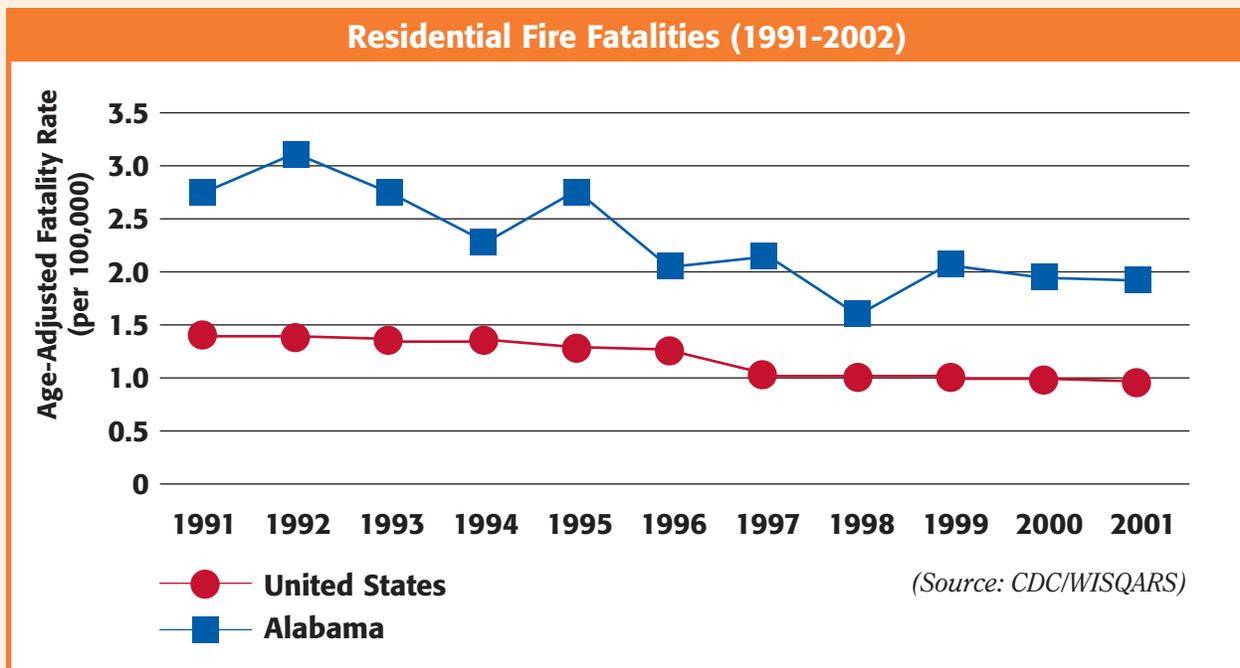# RESIDENTIAL FIRES

THE PROBLEM:

- **About 85 percent of all fire deaths occur in the home. Every 27 minutes someone is killed or injured in a home fire.**

- **Residential fires account for 66 percent of all fire-related injuries.**

Over 400,000 residential fires nationwide account for approximately 3,000 deaths and 16,000 injuries each year. Residential fires result in direct property damage of roughly $8.5 billion each year. In Alabama, over a five-year period (1997-2001) more than 400 residential fire fatalities were reported. Alabama's fire fatality rate is consistently two times higher than the national average; in 2001 the age-adjusted rate per 100,000 persons in Alabama was 1.93, while that of the United States was 0.99.

Residential Fire Fatalities (1991-2002)

(Source: CDC/WISQARS)

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THOSE AT RISK:

• **Groups at greatest risk of suffering from fire injuries and deaths include children ages 5 and under, adults ages 65 and older, minorities and low-income families.**
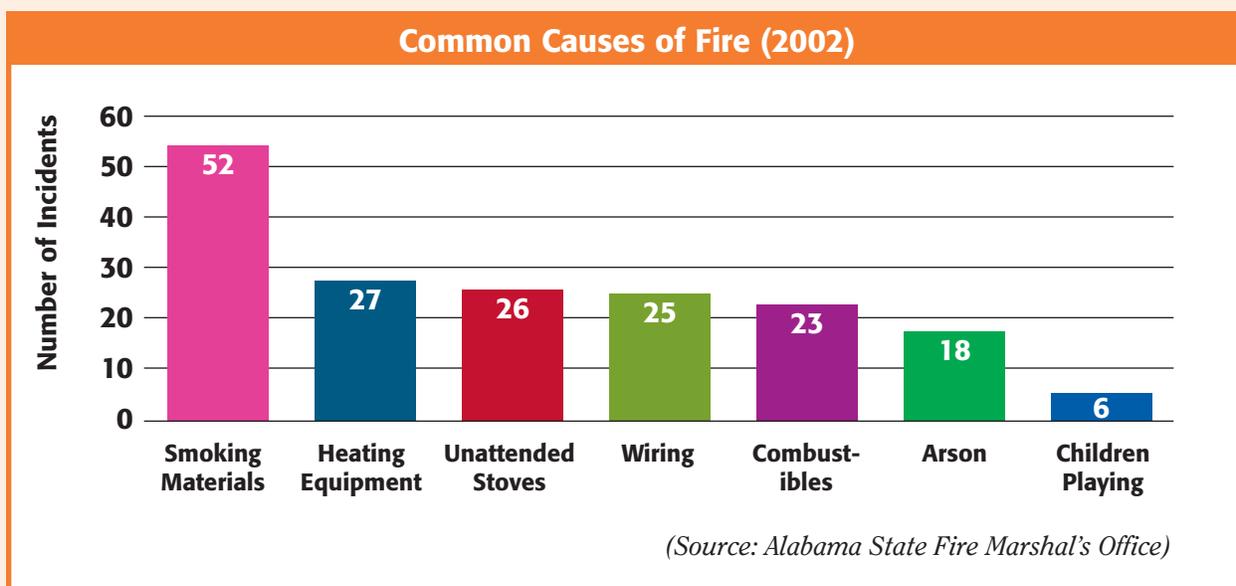
In 2001, 87 unintentional residential fire/flame deaths were reported in Alabama. Forty-eight percent of the fire mortality cases (42 deaths) occurred among Whites. However, the age-adjusted mortality rate among Blacks (4.34 per 100,000) was more than three times the age-adjusted mortality rate among Whites (1.25 per 100,000). Males represented 55 percent of the reported 87 fire mortality cases with an age-adjusted mortality rate of 2.34 per 100,000; females had an age-adjusted mortality rate of 1.56 per 100,000.

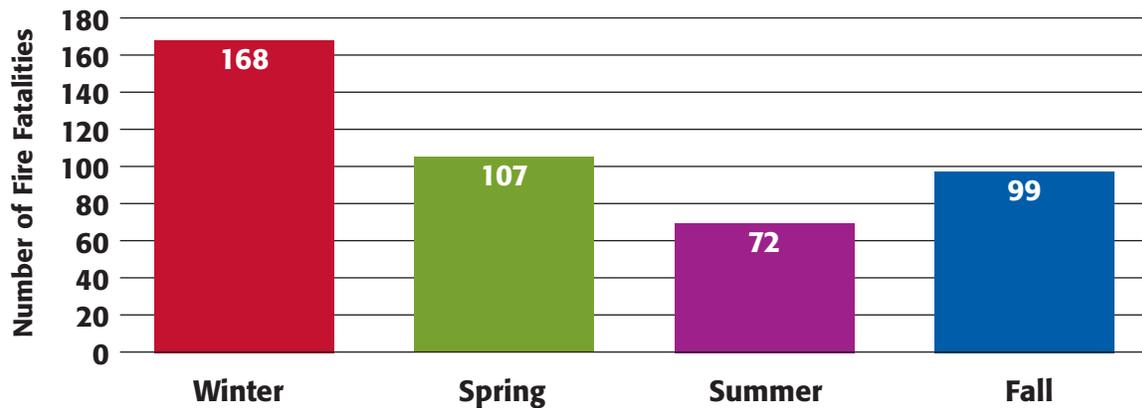Groups at greatest risk of suffering from fire injuries and deaths include children ages 5 and under, adults ages 65 and older, minorities and low-income families, persons living in rural areas and persons living in manufactured homes. Alabama is primarily a rural state. As such, many communities contain residential units built before 1976, mobile homes and lower income rental units. Furthermore, rural areas are serviced by volunteer fire staff, which often means larger service areas and longer response times.

THE CAUSES:

Misuse of smoking material, including cigarettes and ashtrays, and heating equipment, such as furnaces, space heaters and fireplaces, continues to account for the vast majority of fire-related deaths and injuries in Alabama. Due to the increased use of heating devices in cold weather, the largest number of fatalities occurs during the winter months.

Common Causes of Fire (2002)

Number of Incidents

Cause	Incidents
Smoking Materials	52
Heating Equipment	27
Unattended Stoves	26
Wiring	25
Combustibles	23
Arson	18
Children Playing	6

(Source: Alabama State Fire Marshal's Office)

Seasonal Variation in Fire Fatalities (1997-2002)

Number of Fire Fatalities

Winter	Spring	Summer	Fall
168	107	72	99

(Source: Alabama State Fire Marshal's Office)

PREVENTION:

Early detection devices like smoke alarms can reduce home fire fatalities by as much as 50 percent. In a typical home fire, residents have approximately two minutes to escape safely. Working smoke alarms are considered the "first line of defense" against fire damage. Smoke alarm maintenance includes monthly battery checks and yearly battery replacement.

In Alabama it is estimated that 94% of homes have at least one smoke alarm. However, nationally, one in four homes has a non-functioning smoke alarm and many homes need more than one alarm. It is suggested that smoke alarms be placed outside each sleeping area and on every floor of a home. Further recommendations include testing alarms monthly and replacing the battery yearly. In Alabama, only 37% of adults surveyed reported that they or someone else had tested smoke alarms in their home within the past month.

Another major factor in reducing fire fatalities and injuries is establishing a home fire escape plan. According to the National Fire Protection Association, only 16 percent of American families have developed and practiced an escape plan. Plans should include positioning working smoke alarms near family sleeping areas, identifying easy-to-use exits and establishing a safe meeting place outside the residence. Escape plans should be practiced at least two times per year.

THE COSTS:

- **$1 spent on smoke alarms can save $69 in fire-related costs.**

- **Nationally, structural fires resulted in $8.5 billion in property damage in 1999.**

The cost of residential fires to society is high. Annually, the largest share of fire losses in the United States is sustained by residential structural fires. In 1999, these fires resulted in property damage exceeding $8.5 billion. In addition, the costs of medical treatment and rehabilitation for those persons injured in fires are expensive. The prevention of

these injuries costs far less than treating them: for every one dollar spent on smoke alarms, $69 can be saved in fire-related costs.

The Alabama Smoke Alarm Initiative (ASAI) is actively working to reduce fire deaths and injuries in Alabama. The initiative is working with fire departments in high-risk areas to provide fire safety education and to install free smoke alarms. High-risk communities are defined as those with small populations, high fire fatality rates and large poverty rates. During the first five years of the project, the ASAI has worked with fire departments in seven counties, installed over 5,000 smoke alarms and saved 130 lives within homes receiving an ASAI smoke alarm.

ALABAMA'S STRATEGY FOR RESIDENTIAL FIRE PREVENTION:

GOAL:
Reduce the number of deaths and injuries due to residential fire.

1. **Reduce the age-adjusted rate of residential fire deaths to less than 1.2 deaths per 100,000 people.** AL baseline: 1.93 deaths per 100,000 people (CDC, 2001 data)

2. **Increase the use of functioning residential smoke alarms to 100% and have one smoke alarm on every floor.**

3. **Continue to promote and enhance public fire safety education.**

a. Promote residential fire safety.

1. Educate on proper use and maintenance of smoke alarms to include checking the batteries and best locations for smoke alarms in the home.

2. Educate about the correct usage of supplemental room heaters and proper maintenance of gas furnaces and gas stoves.

3. Stress the importance of not smoking in bed and keeping lighters out of sight and reach of children.

4. Educate on proper storage of flammable liquids.

5. Educate on setting hot water heaters at 120 degrees.

6. Encourage practicing a fire evacuation plan to include determining two ways out of every room, designating a safe place to meet outside, calling 911 and staying out of the home once you escape.

7. Creating fire escape plans for the elderly, people with special needs, or young children.

8. Increase knowledge on how to respond and to survive a fire if you cannot get out immediately.

b. Target at risk groups.

   1. Collaborate with schools, daycares and head start programs to provide fire safety education for children.

   2. Collaborate with senior centers to provide fall and fire safety training.

   3. Re-evaluate at risk groups to target with fire safety education on an annual basis.

c. Serve as a fire safety education resource for other agencies and groups.

   1. Provide pamphlets, incentives and activity sheets.

   2. Conduct training sessions as needed.

4. **Identify and coordinate with current programs addressing residential fire injuries and deaths.**

a. Maintain the Alabama Department of Public Health's Agency Fire Safety meetings and support its mission.

b. Support SAFE KIDS campaigns that promote fire safety.

c. Identify other agencies/groups to collaborate with to promote awareness and provide fire safety education.

5. **Promote the need for a quality fire and burn injury data collection system.**

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