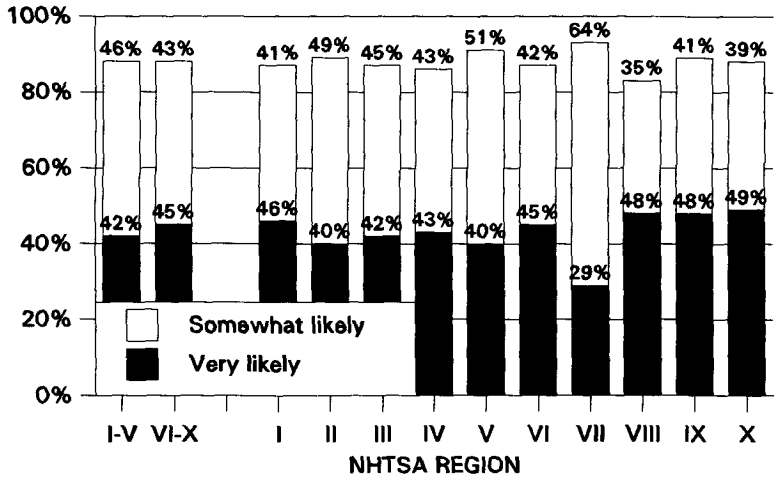
FIGURE 30: LIKELIHOOD THOSE INTERESTED IN TRAINING WOULD TAKE A 2-4 HR. CLASS



Qx: If the training took two to four hours in a single class session, how likely would you be to take such a class?
[Base: Very or somewhat interested in training to assist people injured in crashes; N = 3001]

The likelihood that those interested in training would take a 2-4 hour training class varies somewhat by NHTSA region. In all regions but one, from 40-49% say they would be very likely to take such a class; the exception is Region VII, where only 29% say they would be very likely to do so (Figure 31). However, in every region, more than 80% of those interested in training say they would be very or somewhat likely to take a 2-4 hour class.

FIGURE 31: LIKELIHOOD THOSE INTERESTED WOULD TAKE A 2-4 HR. CLASS, BY REGION



Qx: If the training took two to four hours in a single class session, how likely would you be to take such a class?
[Base: Very or somewhat interested in training to assist people injured in crashes; N = 3001]

CONCLUSIONS

1) The survey data show the vast impact of crash injury on the general population: about one in four persons age 16 and older have at some time in their lives received medical attention for injuries incurred in motor vehicle crashes. The extensive number of crash injuries occurring on the nation's roadways underscores not only the importance of a strong and efficient Emergency Medical System, but also the importance for the public to possess basic emergency and first aid skills that can be applied at crash scenes.

2) In general, the survey results disclosed widespread awareness of the 9-1-1 emergency telephone number, and confidence among much of the population in the responding capabilities of the EMS. Many persons also express a willingness to stop and assist at crash scenes where someone is injured. However, many persons may not be adequately skilled to do so as fewer than one third of the public have received emergency or first aid training in the past five years.

3) The data suggest that it will take more than training the public in basic injury treatment procedures to achieve the full benefits desired from this

activity. Prior training in emergency or first aid procedures was much more prevalent among persons who had completed more years of schooling. Yet these also were the persons who expressed the greatest reluctance to stop and help at a crash scene, usually for reasons of personal safety or fear of lawsuits. This raises questions about whether additional issues need to be covered in training.

4) Blacks and Hispanics tended to express less confidence than did whites in the responsiveness of EMS. They also were more likely than whites to voice a desire for emergency or first aid training, or to actually have taken the training. This suggests that certain groups may perceive a greater need to be personally skilled in injury treatment procedures, and consequently are more receptive to such training. The data also point to strong interest among minority populations for emergency or first aid training.

5) Lastly, the data revealed differences on EMS issues according to population density and region. Respondents in rural areas, compared to their urban and suburban counterparts, were more likely to be unaware of or lack access to 9-1-1, to expect longer times for ambulances to respond, and to lack strong confidence in emergency workers. However, some of the differences were small. No other differences were observed in rural vs. urban or suburban communities regarding issues such as crash injury experience or concerns about stopping to help at an injury crash. In terms of geographic region, emergency or first aid training during the past five years was more prevalent in the west. There also were differences across the ten NHTSA regions in perceived responsiveness of EMS.

APPENDIX A:
TECHNICAL DISCUSSION

Figure 1, on page 1 of this report, presents data on crash injury experience drawn from two NHTSA surveys: the 1994 Motor Vehicle Occupant Safety Survey and the 1995 Customer Satisfaction Survey. As noted in the narrative discussion of that figure, there was a small discrepancy between the two surveys in the lifetime prevalence of crash injuries reported.

The sampling frame and survey methods were essentially the same for the two surveys; the only difference was that some oversampling of young adults in the Occupant Safety Survey was then adjusted through weighting to produce national estimates. Different emphases in the two questionnaires are the more likely source for the disparity in injury results. The Customer Satisfaction Survey contained a wider variety of items concerning personal safety and crash protection than did the Occupant Safety Survey. These questions may have led to increased recall of relatively minor injuries.

For example, the Customer Satisfaction Survey asked respondents about such issues as the ability of vehicles to protect passengers in a crash, whether crashes are more often caused by driver errors or vehicle failures, and the steps that government and auto manufacturers should take to increase safety. The cumulative effect of thinking about crash protection in these and other questions may have brought the crash injury experience to mind more readily than did the Occupant Safety Survey with its long series of questions about child car seats and its questions on pedestrian and bicycle safety.

Two findings support this hypothesis. First, a high percentage of the injuries in the Occupant Safety Survey (61%) were sufficiently severe to have incapacitated the victim in some way for at least one week. Second, the two surveys essentially did not differ in injury experience for the youngest age groups, when crashes were most likely to occur. Rather, the differences occurred in older age groups, with some respondents in the Occupant Safety Survey perhaps forgetting or discounting relatively minor injuries they incurred years ago.