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NON-CIRCULATING

Texas Preventable Disease



NEWS

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TEXAS STATE DOCUMENTS
COLLECTION

REGIONAL DISTRIBUTION OF DEATHS FROM RESIDENTIAL FIRES - UNITED STATES, 1978-1984*

In 1984, 5,010 people in the United States lost their lives in fires; almost 90% of them died in residential fires (National Center for Health Statistics [NCHS], unpublished data). To assess the regional distribution of these deaths,** 1978-1984 mortality data collected by NCHS[†] were analyzed.

While an average of 4,897 persons died in residential fires each year during the period 1978-1984 (Table 1), residential fire death rates per 100,000 population decreased 21% from 2.4 in 1978 to 1.9 in 1984 (CDC, unpublished data). The South had the largest average number of deaths per year (2,150) and the highest average death rate per 100,000 population (2.9). In contrast, the West had the lowest average number of deaths per year (585) and the lowest death rate per 100,000 population (1.4). Residential fire deaths and death rates for the Northeast and the Midwest were lower than those for the South, but higher than those for the West.

Overall, males in the South had the most residential fire deaths and the highest death rate per 100,000. The male to female ratio of residential fire death rates varied by region from 1.4 to 1.7. However, death rates for females in the South were higher than for females in other regions and higher than for males in the West.

In all regions, residential fire death rates were much higher for children aged 0-4 years and the elderly (≥ 65 years) than for those aged 5-64 years; however, the rate differences were most pronounced in the South. Children had higher residential fire death rates than the elderly in the Midwest and the Northeast. However, in the South and West, residential fire death rates were lower for children than for the elderly.

For each region, deaths from conflagrations (uncontrolled fires) (E890) represented 87% to 90% of deaths from residential fires; those from clothing ignitions (E893) represented 4% to 5%; and those from other residential fires such as fires in unspecified buildings or structures (E891) and ignition from highly inflammable material (E894) represented 6% to 8%. For each type of residential fire death, the South had the highest number of deaths, and the West, the lowest. For conflagrations, the residential fire death rate was highest in the South (2.5) and lowest in the West (1.2); fire death rates were similar in the Northeast (1.7) and Midwest (1.9). For clothing ignition, the residential fire death rates were identical in all four regions (0.1). For all other residential fire deaths, the rate in the Northeast, Midwest, and West was 0.1; the rate in the South was 0.2.

*Adapted from: CDC. MMWR 1987;36(39)645-9.

**Deaths from residential fires are those with the underlying cause of death coded as E890-E899 and place of occurrence coded as "home", based on the International Classification of Diseases, Supplementary Classification of External Cause of Injury, 8th Revision Adapted for 1978 and 9th Revision for 1979-1984.

[†]To compute sex- and age-specific death rates, the average annual number of deaths occurring during the period 1978-1984 in each of the four NCHS regions (Northeast, Midwest, South, and West) were used as a numerator, and the 1980 regional census total was used as the denominator.

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Most residential fire deaths occurred in the winter (December-February), and the fewest occurred in the summer (June-August) (Figure 1). Within each region, the seasonal distribution of residential fire deaths varied markedly. In the winter, the number of deaths in every region was 1.5 to 3.3 times the number of deaths in the summer. For every season, the South had the highest number of deaths, and the West had the lowest.

MMWR Editorial Note: Since residential fire deaths have accounted for most deaths from fires and flames in recent years, the US Department of Health and Human Services identified residential fires as an important area for intervention and established an objective to reduce the death rate from the 2.4 deaths per 100,000 recorded in 1978 to 1.5 deaths per 100,000 by 1990. At the same time, the department established an objective to increase the number of functioning smoke detectors in residential homes from 30 million in 1979 to at least 110 million (75% of homes) by 1990. These objectives go hand-in-hand with the aim of Fire Prevention Week (FPW) activities--to promote fire safety and prevent fire-related injuries, deaths, and property damage.

During FPW, individual fire departments across the nation conduct additional fire safety programs for targeted populations in their areas. These programs are of two general types: preventing fires from occurring and reducing the risk of injury in the event of fire. Prevention activities focus on promoting safe storage of matches and flammable liquids such as gasoline and kerosene, teaching children not to play with matches, and discouraging people from smoking in bed. Injury risk-reduction programs teach how to install and maintain smoke detectors, how to put out fires, and how to escape during a fire.

Smoke detectors are relatively inexpensive devices designed to warn people of a fire before it becomes unmanageable and noxious gases are released. Although the effectiveness of smoke detectors has not been thoroughly evaluated, one investigator estimated that the residential fire death rate in homes with a detector was half that in homes without one. Possible explanations for continued residential fire deaths include the low prevalence of smoke detectors in the homes of high-risk groups and poor maintenance of smoke detectors after installation; personal characteristics such as alcohol consumption and smoking in bed; and conditions that hamper the chances of escape from a fire, such as hearing and/or visual impairment, the effect of medications, lack of mobility, or advanced age. Additional risk factors for residential fires are poverty, poor housing, and decreased availability and slower response of fire department services.

Reasons for the high rate of residential fire deaths in the South are not known because definitive studies on residential fires have not been conducted. There is, however, some evidence that, compared with other regions, the South has had a lower prevalence of smoke detectors, a higher usage of portable heating equipment, and a larger percentage of persons below the poverty level. Together, these factors may contribute to the higher rate of residential fire deaths in the South.

The overall residential fire death rate in the West was lower than 1.5 deaths per 100,000 (the 1990 objective rate for residential fires), although children, the elderly, and males in this region had rates higher than 1.5. The overall death rates for all other regions were 27% to 93% higher than the 1990 objective, and some age-specific rates far exceeded the 1990 objective for lowering the residential fire death rate.

Most residential fire deaths occurred in the winter, followed by spring, fall, and summer. Since the risk of dying in a residential fire varies markedly by season, deaths from residential fires might be reduced if fire prevention and risk-reduction activities in each region target high-risk groups at appropriate times of the year. Residential fire death rates might be further reduced by increasing the prevalence of functioning smoke detectors in the homes of high-risk groups, by adopting safe house-heating practices, and by modifying commercial brands of cigarettes to reduce their potential to start fires on upholstered furniture or mattresses (National Bureau of Standards, unpublished data). The manufacture of self-extinguishing and otherwise less fire-prone cigarettes is technically feasible, according to a recent study conducted by the National Bureau of Standards (National Bureau of Standards, unpublished data).

The maintenance of functioning smoke detectors in high-risk homes will require innovative approaches. For example, to reduce fire death risks for the elderly, a public health nurse or a home health-care provider might be asked to check the condition of the smoke detector and complete a fire safety checklist as part of the medical evaluation. Further information is needed to assess the effectiveness of smoke detectors in homes of the elderly and to ascertain specific circumstances leading to residential fire deaths.

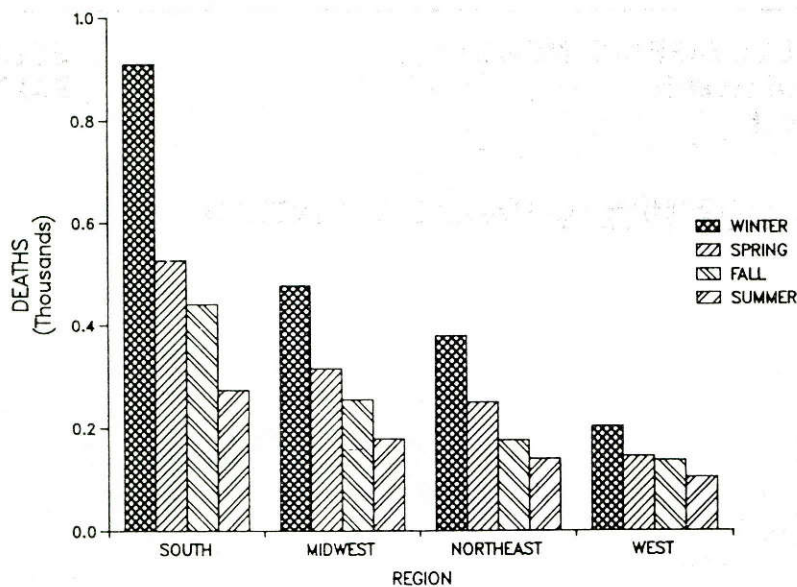
Table 1.
Average annual number of residential fire deaths and death rates*
per 100,000 population, by sex and age of decedents and by type of fire
United States, 1978-1984

	South		Midwest		Northeast		West		Total†	
	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate
Sex										
Male	1,331	3.6	725	2.5	531	2.3	343	1.6	2,930	2.7
Female	819	2.1	497	1.6	410	1.6	242	1.1	1,967	1.7
Age										
<5 years	343	6.2	226	5.2	138	4.5	78	2.3	785	4.8
5-64 years	1,189	1.9	679	1.4	533	1.3	331	0.9	2,733	1.5
≥65 years	615	7.2	316	4.7	268	4.4	175	4.1	1,373	5.4
Type										
Conflagration	1,897	2.5	1,104	1.9	837	1.7	509	1.2	4,346	1.9
Clothing ignition	92	0.1	45	0.1	48	0.1	29	0.1	214	0.1
Other	161	0.2	72	0.1	56	0.1	47	0.1	336	0.1
Total deaths tabulated†										
	2,150	2.9	1,222	2.1	940	1.9	585	1.4	4,897	2.2

*(Total number of deaths, 1978-1984) ÷ 7
1980 population

†Rows and columns may not equal total because of rounding.

Figure 1.
Average annual residential fire deaths, by region and season
United States, 1978-1984



* * *

CPSC: TOY HOBBY HORSES RECALLED

In cooperation with the US Consumer Product Safety Commission, CBS Inc, New York, has announced a voluntary recall and replacement of the plastic bodies of its "Clippety Clop," "Comanche," and "Colt" ride-on toy "Wonder" horses. CBS has received 105 complaints that the body of the toy has broken without warning while being ridden, causing the rider to fall suddenly. Forty of these incidents resulted in injuries such as cuts, scrapes, and bruises.

The "Wonder" horse is a hobby horse suspended by four springs from a tubular blue or brown metal frame. Only those units produced prior to June 1986 by the Wonder Unit of CBS Toys are affected by this recall. Any "Wonder" horse with a silver label on its belly, or a number higher than 86207 stamped on its belly, is not affected by this recall.

Consumers should stop using this product immediately, and retailers should remove the product from sale. For return and replacement instructions or help with product identification, contact Service Concepts International, Inc, Santa Ana, California at 1-800-227-3378 or call the CPSC hotline, 1-800-638-CPSC. A teletypewriter for the hearing impaired is 1-800-638-8270.

* * *

TDH AIDS INFORMATION LINE

The AIDS Public Health Issues and Resource telephone line will become operational December 1 at the Texas Department of Health (TDH) in Austin. The toll-free number for licensed and certified health professionals is 1-800-248-1091. Hours of operation are 9:30 - 11:30 am and 1:30 - 3:30 pm Monday through Friday. Health professionals can call the number for information about AIDS resources, referrals, infection control protocols, HIV testing, risk reduction, current statistics, and current TDH policies on such topics as reporting and testing.

Other AIDS telephone numbers include:

- * 512/458-7504, to report cases or to inquire about the number of AIDS cases reported through the TDH AIDS Surveillance Program.
- * 512/458-7260, to request a catalog and information for ordering films and videotapes from the TDH film library.

For more information, contact Janet Pichette, AIDS Education Specialist, at 512/458-7400 or Margaret Wilson, Public Information Coordinator, TDH, at 512/458-7405.

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