CHARACTERISTICS OF HOME FIRE VICTIMS

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Abstract

Children under age 5 are nearly twice as likely to die in home fires as the average person, but their relative risk has been declining, and by 2002 was down to only 56% over the average. Older adults age 65 and older are more than twice as likely to die in home fires as the average person. Alcohol or other drugs, disabilities and age-related limitations are all factors in home fire risk.

Keywords: fire statistics, older adults, children, home fires, fire victims, residential fires, burns, smoke inhalation, fire deaths

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EXECUTIVE SUMMARY

Patterns By Age and Sex

The very old and the very young are at highest risk of death from home fires. Based on 1999-2002 experience, children under age 5 are 74% more likely to die in a home fire than the average person. Older adults age 65 or over are more than twice as likely to die as the average person. Children defined as those age 14 or under have only average risk (3% above the all-ages averages), as do children defined as those under age 18 (7% below the all-ages average).

Young adults age 20 to 34 and older adults age 75 or over have the highest risk of reported non-fatal injury from home fires. Based on 1999-2002 experience, these two groups have a risk of injury 30% and 23%, respectively, above the all-ages average. Children in any age group have below-average or average risk of home fire injury.

From 1980 to 2002, the share of home fire deaths accounted for by children under age 5 declined from 18% to 11%, while the share of older adults age 65 and over increased from 19% to 26%. The numbers of deaths and injuries also declined from 1980 to 2002 for all age groups, except for injuries in the age 35-49 group. The relative risk index for home fire deaths for children under age 5 has declined sharply since 1994, when the U.S. Consumer Product Safety Commission (CPSC) instituted requirements for child resistance in lighters.

In the United Kingdom and Japan, young children are not a high-risk group for fire deaths, relative to the all-ages population, and the relative risk indexes for older adults in the U.K. are even higher than in the U.S. Even if incendiary suicides (which are a significant share of Japan fire deaths) are excluded, the relative risk for older adults in Japan is higher than in the U.S.

In the U.S., males have a 38% higher risk of home fire death than females and an 18% higher risk of non-fatal home fire injury.

Fatal Effects of Fire

Fire deaths due to toxic gases and/or oxygen deprivation, collectively called smoke inhalation, outnumber fire deaths due to burns. The ratio of smoke inhalation deaths to burn deaths is 2-to-1 if death certificates from 2002 are used, 3-to-1 if death certificates prior to 1999 are used, 5-to-1 if 1994-1998 NFIRS data are used, and 6-to-1 if 1999-2002 NFIRS data are used.

The share of fire deaths attributed to burns rises rapidly as the victim's age increases, at least for adults.

Risk Factors

More than one-fourth (28%) of fatal home fire victims had some sort of disability, age-related limitation or impairment (by alcohol or other drugs) before the fire began.

The majority of U.S. home fatal fire victims were located in a different room from the room of fire origin when fire began. The closer the victim was to the point of fire origin, the more likely it was that the fatal injury was burns.

Two of every five fatal fire victims never wake up before being injured. Forty-one percent of the people injured (but not killed) in home fires were trying to fight the fire or rescue someone when they were injured. Fatal victims of home fires who died attempting escape tended to be farther from the fire at ignition than fatal victims who were injured while engaged in other activities.

Males are more likely than females to be attacking the risk (by fighting the fire or trying to rescue others from it) when injured, while females are more likely than males to be escaping the risk when injured.

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