

## **7. INJURY/VIOLENCE PREVENTION**

### *Injuries That Cut Across Intent*

<b>Number</b>	<b>Objective</b>
1	Nonfatal head injuries
2	Nonfatal spinal cord injuries
3	Firearm-related deaths
4	Homes with firearms
5	Laws requiring proper firearm storage
6	Child death review systems
7	Injury prevention and safety education

### *Unintentional Injuries*

8	Deaths from unintentional injuries
9	Emergency department visits
10	Nonfatal unintentional injuries
11	Motor vehicle crashes
12	Pedestrian deaths
13	Nonfatal motor vehicle injuries
14	Pedestrian injuries
15	Safety belts and child restraints
16	Primary enforcement laws for safety belt use
17	Use of motorcycle helmets
18	Motorcycle helmet laws
19	Graduated driver licensing
20	Residential fire deaths
21	Smoke alarms
22	Deaths from falls
23	Hip fractures
24	Drowning deaths
25	Bicycle helmet laws
26	Bicycle helmet use, high school students
27	Bicycle helmet use
28	Nonfatal poisoning
29	Deaths from unintentional poisoning
30	Nonfatal dog bite injuries
31	Head, face, eye, and mouth protection in school sports
32	Injury prevention counseling

### *Violence and Abusive*

33	Homicides
34	Maltreatment of children
35	Physical abuse by intimate partners
36	Forced sexual intercourse
37	Emergency housing for battered women
38	Sexual assault other than rape
39	Physical assaults
40	Physical fighting among adolescents
41	Weapon carrying by adolescents



## **Injury/Violence Prevention**

### **Terminology**

(A listing of all acronyms used in this publication appears on page 27 of the Introduction.)

**Age-adjusted injury rate:** An injury rate calculated to reflect a standard age distribution.

**BAC:** Blood alcohol concentration.

**Graduated licensing laws:** Require young drivers to “graduate” through phases of restricted driving before they are allowed to get their unrestricted licenses. Such restrictions include a mandatory supervised driving period, night driving curfews, limits on teen passengers riding with a beginning driver, and a lower BAC level for teens than for adults.

**Impaired driving:** Drunk or drugged driving.

**Injury:** Unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy or from the absence of such essentials as heat or oxygen.

**Pedalcyclists:** Includes bicycles and tricycles.

**Primary enforcement:** A stipulation of a safety belt use law that allows law enforcement officials to stop a driver solely on the basis of a safety belt law violation.

**Risk factor:** A characteristic that has been demonstrated statistically to be associated with a particular injury.

**Secondary enforcement:** A stipulation of a safety belt use law that allows law enforcement officials to address a safety belt use law violation only after a driver has been stopped for some other purpose.

**Target population:** The group of persons (usually those at high risk) that program interventions are designed to reach.

**Trauma registry:** A collection of data on patients who receive hospital care for certain types of injuries (e.g., blunt or penetrating trauma or burns). Such collections are designed primarily to ensure quality trauma care process and outcomes in individual institutions and trauma systems but have the secondary purpose of providing useful data for the surveillance of injury morbidity and mortality.

**Unintentional injury:** A type of injury that occurs without purposeful intent.

**Years of potential life lost (YPLL):** A statistical measure used to enumerate premature death; YPLL is calculated by subtracting an individual’s age at death from a predetermined life expectancy. The Centers for Disease Control and Prevention (CDC) generally uses 75 years of age for this purpose (e.g., a person who died at age 35 would have YPLL of 40).

### **Goal: Injuries That Cut Across Intent**

Reduce the incidence and severity of injuries from unintentional causes, as well as violence and abuse.

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## **Overview**

In 1995, over 143,000 Americans died from injuries sustained from a variety of causes such as motor vehicle crashes, falls, fires, drownings, poisonings, homicides, and suicides. This translates into over 390 people who die from injuries each day, of which at least 50 of the daily death toll are children. One death out of every 14 in the United States results from injury. Of these deaths, 65 percent were classified as unintentional and 35 percent as intentional. Unintentional injury deaths included approximately 42,000 resulting from motor vehicle crashes. Of approximately 50,000 intentional injury deaths, 31,000 were classified as suicide and 19,000 as homicide.<sup>1</sup>

The age-specific death rates for injuries far surpass those for cancer and heart disease for ages 1-44. From ages 1 through 4, injuries cause almost half of all deaths and result in more than three times the number of deaths from congenital anomalies, the second leading cause. Injury deaths exceed deaths from all other causes combined from age 5 through 34 and are most prominent at ages 15 to 24, when they cause 78 percent of all deaths. From ages 35 through 44, they continue to outnumber deaths from any other single cause. After age 45, injuries account for fewer deaths than several other health problems, such as heart disease, cancer, and stroke. Despite the decrease in the proportion of deaths due to injury, the death rate from injuries is actually higher among the elderly than among younger people. In absolute numbers, injuries remain important throughout life. For example, each year some 30,000 people aged 65 or older die from injuries.

The risk of injury is so great that most people sustain a significant injury at some time during their lives.<sup>2</sup> Nevertheless, this widespread human damage too often is taken for granted, in the erroneous belief that injuries happen by chance and are the result of unpreventable “accidents.” They are not, as we used to think, “accidents,” or random, uncontrollable acts of fate. Injuries are predictable and preventable.

Specific injuries share similar characteristics of person, place, and time. It is by understanding injuries that interventions can be developed and implemented.

Injuries are often classified on both the basis of events and behaviors that preceded them, as well as the intent of the people involved. Injury deaths are commonly reported as intentional and unintentional. Although the events leading to an intentional and unintentional injury differ, the outcomes and extent of the injury are similar. To reduce the incidence and outcome of injuries, prevention activities might focus more on the mechanisms of injury (e.g., cut/pierce, drowning/submersion, fall, fire/burn, firearm, motor vehicle traffic, struck by and against) and relatively less on intent of injury.<sup>3</sup> For example, a nonfatal spinal cord injury produces the same outcome even though the spectrum of behavior can range from an unintentional motor vehicle crash or an attempted suicide.

Some interventions targeted for a specific cause of injury can potentially reduce injuries from both unintentional and violence-related episodes. For instance, efforts to promote proper storage of firearms in homes can help reduce the risk of assaultive, intentional self-inflicted, and unintentional shootings in the home.<sup>4</sup>

Considerable numbers of injuries and injury-related deaths occur in some population subgroups (e.g., younger children) where the intentionality of the injury incident is unknown and requires more detailed investigation. As these cases are examined more closely, interventions can be developed to address mechanisms of injury (e.g., unintentional poisonings in children or hangings among teenagers) that are emerging in society as growing public health concerns.

Focusing on the mechanism of injury is critical for developing interventions to reduce injuries that cut across the intentionality of injury.

**Draft 2010 Objectives: Injuries That Cut Across Intent**

*Head and Spinal Cord Injuries*

- 1. (Former 9.9) Reduce nonfatal head injuries so that hospitalizations for this condition are no more than 74 per 100,000 people. (Baseline: 87 per 100,000 in 1995)

Select Populations	1995
Male aged 15-24	Not available
People aged 75 and older	Not available

**Target Setting Method:** 15 percent improvement.

**Potential Data Source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

- 2. (Former 9.10) Reduce nonfatal spinal cord injuries so that hospitalizations for this condition are no more than 3.9 per 100,000 people. (Baseline: 4.6 per 100,000 in 1995)

Select Populations	1995
Male	6.9

**Target Setting Method:** 15 percent improvement.

**Potential Data Source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

The physical and emotional toll associated with head and spinal cord injuries can be enormous for the survivors and their families. People with existing disabilities from head and spinal cord injuries are at high risk for further secondary disabilities. Prevention efforts should target motor vehicle crashes, falls, diving, and water safety.

Motor vehicle crashes cause 44 percent of all spinal cord injuries. Many diving-related incidents result in spinal cord injury. Among a majority of pedalcyclists (includes bicycles and tricycles) killed, the most serious injuries are head injuries. Serious head injury is common among fatally injured motorcyclists. Death rates from head injuries have been shown to be twice as high among cyclists in States with no helmet laws or laws that apply only to young riders, compared with States where laws apply to all riders. Falls account for 87 percent of all fractures among people aged 65 years and older and are the second leading cause of spinal cord and brain injury.<sup>5,6</sup> Head injuries are associated with the majority of deaths and severe injuries resulting from falls among children. Falls account for 90 percent of the most severe playground-related injuries (mostly head injuries and fractures) and one-third of fatalities. Head injuries are involved in 75 percent of all fall-related deaths associated with playground equipment.

1 **Firearm-Related Injuries**

- 2  
3 **3. (Former 7.3) Reduce firearm-related deaths to less than 11.6 per 100,000 people.** (Baseline:  
4 13.9 per 100,000 people in 1995)

5

Select Populations	1995
African American	30.3
American Indian/Alaska Native	13.9
Asian/Pacific Islander	6.4
Hispanic	16.0
White	5.4

6  
7 **Target Setting Method:** Retain year 2000 target.

8  
9 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.

- 10  
11 **4. (Former 7.11) Reduce to 16 percent the proportion of people living in homes with firearms that**  
12 **are loaded and unlocked.** (Baseline: 20 percent in 1994)

13  
14 **Target Setting Method:** Retain year 2000 target.

15  
16 **Data Source:** National Health Interview Survey (NHIS), CDC, NCCDPHP.

- 17  
18 **5. (Former 7.19) Enact laws in 50 States and the District of Columbia requiring that firearms be**  
19 **properly stored to minimize access and the likelihood of discharge by minors.** (Baseline: 15 in  
20 1996)

21  
22 **Target Setting Method:** Retain year 2000 target.

23  
24 **Data Source:** National Conference of State Legislatures.

25  
26 In 1990, firearm injuries cost over \$20.4 billion in direct costs for hospitals and other medical care and in  
27 indirect costs for long-term disability and premature death. At least 80 percent of the costs for treating  
28 firearm injuries are paid for with taxpayer dollars.<sup>7</sup>

29  
30 In 1994, there were 787 unintended firearm deaths among persons aged 10 to 29, accounting for 58  
31 percent of all unintentional firearm deaths in the Nation. Unintentional firearm deaths are those that occur  
32 when the person firing the gun does not intend to harm another.<sup>8</sup>

33  
34 The lethality of American violence distinguishes it from violence in every other industrialized country.  
35 The recent epidemic of youth homicide and suicide is largely the result of increases in the use of firearms  
36 over other, less lethal methods, such as poisoning and strangulation. Fatalities, however, are only a portion  
37 of the problem. For each of the 35,957 people killed by a gunshot wound in the United States in 1995,  
38 approximately 3 more were nonfatally wounded.<sup>9</sup>

1 **Child Death Review**

2  
3 **6. (Developmental/Former 7.13) Extend to all 50 States child death review systems with**  
4 **interdisciplinary teams reviewing at least 75 percent of deaths due to external causes for**  
5 **children 14 and under and making recommendations for prevention.**  
6

7 One of the most profound public health issues facing children under the age of 18 in the United States  
8 today is violent deaths, or deaths from homicide, suicide, and unintentional firearm-related injuries. In  
9 1995 over 4,500 children were victims of either homicide or suicide, making homicide the third leading  
10 cause of death and suicide the fifth leading cause of death for children under 18 years of age. Between  
11 1950 and 1994, childhood homicide rates tripled and childhood suicide rates quadrupled, while rates for  
12 other childhood conditions decreased.  
13

14 In order to examine these trends in childhood violent death, information has typically come from one of  
15 several sources (vital statistics, death certificates, protective service records, and FBI’s Uniform Crime  
16 Report), each with specific limitations. In response to the increasing trend of violence against children and  
17 the lack of a comprehensive data source on violent childhood deaths, the Child Fatality Review Process  
18 (CFR) was developed in 1978 in California. There are currently 41 States with child death review  
19 systems; therefore, achieving the goal of 50 States by 2010 should be feasible.  
20

21 The goal of the CFR Teams is the prevention of childhood deaths. Their responsibility is to review  
22 so-called “suspicious” or “preventable” childhood deaths. This objective emphasizes “external causes,”  
23 which refers to deaths that receive an “E code” on death certificates. In general, these codes are used to  
24 document injury-related deaths and to a limited extent describe how an injury occurred. This is deemed to  
25 be more specific than the previous term (unexplained) and emphasizes the prevention aspects of the  
26 process. Child Fatality Review Teams are typically multiagency and multidisciplinary. After integrating  
27 information from multiple sources, review teams strive to determine if the cause of death was accurate and  
28 suggest prevention initiatives for all relevant agencies. Simply reviewing deaths is not helpful unless  
29 recommendations for prevention are also included.  
30

31 Ideally, all deaths involving children 18 years and younger should be reviewed. However, this volume  
32 may be unmanageable for States that need to develop or have just begun to implement child fatality  
33 reviews. Focusing on children 14 years and below will include most “unexplained” childhood deaths and  
34 is considered a more reasonable goal to achieve. However, States should continue to improve their  
35 systems and move toward reviewing all deaths for youth 18 and below, as their ultimate goal.  
36

37 **Injury Education**

38  
39 **7. Increase to at least 76 percent the proportion of public and private schools that teach about**  
40 **injury prevention and safety in a required health education course. (Baseline: 66 percent in**  
41 **1996)**  
42

<b>Select Settings</b>	<b>1996</b>
Elementary schools	Not available
Middle/junior high schools	66%
Senior high schools	66%

43  
44 **Target Setting Method:** 15 percent improvement.  
45

46 **Data Source:** School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP.

1  
2 Education provides information and teaches skills. New knowledge and new skills can change or reinforce  
3 a person's attitude and behavior, thus reducing the chances of injury. Educational efforts can be directed  
4 toward a wide variety of target groups to help convey knowledge and skills. Knowledge and skills are a  
5 crucial part of the process, but they are often insufficient by themselves. The acquisition of knowledge is  
6 usually not followed immediately by the adoption of new behaviors. Behavioral change requires time and  
7 repeated effort and is more likely to occur if the physical and social environment support and encourage it.  
8

## 9 **Goal: Unintentional Injuries**

10  
11 Reduce the incidence and severity of injuries from unintentional causes.  
12

### 13 **Overview**

14  
15 Unintentional injuries are the leading cause of death for people aged 1 to 34. Unintentional injuries  
16 constitute the fifth leading cause of death in the United States, killing over 93,320 people in 1995. In  
17 1994, over 2 million YPLL were caused by unintentional injuries.<sup>10</sup> Motor vehicle crashes account for  
18 approximately half the deaths from unintentional injuries; falls rank second, followed by poisoning,  
19 drowning, and home fires.  
20

21 Additional millions are incapacitated by unintentional injuries, with many suffering lifelong disabilities.  
22 These events occur disproportionately among the young and the elderly. In 1994, 4.5 million people were  
23 hospitalized and 34.9 million people visited emergency departments as a result of an unintentional injury.<sup>11</sup>  
24

25 Although the greatest impact of injury is in human suffering and loss, the financial cost also is staggering,  
26 including direct medical care and rehabilitation as well as lost income and productivity. Injury costs are  
27 estimated at more than \$224 billion annually, which represents an increase of 42 percent over the last  
28 decade.<sup>12</sup> Preventing injuries costs less than treating them.  
29

- 30 • Every child safety seat saves this country \$85 in direct medical costs and an additional \$1,275 in other  
31 costs to society.
- 32
- 33 • Every bicycle helmet saves this country \$395 in direct medical costs and other costs to society.  
34
- 35 • Every smoke detector saves this country \$35 in direct medical costs and an additional \$865 in other  
36 costs to society.
- 37
- 38 • Every dollar spent on poison control centers saves this country \$6.50 in medical costs.<sup>13</sup>  
39

40 Several themes become evident when examining the body of knowledge on injury prevention and control,  
41 including acute care or treatment and rehabilitation. First, unintentional injury comprises a family of  
42 complex problems involving many different sectors of society. No single force working alone can  
43 accomplish everything needed to reduce the number of injuries. Improvement requires the combined  
44 efforts of many fields, including health, education, transportation, law, engineering, and safety sciences.  
45 Second, many of the factors that cause unintentional injuries are closely associated with violent and  
46 abusive behavior. Injury prevention and control addresses both unintentional and intentional injuries.  
47 Therefore, national objectives to reduce death and disability resulting from injuries must include both the  
48 objectives in this section and those in the section on violence and abuse.  
49

1 **Progress Toward Year 2000 Objectives**

2  
3 The 26 objectives in the area of unintentional injuries focus on a wide range of epidemiological,  
4 legislative, and educational means to reduce the occurrence of these events. Progress toward the year 2000  
5 targets was made on seven objectives.

6  
7 For four objectives, 9.2 (injury hospitalizations), 9.8 (nonfatal poisonings), 9.9 (nonfatal head injuries),  
8 and 9.10 (nonfatal spinal cord injuries), the year 2000 target has been achieved or surpassed. Much of the  
9 progress is in areas related to motor vehicle fatalities, injuries, and use of vehicle occupant restraints (9.3,  
10 9.9, and 9.12).

11  
12 The national rate of residential fire deaths (9.6) and all special populations monitored as subobjectives  
13 show declining rates. These improvements may be associated with increased use of smoke detectors  
14 (9.17).

15  
16 The hospitalization rates for hip fractures (9.7) remain above baseline levels, indicating no progress toward  
17 the year 2000 target.

18  
19 Data are not available currently to update three objectives: 9.11 (incidence of secondary conditions  
20 associated with trauma-related spinal cord injuries), 9.18 (injury prevention instruction in required course),  
21 and 9.20 (number of States with design standards for roadway safety).<sup>14</sup>  
22

23 **Draft 2010 Objectives**

24  
25 **8. (Former 9.1) Reduce deaths caused by unintentional injuries to no more than 25.9 per 100,000**  
26 **people.** (Age-adjusted baseline: 30.5 per 100,000 in 1995)  
27

Select Populations	1995
African American male	57.6
American Indian/Alaska Native male	56.7
Hispanic male	Not available
Mexican American male	44.6
White male	43.0

28  
29 **Target Setting Method:** 15 percent improvement.

30  
31 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.  
32

33 **9. Reduce emergency department visits caused by unintentional injuries to no more than 111 per**  
34 **1,000 people.** (Baseline: 131 per 1,000 in 1995)  
35

Select Populations	1995
Aged 15-24	202

36  
37 **Target Setting Method:** 15 percent improvement.

38  
39 **Data Source:** National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.  
40

1 **10. (Developmental/Former 9.2) Reduce nonfatal unintentional injuries so that hospitalizations for**  
2 **this condition are no more than \_\_ per 100,000 people.**

3  
4 **Potential Data Source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

5  
6 Unintentional injuries are the leading cause of death for people aged 1 to 34 and the fourth leading cause  
7 of death in the United States among all ages, killing over 93,320 people in 1995. Minority populations  
8 have an even higher incidence of unintentional injuries and death. Unintentional injuries are the second  
9 leading cause of death for American Indian men and the third leading cause of death for American Indian  
10 women. More than 1,000 Americans Indians die from injuries and 10,000 more are hospitalized for  
11 injuries each year. The age-adjusted injury death rate for American Indians is 3 times higher than that of  
12 all other Americans. Among American Indians, 46 percent of YPLL is the result of injury, which is 5  
13 times greater than the YPLL due to the next highest cause, heart disease (8 percent). Among the factors  
14 that contribute to these increased rates are rural or isolated living, minimal emergency medical services,  
15 and great distances to sophisticated trauma care.<sup>15</sup>

16  
17 **Motor Vehicle-Related Injuries**

18  
19 **11. (Former 9.3) Reduce deaths caused by motor vehicle crashes to no more than 11.4 per 100,000**  
20 **people and 1.1 per 100 million vehicle miles traveled (VMT).** (Baseline: 15.8 per 100,000 people  
21 and 1.7 per 100 million VMT in 1996)  
22

Select Populations	1996 (unless noted)
African American	16.6 (1995)
American Indian/Alaska Native	33.1 (1995)
Asian/Pacific Islander	10.8 (1995)
Hispanic	17.7 (1995)
White	16.4 (1995)
Aged 15-19	27.9
Aged 20-24	29.7
Aged 70 and older	23.1
Motorcyclists per 100 million VMT	21.8
Rural settings per 100 million VMT	2.6

23  
24 **Target Setting Method:** 28 percent reduction per 100,000 people, 35 percent reduction per 100  
25 million VMT, and 10 percent reduction per 100 million VMT (motorcyclists).

26  
27 **Data Sources:** Fatality Analysis Reporting System (FARS), NHTSA; National Vital Statistics System  
28 (NVSS), CDC, NCHS.

29  
30 **12. (Former 9.3f) Reduce pedestrian deaths to no more than 1.7 per 100,000 people.** (Baseline: 2.0  
31 per 100,000 in 1996)  
32

Select Populations	1996
Aged 70 and older	3.9

33  
34 **Target Setting Method:** 15 percent improvement.

35  
36 **Data Source:** Fatality Analysis Reporting System (FARS), NHTSA.

1 **13. Reduce nonfatal injuries caused by motor vehicles to 953 per 100,000 people and 102 per 100**  
2 **million vehicle miles traveled (VMT).** (Baseline: 1,323 per 100,000 people and 141/100 million  
3 VMT in 1996)  
4

Select Populations	1996
Aged 16-20	3,256
Aged 21-24	2,522

5  
6 **Target Setting Method:** 28 percent improvement.  
7

8 **Data Source:** General Estimates System (GES), NHTSA.  
9

10 **14. Reduce pedestrian injuries to no more than 26 per 100,000 people.** (Baseline: 31 per 100,000 in  
11 1996)  
12

Select Populations	1996
Aged 5-9	51
Aged 10-15	65
Aged 16-20	47

13  
14 **Target Setting Method:** 15 percent improvement.  
15

16 **Data Source:** General Estimates System (GES), NHTSA.  
17

18 **15. (Former 9.12) Increase use of safety belts and child restraints to at least 93 percent of motor**  
19 **vehicle occupants.** (Baseline: 69 percent in 1997)  
20

Select Populations	1996
4 years old and younger	61%
9 <sup>th</sup> -12 <sup>th</sup> graders	Not available

21  
22 **Target Setting Method:** NHTSA has a goal of 90 percent seat belt rate by 2005.  
23

24 **Data Sources:** National Occupant Protection Use Survey (NOPUS), NHTSA; Youth Risk Behavior  
25 Survey (YRBS), CDC, NCCDPHP.  
26

27 **16. Extend to 50 the number of States with primary enforcement laws for safety belt use.** (Baseline:  
28 11 States in 1996)  
29

30 **Target Setting Method:** 100 percent coverage.  
31

32 **Data Source:** NHTSA.

1 **17. (Former 9.13) Increase to at least 75 percent the proportion of motorcyclists using helmets.**  
2 (Baseline: 64 percent in 1996)

3

Select Populations	1995
9 <sup>th</sup> -12 <sup>th</sup> graders	40.5%

4  
5 **Target Setting Method:** The rate increased 2.5 percent from 1994 to 1996; increasing 2.5 percent  
6 every 2 years from 1996 to 2010 results in a 76 percent rate.

7  
8 **Data Sources:** National Occupant Protection Use Survey (NOPUS), DOT, NHTSA; Youth Risk  
9 Behavior Survey (YRBS), CDC, NCCDPHP.

10  
11 **18. (Former 9.14) Extend to 50 States laws requiring helmet use for all motorcyclists.** (Baseline: 22  
12 States and District of Columbia in 1997)

13  
14 **Target Setting Method:** Retain year 2000 target. It is highly unlikely that more States will pass laws.  
15 Three States repealed their laws in 1997 alone. It will be very difficult to even maintain the 22  
16 existing laws.

17  
18 **Data Source:** Insurance Institute for Highway Safety.

19  
20 **19. (Former 9.26) Increase to 50 the number of States adopting the core components of the**  
21 **National Committee on Uniform Traffic Law and Ordinances (NCUTLO) graduated driver**  
22 **licensing model law.** (Baseline: 6 States in 1997)

23  
24 **Target Setting Method:** 100 percent coverage.

25  
26 **Data Source:** NHTSA.

27  
28 Motor vehicle crashes remain a major public health problem. They are the leading cause of death for  
29 Americans aged 1 to 24. According to the DOT, the total societal cost of crashes exceeds \$150 billion  
30 annually. Based on analysis of data from DOT's FARS, 41,907 people died in motor vehicle crashes in  
31 1996. The motor vehicle death rate per 100,000 people is especially high among 16- to 24-year-olds and  
32 people aged 75 years and older. At all ages, males have higher motor vehicle death rates per 100,000  
33 people compared to females. Motor vehicle crashes cause 44 percent of all spinal cord injuries.

34  
35 Safety belts, when used, are the single most effective means for occupants to reduce the risk of death and  
36 serious injury in a motor vehicle crash. The national use rate (as of December 1996) is 68 percent,  
37 according to NHTSA. Lap and shoulder belts are 45 percent effective in reducing deaths and 50 percent  
38 effective in preventing moderate-to-critical injuries to passengers. In 1996, if all passenger vehicle  
39 occupants had buckled up, an estimated 20,169 lives could have been saved.

40  
41 As of December 1997, 49 States have safety belt laws. Eleven States have primary enforcement laws  
42 while the remaining 38 States have secondary enforcement laws.<sup>16</sup> Many States that have upgraded to  
43 primary enforcement laws have seen their State's safety belt use increase 10 to 15 percent immediately  
44 following passage of the law. States with primary enforcement and well-publicized enforcement of these  
45 belt laws can produce use rates at 80 percent and above.

46  
47 Teenagers experience a disproportionately high incidence of crashes and crash deaths. Teenagers  
48 accounted for 10 percent of the U.S. population in 1996 and 15 percent of motor vehicle deaths. The risk

*Healthy People 2010 Objectives: Draft for Public Comment*

1 of crash involvement per mile driven among drivers 16 to 19 years old is 4 times greater than other drivers;  
2 risk is greater at ages 16 and 17. In 1996, 5,805 teenagers died in motor vehicle crashes, more than in each  
3 of the preceding 5 years. Graduated licensing laws are a means of allowing a young driver to gain driving  
4 experience at incremental levels. While 18 States have some element of a graduated licensing system, only  
5 6 have all the core provisions of the model graduated licensing model law developed by NCUTLO. The  
6 core provisions are a learner's phase of at least 6 months followed by an intermediate phase of at least 6  
7 months and a prohibition of unsupervised driving at night for young drivers during the intermediate phase.  
8 The NCUTLO model requires applicants for intermediate and full licenses to have no safety belt or zero  
9 tolerance violations and to otherwise be conviction free during the mandatory holding periods.<sup>17</sup>

10  
11 Among children aged 1 to 14, crash injuries are the leading cause of death. According to data from FARS,  
12 2,172 children aged 12 and under died in motor vehicle crashes in 1996. The use of age-appropriate  
13 restraint systems can reduce this problem. Because all 50 States have child restraint laws, more children  
14 now ride restrained. But loopholes in the laws exempt many children from coverage under either safety  
15 belt or child restraint use laws. Another problem is the persistence of incorrectly used child restraints and  
16 safety belts.<sup>18</sup>

17  
18 Fewer elderly people are licensed to drive, compared to younger groups, and they drive fewer miles per  
19 licensed driver. However, there is cause for concern when elderly people do drive because they have  
20 higher rates of fatal crashes per mile driven, per 100,000 people, and per licensed driver than any other  
21 group except young drivers. One problem is that elderly drivers do not deal as well as younger ones with  
22 complex traffic situations; multiple-vehicle crashes at intersections increase markedly with the driver's age.  
23 Elderly drivers are more likely to get traffic citations for failing to yield, turning improperly, and running  
24 stop signs and red lights. Once they are in crashes, elderly people are more susceptible than younger  
25 people to medical complications following motor vehicle crash injuries. Thus, they are more likely to die  
26 from their injuries.<sup>19</sup>

27  
28 Motorcycles are less stable and less visible than cars, and they have high performance capabilities. For  
29 these and other reasons, motorcycles are more likely than cars to be in crashes. Also, when motorcycles  
30 crash, their riders lack the protection of an enclosed vehicle, so they are more likely to be injured or killed.  
31 Per mile traveled, the number of deaths on motorcycles is about 16 times the number in cars. Because  
32 serious head injury is common among fatally injured motorcyclists, helmet use is important. In States that  
33 require all riders to wear helmets, use approaches 100 percent compared with about 50 percent in States  
34 with partial laws or no laws. Yet less than half of the States mandate helmet use by all riders. Death rates  
35 from head injuries have been shown to be twice as high among cyclists in States with no helmet laws or  
36 laws that apply only to young riders, compared with States where laws apply to all riders. Repealing or  
37 weakening helmet laws so that they do not apply to all riders has been followed in a number of States by  
38 increases in deaths. Helmets are about 29 percent effective in preventing motorcycle deaths and about 67  
39 percent effective in preventing brain injuries. An unhelmeted rider is 40 percent more likely to suffer a  
40 fatal head injury, compared with a helmeted rider. FARS data indicate that 2,075 motorcyclists died in  
41 crashes in 1996.<sup>20</sup>

42  
43 Pedestrians are the second largest category of motor vehicle deaths, after occupants, and account for about  
44 13 percent of motor vehicle deaths. The problem is worse among young children and the elderly.  
45 Children are more likely to be injured, while older adults are more likely to die in pedestrian crashes.<sup>21</sup>

1 **Residential Fires**

2  
3 **20. (Former 9.6) Reduce residential fire deaths to no more than 1.0 per 100,000 people.** (Age-  
4 adjusted baseline: 1.2 per 100,000 in 1995)

5

Select Populations	1995
African American male	4.2
African American female	2.4
American Indian/Alaska Native	3.1
Asian/Pacific Islander	0.4
Hispanic	0.6
Puerto Rican	1.3
White	1.0
4 years and younger	2.6
65 years and older	3.6

6  
7 **Target Setting Method:** 15 percent improvement.

8  
9 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.

10  
11 **21. (Former 9.17) Increase to 100 percent the presence of functional smoke alarms to at least one**  
12 **on each habitable floor of all inhabited residential dwellings, including the basement.** (Baseline:  
13 52 percent of residential dwellings had at least one smoke alarm per habitable floor in 1995)

14

Select Settings	1995
Schools having fires reporting functional smoke alarms	80%

15  
16 **Target Setting Method:** 100 percent.

17  
18 **Data Sources:** National Health Interview Survey (NHIS), CDC, NCHS; National Fire Incidence  
19 Reporting System (NFIRS), U.S. Fire Administration.

20  
21 In 1996, there were an estimated 417,000 residential fires in the United States, which killed 4,035  
22 individuals and injured an additional 18,875 people. Direct property damage caused by these fires was  
23 roughly \$4.9 billion. In 1995, the monetary equivalent of all fire deaths and injuries, including deaths and  
24 injuries to firefighters, was estimated at \$15.8 billion.<sup>22</sup>

25  
26 The home fire death rate in 1996 was 1.52 per 100,000.<sup>23</sup> The leading causes of these fires were cooking,  
27 heating equipment, and incendiary or suspicious causes (such as arson). Deaths attributable to residential  
28 fires are due primarily to fires caused by cigarette and cigar smoking, incendiary or suspicious causes,  
29 heating equipment, and children playing with matches or fire.

30  
31 Residential fire deaths occur disproportionately in the southeastern States. They also occur to a greater  
32 extent during the winter months of December through February. Many subgroups within the population  
33 remain highly vulnerable to fire morbidity and mortality. The rate of death from residential fires is higher  
34 among the poor, less educated, minorities, children under 5 years of age, older adults, low-income  
35 communities in urban or remote rural areas, and those living in manufactured homes built before 1976,  
36 when the U.S. Department of Housing and Urban Development construction safety standards became  
37 effective.<sup>24</sup> Alcohol impairment also is a strong risk factor for death in the case of a fire as mobility,

1 functionality, and judgment are affected.<sup>25</sup> Other risk factors for fire deaths, some strongly correlated with  
2 household poverty and others less so, include:

- 3
- 4 • Absence of working smoke alarms
- 5
- 6 • Careless smoking
- 7
- 8 • Abuse of alcohol or other drugs
- 9
- 10 • Incorrect use of alternative heating sources including use of devices inappropriate or insufficient for  
11 the space to be heated, especially in poor rural areas
- 12
- 13 • Inadequate supervision of children
- 14
- 15 • Unusable exits because of security devices used to prevent break-ins
- 16
- 17 • Higher risk of arson in poor urban areas.
- 18
- 19 • Substandard housing, particularly substandard electrical systems
- 20
- 21 • Little or no fire safety education
- 22

23 Fires are the second leading cause of unintentional injury death among children. Compared to the total  
24 population, children aged 4 years and younger have a fire death rate more than twice the national average.  
25 About 800 children aged 14 and under die by fire each year, and 55 percent of these children are under the  
26 age of 5. The leading reason for this excess is that children react less effectively to fire than adults, but it is  
27 also true that they generally sustain more severe burns at lower temperatures than adults. Losses to society  
28 from childhood burn deaths and injuries total approximately \$5.5 billion annually. Two-thirds of  
29 fire-related deaths and injuries among children under age 5 occur in homes without working smoke alarms.  
30 African American, Hispanic, and American Indian children are at higher risk than white children for home  
31 fire deaths.<sup>26</sup>

32

33 Older adults are at increased risk of fire death because they are more vulnerable to smoke inhalation and  
34 burns and are less likely to recover. Sense impairment (such as blindness or hearing loss) may prevent  
35 them from noticing a fire and mobility impairment may prevent them from escaping its consequences.  
36 These older adults also are less likely to have learned fire safety behavior and prevention information, since  
37 they grew up at a time when there was little fire safety education in schools and because most educational  
38 programs are targeted to children.

39

40 Individuals living in manufactured homes built before 1976 also are at increased risk of death in the case  
41 of fire. These older manufactured homes are less likely to have smoke alarms or an adequate second  
42 means of exit, and their smaller room sizes and characteristic building materials promote rapid fire  
43 development.

44

45 The majority of fire-related fatalities occur at night (9 p.m.-6 a.m.), while occupants are asleep, a time  
46 when effective detection and alerting systems are of special importance. Most fire victims die from  
47 inhalation of smoke and toxic gases (75 percent, in 1994), not as a result of burns (only 24 percent) or  
48 other factors (2 percent).

1 Operable smoke alarms on every level and in every sleeping area provide residents with sufficient warning  
2 to escape from nearly all types of fires. As a result, working smoke alarms can be highly effective in  
3 preventing fire-related deaths. If a fire occurs, homes with smoke alarms are roughly half as likely to have  
4 a death occur as homes without smoke alarms.

5  
6 **Falls**

7  
8 **22. (Former 9.4) Reduce deaths from falls to no more than 2.3 per 100,000 people.** (Age-adjusted  
9 baseline: 2.6 per 100,000 in 1995)

10

Select Populations	1995
African American	2.3
American Indian/Alaska Native	3.8
Asian/Pacific Islander	1.8
Hispanic male aged 65-84	12.8
White male aged 65-84	16.1
Hispanic male aged 85+	89.1
White male aged 85+	129.8

11  
12 **Target Setting Method:** Retain year 2000 target.

13  
14 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.

15  
16 **23. (Former 9.7) Reduce hip fractures for persons aged 65 and older to 800 per 100,000 females**  
17 **and 350 per 100,000 males.** (Baseline: 1,000 per 100,000 females; 440 per 100,000 males in 1995)

18  
19 **Target Setting Method:** 20 percent improvement.

20  
21 **Data Source:** National Hospital Discharge Survey (NHDS), CDC, NCHS.

22  
23 Falls are the second leading cause of injury deaths among people aged 65 to 84 and the leading cause for  
24 people aged 85 and older. In 1995, almost 7,900 people over 65 died as a result of falls.<sup>27</sup> Falls are the  
25 most common cause of injuries and hospital admissions for trauma among the elderly. Falls account for 87  
26 percent of all fractures among people aged 65 years and older and are the second leading cause of spinal  
27 cord and brain injury.<sup>28</sup> Since most fractures are the result of falls, understanding factors that contribute to  
28 falling is essential in order to design effective intervention strategies. For people aged 65 years and older,  
29 60 percent of fatal falls occur in the home, 30 percent occur in public places, and 10 percent occur in  
30 health care institutions.

31  
32 The most serious fall-related injury is hip fracture. Approximately 240,000 hip fractures occur each year  
33 in the United States among people older than 50 years;<sup>29</sup> 75 to 80 percent of all hip fractures are sustained  
34 by women. The impact of these injuries on the quality of life is enormous. Half of all elderly adults  
35 hospitalized for hip fracture cannot return home or live independently after the fracture. The annual cost  
36 for treating these injuries was over \$3 billion in 1986.<sup>30</sup> Factors that contribute to falls include dementia,  
37 visual impairment, neurologic and musculoskeletal disabilities, psychoactive medications, and difficulties  
38 in gait and balance. Environmental hazards such as slippery surfaces, uneven floors, poor lighting, loose  
39 rugs, unstable furniture, and objects on floors also may play a role.

1 **Drownings**

2  
3 **24. (Former 9.5) Reduce drowning deaths to no more than 1.5 per 100,000 people.** (Age-adjusted  
4 baseline: 1.7 per 100,000 in 1995)

5

Select Populations	1995
African American male	4.1
American Indian/Alaska Native	3.5
Asian/Pacific Islander	1.3
Hispanic	1.6
White	1.6
4 years and younger	3.7
Male aged 15-24	Not available
Rural	Not available

6  
7 **Target Setting Method:** 15 percent improvement.

8  
9 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.

10  
11 In 1995, drownings ranked as the fifth unintentional injury-related cause of death after motor vehicle  
12 crashes, other unintentional injuries, falls, and poisonings.<sup>31</sup> In 1992, the U.S. Coast Guard had reports of  
13 6,000 crashes involving recreational boats, which resulted in 3,700 injuries and 816 deaths.<sup>32</sup> Drowning is  
14 the second leading cause of injury-related death for children aged 1 to 19, accounting for 1,502 deaths in  
15 1995.<sup>33</sup> In every age group, drowning rates are almost 2 to 4 times greater for males than for females. In  
16 1993, the overall drowning rate for African Americans was twice that for whites; however, the rate was not  
17 higher for all age groups. For example, among children aged 1 through 4 years, the drowning rate for  
18 whites was twice the rate for African Americans, largely because of drownings in residential swimming  
19 pools. For children aged 5 to 19 years, the drowning rate for African Americans was 2 to 4 times the rate  
20 for whites.<sup>34</sup>

21  
22 Most deaths involving diving occur among people aged 15 to 39 years, with the largest proportion (14.8  
23 percent) occurring among people in the 30-39 age group. Many diving-related incidents result in spinal  
24 cord injury. Alcohol use appears to be a contributing factor in many diving-related injuries and deaths.

25  
26 According to the U.S. Consumer Product Safety Commission (CPSC), each year emergency departments  
27 report about 500 drownings and 3,000 near-drownings in residential swimming pools among children 5  
28 years and younger. Among children aged 0 to 4 years, 60 to 90 percent of drownings occur in residential  
29 pools, with more than half of these drownings occurring at the child's own home. According to CPSC,  
30 drownings are 60 percent more likely to occur at homes with in-ground pools without isolation fencing.

31  
32 **Bicycle-Related Head Injuries**

33  
34 **25. (Former 9.24) Extend to 50 States, laws requiring helmets for bicycle riders 14 years of age and**  
35 **younger.** (Baseline: 8 States in 1997)

36  
37 **Target Setting Method:** 100 percent coverage.

38  
39 **Data Source:** National SAFE KIDS Campaign.

1 **26. (Former 9.13) Increase use of bicycle helmets to 50 percent of 9th-12th grade students who ride**  
2 **bicycles.** (Baseline: 8 percent in 1995)

3  
4 **Target Setting Method:** Retain year 2000 target.

5  
6 **Data Source:** Youth Risk Behavior Survey (YRBS), CDC, NCCDPHP.

7  
8 **27. (Developmental/Former 9.13) Increase use of helmets to at least \_\_ percent of bicyclists.**

9  
10 Head injuries are the most serious type of injuries sustained by pedalcyclists of all ages. In 1996, there  
11 were 761 bicyclists killed in crashes involving motor vehicles. Of those deaths, 33 percent were riders  
12 aged 16 and younger, which is a decrease compared to 47 percent of riders in 1986. Pedalcyclists 25 years  
13 of age and older make up an increasing proportion of all pedalcyclist deaths since 1986. The proportion of  
14 pedalcyclist fatalities aged 25 to 64 was nearly twice as high in 1996 as in 1986 (46 percent and 25  
15 percent, respectively).<sup>35</sup> More bicyclists were killed in urban areas than in rural areas (65 percent  
16 compared with 35 percent) in 1996.<sup>36</sup> Bicycle helmets are a proven intervention that minimize the risk of  
17 head injury. Although no State has a bicycle law that applies to all riders, 15 States have laws that apply to  
18 young bicyclists.<sup>37</sup> In addition, several localities have ordinances that require some or all bicyclists to wear  
19 helmets. Helmets are important for riders of all ages, especially because older bicyclists represent  
20 two-thirds of bicycle deaths.

21  
22 **Poisonings**

23  
24 **28. (Former 9.8) Reduce nonfatal poisoning to no more than 42 emergency department visits per**  
25 **100,000 people.** (Baseline: 49 per 100,000 in 1994)

26

Select Populations	1994
4 years and younger	518

27  
28 **Target Setting Method:** 15 percent improvement.

29 **Data Source:** National Electronic Injury Surveillance System (NEISS), Consumer Product Safety  
30 Commission.

31  
32 **29. Reduce deaths caused by unintentional poisoning to no more than 2.7 per 100,000 people.**  
33 (Baseline: 3.2 per 100,000 in 1995)

34

Select Populations	1995
African American male aged 25-34	9.8
American Indian/Alaska Native male aged 25-34	Not available
Asian/Pacific Islander male aged 25-34	Not available
Hispanic male aged 25-34	Not available
White male aged 25-34	8.4
African American male aged 35-44	25.0
White male aged 35-44	12.3
African American male aged 45-54	22.7
White male aged 45-54	6.4

35  
36 **Target Setting Method:** 15 percent improvement.

37 **Data Source:** National Vital Statistics System (NVSS), CDC, NCHS.

1  
2 Children are at significantly greater risk from poisoning death and exposure than adults because they are  
3 smaller, have faster metabolic rates, and are less able to physically handle toxic chemicals. In 1995, 80  
4 children aged 14 and under were fatally poisoned. Children aged 4 and under accounted for nearly half of  
5 these deaths. In 1996, more than 1.1 million unintentional poisonings among children aged 5 and under  
6 were reported to U.S. poison control centers. Approximately 90 percent of all poison exposures occur at a  
7 residence.<sup>38</sup>

8  
9 In 1996, 29 children aged 5 and under died from exposure to medicines and household products.  
10 Among children aged 5 and under, 60 percent of poisoning exposures are by nonpharmaceutical products  
11 such as cosmetics, cleaning substances, plants, foreign bodies and toys, pesticides, art supplies, and  
12 alcohol; 40 percent are by pharmaceuticals. Ipecac syrup, when used under medical advice, can reduce the  
13 likelihood of severe poisoning, decrease the costs of a poisoning incident, and prevent the need for a  
14 hospital emergency room visit.<sup>39</sup>

15  
16 The total annual cost of poisoning-related death and injury exceeds \$7.6 billion among children aged 14  
17 and under. Children aged 4 and under account for \$5.1 billion, or two-thirds, of these costs. Medical  
18 expenses associated with a poisoning exposure average \$925 per case. The average cost of hospital  
19 treatment for a poisoning exposure is \$8,700. Every dollar spent on poison control centers saves this  
20 country \$7 in medical costs.<sup>40</sup>

## 21 22 *Dog Bite Injuries*

23  
24 **30. Reduce number of emergency department visits for nonfatal dog bite injuries among children**  
25 **aged 9 and younger to no more than 28 per 10,000 persons.** (Baseline: 32.5 per 10,000 for period  
26 1992-94)

27  
28 **Target Setting Method:** 15 percent reduction.

29  
30 **Data Source:** Emergency department survey, National Hospital Ambulatory Medical Care Survey  
31 (NHAMCS), CDC, NCHS.

32  
33 Dog bite injuries are an important source of injury in the U.S. population, especially among children. With  
34 regard to overall morbidity, the annual number of total bites that occur in the U.S. population has been  
35 estimated to range from 500,000 to 4.5 million. It has been estimated that almost half of all children have  
36 been bitten by a dog at some point in their lives. Among children, more than 50 percent of documented  
37 bites have been to the head, face, or neck. Based on a random household survey, the Injury Control and  
38 Risk Survey conducted by CDC, it was estimated that about 800,000 bites occur annually that require  
39 medical attention. Also, in a recent emergency department survey from the NCHS NHAMCS for 1992-94,  
40 the 3-year annualized, adjusted, and weighted estimate of dog bite-related injury visits to emergency  
41 departments was 12.9 per 10,000 persons. The median age of patients was 15 years, with children,  
42 especially boys aged 5 to 9 years, having the highest incidence rate (60.7 per 10,000 persons). Analysis of  
43 the NHAMCS data have shown that each year emergency departments treat about 334,000 new cases of  
44 dog bites with associated treatment payments of over \$100 million.<sup>41</sup>

45  
46 Considering the risk to large parts of the population, especially to children, it is necessary that effective  
47 prevention strategies be developed and applied to reduce the painful and costly burden of dog bites. More  
48 knowledge is needed through a combination of enhanced and coordinated dog bite reporting systems,  
49 expanded population-based surveys, and implementation and evaluation of prevention trials. Particularly

1 for the more severe episodes, information needs to be obtained regarding high-risk situations, high-risk  
2 dogs, and elements of successful interventions.

3  
4 More attention and research need to be devoted to the prevention of dog bites. Potential prevention  
5 strategies include educational programs on canine behavior, especially directed at children; laws for  
6 regulating dangerous or vicious dogs; enhanced animal control programs; and educational programs  
7 regarding responsible dog ownership and training.

8  
9 ***Injury Prevention***

10  
11 **31. (Developmental/Former 9.19) Increase to \_\_ percent the proportion of public and private**  
12 **schools that require use of effective head, face, eye, and mouth protection for students**  
13 **participating in school-sponsored physical activities.**

14  
15 **Potential Data Source:** School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP.

16  
17 **32. (Former 9.21) Increase to 50 percent the proportion of households with children that report**  
18 **receiving injury prevention counseling at a medical or dental visit in the past 12 months.**

19 (Baseline: 1994)

20

<b>Subject/Ages</b>	<b>1994</b>
Ipecac, 6 years and younger	17%
Poison control number, 6 years and younger	25%
Storage of firearms, 2-14 years	6%
Bicycle helmet, 5-14 years	19%
Car seat/belt, 14 years and younger	25%

21  
22 **Target Setting Method:** Retain year 2000 target.

23  
24 **Data Source:** Injury Control and Risk Survey (ICARIS), CDC.

25  
26 A large number of school-aged children suffer disabling and fatal injuries each year. As educational  
27 programs for schoolchildren are developed and proven effective in preventing injuries, they should be  
28 included in quality health education curricula at the appropriate grade level. Education should aim not  
29 only at reducing risks of injury directly but also at preparing children to be knowledgeable members of the  
30 adult community.

31  
32 Trauma to the head, face, eyes, and mouth is a frequent occurrence during school-sponsored physical  
33 activities. Schools with recreation and sports programs can reduce traumas by requiring the use of  
34 appropriate protective gear.

35  
36 The opportunities for physician intervention in unintentional injury prevention are enormous. Although  
37 behavioral risk factor counseling from a variety of sources is beneficial, patients continue to view  
38 physicians as the most credible source of health information. Yet physicians do not always seize the  
39 opportunity to counsel patients about the prevention of unintentional injuries.

1 **Goal: Violence and Abuse**

2  
3 Reduce injuries, disabilities, and death due to violence among all people of the United States.  
4

5 **Overview**

6  
7 Violence is pervasive in our society and has the potential to change the quality of life. Americans are  
8 shocked by reports of children killing other children in schools, and parents are concerned about the safety  
9 of their children at school. Reports of gang violence even in smaller towns and rural areas make people  
10 fearful for their safety and their family's. An increase in suicide among young people and the elderly  
11 raises concerns about the vulnerability of people in these age groups. Intimate partner violence and sexual  
12 assault threaten women in all walks of life. Violence claims the lives of many of our Nation's young  
13 people and threatens the health and well-being of many Americans. The pervasiveness of violence and the  
14 fear it causes have rapidly changed the quality of life in America. On an average day in America, 70  
15 people die from homicide, 87 people commit suicide, as many as 3,000 people attempt suicide, and a  
16 minimum of 18,000 people survive interpersonal assaults.  
17

18 Poverty, discrimination, and lack of education and employment opportunities are important risk factors for  
19 violence and must be addressed as part of any comprehensive solution to the epidemic of violence.  
20 Strategies for reducing violence should begin early in life, before violent beliefs and behavioral patterns  
21 can be adopted.  
22

23 The public health approach to violence is multidisciplinary and enlists many strategies and approaches for  
24 dealing with violence. There is still a strong conviction in society that violence can be prevented. Much  
25 has been learned about the impact of violence and the burden it imposes on society. Additionally, there are  
26 many potentially effective intervention strategies such as parent training, mentoring, home visitation, and  
27 social-cognitive curricula for violence prevention. Ongoing evaluation of programs will help identify  
28 effective approaches for violence prevention. Public health provides leadership in an effort to facilitate a  
29 multifaceted approach by integrating scientific disciplines, organizations, and communities to work  
30 together to find solutions to violence in our nation.  
31

32 **Progress Toward Year 2000 Objectives**

33  
34 Of the 19 violent and abusive behavior objectives in Healthy People 2000, 3 surpassed their year 2000  
35 targets: reduction of weapon carrying, child death review systems, and nonviolent conflict resolution  
36 programs in schools. Six objectives progressed toward the year 2000 targets: reducing suicides; reducing  
37 firearm-related deaths; reducing physical fighting and weapon-carrying among adolescents aged 14-17;  
38 increasing the proportion of elementary and secondary schools that teach nonviolent conflict resolution  
39 skills, preferably as part of comprehensive school health education; and enacting laws requiring that  
40 firearms be properly stored to minimize access and the likelihood of discharge by minors.  
41

42 Eight violent and abusive behavior objectives indicate movement away from the year 2000 targets:  
43 homicide, maltreatment of children younger than age 18, physical abuse directed at women by male  
44 partners, assault injuries among people aged 12 and older, rape and attempted rape of women aged 12 and  
45 older, suicide attempts among adolescents aged 14 to 17, battered women and their children turned away  
46 from emergency housing due to lack of space, and the number of States with protocols to facilitate  
47 identification and appropriate intervention for the prevention of suicides in jails.  
48

1 Three objectives remain without baselines: extend protocols for routinely identifying, treating, and  
2 properly referring suicide attempters, victims of sexual assault, and victims of partner violence, elder, and  
3 child abuse to at least 90 percent of hospital emergency departments; increase to at least 30 the number of  
4 States in which at least 50 percent of children who have been identified as neglected or physically or  
5 sexually abused receive physical and mental evaluation with appropriate followup as a means of breaking  
6 the intergenerational cycle of abuse; and extend coordinated, comprehensive violence prevention programs  
7 to at least 80 percent of local jurisdictions with populations over 100,000. Each of these objectives  
8 contains multiple components that make it difficult to track with a single data source, if one could be  
9 identified. However, each objective contains important issues that may have potential for development of  
10 a modified objective for Healthy People 2010.

11  
12 While the movement away from some of the year 2000 targets is disturbing, there are many reasons  
13 contributing to these results. Youth continue to be involved as both perpetrators and victims of violence.  
14 Women, and often their children, continue to be the targets of both physical and sexual assault frequently  
15 perpetrated by individuals known to them, specifically the women's current and former intimate partners.  
16 Other, more general issues include the lack of comparable data sources, definitional issues, and the lack of  
17 resources to adequately establish consistent tracking systems.

## 18 **Draft 2010 Objectives**

### 19 *Homicide*

20  
21  
22  
23 **33. (Former 7.1) Reduce homicides to less than 7.2 per 100,000 people.** (Age-adjusted baseline: 9.2  
24 per 100,000 in 1995)

<b>Select Populations</b>	<b>1995</b>
African American male aged 15-34	114.6
African American female aged 15-34	18.5
American Indian/Alaska Native	11.5
Asian/Pacific Islander	5.4
Hispanic male, aged 15-34	Not available
White	4.9
Infants aged <1	8.8
Children aged 1-4	2.9
Adolescents aged 15-19	Not available
Intimate partners (spouse, ex-spouse, boyfriend, girlfriend) aged 15-45	Not available

25  
26  
27 **Target Setting Method:** Retain year 2000 target.

28  
29 **Data Sources:** National Vital Statistics System (NVSS), CDC, NCHS; Federal Bureau of  
30 Investigation (FBI).

31  
32 Homicide was the cause of death for 22,552 Americans (8.58 per 100,000) in 1995.<sup>42</sup> Homicide rates are  
33 dropping among all groups, but the decreases are not as dramatic among youth, who already exhibit the  
34 highest rates. Homicide is the second leading cause of death for young people aged 15 to 24 and the  
35 leading cause of death for African American and Hispanic youth in this age group.<sup>43</sup> In 1995, 7,284 young  
36 people between 15-24 years old were victims of homicide, amounting to almost 19 youth homicide victims  
37 per day in the US.<sup>44</sup> Of all homicide victims in 1994, 38 percent were younger than 24 years old.<sup>45</sup> The

1 homicide rate among males between 15-24 years old in the U.S. is 10 times higher than in Canada, 15  
2 times higher than in Australia, and 28 times higher than the same rate in France or in Germany.<sup>46</sup>

3  
4 ***Family and Intimate Violence and Sexual Assault***

5  
6 **34. (Developmental/Former 7.4) Reduce to less than \_\_ per 1,000 children the incidence of**  
7 **maltreatment of children younger than age 18.**

8  
9 **35. (Developmental/Former 7.5) Reduce physical abuse by current or former intimate partners to**  
10 **less than \_\_ per 1,000.**

11  
12 **Potential Data Sources:** National Crime Victimization Survey (NCVS), Department of Justice,  
13 Bureau of Justice Statistics and National Institute of Justice Survey.

14  
15 **36. (Former 7.7) Reduce the rate (annual) of forced sexual intercourse or attempted forced sexual**  
16 **intercourse of persons aged 12 and older to less than 0.55 per 1,000 persons. (Baseline: 1.1 in**  
17 **1995)**

18  
19 **Target Setting Method:** Based on rates from 1992 to 1995 from National Crime Victimization  
20 Survey (NCVS) data.

21  
22 **Data Sources:** National Crime Victimization Survey (NCVS), Department of Justice, Bureau of  
23 Justice Statistics, and National Family Growth Survey.

24  
25 **37. (Developmental/Former 7.15) Reduce to less than \_\_ percent the proportion of battered women**  
26 **and their children turned away from emergency housing due to lack of space.**

27  
28 **Potential Data Source:** National Coalition Against Domestic Violence Survey.

29  
30 **38. Reduce sexual assault other than rape to less than 0.3 per 1,000 people. (Baseline: 0.5 per 1,000**  
31 **people in 1995)**

32  
33 **Target Setting Method:** 66 percent improvement.

34  
35 **Data Source:** National Crime Victimization Survey (NCVS), Department of Justice, Bureau of  
36 Justice Statistics.

37  
38 In 1995, almost 5,000 girls and women in the United States were murdered. In those cases for which the  
39 FBI has data on the relationship between the offender and the victim, 85 percent were killed by someone  
40 they knew. Nearly half of the women who knew the perpetrators were murdered by a husband, ex-  
41 husband, or boyfriend.<sup>55</sup> In 1994, more than 500,000 women were seen in hospital emergency  
42 departments for violence-related injuries, and 37 percent of those women were there for injuries inflicted  
43 by spouses, ex-spouses, or nonmarital partners.<sup>56</sup> Although most assault victims survive, they suffer  
44 physically and emotionally.

45  
46 A minimum of 16 percent of American couples experienced an assault during the year they were asked  
47 about it, and about 40 percent of these assaults involved severe violence, such as kicking, biting, punching,  
48 choking, and attacking with weapons.<sup>57</sup> Nearly one out of eight of the husbands had carried out one or  
49 more acts of physical aggression against his wife during the 12 months preceding questioning.<sup>58</sup>

1  
2 Men who are physically violent toward their partners are more likely to be sexually violent toward them  
3 and are more likely to use violence toward children. The perpetration of intimate partner violence is most  
4 common in adults who, as children or adolescents, witnessed intimate partner violence or became the  
5 targets of violence from their caregivers.<sup>59</sup>

6  
7 The 1994 National Crime Victimization Survey (NCVS) reports that 407,190 females aged 12 and over  
8 were victims of rape, attempted rape, or sexual assault.<sup>60</sup> Other surveys conducted in the past decade  
9 indicated that the NCVS underestimates the problem. For example, the National Women's Study in  
10 conjunction with estimates based on the U.S. Census suggest that 12.1 million American women have  
11 been victims of forcible rape sometime in their lives. According to this study, 0.7 percent, approximately  
12 683,000, adult American women experienced a forcible rape in the last year.<sup>61</sup>

13  
14 Because of the nature of intimate partner violence and sexual violence, the problems are difficult to study.  
15 Consequently, much remains unknown about the factors that increase or decrease the likelihood that men  
16 will behave violently towards women, the factors that endanger or protect women from violence, and the  
17 physical and emotional consequences of such violence for women and their children.

18  
19 Sexual assault is defined as any nonconsensual physical sexual activity including use of force, threat,  
20 intimidation, manipulation, coercion, physical helplessness, or mental incapacitation that has, or may have,  
21 an effect upon the mental and physical health of the survivors.

22  
23 **Youth Violence**

24  
25 **39. (Former 7.6) Reduce physical assaults among people aged 12 and older to less than 28.2 per**  
26 **1,000 persons.** (Baseline: 37.6 per 1,000 persons in 1995)

27

Select Populations	1995
Adolescents aged 12-15	95.4
Adolescents aged 16-19	93.0
Young adults aged 20-24	65.0

28  
29 **Target Setting Method:** 25 percent improvement.

30  
31 **Data Source:** National Crime Victimization Survey (NCVS), Department of Justice, Bureau of  
32 Justice Statistics.

33  
34 **40. (Former 7.9) Reduce to less than 35 percent the prevalence of physical fighting among**  
35 **adolescents in grades 9 through 12.** (Baseline: 38.7 percent in 1995)

36  
37 **Target Setting Method:** 10 percent improvement.

38  
39 **Data Source:** Youth Risk Behavior Survey (YRBS), CDC, NCCDPHP.

1 **41. (Former 7.10) Reduce to less than 15 percent the prevalence of weapon carrying by adolescents**  
2 **in grades 9 through 12.** (Baseline: 20 percent in 1995)  
3

Select Populations	1995
Those carrying guns	Not available
Those carrying weapons other than guns	Not available

4 **Target Setting Method:** 25 percent improvement.

5 **Data Source:** Youth Risk Behavior Survey (YRBS), CDC, NCCDPHP.  
6  
7

8  
9 Adolescents and young adults face an extraordinarily high risk of death and injury from violence. Arrest  
10 rates for homicide, rape, robbery, and aggravated assault are consistently and substantially higher for  
11 young people aged 15 to 34 than for all other age groups.<sup>62</sup> Arrest rates for homicide among youth aged  
12 14 to 17 increased 41 percent between 1989 and 1994, compared to an increase of 18 percent for youth 18  
13 to 24 years of age.<sup>63</sup> Nearly 20 percent of all violent crime arrests in 1994 involved a juvenile under 18  
14 years of age.<sup>64</sup>  
15

16 **Related Objectives From Other Focus Areas**

17  
18 **Educational and Community-Based Programs**

- 19 3 Undergraduate health risk behavior information  
20

21 **Environmental Health**

- 22 13 Pesticide poisonings  
23 18 Exposure to household hazardous chemicals  
24

25 **Occupational Safety and Health**

- 26 1 Deaths from work-related injuries  
27 2 Work-related injuries  
28 6 Work-related homicides  
29 7 Workplace assaults  
30

31 **Access to Quality Health Services**

- 32 C.1 Access to emergency medical services  
33 C.3 Toll-free Poison Control Center number  
34

35 **Mental Health and Mental Disorders**

- 36 1 Suicide  
37 2 Injurious suicide attempts  
38

39 **Substance Abuse**

- 40 1 Motor vehicle crashes  
41 8 Riding with a driver who has been drinking  
42 12 Alcohol and drug-related violence  
43 13 Alcohol-related drownings  
44 23 Blood alcohol concentration levels  
45

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