PUBLIC EDUCATION FOR FIRE PREVENTION

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Fire 105
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I remember as a little kid when the firefighters in their big red truck came rolling up to my elementary school. There was a lot of excitement and soon enough myself and my classmates were sitting in the auditorium listening to a discussion on the fire safety and fire dangers. The only thing I can say I remember is the classic *Stop, Drop and Roll*. While I've been fortunate enough to never need to refer to that saying in my own life, I have no doubt it's been enough to save the lives of children throughout America for decades.

*Stop, Drop and Roll* is just one example of Public Education saving lives. In the world of fire prevention, I believe the role of public education, while big, is still under-emphasized and under-utilized. In this report, I will discuss the issue of public education for through three subtopics: the goals of the fire service, common fire hazards (including highlighting tips for their prevention), and approaches used in educating the public.

In general, the goal of public education is to teach citizens how to reduce hazardous conditions, and react to dangerous situations in the occasions when they arise. When a home or building is built and inspected by code enforcement officers and inspectors, the structures owners are rarely too concerned about fire issues. Their primary concerns are typically financial and time oriented. They want to get into their new home or building fast and cheap. The dangers of fire are simply too far removed from their everyday thoughts, and so often, the real dangers seem all too innocent and unlikely. Here lies the need for education.

Simply defined, a *fire hazard* is a condition that increases the likelihood of a fire starting or would increase the extent or severity of a fire if one did start. The general public does not need to memorize the fire tetrahedron to keep safe. They simply need to know that there are
elements that go into making a fire and, the two they have the most control over are heat sources and fuel supplies.

As it turns out most people are killing themselves. Smoking is the leading cause of fire deaths in the United States killing almost 25% of people who die in fires. This typically happens to older people as they fall asleep and the ashes of their cigarette ignite their furniture or bedding.

While smoking kills the most people, it's actually cooking and kitchen fires that start the most home fires and result in the most injuries. Virtually all cooking fires start with the ignition of cooking materials like food, grease, or oil. Once these are lit, people often try and put them out with water making the situation worse. Soon enough, the fire catches the cabinets, wall coverings, curtains and/or other items commonly found in the kitchen. Most of these fires occur during food oriented family events like Christmas and Thanksgiving.

Another very common hazard are home heating systems. Furnaces and water heaters, fireplaces, and space-heaters are all common causes of accidental fires within the home. Most of the time the problem is a simple as placing heating equipment too close to combustibles, such as upholstered furniture, clothing, mattresses or bedding. As with the smokers, people will fall asleep, walk away, or simply overlook the potential hazard. Generally, this occurs during the winter months between 6:00 p.m. and 11:00 p.m.
The last home fire hazard we're going to explore are electrical based fires. In America, about one-third of homes are over 50 years old and with that comes a variety of problems. Inadequate and overburdened electrical systems, over-current protection, misuse of extension cords and makeshift circuit extensions are common. In addition, worn-out wiring devices and poorly done electrical repairs make for hidden, but often preventable fire hazards.

The following are simple tips to maintain a safe home for the top 4 fire causes:

<table>
<thead>
<tr>
<th>Smoking</th>
<th>Cooking</th>
<th>Heating</th>
<th>Electrical</th>
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<tr>
<td>Before you throw out butts and ashes, make sure they are out, and dousing in water or sand is the best way to do that.</td>
<td>Stay in the kitchen when you are frying, grilling, or broiling food. If you leave the kitchen for even a short period of time, turn off the stove.</td>
<td>Keep anything that can burn at least three feet from heating equipment</td>
<td>Homes should be inspected by a qualified electrician (based on NFPA 73)</td>
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<td>If you smoke, smoke outside.</td>
<td>Use a timer to remind you that you are cooking.</td>
<td>Do not use your oven to heat your home.</td>
<td>Professional Electricians should do all new electric work.</td>
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<td>Use deep, wide ashtrays on a sturdy table.</td>
<td>Use a &quot;kid-free zone&quot; of at least 3 feet around the stove and areas where hot food or drink is prepared or carried.</td>
<td>Portable space heaters should be turned off every time you leave the room and before going to bed.</td>
<td>Check electrical cords to make sure the wires are not damaged, cracked or loose.</td>
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<td>To prevent a deadly cigarette fire, you have to be alert. You won't be if you are sleepy, have been drinking, or have taken medicine or other drugs.</td>
<td>Be aware that loose clothing can dangle onto stove burners and can catch fire if it comes in contact with a gas flame or electric burner.</td>
<td>Make sure your fireplace has a sturdy screen to prevent sparks from flying into the room.</td>
<td>Make sure cords are not running across doorways or under carpets and avoid pinching cords against walls or furniture.</td>
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<td>Keep matches and lighters up high, out of children's sight and reach.</td>
<td>Keep anything that can catch fire — oven mitts, wooden utensils, food packaging, towels or curtains — away from your stove-top.</td>
<td>Install smoke alarms in every bedroom, outside each sleeping area, and on every level of the home and test monthly.</td>
<td>Ground-fault circuit interrupters (GFCIs) reduce the risk of electric shock by interrupting the electrical circuit when a shock hazard exists.</td>
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Always maintain clear and unobstructed pathways through your home. Always keep a flashlight by your bed.

These are only some of many great tips, but how do we go about educating the public? Locally this is done through many means including the fire department itself, local schools, community programs, and other organizations. The information and programs used in their education come from a variety of sources. Some of the sources include the following:
In general public education for fire safety has adopted a principle of prevention called the *four E's*. They stand for Education, Engineering, Enforcement, and Economic incentive. Occasionally, the additional E of Emergency Response is included. Still, to be effective (not one of the E's) the audience must be addressed appropriately.

Adults are the immediate and obvious choice as a first target. Unfortunately, they are often an unenthusiastic audience as they have plenty of "immediate responsibilities" to worry about and fire prevention just doesn't appeal to them as an urgent need. This is why educators must seek out "teachable moments" to target their adult audience. Teachable moments tend to be significant times in a person's life when fire education seems to be a real concern. The purchase of a new home, the birth of a child, or loss of a friend or family member due to fire are all teachable moments. They make the dangers of fire real and command genuine attention.

Children are the other key target for fire prevention schooling (and often a good means of access to the adults), and there are a number of manuals already in place for the purpose of their development. The NFPA has put together a variety of publications: For preschool children aged 3-5 is "Learn Not to Burn" which uses songs, games, and activities to teach basic fire prevention behaviors. The NFPA also produces "Risk Watch" which covers a number of different topics including fire and burn prevention.

Station tours are another great method for educating children and adults of all ages. People never seem to be too old or too young to enjoy a visit to their local fire station.
Whether teaching adults or children all the safety information in the world will not be effective without an effective method of instruction. The popular method includes four steps: *Preparation, Presentation, Application and Evaluation.*

Preparation means knowing what you'll be talking about and ensuring the information is education and engaging. Real life stories work well for this purpose. Make sure you're fully educated on any topic you'll be discussing and practice delivering that information with friends, family or other fire fighters. Be familiar with the feel of standing before a crowd and speaking to them, even if you start by testing yourself out on your support network. Toastmasters clubs are a great resource for improving public speaking skills.

Once you're fully prepared, it's time for the actual presentation. At this point your knowledge and confidence will carry you a long way, but go beyond words. Using visual aids like actual smoke alarms, extinguishers and other props that your audience can see touch and feel will help solidify your messages and make them all the more tangible. In the case of children, activities like my favorite - *Stop, drop and roll* work well in nailing the lesson into the memory banks. Lastly, take-homes work well too. Have handout prepared, or supply simple reminders that people can take away such as pencils or workbooks.

Application is the third step and possibly the most important. It's basically their midterm and/or final exam. Have your audience apply what they've learned by practicing it right there with your supervision. This way, they reinforce their new knowledge and you can correct any mistakes they might make. Actually doing something has been proven to be a much more potent education tactic than merely reading or hearing about it.
Finally, evaluation is the part where you're going to review the effectiveness of your presentation and make any necessary adjustments. Get feedback at the end and ask your participants what they liked, didn't like, thought was useful, and how you can improve. As mentioned earlier, you may be giving a pre-planned lecture from one of the organizations listed above, but feedback is still invaluable. It can help direct both you and the organization in future presentations.

In conclusion, there are many devices and technologies out there designed to help prevent and protect us from fire, but there is nothing quite so valuable as the knowledge and know-how to protect ourselves. If the public as a whole were sufficiently educated in the principles and practices of fire prevention, the need for fire suppression would in itself be suppressed. Smoke alarms and automatic sprinklers will always be important and useful, but empowering people to keep themselves safe is a far more powerful tool. An educated community is a safe community. I believe public education is, and will always be the most potent form of fire prevention.