

Injury Research in Action

Fire Prevention Research Saves Lives

Public Health Issue

Deaths from fires and burns are the fifth most common cause of unintentional injury deaths and the third leading cause of fatal residential injuries in the United States. In 2006, someone died in a fire about every 3 hours and others were injured every 32 minutes. Fires caused by smoking-related material, such as cigarettes, killed 800 people and injured 1,660 others in 2005. Ninety-three percent of fatalities related to these fires and 78 percent of the injuries occurred in the home. Although the number of fatalities and injuries caused by residential fires has declined, it continues to pose a problem for the public's health. The good news is that residential fires are preventable. Researchers at the University of North Carolina Injury Prevention Research Center (UNC IPRC) are helping us understand how.



"Our work provided evidence about both the role of cigarette smoking as a cause of fatal residential fires and the protective value of smoke alarms. The study, with strong involvement by the State Fire Service, helped increase grassroots efforts and legislative attention, building on the excellent work that Andrew McGuire and others had been doing for years."

-Carol Runyan, MPH, PhD
Lead Research Investigator, UNC Injury Prevention Research Center

Successful Outcomes Reached

Since the late 1980's, researchers at UNC IPRC have studied residential fire injuries and deaths. Their research demonstrated that rental units and non-working smoke alarms were the two leading risk factors for residential fire fatalities. Protective factors identified by this research were both the presence of a working smoke alarm and not smoking in the home. Based on these findings, UNC researchers recommended that landlords install smoke alarms in rental properties to prevent fire-related fatalities and injuries.

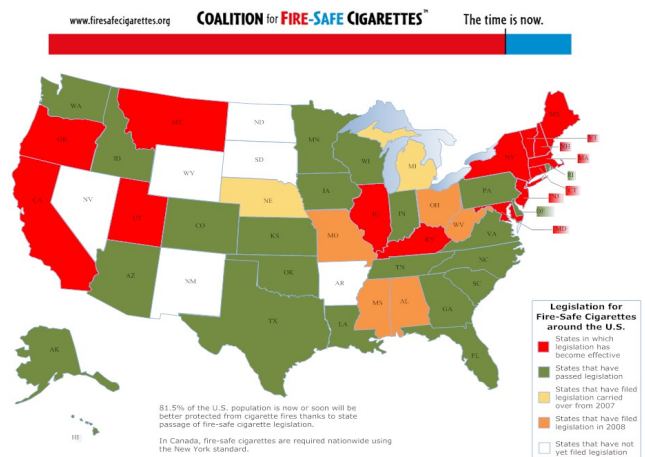
In North Carolina, between 1990 and 1995, there was a significant (25%) reduction in fire fatalities. This was due in part to the partnering of UNC researchers with the State Fire Service and other organizations to increase smoke alarm distribution and use. CDC funds the North Carolina Department of Health and Human Services (DHHS) to conduct a state-wide program to install smoke alarms and deliver fire safety education in high risk homes. The UNC IPRC is collaborating with North Carolina's DHHS to evaluate this program.

Effect on Public Policy

The results from the UNC IPRC research supported a new state law requiring the installation of smoke alarms in all rental properties as of 1995. If broadly enforced, this law could prevent property loss from smoking-material related fires and save hundreds of millions of dollars each year. The CDC-funded research at UNC was used to demonstrate the effectiveness and efficiency of smoke alarms in rental properties.

In 2007, Ernest Grant, a registered nurse from the UNC Jaycee Burn Center, worked with several state legislators to champion a new law requiring the sale of only [fire-safe cigarettes](#) in North Carolina. To make a fire-safe cigarette, manufacturers wrap cigarettes with two or three thin bands of less porous paper to slow down or self extinguish a burning cigarette when left unattended.

Dr. Carri Casteel, of the UNC IPRC, supported the bill's passage by providing technical support and data on fires and their association with tobacco products. She also developed the [North Carolina Coalition for Fire-Safe Cigarettes](#) website where data are available for use by statewide grassroots organizations. RJ Reynolds, a North Carolina-based tobacco company, announced that it would produce only fire-safe cigarettes soon after the bill was passed. 81.5% of the U.S. population is now or soon will be at a reduced risk from cigarette fires thanks to states, in addition to the state of North Carolina, passing fire-safe cigarette legislation (view map below representing states that have adopted fire-safe cigarette legislation).



SOURCE: Coalition for Fire-Safe Cigarettes



Through CDC's funding and UNC's evidence,
we can prevent fires, reduce injuries, and save lives!

