## INTENTIONAL INJURIES

*Intentional injury* encompasses injuries and deaths that are self-inflicted or perpetrated by another person. In Connecticut, homicide and suicide constitute the third leading cause of years of potential life lost before age 65. Between 1988 and 1992, homicide and suicide were responsible for one-quarter of the deaths to Connecticut residents between the ages of 1 and 24 years, and were the second and third leading causes of death in this age group. In 1995, 474 Connecticut resident deaths were caused by suicide and homicide. In 1996, 28 domestic violence homicides (60% women and 25% children), 755 rapes, and 7,012 aggravated assaults were reported to the police.

In 1995, 2,134 hospitalizations of Connecticut residents were reported for self-inflicted injury and 3,340 for assault. Domestic violence is the leading cause of injury to women in the U.S. A total of 13,039 Connecticut females, aged 16 and older, reported domestic physical abuse to the police during 1996. The comprehensive cost (monetary cost plus quality of life cost) of murder, rape, and assault in Connecticut in 1992 was estimated at $2.9 billion, including nearly $90 million in medical and mental health care.

The categories of intentional injuries discussed here include suicide and attempted suicide, homicide and injuries due to assault, domestic violence, and deaths and injuries due to firearms.

## SUICIDE AND SUICIDE ATTEMPTS

### Summary

Suicide accounts for one-fifth of all injury deaths in Connecticut. In 1994, 320 residents took their own lives. This is slightly fewer deaths than those due to motor vehicles, but 50% more deaths than by homicide. Although suicide ranks eleventh as a cause of death in Connecticut, it ranks sixth in terms of premature deaths, reflecting the younger average age of suicide victims as compared to persons who die of other causes. Connecticut's 1994 age adjusted-suicide rate of 9.1 per 100,000 is about 20% lower than the U.S. rate, but falls far short of the *Healthy Connecticut 2000* target rate of 6.7 per 100,000.

Experts agree that the number of suicides is undercounted. The extent of underreporting is unknown, but is estimated at 25%-50%. It is estimated that suicide attempts are eight times more common than completed suicides. Individuals who complete suicide are most likely to be male, while those who survive a suicide attempt are most likely to be female.

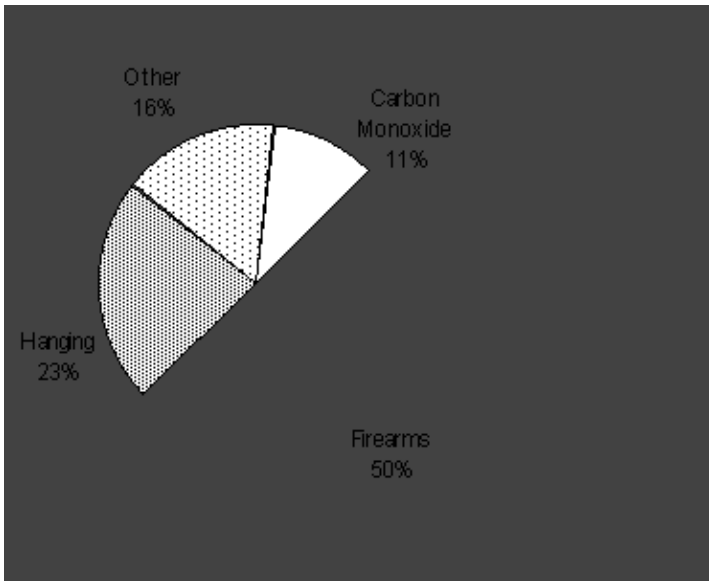
### Methods

Nearly half of Connecticut suicides were performed with a firearm. Hangings and carbon monoxide poisoning, specifically motor vehicle exhaust, accounted for one-fourth and one-fifth of the suicides respectively. The method used for suicide varies by gender (Figure 3-48). While firearms were the most common method used for both sexes, they were used in half of all male suicides, but only 21% of female suicides.

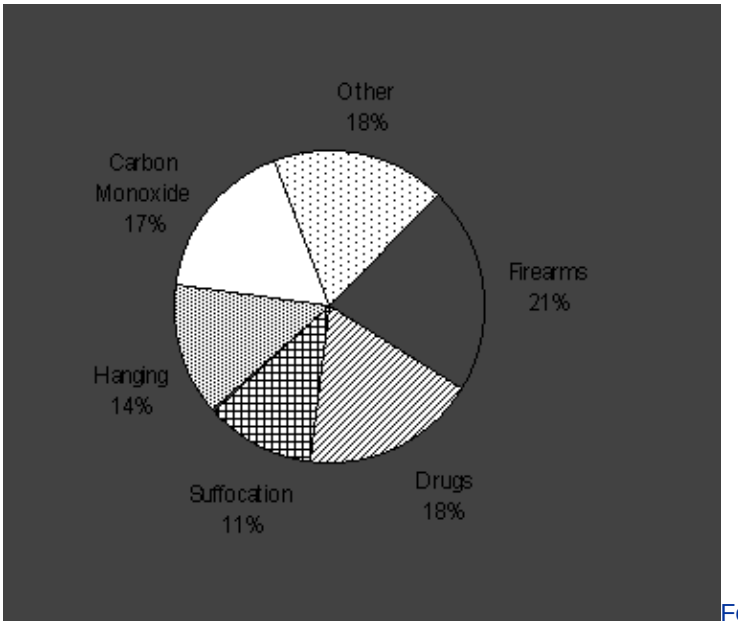
**Figure 3-48**

**Suicide Methods**

**Connecticut, 1994**




Males (N = 249)




Females (N = 71)

Source: DPH, BCH, Injury Prevention Program

High Risk Subgroups

In 1994, three and one half times as many males as females committed suicide. While the highest rate of suicide was found among elderly white males, half the suicides in the State were to males between the ages of 15 and 54 (Figure 3-49). The suicide rate for whites in Connecticut was double the rate for blacks. The results of a 1995 survey of high school students found that 24% of Connecticut high school students had seriously considered suicide in the past year.

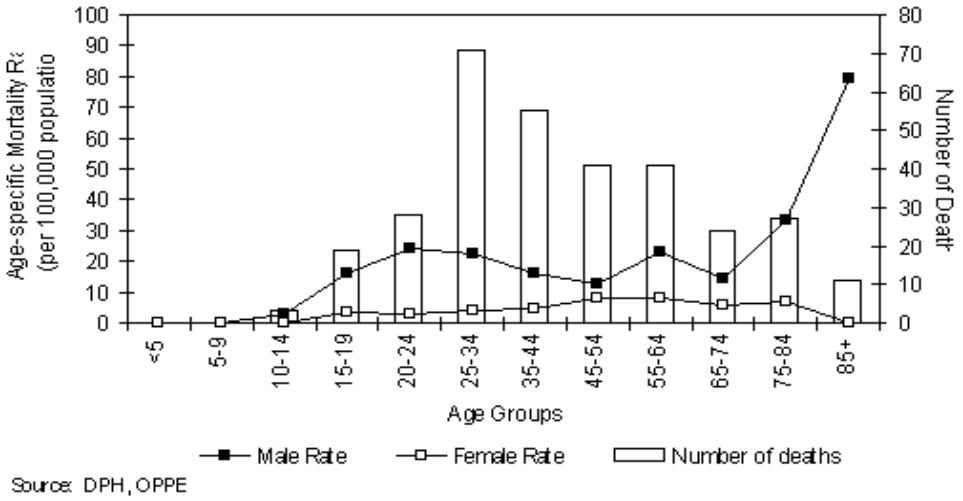
Time Trends

The overall rate of death due to suicide remained fairly steady in Connecticut from 1984 to 1994. Recent cohort studies cited by the CDC indicate that the rate of suicide among youth in the U.S. is higher than the rates of their grandparents at a similar age. National data also show an increase in suicides among blacks, especially young adult black males.

**Figure 3-49**

**Suicides**

**Connecticut Residents, 1994**




Modifiable Risk Factors and Potential for Intervention

Risk factors for suicide in the groups with the highest rates are generally considered to have more differences than similarities. Among older people, identified risk factors include social isolation, alcohol abuse, depression, increased mental and physical illnesses, and easier access to firearms. For youths, risk factors include the suicide of a friend, hopelessness, and intoxication and rage combined with an available method and privacy. Common warning signs include talking about not wanting to live, a feeling of hopelessness, giving possessions away, abuse of alcohol and/or drugs, depression, low school grades, concern about sexual identity or homosexuality, and loss of a significant other because of the break-up of a relationship, death, or divorce.

Intervention strategies for youth suicide prevention include those that directly affect known or suspected risk factors, programs that increase the recognition of suicide warning signs, and appropriate and timely referral to resources. Recommended interventions aimed at preventing suicide among the elderly include senior peer counseling programs, efforts that target high-risk persons, improving mental health services through suicide prevention centers, and programs that increase awareness of risk factors among those who have frequent contact with seniors.

## HOMICIDE AND INJURY DUE TO ASSAULT

Summary

In 1994, an average of four Connecticut residents died each week from homicide. Firearms were used in seven out of ten of these homicide deaths. Although Connecticut's homicide rate of 7.5 per 100,000 was lower than the U.S. rate of 10.1 per 100,000, the state rate was considerably higher than the *Healthy Connecticut 2000* objective of 5.0 deaths per 100,000.

Clearly, not all assaults result in death. In Connecticut, there are nearly six times as many hospitalizations for assault-related injuries as deaths. Police crime reports track aggravated assaults, those assaults that involve the use or attempted use of a dangerous weapon likely to produce death or great harm. In 1996, there were 7,012 aggravated assaults reported to police.

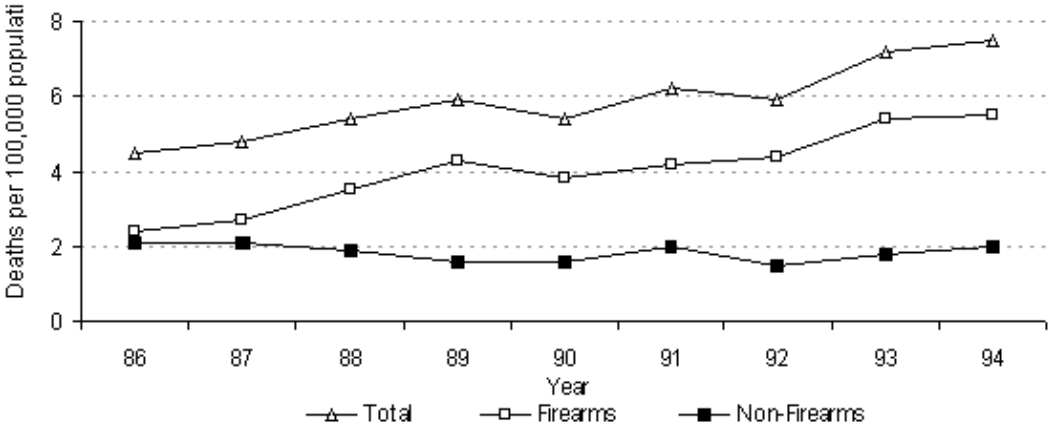
Time Trends

Connecticut's age-adjusted mortality rate for homicides nearly doubled from 1986 to 1994 (Figure 3-50). Virtually all of this increase was due to the increase in firearm homicides. The increased use of firearms has increased the lethality of arguments that previously might have resulted only in treatable injuries. During the same period, the rate of death due to non-firearm homicides remained steady. By contrast, the aggravated assault rate decreased 63% from 1990 to 1995.

**Figure 3-50**

**Age-adjusted Mortality Rates for Homicides**

**Connecticut, 1986-94**




Note: AAMR adjusted to the 1940 U.S. standard million population.
Source: CDC, WONDER

## High Risk Subgroups

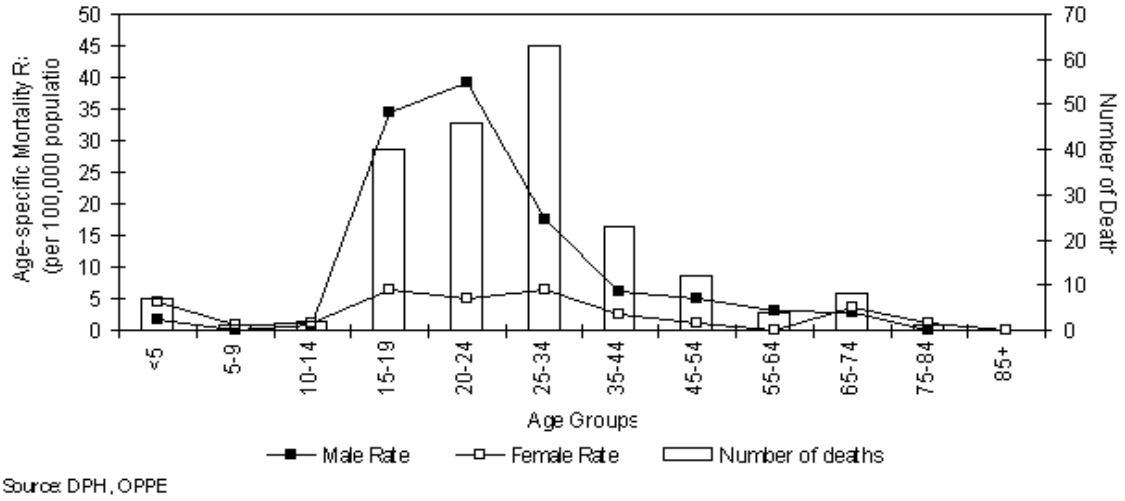
Differences by sex and race are much more pronounced for homicide than for deaths due to many other causes. Three times more males than females die from homicide. During 1994, those in the 15 - 34 age group accounted for the highest number of deaths (Figure 3-51). In 1994, 44% of the State's homicide victims were black and 27% were Hispanic, even though blacks comprise 8.3% and Hispanics 6.5% of the state's population. In Connecticut, homicide was the thirteenth leading cause of death overall, but among black males it ranked fourth. This excess was most pronounced among black males between the ages of 15 and 34. Although black males between the ages of 15 and 34 years old accounted for 1.5% of the State's population, they accounted for 30% of Connecticut's homicide victims.

Other populations at risk include young children and women. Seven Connecticut children under the age of five were killed in 1994 by injuries intentionally inflicted by another person. Of almost 16,400 victims of family violence reported to police in 1996, 80% were female. The Family Violence Victim Advocate Program received 29,388 court referred requests for services for victims of domestic violence in 1996.

**Figure 3-51**

**Homicides**

**Connecticut, 1994**



Source: DPH, OPPE

Modifiable Risk Factors and Potential for Intervention

Forty to sixty-seven percent of homicides occur between people who know each other, whether they are family members or other acquaintances. Arguments and fights, precipitated by anger, have been identified as precursors to many homicides. A 1995 survey of 944 Connecticut high school students found that 38% of them reported being in a physical fight in the past year. The prevention of homicides among spouses and intimates is directly linked to the prevention of physical and emotional abuse, especially as directed toward women. Scientific studies have shown a correlation between homicide deaths and lower socioeconomic status, alcohol use, and access to weapons.

Several high-risk behaviors increase the likelihood that children and youth might become involved in violent incidents. These include consistently choosing physical fighting as a way to settle a conflict, low achievement in school leading to failure or dropping out, and the use of alcohol or drugs. Identified risk factors include a history of psychological, physical or sexual abuse, lower socioeconomic status with its resultant stresses, racism, frequent moves, recent relocation, immigrant status, living in overcrowded conditions, and emotional or physical disabilities that hamper the ability to learn or demonstrate non-violent ways of handling conflict.

Children and youth typically model adult behavior. Interventions directed at decreasing adult violence in the home, community and media would therefore seem to be appropriate strategies for reducing youth violence as well. Successful interventions incorporate local needs and a sensitivity to the target population. They may include reducing the incidence of precursors, such as arguments and fighting, that can lead to violence, reducing the occurrence of abuse in high-risk situations, increasing the safety mechanisms of lethal weapons and eliminating unsupervised access to them by children and youths, and incorporating measures to improve socioeconomic status.

## DOMESTIC VIOLENCE

Summary

Populations directly affected by domestic violence are women and children, but the cost to society in terms of indirect effects is staggering. Domestic violence is the leading cause of injury among women, and is linked to numerous other health care problems including depression, drug abuse, and suicide. Nationally, at least 10 battered women are killed each day and almost one-quarter of women seen in emergency rooms have injuries related to domestic violence. Connecticut's domestic violence issues are similar. In 1995, 8.9 per 1,000 couples or 12,229 females age 16 and older were victims of family violence that was reported to police. The number of reported incidents represents a 2.5% increase compared to 1994.

Children who are victims of violence or witness violence in the home are more likely to be involved in violent behavior when they get older. Nationally, more than 3.3 million children are reported to have seen a parent assaulted or killed. Child victims of abuse or neglect comprise at least 70% of men in the criminal justice system. In 1996, 2,637 or 14% of Connecticut’s children were directly involved in situations in which one or both adults in their homes were arrested for cases involving family violence. Another 6,000 or 32%

of children were present in the home when a violent incident occurred, but were not directly involved in the family violence incident.

Domestic violence is also frequently related to sexual assault. "Forty percent of battered women are also sexually assaulted by their partners". But the problem may be more frequent, as it is estimated that at least 92% of rapes go unreported to criminal authorities and that at least 44% of women have been victims of attempted or completed sexual assault. Twenty-two percent of college students and 10% of high school students have experienced physical violence in dating relationships. According to Connecticut's 1995 Uniform Crime Report, there were 666 forcible rapes of females and 107 attempted rapes (a total of 773) reported to the police. In Connecticut there were 1,084 rapes of women age 12 and over reported to the Connecticut Sexual Assault Crisis Center (CONNSACC) during SFY 1995-96.

### Modifiable Risk Factors and Potential for Intervention

Public health agencies need to collaborate with social service, criminal justice, education, mental health, and other public and private agencies committed to assessment, intervention and elimination of the problem. In addition, strategies to intervene in the problem of domestic violence include:

- Provide education about "dating violence" and appropriate referral through school-based health centers and other school-based clinical and educational programs.
- Incorporate knowledge of risk factors of potential perpetrators into service provider education with the goal of targeted prevention and appropriate referral.
- Provide education and technical assistance to service providers in the installation and use of protocols to properly identify and refer battered women. Incorporate environmental modifications such as improved lighting and security on school campuses and in the community.
- Provide awareness activities that include information about the significant effect of domestic violence on children, that most perpetrators are known to the victims, and that domestic violence and rape are grossly underreported.
- Improve data collection to determine the incidence of the problem and successful strategies for intervention.

## DEATHS AND INJURIES DUE TO FIREARMS

### Summary

Firearms cause nearly one of every five injury deaths in Connecticut. In 1994, 293 Connecticut residents were shot to death; 49% of the firearms deaths were homicides, 48% were suicides and 3% resulted from unintentional shootings. Firearms cause approximately equal numbers of homicides and suicides (143 and 140, respectively), however, guns are used in a larger percentage of homicides than suicides (69% and 44%, respectively).

### High Risk Subgroups

In 1994, 87% of the firearms deaths in Connecticut occurred to males. In terms of racial disparity, the firearms mortality rate for blacks was four times higher than for whites. The risk of gun-related death was highest for the 15-24 age group, particularly males (Figure 3-52). The mortality rate increased again among elderly males. While two-thirds of firearm deaths to people between the ages of 15 to 24 were due to assault, suicide accounted for 89% of firearm deaths for those 55 years and older.

### Time Trends

Connecticut's firearms mortality rate is two-thirds the national rate, but both rates have risen steadily over time. Connecticut's rate increased more than 50% from 1985-1994; firearms deaths from homicides in Connecticut increased 162%, and suicides increased 23%, while unintentional deaths decreased 67%. The firearm death rate for blacks increased 91%, while the rate for whites increased 41%. For about the same

time period, the AAMR overall and for homicide increased, but suicide and unintentional injury showed little variation (Figure 3-53). Although blacks in Connecticut were three times as likely as whites to die from a firearm in 1985, by 1994 the gap had widened such that blacks were four times as likely as whites to die from a gunshot wound.

Modifiable Risk Factors and Potential for Intervention

A gun at home is 43 times more likely to be used to kill a family member or friend than a criminal intruder. People who have guns in their homes are at a much greater risk of suicide than people who do not keep guns in their home. A suggested public health strategy is separate storage of firearms and ammunition to reduce access by children and youth. More information on modifiable risk factors is contained in the sections on suicide and homicide.

**Figure 3-52**

**Firearms Deaths**

**Connecticut, 1994**

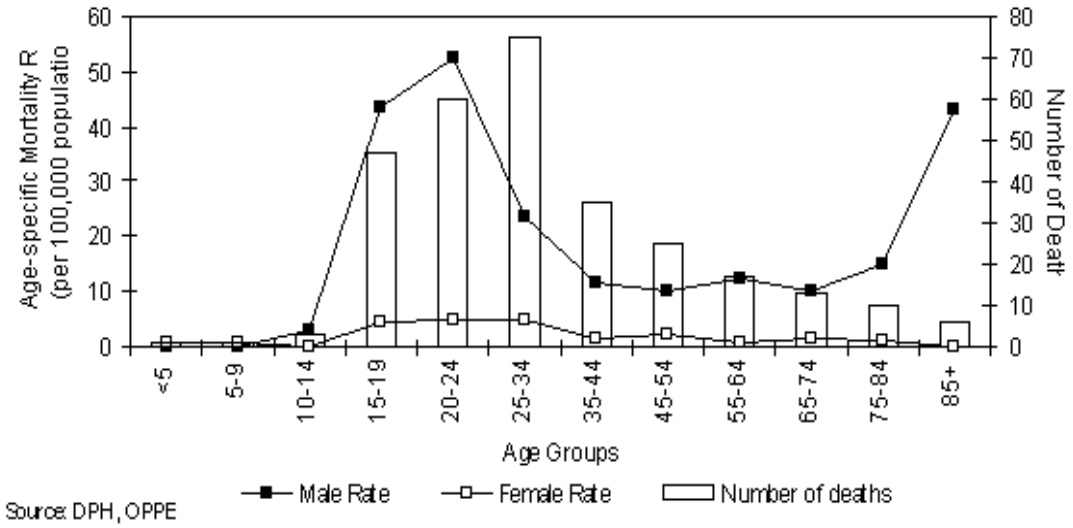
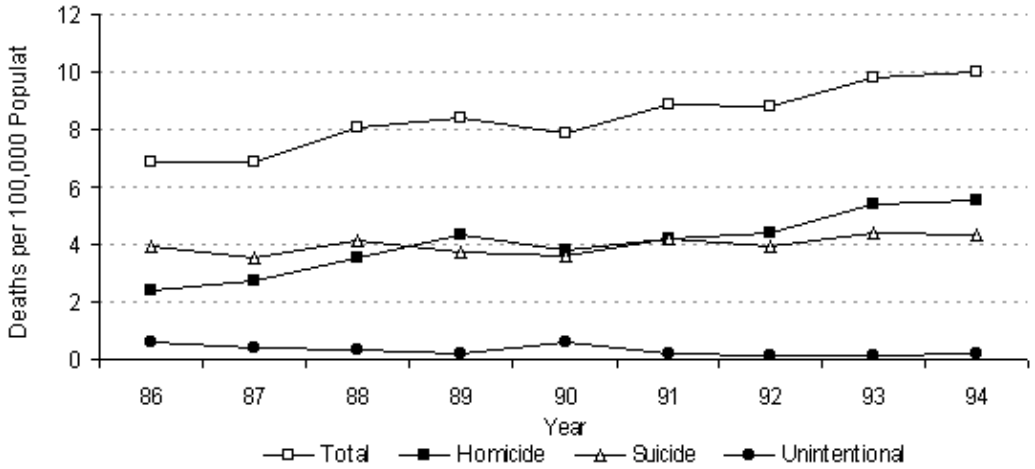



**Figure 3-53**

**Firearms Deaths**

**Age-adjusted Mortality Rates**

**Connecticut, 1986-94**




Note: AAMR adjusted to the 1940 U.S. standard million population.
Source: CDC, WONDER

Chapter 3 continued

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