

# Does Your Home Have Working Smoke Alarms?



The **Red Cross** along with partners **Quicken Loans** and the **Brooklyn Fire Department** will be on your street

**Saturday, November 7<sup>th</sup>, 2015**  
**10:00 am to 2:00 pm**  
To install **FREE** smoke alarms.

**Operation Save-A-Life**, a home fire preparedness campaign of the American Red Cross will provide up to three **FREE** smoke alarms with batteries to Brooklyn residents along with fire safety literature.

These Smoke alarms will be installed by trained **Red Cross** volunteers and representatives from **Quicken Loans** and the **Brooklyn Fire Department** at no cost to the residents.

## Why do you need smoke alarms?

- **All Smoke Alarms will last only 10 years.** The sensors wear out.
- Smoke Alarms provide early warning of fire and **increase the chance of escape.**
- Nearly 40% of deaths in a house fire are caused by smoke rather than burns.
- **Smoke Alarms Save Lives!**



# Home Fire Safety Checklist

## Cooking Safety



- "Keep an eye on what you fry." Stay in the kitchen when frying, grilling or using an open flame.

## Fireplaces, Space Heaters, Baseboards, etc.



- "3 feet from the heat." Furniture, curtains, dish towels and anything that could catch fire are at least 3 feet from any type of heat source.

## Smoking Safety



- Never smoke in bed.

## Electrical and Appliance Safety



- Large and small appliances are plugged directly into wall outlets.

## Children Playing



- Matches and lighters are locked away.

## Smoke Alarms



- Change smoke alarm batteries every year unless it has a long-life battery.
- Replace smoke alarms every ten years.
- Test your smoke alarms each month. If they're not working, they can't get you out the door.

## Home Fire Escape Plan



- At least twice a year, practice your fire escape plan with all family members.
- Practice makes perfect! After each fire drill, mark down your escape time.

## What's Your Escape Time?

Make sure everyone can escape in two minutes or less.

Drill 1

Drill 2



**American  
Red Cross**



# Lista para verificar la seguridad durante un incendio doméstico

## Medidas de seguridad en la cocina



- Esté atento a la hora de freír. Permanezca en la cocina cuando frite, use la parrilla o esponja algo a fuego directo.

## Chimeneas, calefactores, zócalos radiantes, etc.



- A 1 metro del fuego. Los muebles, las cortinas, las toallas de cocina y cualquier otro objeto que pueda incendiarse debe estar a por lo menos 1 metro de distancia de cualquier fuente de calor.

## Medidas de seguridad para fumadores



- Nunca fume en la cama.

## Medidas de seguridad respecto a electrodomésticos



- Los electrodomésticos, tanto grandes como pequeños, se deben enchufar directamente a las tomas de corriente.

## Niños jugando



- Los fósforos y los encendedores deben guardarse bajo llave.

## Detectores de humo



- Cambie las baterías del detector de humo una vez al año, a menos que tenga baterías de larga vida.
- Reemplace los detectores de humo cada diez años.
- Pruebe si los detectores de humo estén funcionando do una vez al mes. Si no funcionan correctamente, asegúrese de reemplazarlos por otros nuevos en caso de emergencia.

## Plan para evacuar de la casa en caso de incendio



- Por lo menos dos veces al año, practique su plan de evacuación para incendios con todos los miembros de su familia.
- ¡La práctica hace al maestro! Después de cada simulacro de incendio, indique el tiempo que tardaron en evacuar.

## ¿Cuánto tiempo tardaron?

Asegúrese de que todos puedan evacuar en dos minutos como máximo.

Simulacro 1

Simulacro 2



**Cruz Roja  
Americana**



**Endorsing  
Organizations\***

Buddhist Tzu Chi  
Foundation

Catholic Charities USA

Church of the Brethren  
Disaster Ministries

Common Voices

Congressional Fire Services  
Institute

Corporation for National  
and Community Service

Delta Sigma Theta Sorority  
Inc.

Electrical Safety Foundation  
International (ESFI)

Fire Department Safety  
Officers Association

Habitat for Humanity  
International

HOPE *worldwide*

International Association of  
Black Professional Fire  
Fighters

International Association of  
Fire Chiefs (IAFC)

International Association of  
Fire Fighters (IAFF)

International Code Council

Lott Carey

Meals On Wheels America

Metropolitan Fire Chiefs  
Association

We, the undersigned, join the American Red Cross in support of the Home Fire Preparedness Campaign and its goal to reduce the number of deaths and injuries caused by home fires by 25% in five years. Achieving this goal is beyond the means of any one organization. Together, we need to build and strengthen existing coalitions of local fire departments, houses of worship, businesses, schools, public health departments, social service agencies, neighborhood leaders, private sector and additional stakeholders to target campaign efforts and reach households most likely to experience a fire.

Home fires kill an average of seven people every day. Every 40 minutes, an injury from a home fire is reported. Roughly 1,000 times every day, fire departments are called to a home fire. Home structure fires cause roughly \$7 billion in direct property damage per year, or an average of more than \$20,000 per fire.

We have an opportunity to make a difference in our communities and save lives tragically lost due to home fires. We agree to work together to support the fulfillment of the cornerstone elements of this strategy below and look forward to supporting the formation of local coalitions.

- 1) Door-to-door installation of smoke alarms and completion of a home-safety checklist and plan in vulnerable neighborhoods;
- 2) Engagement of youth in classrooms and after school with technology, challenges, and science-based education;
- 3) A marketing and public relations campaign to motivate people to take action to save themselves, their families, and their neighbors by checking smoke alarms and practicing evacuating when the alarm goes off.

Smoke alarm installation is critical to reducing home fire deaths. Working together, we will support the formation of local coalitions to identify and reach neighborhoods most vulnerable to experiencing a home fire and install up to 500,000 smoke alarms across the country each year. National Fire Protection Association estimates that the 4% of homes without smoke alarms represent more than one quarter of reported home fires and more than one-third of home fire deaths. Working smoke alarms cut the risk of dying in a fire in half.

Youth engagement will include school- and after-school-based programs aimed at educating young people about fire safety, a youth-oriented smart phone app that will make learning about disasters fun and a youth challenge aimed at harnessing the creativity of America's

**Endorsing Organizations\***

National Association of Hispanic Fire Fighters

National Association of State Fire Marshals

National Council Society of St. Vincent de Paul, Inc.

National Fallen Firefighters Foundation

National Fire Protection Association

National Fire Sprinkler Association

National Native American Fire Chiefs Association

National Volunteer Fire Council

Phoenix Society for Burn Survivors

Points of Light

Portlight Strategies, Inc.

Project Paradigm

Rebuilding Together

Society of Fire Protection Engineers

State Farm

Team Rubicon

The National Council on Independent Living

The Salvation Army

UL

United States Fire Administration

Vision 20/20

YMCA of the USA

\*As of June 12, 2015

young people to solve the complex problems around home-fire prevention.

Finally, the marketing campaign will support the strategy by encouraging individuals who feel responsible for others to test their smoke alarms and know their escape plans. NFPA reports almost one-quarter of home fire deaths resulted from fires in which smoke alarms failed to operate, usually due to missing, disconnected or dead batteries. Fire science further reveals that people may have as little as two minutes to evacuate after a fire starts.

We are committed to work together to seek and provide the collective resources needed to fulfill the cornerstone elements of this strategy and look forward to supporting the formation of local coalitions to implement the outreach to households, youth, and the community to realize the goal of reducing the tragic loss of life from home fires.

# Preparedness Campaign 2014: Home Fires

## Executive Summary

Seven times a day, someone dies in a home fire. Every 40 minutes, an injury from a fire is reported. Nearly 1,000 times every day, fire departments are called to home fires. Damage from US home fires is bigger than the entire annual sales of many Fortune 500 companies.

For the past 20 years, these numbers have been relatively stagnant.

By mobilizing the power of volunteers and the generosity of donors, the American Red Cross and our coalition partners will attack that stagnation. In an unprecedented, nationwide effort to combine new technology and innovation with old-fashioned neighbor-to-neighbor outreach, we will save lives, reduce injuries, and cut down on needless losses.

Our goal is to reduce the number of fire deaths and injuries in the United States by 25% within five years.

There are three cornerstones to the strategy:

- 1) Door-to-door installation of smoke alarms and completion of home-safety checklists and plans in vulnerable neighborhoods,
- 2) Engagement of youth in classrooms and after school with technology, challenges, and science-based education,
- 3) A marketing and public relations campaign to motivate ordinary people to take action to save themselves, their families and their neighbors by checking smoke alarms and practicing evacuating when the alarm goes off.

The Red Cross and our partners will do this by establishing local coalitions in communities all across America, including local fire departments, houses of worship, businesses, schools, after-school groups, public health departments, social service agencies, neighborhood leaders and others. These coalitions will support all elements of the strategy.

One cornerstone of the campaign is going door to door where it counts the most. Data shows that the 4% of homes without smoke alarms represent nearly 40% of the home fires, and that working smoke alarms can double someone's chance of surviving a fire. By combining data from 5 years of responses to home fires by Red Cross volunteers with demographic risk factors like poverty, maps will highlight the neighborhoods at greatest risk.

The coalition will also be nimble and target areas dynamically in the event that there is an outbreak of fires in a neighborhood during the campaign. Volunteers from the coalition will go to homes in those neighborhoods with home safety checklists, family disaster plan templates, and smoke alarms. When invited, they will complete a checklist and plan with the family, and they will install smoke alarms in the residence. We will also install smoke alarms as needed for our clients who move into new homes after a disaster, and engage our partners who provide services in homes to install alarms as well.

The goal each year is to install 500,000 smoke alarms. One national coalition partner has already committed to providing 150,000 volunteers to install smoke alarms nationwide.

Youth engagement will include school- and after-school-based programs aimed at educating young people about fire safety, a youth-oriented smart phone app that will make learning about disasters fun, and a youth challenge aimed at harnessing the creativity of America's young people to solve the complex problems around home-fire prevention.

Finally, a marketing campaign will support the strategy by encouraging individuals who feel responsible for others to check their smoke alarms and know their escape plans. Data indicates that about half of installed smoke alarms are not functioning, usually due to dead or removed batteries. And new fire

science shows that people in most modern homes have only about three minutes to evacuate after a fire starts, which means people need to know their escape routes and take the smoke seriously.

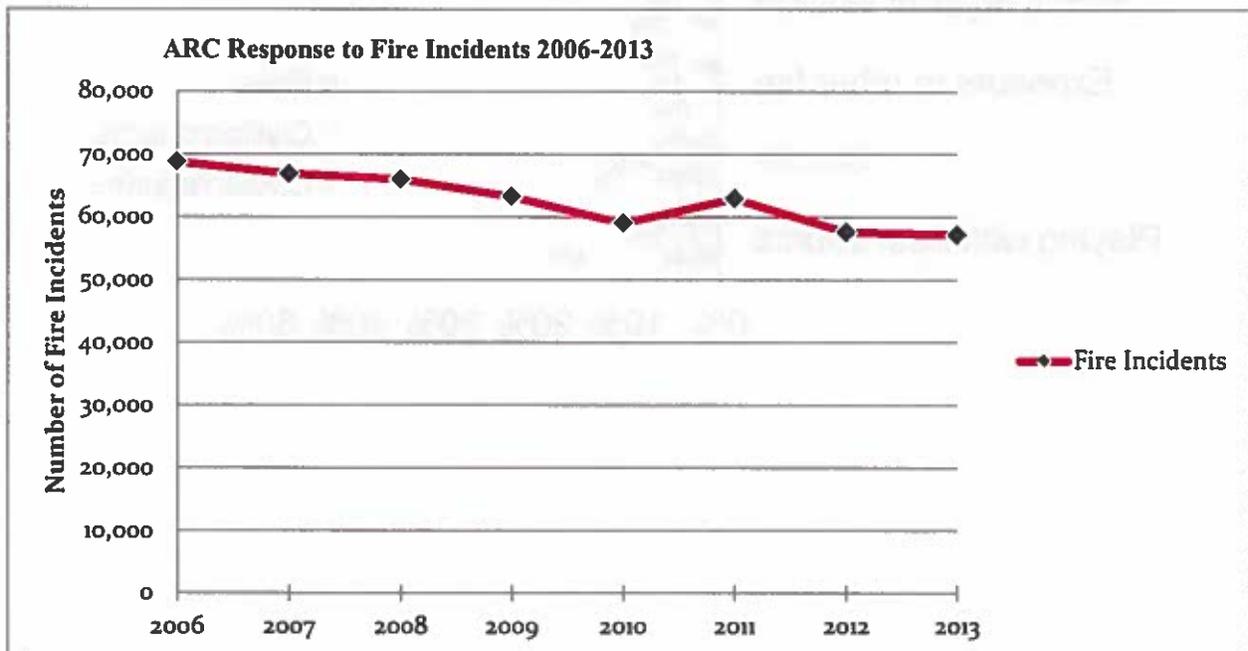
***About the Preparedness Campaign***

The 2014 Home Fire Preparedness Campaign is the kick-off of a multi-year, two-prong preparedness strategy for the American Red Cross. The goals of the strategy are to save lives that are lost to preventable causes like fires, disasters, choking, and cardiac arrest and to improve the resilience of the social safety net in the face of disasters.

# Home Fire and Smoke Alarm Summary Fact Sheet

## Fire Loss in the United States

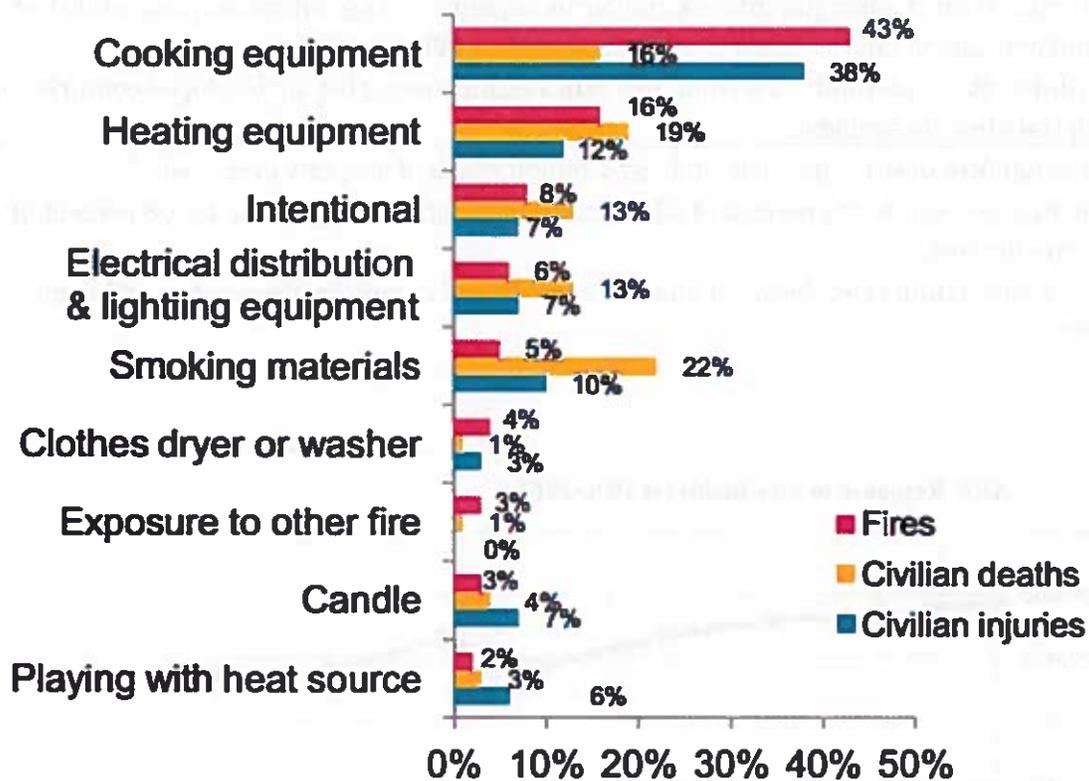
- Home fires in the United States kill more than 2,500 people annually and cause an average of 13,000 injuries. <sup>1</sup> (These figures do not include firefighter deaths or injuries.)
- Fire Departments respond to approximately 366,600 home fires a year, including small fires that are confined to—for example—a stovetop. <sup>2</sup> On average, the American Red Cross is called to help affected residents in 63,000 of these cases.
- The total cost for treating fire injuries and burns amounts to \$1.3 billion per year, while lost productivity due to injuries leads to an additional \$6.2 billion in losses. <sup>3</sup>
- The United States mortality rate from fires ranks eighth among the 25 developed countries for which statistics are available. <sup>4</sup>
- Residential fires destroy approximately \$7.2 billion worth of property every year. <sup>5</sup>
- Home fires account for 74 percent of all structure fires and are responsible for 68 percent of structure fire loss. <sup>6</sup>
- A strong correlation exists between home fire deaths and certain socioeconomic and demographic factors.



## Home Fire Leading Causes

- Cooking fires account for 43 percent of all home fires in the United States and are the leading cause of fire in suburban and urban communities.<sup>7</sup>
- In rural communities that have less than 20,000 residents, heating equipment is the leading cause of home fires. These fires are more than twice as likely to occur in rural dwellings when compared to homes in metropolitan areas.<sup>8</sup>

Major Causes of Home Structure Fires



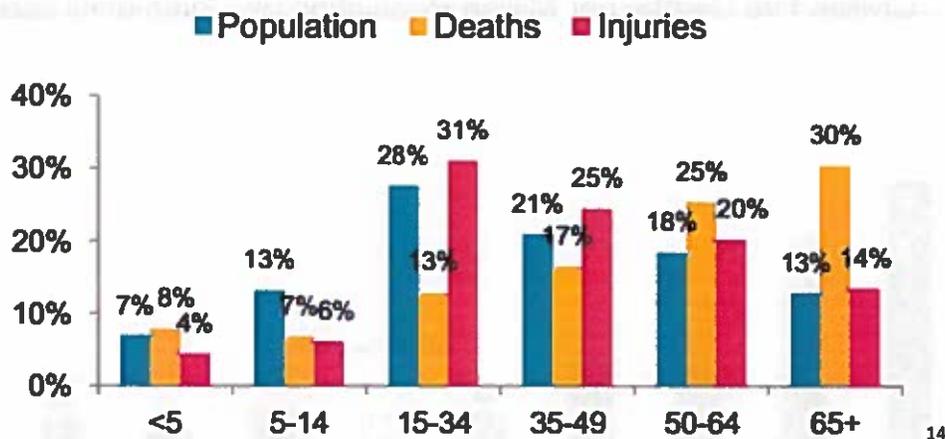
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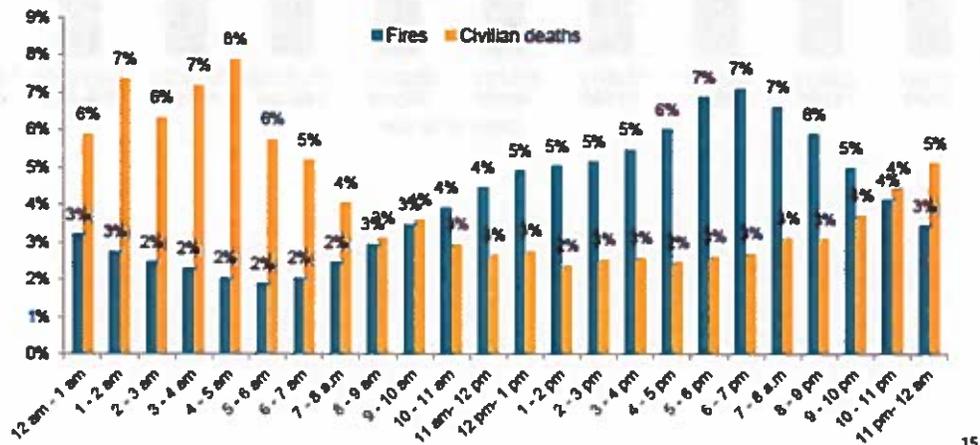
## Home Fire Deaths and Injuries

- Smoking is the leading cause of fire-related fatalities; these fires account for 22 percent of all fire deaths. <sup>10</sup>
- Cooking fires are responsible for 38 percent of all fire-related injuries. <sup>11</sup>
- Approximately 40 percent of home fire deaths are related to asphyxiation, which is caused by breathing in poisonous smoke. <sup>12</sup>
- Young children are more likely to be killed by a home fire while asleep, while older adults are more likely to die while escaping or taking other protective actions.
- While only 20 percent of home fires occur between 11:00pm and 7:00am, over half of all home fire deaths occur at night. <sup>13</sup>

Home Fire Deaths and Injuries by Age Group



Home Structure Fires by Alarm Time

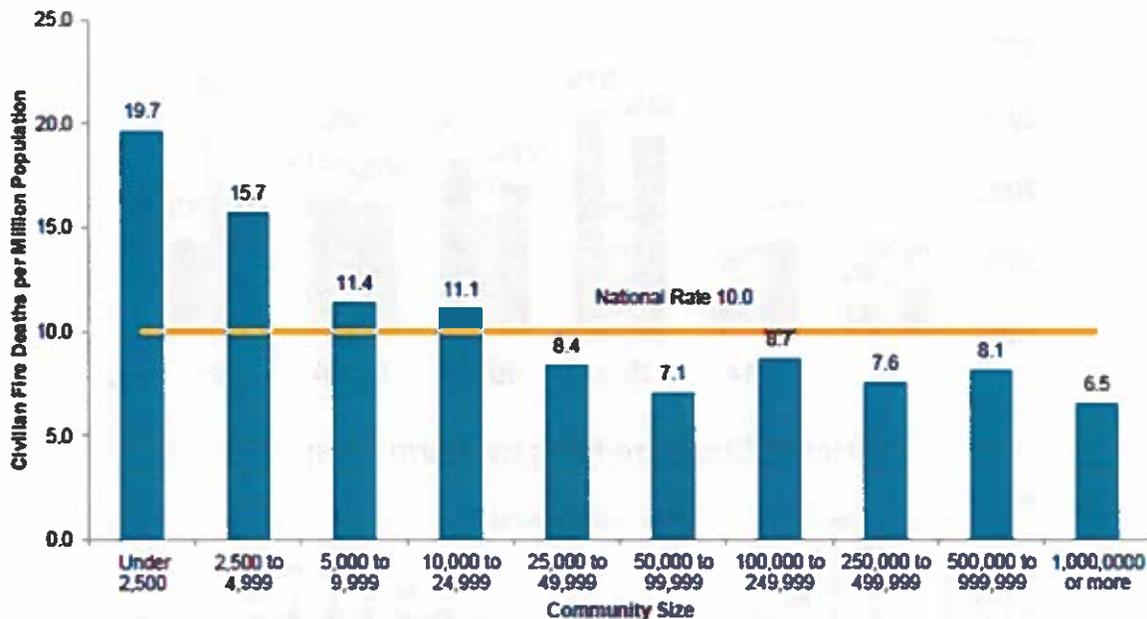




## Home Fire Risk in Rural Communities

- Smoke alarms are either missing or non-functional in 73 percent of rural home fires.<sup>16</sup>
- A strong inverse correlation exists between community size and the risk of fire related fatalities. Civilian fire death rates per million are nearly twice as high in communities with 25,000 residents or less.<sup>17</sup>
- On average, flame damage to homes in rural areas is more extensive than in non-rural areas. Rural areas typically suffer worse from home fire damage due to the following factors:
  - Emergency response times are usually longer due to greater travel distances.
  - Fires typically burn longer before being reported due to lower population densities.<sup>18</sup>

Civilian Fire Deaths per Million Population by Community Size



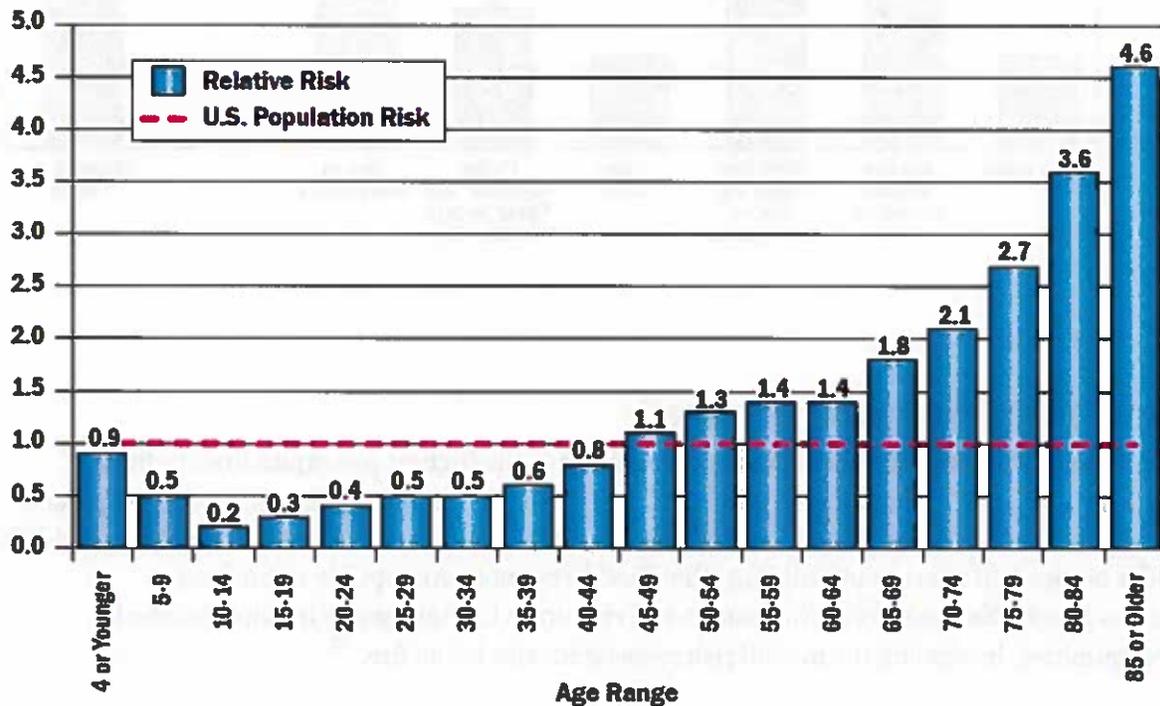
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## Home Fire Risk by Age

- Adults over the age of 65 are more than twice as likely to die in home fires when compared to the average American; furthermore, the heightened risk for seniors continues to increase as they grow older.<sup>20</sup>
- While many age groups have seen a reduction in home fire deaths over the past 30 years, senior death rates have actually increased by approximately 10 percent.<sup>21</sup>
- Small children ages 5 and under are at a heightened fire risk. They are almost one and a half times as likely to die in a home fire when compared to all other youth.<sup>22</sup>
- For children younger than 15, exposure to smoke and fire is the third leading cause of death after transportation accidents and drowning.<sup>23</sup>
- Although child fatalities have been significantly reduced over the past 20 years, children ages 5 and under are still eight times as likely to die as a result of playing with heat sources when compared to other age groups.<sup>24</sup>

Relative Risk of Fire Death by Age

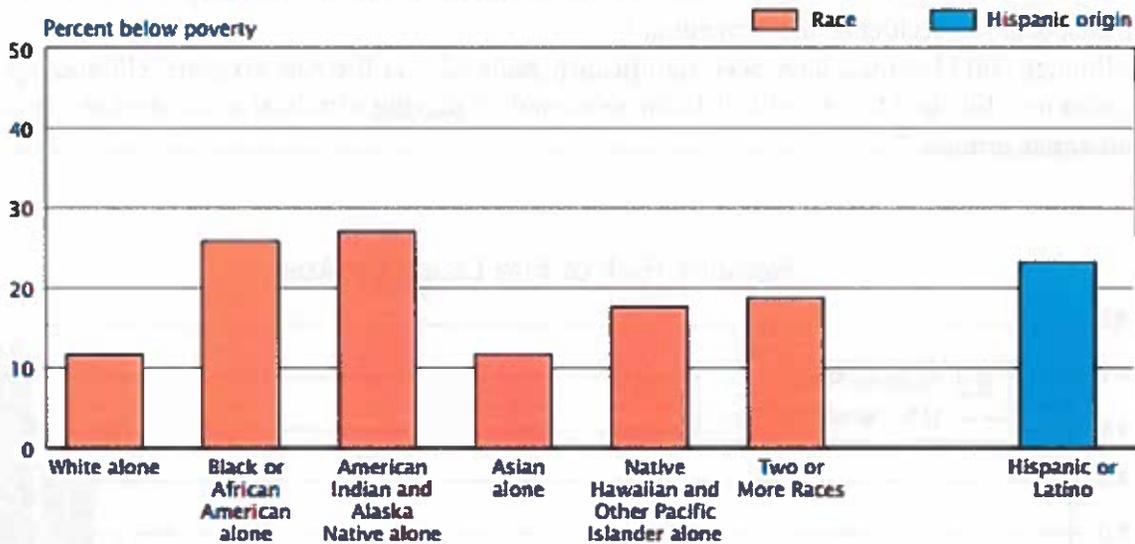




## Home Fire Risk by Race

- On average African Americans account for 20 percent of all fire deaths even though they only represent 13 percent of the population. <sup>26</sup>
- Studies have found a causal relationship between poverty and home fire risk. Native American and African American communities represent the two leading at-risk communities for home fire; <sup>27</sup> these communities also have the two highest per capita poverty rates in the United States.

U.S. Census Bureau's Demographics of Poverty



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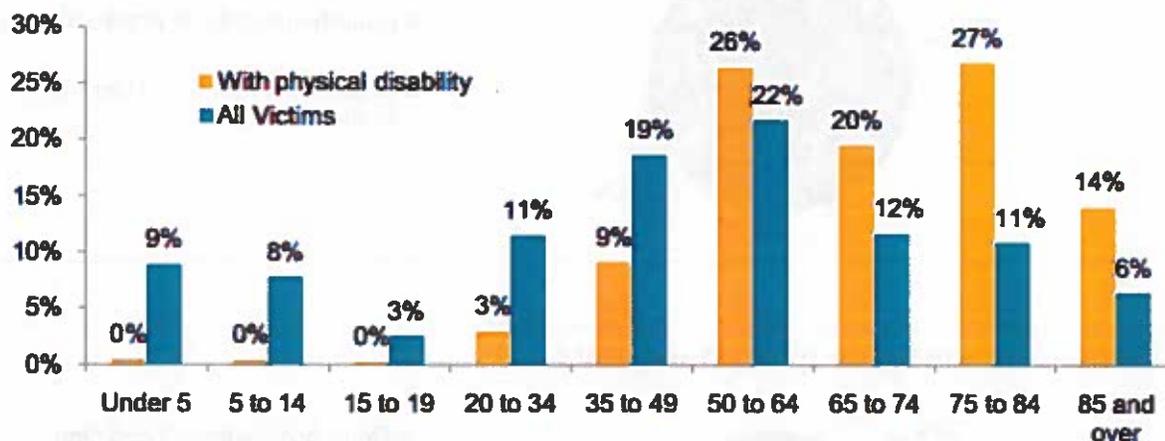
## Home Fire Risk and Poverty

- Six of the top ten most impoverished states also have the highest per capita fire fatalities. <sup>29</sup>
- Individuals living at or below the poverty line may find it cost prohibitive to purchase fire-safe products, smoke alarms, and fire extinguishers. Additionally, many of these individuals reside in older homes and apartment buildings that tend to be more susceptible to fire loss.
- Access to reliable fire safety information and resources is often sparse in impoverished communities, increasing the overall risk associated with home fire. <sup>30</sup>

## Home Fire Risk for Individuals with Physical Disabilities or Other Functional Needs

- Approximately one in every five Americans has some form of disability or functional need.<sup>31</sup>
- Physical disability is a contributing factor in 14 percent of all home fire deaths.<sup>32</sup>
- More than half of all physically disabled fire victims were involved in accidental ignition and were in the room of origin when the fire started.<sup>33</sup> Smoking and cooking related incidents are the two leading causes of these fires.<sup>34</sup>
- Intentional fires account for 40 percent of all home fires amongst individuals with mental disabilities.<sup>35</sup>
- Forty-one percent of disabled victims were killed in fires started by smoking materials, whereas smoking accidents were responsible for only about 25 percent of all home fire victims amongst the general population.<sup>36</sup>

Home Fire Deaths with Physical Disability as a Factor by Age of Victim



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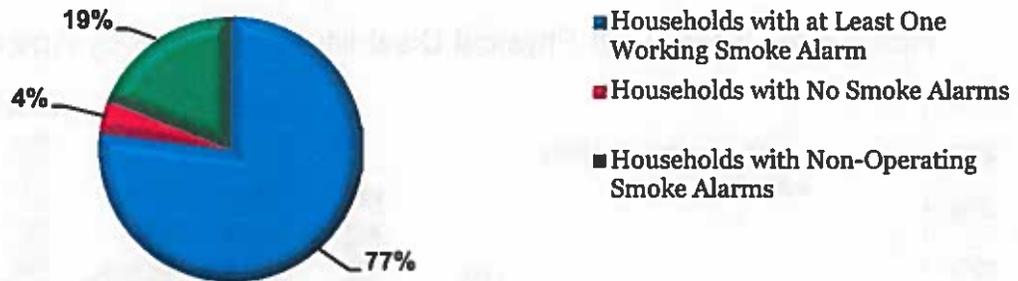
- Fifty-five percent of fire victims with physical disabilities died in homes that had adequate smoke alarm coverage, whereas only 38 percent of the remainder of all fire victims had working smoke alarms. A comprehensive program that addresses fire escape planning, cooking safety, and smoking in bed may help to address the root causes behind most fire fatalities in this segment of the population.<sup>38</sup>



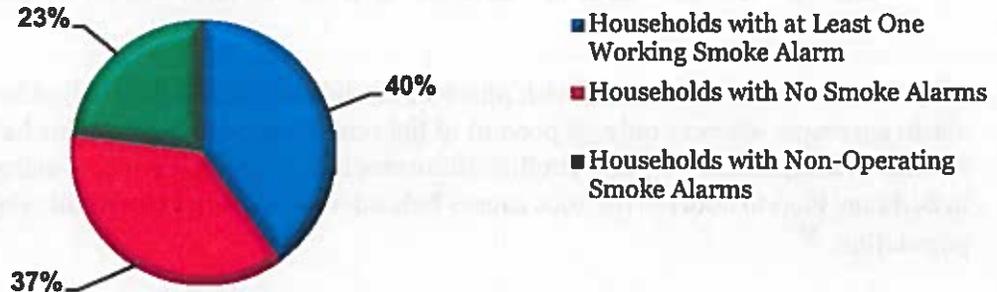
## Smoke Alarm Facts

- Nearly two-thirds of all fire-related deaths occur in homes that have no functioning smoke alarms. <sup>39</sup>
- Working smoke alarms cut the risk of dying in home fires by half. <sup>40</sup>
- Homes without smoke alarms are 15 times as likely to report a home fire as those with smoke alarms installed. <sup>41</sup>
- Best estimates suggest that only 77 percent of US homes have at least one functioning smoke alarm. <sup>42</sup>
- The only intervention proven more effective than smoke alarms is fire sprinklers. Sprinklers decrease the fatality rate for home fires by 83 percent. Additionally, this equipment decreases the average dollar loss per home fire by 69 percent. <sup>43</sup>

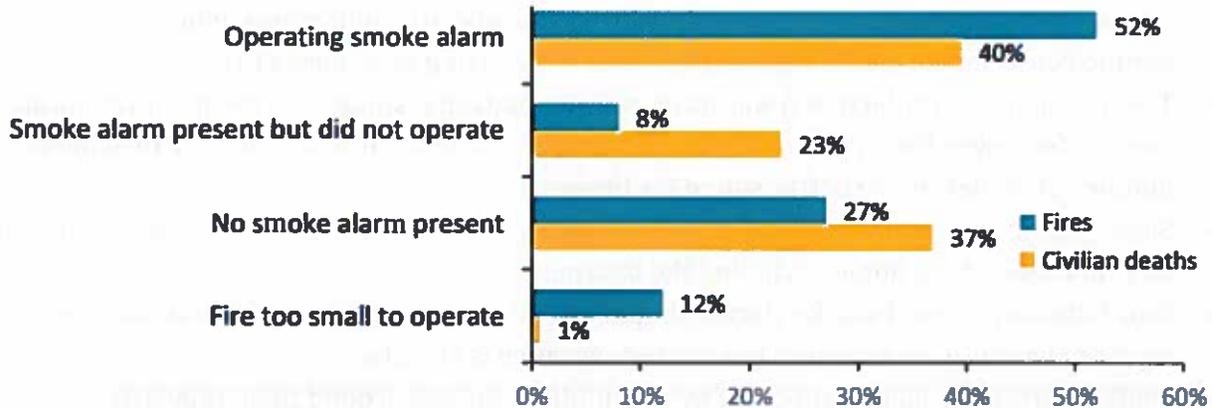
### Smoke Alarms in US Households



### Home Fire Fatalities in US Households



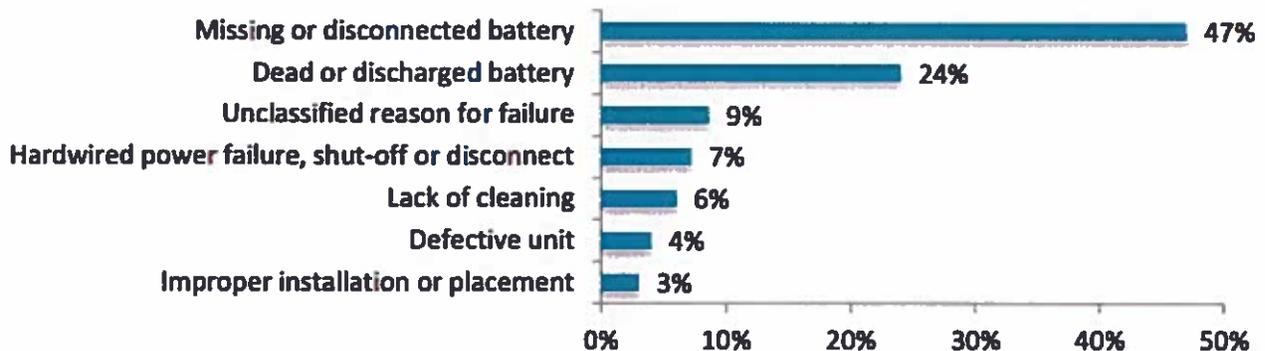
### Reported Home Structure Fires and Fire Deaths by Smoke Alarm Performance 2007-2011



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- When smoke alarms fail to operate, it is usually because of human error. Almost one-quarter of smoke alarm failures are due to dead batteries. <sup>45</sup>
- Loud, low frequency auditory signals are most effective in waking persons with moderate to severe hearing loss. This signal type performs better than bed/pillow shakers and strobe lights. <sup>46</sup>

### Reasons Smoke Alarms Fail to Operate in Home Structure Fires<sup>47</sup>



## Smoke Alarm Recommendations

- The United States Fire Administration recommends that every residence should be equipped with dual sensor alarms, or a combination of ionization and photoelectric smoke alarms.
- An ionization smoke alarm is generally more responsive to flaming fires, whereas a photoelectric smoke alarm is generally better at detecting smoldering fires.
- The National Fire Protection Association recommends that smoke alarms should be located at least 10 feet away from cooking appliances in order to avoid nuisance alarms. In general, photoelectric alarms are better suited for these areas.
- Smoke alarms should be installed in every bedroom, outside each separate sleeping area and on every level of the home, including the basement.
- Non-Lithium powered smoke alarms should be tested monthly and have their batteries replaced yearly, or as soon as a low-battery warning is signaled.
- Smoke alarms should be kept clean by vacuuming over and around them regularly.
- Never remove the battery or disable a smoke alarm. If an alarm sounds while cooking or taking a shower, press the “hush” button and open a nearby door or window. You can also wave a towel in front of the unit to help clear the air.
- If your smoke alarm is sounding “nuisance alarms,” try locating it further away from kitchens and bathrooms.
- All smoke alarms should be replaced after ten years of use.



## Citations

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- <sup>11</sup> National Fire Protection Association, Fire Analysis and Research Analysis. (2013). *An overview of the U.S. fire problem*.
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