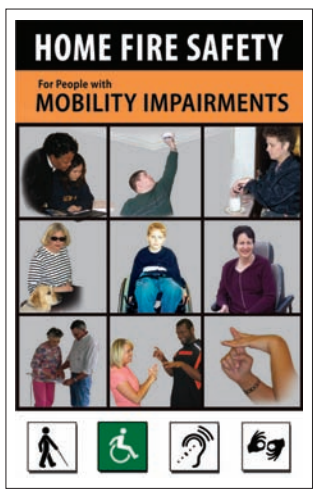
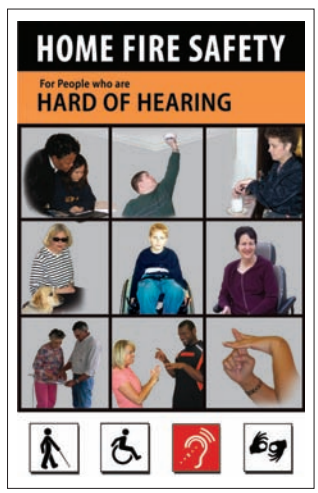
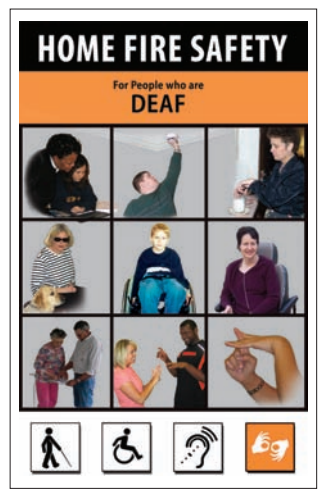
Fire Safety Solutions for People with Disabilities

How to Implement a Home Fire Safety & Smoke Alarm Installation Program

A Model Program from Oklahoma that Saves Lives







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Introduction

"Fire Safety Solutions for Oklahomans with Disabilities" is a comprehensive, home fire safety program that includes educating people with disabilities and installing specialized smoke alarms. During this statewide program, we have learned and adapted. Through July 2007, we have had great successes with six reported saves as the smoke alarm provided the alert, and no one was harmed. We have demonstrated effectiveness through the follow-up survey results. So we present this guide, enabling you to implement home fire safety programs for people with disabilities.

Prioritizing Disability

Solutions 2000, a national symposium of fire safety and disability organizations, recommended creating specialized fire safety messages for young children, older adults and people with disabilities. The symposium developed a work plan with specific priorities in education, engineering and advocacy; many of the education priorities are met through this program, including providing education and training about fire prevention and providing those materials in accessible formats.

National tragedies, such as September 11, 2001 and Hurricane Katrina, brought an increased focus on the unique needs and abilities of people with disabilities in emergency situations. These events motivated the government and foundations to develop funding for research and materials concerning evacuation and emergency planning. Grant funding is likely to continue in these areas as the number of people with disabilities increases due to veterans returning from war and baby boomers aging. Our program focuses specifically on residential occupants—not commercial or high-rise—smoke alarms, evacuation and fire prevention education.

The Partners

Fire Protection Publications (FPP) and Oklahoma ABLE Tech (ABLE Tech), both at Oklahoma State University, partnered to create and implement the program, "Fire Safety Solutions for Oklahomans with Disabilities," through funding from the Department of Homeland Security and the U.S. Fire Administration (USFA).

This partnership facilitated the program's success given the expertise of each organization. FPP, established in 1935, is the largest provider of firefighter training materials and curricula in the world. During the years, FPP staff has worked successfully with the USFA in public fire education programs and activities. For this program, FPP has provided home fire safety experts and experience with fire and life safety programs.

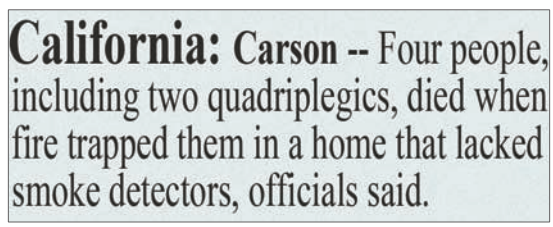
ABLE Tech began in 1992 as Oklahoma's assistive technology program, making assistive technology devices and services more available and accessible to individuals with disabilities and their families, and serving individuals of every age. ABLE Tech has provided experts on assistive technology and experience implementing projects for people with disabilities. Both partners' knowledge and experience were required. One organization could not have succeeded without the other.

People with disabilities have a slogan "Nothing about us, without us." This program could have produced the standard components and appeared to be successful with just FPP and ABLE Tech, but we would have missed key elements if we had created educational materials without the input from focus groups comprised of people with disabilities. Only people with disabilities know their own capabilities and needs. We asked for their participation, and we listened, learned and made changes based on what they said.

The Fire Safety Problem

This program targets Oklahomans with hearing, visual and/or mobility impairments. These individuals are at the highest risk for injury or death in residential fires. After researching the materials available, we realized there were no targeted messages with specific recommendations for people with disabilities. Often the information was only a short side-note in a larger guide about fire safety, or the information was incorrect or inapplicable to these individuals. We also realized that the numbers of people with disabilities who are injured or killed in residential fires is masked because this data is not collected or reported.

But the headlines show the need for targeting people with disabilities. In Dayton, Ohio, a man who was blind died in a house fire while attempting to rescue his cat.[1] A child who was deaf in Norfolk, Nebraska, died in her bedroom in a mobile home fire; firefighters said there was no evidence of a smoke alarm.[2] A woman in a wheelchair was killed in a home fire started by a


California: Carson -- Four people, including two quadriplegics, died when fire trapped them in a home that lacked smoke detectors, officials said.

1 Dayton Daily News, 11/26/05, A1.
2 Omaha World Herald, 7/25/06, A1.

Finding Partners & Experts

If you need a partner or expert in fire service, check with the state fire marshal's office or with public information officers in local fire departments. You can find your state's contact information quickly through the U.S. Fire Administration website at http://www.usfa.dhs.gov. (Select Contact Us and then select your state in the State Contacts box.) Hospital burn units may also participate in fire prevention outreach, making them ideal partners.

If you need a partner or expert in disabilities, check with the state's provider of assistive technology or the state's Department of Rehabilitation. To find contact information for your state's Department of Rehabilitation, visit http://www.jan.wvu.edu/SBSES/VOCREHAB.HTM. Another helpful link about disability services throughout the United States is http://www.disabilityinfo.gov.

For a listing of Schools for the Deaf, visit http://infotogo.gallaudet.edu/schools-usa.html. For a listing of Schools for the Blind, visit http://www.sdsbvi.sdbor.edu/wwwresources/list.htm.

burning candle.[3] A Brooklyn woman in a wheelchair was killed in her apartment due to a smoldering cigarette.[4] Living in a mobile home, a woman who was blind in Lakeland, Florida, died in her bedroom when it was engulfed by a fire that originated in the kitchen.[5]

A 48-year old woman who was deaf died in a house fire when a space heater caught fire in the kitchen.[6] In Vallejo, California, a man who was blind and hearing impaired died in a house fire after heat from a wood-burning stove ignited a propane tank.[7] A woman who was blind and used a walker died in Midwest City, Oklahoma, due to an apartment fire started by a cigarette.[8] Stories like these are in every state and every newspaper as people with disabilities die in home fires due to a lack of appropriate smoke alarms and an inability to escape. Often people have been told to wait for help rather than rescue themselves.

This program gives people with disabilities home fire safety information, specific to their unique needs, and equips them with specialized, residential smoke alarms. We work from a philosophy of positive methods for remaining safe from fire rather than scaring people.

3 The Boston Globe, 11/9/06, 7.
4 Daily News (New York), 11/8/05, 19.
5 The Ledger (Lakeland, FL). 2/21/06, B1.
6 San Antonio Express News. 12/10/06, B4.
7 Vallejo Times Herald (California). 12/10/06.
8 The Daily Oklahoman. 4/16/07.

Program Goals

We have three program goals:

1) Install specialized, residential smoke alarms
2) Provide specialized home fire safety messages in accessible formats (large print, Braille, audio tape, CD, VHS/DVD)
3) Develop educational materials for first responders about people with disabilities

Although there are many issues related to fire safety, we have limited our messages, ensuring they are relevant and usable for people with disabilities. Specifically, we emphasize installing the right smoke alarm in the right place, knowing the correct emergency number to call, planning and practicing

Items to Include in a Program Budget

- Photocopies of application, frequently asked questions, installation form, follow-up survey
- Postage for mailing letters, press releases, follow-up surveys
- Office supplies (toner cartridges, envelopes, paper, binders)
- Smoke alarms
- Fire safety message production (include traditional production costs along with costs for Braille transcription and for producing CDs, audio tapes, DVDs, and VHS tapes)
- Language translation for all program materials
- Installation equipment
- Travel for installers
- Professional contractual costs for American Sign Language (ASL) interpreters and other language interpreters
- Salary for program coordinator and installers (optional, but recommended)
- GPS unit (optional, but recommended)
- Interpretype or UbiDuo (optional, but recommended)

a home escape plan and practicing fire prevention strategies. Overall, we have attempted to provide the most comprehensive education and prevention for these individuals. The program materials focus on adults, but we provide services to people of every age.

To find current statistics for the number of people with disabilities, visit http://www.ilr.cornell.edu/edi/disabilitystatistics/. This website accesses the American Community Survey, the Current Population Survey and the Census 2000.

Defining Disability

We target people with visual, hearing and mobility impairments. People with cognitive disabilities are targeted with a combination of fire safety classes and smoke alarm installation through a separate program.[9] To qualify for the free smoke alarm, installation and messages, an individual must submit some type of proof of disability. This proof may include a letter from a doctor or school; professional physical therapist/occupational therapist or audiologist report; Vocational Rehabilitation, Veterans Administration or Social Security documentation; or a copy of a driver's license indicating the type of disability.

Some states do not mark types of disabilities on the driver's license. Oklahoma uses a numerical system to indicate a difference in visual and hearing impairments. Make sure to check whether your state indicates individual disabilities on the driver's license before you accept the license as proof of disability.

Targeted Groups

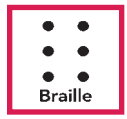
We used the following definitions to distinguish the targeted groups:

Visual Impairment: people with a medical condition or impairment that limits their ability to have aided or unaided vision.

They may have one of the following:

- Astigmatisms in one or both eyes
- Low vision whether unaided or aided with corrective lenses
- Tunnel vision
- Night blindness
- Non-peripheral vision

They may use assistive technology devices such as magnifying lenses, computer screen readers and corrective lenses.



Blind: people with a medical condition or impairment that completely limits their ability to have aided or unaided vision. They may have light or total blindness. They may use service animals and assistive technology devices such as magnifying lenses, talking watches and computer screen readers.

Mobility Impairment: people with a medical condition that limits their ability to stand aided or unaided without support of an assistive device. These impairments also include limited strength or dexterity to walk, grasp or lift objects. Assistive technology devices vary from crutches and canes to walkers and wheelchairs.

Deaf: people with a medical condition or impairment that limits their ability to hear. They may use American Sign Language (ASL) and assistive technology devices such as TTY phones, video phones, and strobe and/or vibrating disc systems for doorbells and alarm clocks. Some may use cochlear implants or hearing aids.

Hard of Hearing: people with a medical condition or impairment that limits their ability to hear certain pitches or volumes. They may use assistive technology devices such as hearing aids, CapTel phones or television sound amplifiers.

We also realize that many people may have multiple disabilities or other characteristics that impair communication such as unintelligible speech. In these cases, we identify the disability that will most impact the individual's ability to respond to a smoke alarm and to escape from a home fire; this is the primary disability we use to determine which alarm will best meet the individual's needs. We also attempt several communication methods to ensure the individual can understand and apply the fire safety messages.

Understanding Accessibility

Creating accessible materials means providing the same material in accessible formats:

- Braille (use an expert to verify the Braille quality)
- Large print using the guidelines from the American Printing House for the Blind (see Appendix H)
- Audio tape with effective enunciation and speed of narration
- CD with text-only files for screen reading software
- Open and closed captions for video and web media
- American Sign Language (ASL)

9 For more information about fire safety classes for people with cognitive disabilities, visit http://seedseducation.org/fire_safety. We partnered with SEEDS Educational Services to customize these educational materials for adults in Oklahoma.

Principals of Residential Smoke Alarms

- To detect the presence of smoke or the products of combustion from a fire (false alarms from cooking or steam from bathroom showers "look" like smoke to the detectors)
- To be located so that fires occurring while people are sleeping (the most fatal fires) are detected as soon as possible to give people early warning
- To alert occupants that smoke is present (this is an audible alarm intended to alert people while they are sleeping or to awaken people)
- To make the alert as an early warning so the occupants have sufficient time to escape

Selecting the Alarms

We knew that traditional smoke alarms could not meet the needs of people with disabilities. People with hearing impairments cannot respond to an audible alert because they often lose hearing in high frequencies, the same frequencies that smoke alarms use.[10] People with hearing aids may hear the smoke alarm during the day, but they remove their hearing aids at night. People with low vision may put themselves at risk for falling or other injuries when they try to test or silence traditional alarms with a button on the face of the alarm. People with mobility impairments cannot test alarms monthly due to their inability to reach or push the test button on the alarms.

Given these physical considerations, we used the following criteria to select appropriate alarms for this program:

Hearing Impairments	Vision or Mobility Impairments
▪ Battery operated ▪ Strobe and/or vibrating disc component along with the audible alert ▪ Strobe separate from smoke alarm ▪ Receiver with strobe and one without strobe (interchangeable with other alarm components) ▪ Smoke alarm system separate from AlertMaster or ShakeUp	▪ Battery operated ▪ Long-lasting battery (10-year, lithium) ▪ Able to be tested and silenced without climbing on a chair or using something to push the test button

10 Lee, A., Midgettt, J. & White, S. (December 2004). A review of the sound effectiveness of residential smoke alarms. US Consumer Product Safety Commission. Retrieved April 3, 2007 from: http://www.cpsc.gov/library/foia/foia05/os/alarm1.pdf

Alarms for People with Hearing Impairments

Although the vast majority of our applicants do not have a seizure disorder, we wanted to make sure the alarm we selected for people with hearing impairments had receivers without strobe lights but could activate a bed shaker. In addition, several consumers explained that their alert systems were sometimes unreliable, failing to alert them to doorbells or alarm clocks, so they were afraid if the smoke alarm was connected to that system, it might malfunction as well. We addressed this concern by selecting a smoke alarm not incorporated with other alert systems. In residences with multiple alert systems, we wanted to make sure the signals would not interfere with each other.

In the past, a state agency in Oklahoma provided free smoke alarms to people who are deaf. They distributed a smoke alarm with a strobe light attached and with a six-foot power cord for easy installation. The alarms were distributed without an educational component or installation assistance. Our focus group reported that people believed that they were to move this alarm room to room as they moved throughout the day to various spaces in their home. This assumed need to keep the alarm within their sight was a nuisance, and people did not use the alarms.

This type of smoke alarm is primarily designed for use in a hotel or motel room with one living/sleeping space. Yet installing the smoke alarm with an attached strobe poses a problem even when combined with an educational piece; it forces people to choose where to place the alarm. People need the strobe light close to them, inside the bedroom, so it is bright enough to awaken them.

However, placing the alarm inside the bedroom means smoke has to be inside the bedroom to trigger the alarm, thereby reducing time for escape. If the alarm is placed in the hallway outside the sleeping area, the strobe is too far away to be bright enough to awaken

them. Forcing people to make this choice and then to worry about making the wrong choice makes this model unacceptable for our program.

Silent Call is the smoke alarm we provide to people with hearing impairments. It has three separate components: a smoke alarm with a transmitter (model 1008-3), a vibrating disc (model VIB-PJ), and a receiver with or without a strobe light (model SK09214).[11] The alarm provides an audible alert and transmits a signal to the receiver and the strobe light.[12] The receiver then activates the vibrating disc that is under the mattress.

Alarms for People with Visual Impairments

Many individuals with visual impairments use sounds to orient themselves in their homes. For example, they can orient themselves in a room by noting the electric hums of computers or the refrigerator. Because people with visual impairments often rely on these types of sounds to orient themselves, the high-pitched sounds of a smoke alarm can be disorienting. Silencing false alarms and testing the smoke alarm regularly needed to be easy.

One of the members of our focus group related a story about how she climbed on her kitchen table to turn off a false alarm. We wanted an alarm that was safer for people with visual impairments, an alarm that did not require standing on something or using a broom handle to test and silence it. We chose the First Alert smoke alarm (model SA302CN) because it can be tested and silenced with most household remote controls. This model also has dual photoelectric and ionization sensing devices.

11 These are the models we are using in 2007. Note that the model numbers may change as Silent Call and First Alert improve their smoke alarm technology.
12 The alarm can transmit a signal approximately 100 feet to the receiver that activates the bed shaker and strobe light.

We also knew we could purchase the First Alert with a 10-year lithium battery, ensuring that the battery was good for the life of the alarm. This particular model was unavailable in Oklahoma; at the time it was only available through a home improvement center chain in states that had passed laws requiring 10-year batteries in battery-operated alarms used in new residential construction. We purchased the model through a center in Burlington, Washington.

Alarms for People with Mobility Impairments

People with mobility impairments often find it impossible to test alarms monthly without endangering themselves or relying on others. Some materials encourage people with mobility impairments to use a broom handle to press the small test button; however, we determined that this procedure is not only difficult but also unwise. The button and the broom handle are not made to fit, so it is difficult to align the handle and press the target; in addition, the button is sometimes recessed, meaning the broom handle cannot reach it.

Based on this information, we selected the same First Alert smoke alarm that we chose for people with visual

Smoke Alarm & Sprinkler Technology

The technology for smoke alarms has remained about the same since the mid-seventies. Some incentives have been offered to builders who will install more comprehensive alarm systems. Yet even comprehensive systems with wireless interconnected alarms do not activate a bed shaker or a strobe light, making them ineffective for people with hearing impairments.

We argue that technical advancements are necessary for the basic alarms that are easy for people to install, such as battery back-ups or a 10-year battery in the Silent Call alarm that works well for people with hearing impairments. Some states may need to refine their laws as each component of the alarm for people with hearing impairments is UL listed; however, the system as a whole is not eligible for UL listing. Care must be taken when placing the components, so the alarm's radio frequency does not interfere with metallic or electronic objects placed too closely to the receiver.

Home Fire Sprinkler COALITION
Protect What You Value Most

Ideally, homes should be equipped with residential sprinkler systems to provide the most security. For more information about sprinkler systems, visit http://www.homefiresprinkler.org/.

Program Steps

1) Confirm program partners (fire safety, disability)
2) List additional organizations that can facilitate the program by spreading the word
3) Contact these organizations and confirm in writing their commitments to the program (what they will be responsible for, how many hours they will contribute, other methods for publicizing the program)
4) Develop list of ASL interpreters or contract agencies (understand their cost structure and verify the items included)
5) Design initial program budget based on outstanding needs versus in-kind services
6) Research and select alarms
7) Consult a focus group to ensure program implementation, alarms and messages are appropriate
8) Make any revisions necessary to meet the needs of your target audiences
9) Confirm program budget incorporating any revisions
10) Purchase alarms
11) Purchase installer equipment
12) Hire and train installer(s)
13) Organize contact information for publicizing the program (include newspapers, public educators/information officers in fire districts, disability organizations, state organizations, veterans and senior citizens' organizations)
14) Draft press releases
15) Photocopy applications and frequently asked questions for initial blitz
16) Produce/copy fire safety messages and installation forms
17) Distribute press releases
18) Create database for storing applicant information (include forms and tables for application, installation and follow-up survey)
19) Receive and enter applications
20) Notify applicants that the application has been received and details of installation process (who will contact, when, what to expect during installation)
21) Schedule installation appointments
22) Schedule interpreters when necessary
23) Enter installation forms
24) Distribute follow-up surveys (3-4 months after installation)
25) Initiate three attempts of the survey
26) Enter survey data
27) Meet with partners and program staff regularly to assess progress and to track outcomes

impairments—an alarm that can be tested and silenced by remote control and that comes with a 10-year lithium battery (model SA302CN). This alarm gives independence to people with mobility impairments as they are now responsible for testing their alarms instead of relying on others.

From Application to Installation

The basic process for accepting applications to installing alarms involves four steps:

1) Processing the application
2) Scheduling an appointment
3) Installing the alarm
4) Completing the follow-up survey

Step 1: Processing the Application

For the application to be approved, the individual must complete an application and provide proof of disability (see Appendix A for the application and program FAQ).[13] These materials are received and entered into the program database by ABLE Tech. When people forget to send their proof of disability or when applying online, ABLE Tech contacts them via mail or phone to remind them the proof is required, which they may send by fax or mail. Before entering the application, all addresses are verified through USPS Zip Code Lookup.

13 There is no income requirement for this program. However, to be eligible, applicants must reside somewhere other than an institutional facility (such as a dorm, nursing home or group home). These facilities are required by law to provide accommodations, including specialized smoke alarms, for their residents.

Missed Appointments

Though rare, if a consumer is not home when our installer arrives for the scheduled appointment, the installer will call all known phone numbers, attempting to contact the consumer. Most consumers apologize and arrive home as soon as possible.

However, if we are unable to contact the consumers, we leave a hang tag on their door, reminding them of the missed appointment and urging them to call us so they may be returned to the waiting list. If consumers miss a second scheduled appointment, they are notified by letter that they have been removed permanently from the list and may reapply at a later date.

Once the application is entered into the database, the information is passed on to FPP. FPP sends out a letter confirming contact information, describing the next steps in the process, and providing a point of contact for further questions or to update contact information (see Appendix B for the letter).

Step 2: Scheduling an Appointment

The applicant then moves into step 2 as FPP schedules an appointment for alarm installation. This process is complex and can be quite lengthy given the need to coordinate consumers, locations, dates, times and interpreters if requested. Initially, consumers are contacted by the preferred method they selected on their application (phone—using TTY or relay services when needed, email or contact person). If this method proves unsuccessful, we attempt all other phone numbers or email addresses given on the application, and then use the mailing address if needed. Sometimes people have moved or changed phone numbers or email addresses yet forgotten to notify us.

Considering Liability Issues

Installing smoke alarms may introduce liability issues depending on the program's structure. Program staff are advised not to hardwire the alarms for two reasons: 1) licensed electricians will be required to hardwire the alarms, and 2) hardwiring the alarms may be considered remodeling the residence, thus requiring the house to be brought up to current electrical codes. These are important considerations for programs with limited personnel and funding.

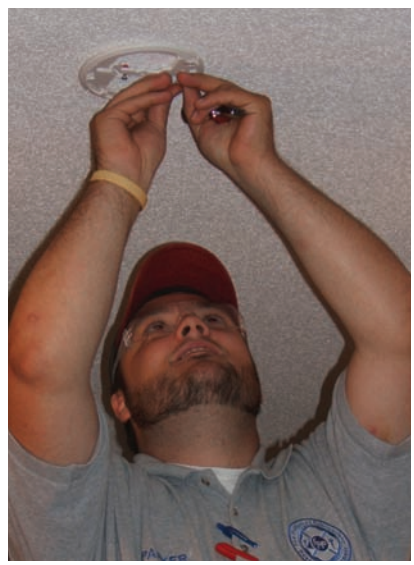
In addition, many states have distinct volunteer laws that discuss how nonprofit organizations may be limited or shielded from potential liabilities. These laws may offer broader protection than the Federal Volunteer Protection Act. Also the nonprofit organizations securing the funding or the individuals working or volunteering to install the alarms may have liability insurance to avert any problems.

When attempting to schedule appointments, we first contact those who have been waiting the longest. Once an appointment is scheduled, we schedule others in the surrounding area. Installers will also arrange for transportation and interpreters (if requested by the applicant).

If it is necessary to leave a message by phone or email while contacting consumers to schedule their appointment, a reasonable length of time is given for them to respond. If they do not respond after three attempts on different days, we send a letter to consumers explaining the difficulty in contacting them. We also explain that if they are still interested in receiving the alarm, they must contact us by phone, email or mail (using the enclosed prepaid envelope). They are given 30 days to contact us before we remove them permanently from the list.

Step 3: Installing the Alarm

Installing the specialized smoke alarm, designing the escape plan and discussing the messages take approximately one hour. First, the installer examines the floor plan of the residence, deciding how many alarms are needed and where to place each one. The installer ensures that one alarm is on each level of the residence and outside each bedroom. A smoke alarm is also installed inside the bedroom when a person reports to smoke in the room or while in bed. Then the installer sets up the Silent Call components in the bedrooms of those who are deaf or hard of hearing. Finally, the installer tests the new alarms to ensure they work properly.



After installing the new alarms, the installer tests and cleans any smoke alarms that preexist in the residence. For battery-operated alarms, the installer replaces the battery. Any non-working alarms are reported to the consumer, but they are not removed.

The next part of the installation focuses on educating the consumer about testing and maintaining the new alarms and practicing home fire safety. While installing alarms, the installer notes any potential fire risks, such as a consumer who smokes indoors or who uses a space heater. While discussing all the fire safety messages, the installer emphasizes the sections that particularly pertain to the consumer due to noted risks. The installer also emphasizes to "get out and stay out" before calling for help and then explains how to clean, test and maintain the smoke alarm. Installers remind consumers that they now own the equipment and should take it with them and reinstall it if they ever move. The installers also emphasize that the alarms should be replaced every ten years.

NFPA 72: National Fire Alarm Code

NFPA 72 specifies that smoke alarms should be installed:

- On every level of the residence
- Outside every sleeping area/bedroom

These locations allow for early warning and give more time to escape when the smoke from a fire in the living areas of the home—most likely to happen according to fire statistics—reaches the smoke alarm to detect the smoke and alert the people. If a smoke alarm is located only in a bedroom, the smoke from a fire outside the bedroom must reach inside the bedroom before providing the alert, thus reducing the time for early warning and escape.

It is best to have a smoke alarm in every bedroom, in the hallway and on every level. It is even better for all of these smoke alarms to be interconnected so if one alarm detects smoke, all of the alarms alert the occupants. Our installers do not remove or replace existing alarms due to fire code restrictions and liability issues. Sound fire protection engineering principals should be applied to the selection and installation of all residential smoke alarms. Consult with your local experts for assistance in your smoke alarm selection and installation guidelines.

As a final component, the installer draws an escape plan for the home with two ways out of each sleeping room and with a designated outdoor meeting place. This escape plan is discussed with the consumers and is left as a reminder along with the fire safety messages in their preferred format. Because 911 service may not be available or reliable in rural areas, the installer confirms the local emergency phone number and writes this number on the home escape plan. The installer leaves contact information for FPP and ABLE Tech in case the consumer has any future questions or problems with the equipment or regarding fire safety.

As the program began, we decided which terms to use throughout our materials. We selected "consumer" to represent those served by the program because people with disabilities prefer this term over "client" or "recipient". We selected "home" to represent all types of residences including houses, apartments, duplexes and mobile homes.

After every installation, the installer completes the Smoke Alarm Installation Form, which ensures quality control and records conditions in the home related to fire safety before and after installation of the new alarm. This information has been helpful when consumers call with questions about their equipment or when assessing the program's outcomes.

Step 4: Completing the Follow-up Survey

At the end of the installation, the installer asks consumers how they prefer for us to contact them with the follow-up survey—by mail, by email or by phone (see Appendix C for the survey and letter). Then, three to four months after installation, ABLE Tech contacts each consumer.

Three attempts are made to contact the consumer, allowing 30 days between each attempt, and then the consumer is listed as a No Response. If the consumer selects to receive the survey by phone, ABLE Tech attempts two phone calls (noted as first attempt) and then mails the survey (noted as second attempt). If the consumer selects to receive the survey by email, ABLE Tech sends a second email if the consumer fails to respond within a week (noted as first attempt). Then ABLE Tech mails the survey (noted as second attempt). The third attempt is also by mail.

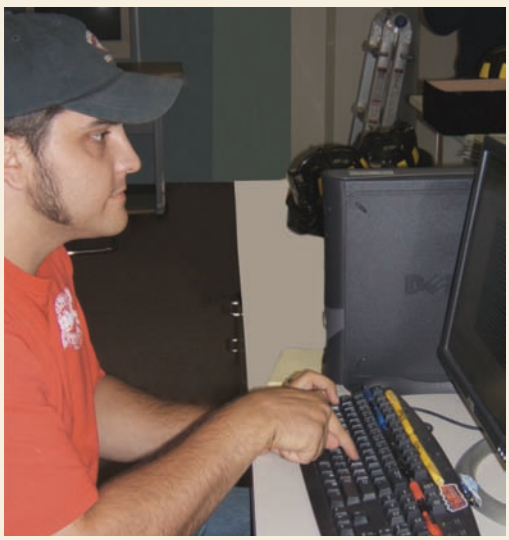
Soliciting & Processing Applications

We began soliciting applicants through face-to-face meetings with boards and representatives from disability organizations across the state. American Sign Language (ASL) interpreters assisted in spreading the word through the Deaf community. One of our most

Tracking Information

The strategies you implement to track information throughout the program will depend on whether you are serving a city or larger area. Because our program is statewide with partners in two physical locations, we use a program database to organize consumer information, installation details and survey responses.

In the program database, we initially listed the parent or guardian as the applicant if the person with a disability was a minor; however, this caused confusion in our record keeping although it made scheduling the installation easier. We later changed that practice so the Applicant field was always the person with a disability and encouraged those needing to contact the applicant to check the birth date before proceeding. We added a Note field for any information that could help an installer schedule the appointment or if the individual was related to other individuals who had applied. We also added a Dropped field to track dates and reasons an applicant was removed from the program.

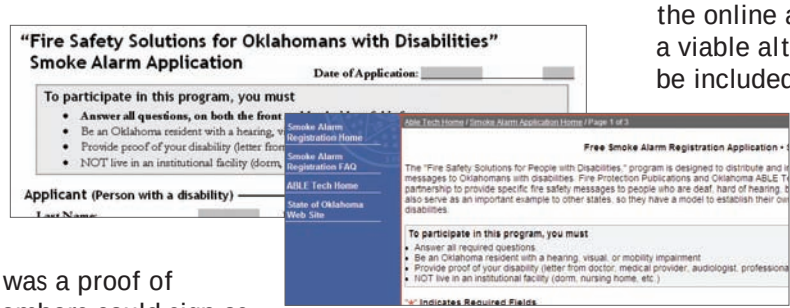


To track scheduling attempts and appointments across the state, we use a spreadsheet organized by counties and color-coded according to the length of time since the application was entered into the system. The installers can also enter tracking information indicating contact methods used, dates attempted, scheduled appointments and driving directions.

Each completed survey is entered into the program database to make tracking survey results easy to manage. Listing attempts and changing response dates allows for easier creation of those needing the survey and for quick reference when completed surveys arrive in the mail. This tracking also provides an easier way to track the overall response rate versus the response rates according to disability type.

successful methods was sending an informational memo through the State Department of Education to all special education directors and school superintendents.

Our main goals for the application process were to ensure it was easy to understand, short in length and accessible in different formats (standard print, large print, online and Braille). We worked to ensure client confidentiality through university and state procedures. On the application, we added a Contact Person section to provide two people we could contact—the applicant or the contact person—if we could not locate the applicant or if the applicant believed it easier to communicate through a contact person.



An additional form we created was a proof of disability form that our staff members could sign as a "witness" to the applicant's disability. This form was extremely handy when we attended registration days at the Oklahoma School for the Deaf and the Oklahoma School for the Blind, State Capital Day for People with Disabilities or specialized conferences for people with disabilities. Then we could take applications on site without the individual having to send proof later.

To offer another way to apply to the program, we created an online application in addition to offering a downloadable application. This process was complex as we had to ensure people using screen readers and other assistive technology could access the form fields and understand the information requested. Once applicants submit their information, the information is stored in an Excel spreadsheet and emailed to a staff person at ABLE Tech. ABLE Tech then sends a letter or email to the applicants, reminding them that proof of disability is required. Although few people have used the online application in lieu of a print application, the online application remains a viable alternative and should be included to make the application process as convenient as possible.

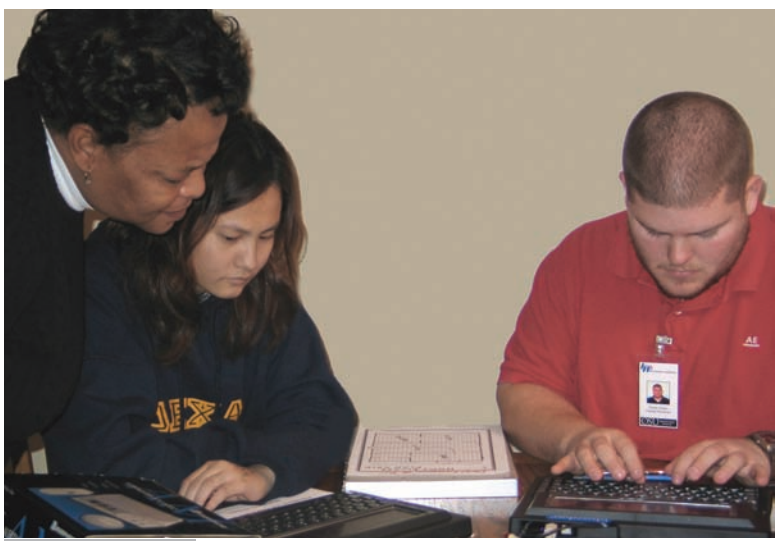
Scheduling Installations & Interpreters

Scheduling the installation appointment is one of the most difficult aspects of the program. Because the wait time between application and installation could be long as the program begins, some applicants may forget to update their contact information. Installers use several methods as they attempt to locate applicants before

listing them as Cannot Contact. Internet searches and reverse yellow/white pages often find applicants if they had moved but remain within the same city. Sometimes we use the proof of disability to contact a case manager, doctor or school teacher who will then encourage the applicant to send us their new contact information.

Scheduling appointments also brings communication challenges. The most efficient ways to schedule appointments are either by phone or email due to the quick response time. Yet communicating with people with disabilities presents unique challenges via phone and email. People who are deaf may only use relay services, which can be reached by dialing 711 from any telephone in the United States.[14] Also consider the benefits of Language Line Services as a cost-effective way to communicate with applicants using languages other than English for their primary language.[15]

Some consumers are hesitant to allow an installer into their home. They want the specialized alarm, but they do not want a stranger coming to install it. One emphasis of the program is installing appropriate smoke alarms in correct locations. The other emphasis is the educational component of having a one-on-one dialog about home escape planning and fire safety between the installer and consumer. When consumers are hesitant to allow an installer in their home, the installer or another staff member speaks with the consumer (sometimes for an extended time), introducing the installer to the consumer by providing a few biographical details while ensuring the program's credibility. Eventually, every consumer has allowed us into the home.



For the installations for people who are deaf and use ASL, the program contracts with ASL interpreters at no cost to the consumer. People who are deaf may request interpreters who are familiar to them; these interpreters also enhance the program's credibility. Children of parents who are deaf may act as interpreters, but they may also "filter" information and provide only information they believe is important rather than translating everything the English speaker is saying. These are important considerations when contracting with interpreters.

Interpreters are certified nationally by two organizations, National Association of the Deaf (NAD) and the Registry of Interpreters for the Deaf (RID), by taking the National Interpreter Certification test. One way to find interpreters in your area is through the RID website at http://www.rid.org.

During these installations, the installer communicates via the interpreter and also shows the DVD in ASL, pausing the DVD after the home escape chapter to then draw out the home escape plan. The installer also pauses the DVD to review specific strategies for preventing fire as they apply to the risks observed in the home.

A smoke alarm installation program, or any public education program, for people who are deaf must include sufficient funds for interpreters for each contact with consumers. Paying interpreters for their professional services, not requesting them to volunteer, is vital to ensuring the program's credibility with the Deaf community. We recommend using only nationally certified interpreters. Although using interpreter agencies in an excellent way to locate interpreters, we estimate that we save, on average, from 66% to 75% for each job by contracting and paying interpreters directly rather than using an agency. Contracting directly is also more time efficient.

14 For more information about the Telecommunications Relay Service, visit http://www.fcc.gov/cgb/consumerfacts/711.html.

15 For more information about Language Line Services, visit http://languageline.com.

Most professional interpreters are punctual and reliable, yet it is important to establish a backup plan for communication in case the interpreter does not arrive for the installation appointment. At first, we used pen and paper to communicate with people who were deaf when the interpreters did not arrive. Now we rely on an Interpretype, a device that has two keyboard pads and displays connected together so the installer can type on one keyboard while the individual reads the display and types on the other keyboard, a much more effective communication method.[16]

Training Installers

Competent installers who understand the complexities of home fire safety, the technical component of the correct smoke alarm location and how to interact with people with disabilities are key to this program. We use installers who are able to complete the following:

- Communicate with people with disabilities
- Correctly locate and install smoke alarms
- Explain the operation and maintenance of the smoke alarms with appropriate detail
- Create a feasible escape plan considering the unique needs of people with disabilities
- Explain how to correct or eliminate potential fire risks in the home (such as moving furniture from escape routes or unsealing painted windows)
- Review fire safety messages
- Answer any other fire-related questions

When we began this statewide program, we anticipated partnering with local fire departments across Oklahoma to install the alarms; although these departments supported our program, relying on their personnel to participate as local installers did not prove feasible. Instead, we began the program with one main installer. This person was a professional member of the program team and not only was qualified with fire protection technology expertise and an engaging personality, but was able to provide feedback on how to modify the program to better meet the needs of the consumers. This installer also experienced many "firsts" for the program and was then able to train others to respond appropriately to unexpected circumstances encountered when providing a service in people's homes.

Entering People's Homes

One of the most important aspects of this program involves the installers spending time in people's homes as they install the alarms, explain how to use them, identify obvious fire risks and educate people about fire prevention. Installers may spend additional time when working with people in rural areas or older adults who may have less contact with people. Yet entering and remaining in someone's home can involve unexpected issues. Preparing installers for unusual circumstances should be part of their training, so they can react professionally.

Some circumstances may be due to poverty or differences in attitudes and lifestyles. Many of the people we serve with this program live in poor neighborhoods or homes needing repair. Some may have no heat or air conditioning. Others may have poor lighting, insect control problems or lots of clutter. Some circumstances may be or may appear to be dangerous. If installers believe they are at risk for injury, they should not enter the home.

We added more installers as the number of applications grew and as word of the program spread. All of our installers are paid by the hour, including time for travel. Each installer was trained during 6-8 installation appointments by first assisting an experienced installer and then serving as the lead installer while the experienced installer coached and observed. Installers need to be prepared to work with interpreters and to use alternative communication methods such as voice and video relay services.

To facilitate this, we created an installer guide that includes a social etiquette guide, offering specific recommendations about how to communicate with people with disabilities and how to work with assistive technology (see Appendices D-E for the guides and forms). Part of the installer training also includes communicating via relay services with the appropriate codes, such

16 Visit http://intrepretype.com/ity/what.php for more information about the Interpretype device. A similar device is called the UbiDuo; visit http://www.scommonline.com for more information.

Not Everyone Has 911

There is no national funding of 911 although several states have applied for federal matching funds to begin implementing 911 systems. Most states and counties assess taxes or fees on landlines to raise money for expanding into Enhanced 911 systems. Some cellular providers have begun assessing similar fees. However, investigations have found that money allocated for upgrading 911 systems has been spent in other areas to balance state budgets or to fund other programs.

Remember, before you begin helping people design their home escape plans, check out the coverage of 911 services in your state. Then you can provide the most accurate and current information.

To learn more about the history of 911 and how your state is implementing 911 and E911, visit the following links:

- Hatfield's report detailing the history of 911 and issues related to deploying the service: http://www.fcc.gov/911/enhanced/reports
- March 2006 GAO report: http://www.gao.gov/new.items/d06338.pdf
- Individual state 911 plans and departments: http://www.nasna911.org/links.htm
- List of all Public Safety Answering Points (PSAP) for each county organized by state: http://www.fcc.gov/911/enhanced/reports/psapregistry.html
- National Emergency Number Association: http://www.nena.org/

as GA for Go Ahead and SK for Stop Keying. We also explain the etiquette of working with interpreters. Installers are reminded to speak to the person who is deaf and to maintain eye contact instead of looking at or talking to the interpreter.

For each appointment, installers wear a picture ID badge or FPP uniform shirt and take an installation kit, the alarms and the fire safety messages. The kit includes basic tools and items that enable the installer to install the alarm easily and to clean up the area afterwards. Our consumers have noted several times that they appreciate the installer vacuuming the sheetrock dust; this attention to detail raises the credibility level of the program and staff.

Oklahoma's 911 service is not consistent statewide because Oklahoma relies on a county-by-county system. Some counties have voted to fund 911 and Enhanced 911 while others have not, leaving 36 of 77 counties in Oklahoma without 911 service or even partial coverage from a nearby city. If people call 911 from one of these counties, they may be transferred to a phone line that is not always staffed. To ensure consumers know how to contact the local emergency services, we use their phone book to identify the appropriate seven-digit emergency number, which is then written on their home escape plan.

Installation Equipment

- Goggles, or protective glasses
- Flat-head & Phillips-head screwdrivers
- Drill (small bit for pilot hole)
- Assortment of screws with anchors
- TV remote control (First Alert SA302CN installation only)
- Assortment of Sharpie markers, fine tip and regular (or other permanent type markers)
- Multi-Tool (Leatherman type tool)
- Smoke alarm installation guidelines
- Home fire safety messages
- Additional batteries
- Box cutter
- Flashlight
- Ladder
- Vacuum

Creating the Fire Safety Messages

The content for the messages is based on the recommendations of the National Fire Protection Association (NFPA) Educational Messages Advisory Committee and people-first language.[17] The messages function as an educational piece that consumers can later reference if they have questions or concerns about their smoke alarm or fire prevention strategies. Specifically, the messages describe how to test the alarm, how to clean it, how to design a home escape plan and how to practice fire safety when cooking, smoking, using candles, electrical appliances, space heaters and fireplaces.

17 For a copy of all the committee's messages, visit http://www.nfpa.org. Enter "Educational Messages Advisory Committee" in the search box and choose the first search result.

When creating the messages, we prioritized using people-first language with phrases such as "people with disabilities" instead of "disabled or handicapped." People-first language recognizes that a disability is only one aspect of an individual and that no person wants to have the disability become their definitive characteristic. This language supports our overall perspective of empowering people with disabilities to take responsibility for their own fire safety while at home (see Appendix F for the principles of people-first language).

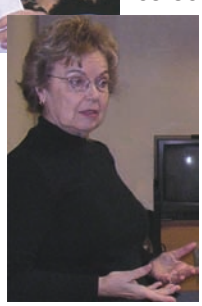
Learning Deaf Culture

People who are deaf may not identify themselves as someone with a disability because their community views deafness as a characteristic, not a disability. People who are deaf form a tight community and visit each other often to communicate. They are more familiar with assistive technology devices because they use them to know when someone rings the doorbell or when their alarm clock is sounding. They use video phones, TTYs, Instant Messaging and Sidekicks to communicate with each other and with people outside the Deaf community. Learn more about the Deaf community at http://www.deaf-culture-online.com/index.html.

To reach Deaf communities, contact Deaf leaders, including the state's School for the Deaf, and encourage them to spread the word. Allocate more time to spread the word within this community. Also make sure to contact the state's telecommunications program, which may include applications/FAQs for your program with packages of assistive technology devices.

To develop the messages and ensure they met the needs of the target audiences, we used focus groups. People with disabilities were asked to join and to invite others who might want to be involved. There were three separate groups: one for people with visual impairments, one for people with mobility impairments and one for people with hearing impairments.

Each group had 4-5 members (aged 30-60) who commented on the messages line by line. We paid them and any personal attendants for their travel, plus an honorarium, and included lunch as another incentive to work with us.[18] We selected locations that were convenient for them, such as the Oklahoma Library for the Blind and the State of Oklahoma's Capitol Building. We offered additional accommodations, such as ASL interpreters and the messages in standard print, large print and Braille.



The focus groups meetings were opened with a discussion of the smoke alarm program, the grant funding and an overview of home fire safety and fire behavior. Then everyone as a group read and critiqued the messages (text only, no graphics) line by line. The meetings lasted most of the day given these detailed critiques. After the meetings, we revised the messages and sent them out for more critique from the same focus group members. After the second review, we revised one additional time and then moved to graphics and layout.

The focus groups provided immeasurable information and feedback for the messages. The group of people with visual impairments suggested adding information about smoking risks and how to extinguish cooking fires, a particularly difficult and dangerous task for people who are blind. They also suggested producing the messages in Braille, large print and audio tape.[19] The group of people with mobility impairments said that the messages needed to explain the special fire risks involved with cooking, wheelchair batteries and space heaters. They told personal stories of always being cold and the necessary use of a space heater in their home while bathing. They also emphasized the need for more direct messages about smoking risks.

Selecting Focus Group Participants

Organizations that serve or advocate for people with disabilities are good starting places for selecting focus group participants. Because focus groups are crucial to the success of your program, select the participants carefully. Effective focus groups represent the people you want to serve with your program. Aim for a diverse representation of disability, gender, age and race. Selecting leaders within the disability populations is effective because these leaders can then increase the credibility and publicity efforts of your program. They become invested in the program's success.

The group of people with hearing impairments adamantly emphasized separating the messages for people who are deaf from the messages for people who are hard of hearing. They said Deaf culture did not want to be lost within the overall banner of hearing impairments. They also said a DVD in ASL would be more effective in communicating with people who are

18 We paid the personal attendants' hourly wage and provided lunch for them as part of the program's overall view of accommodations for people with disabilities.

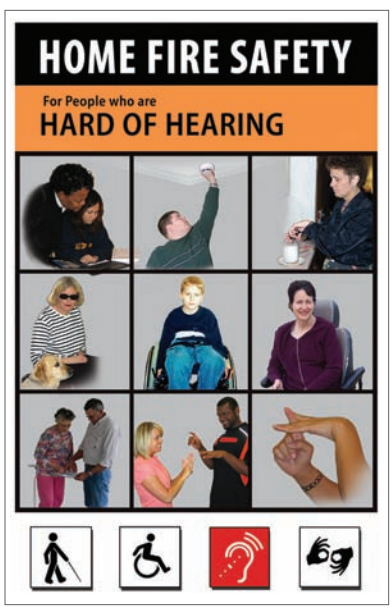
19 We later added the messages on CD at the request of several of the younger consumers.

deaf rather than providing a written guide if ASL is their primary language.

> ASL is a separate language with its own distinct sentence order and grammatical structure. It differs in word order from English and does not include prepositions (on, under, above) or articles (a, an, the). Many people who are deaf consider ASL their primary language, meaning English is their second language (ESL). ESL learners often have difficulty accomplishing the third stage of early literacy development that includes expressing spoken, signed and thought ideas in print. Typically, they graduate secondary school with a reading delay of at least five years (Kyle & Harris, 2006). For more information about ASL, visit http://www.nidcd.nih.gov/health/hearing/asl.asp.

Like many languages, words in English do not necessarily have a corresponding ASL sign; words such as "hazard" and "risk" in the messages needed to be changed to "danger." The group emphasized how the messages needed to express the ideas succinctly without justifying why to perform certain actions. Overall, every message was reviewed by people in the target audience, by fire safety experts and by technical writers and editors. We incorporated plain language to ensure the complex topics were easy to understand (see Appendix G for the principles of plain language).

The graphics and layout of the messages needed to include both technically accurate illustrations of the concepts and show the diversity of people with disabilities. We used photographs, showing people of different ages, races, disability types and gender. Careful consideration was given to the cover graphics to ensure the theme showed our focus on people, not firefighters rescuing people or burning houses. The internal layout is simple and consistent to make the information easy to find and read.



One of the main program goals was to create accessible messages because so much of the available material is not accessible to people with disabilities. We began the program with partners at the Oklahoma League for the Blind for our Braille and at the Oklahoma Library for the Blind for our audio tapes and CDs.

Later, we purchased our own Brailler and began creating our messages in office. To ensure the large print was readable, we followed the standards of the American Printing House for the Blind and used their customized, free font (see Appendix H for the APH guidelines).

To create the fire safety DVD, we used as many local people as possible to ensure the ASL used the Oklahoma dialect and to remain cost effective. The main actors and narrators are leaders in the Deaf community who have promoted the program. The script writer is the research director for all the FPP grant projects, and the director works for the Institute for Teaching and Learning Excellence at Oklahoma State University.

The DVD has voice-over narration and uses open- and closed-caption options, making it accessible on televisions and computers. It is also divided into chapters, covering each topic of the messages for easier browsing and for use during smoke alarm installations and program presentations.[20]

Assessing Outcomes

To assess the effectiveness of our program, we use a follow-up survey consisting of several questions about the consumer's behavior and about the consumer's satisfaction with the alarm and fire safety information.

> As of July 2007, we have documented six families saved due to the specialized alarms installed in their homes. Half of these we never would have known about without the carefully worded questions on the follow-up survey.

The survey captures valuable information, especially as a first indicator of lives saved through the new smoke alarms. If respondents mark that the smoke alarm has sounded, has alerted them to a fire they would not have known about otherwise and if the fire was significant enough to call the fire department, then we make efforts to learn more details about the fire.

20 To view the video, visit http://okabletech.okstate.edu (select Fire Safety > Messages). For more information about the DVD, visit http://www.ifsta.org (under Other Links, select Fire Safety Solutions for People with Disabilities).

The survey also shows specific ways people have changed their behavior and whether they understand and can apply the messages. A suggestion section at the end of the survey provides helpful feedback where many respondents have listed organizations, friends or other ways to spread the word about the program. Overall, one of the most important functions of the survey is to give us numbers measuring the satisfaction with the program, so we can use these numbers in future grant requests and to further publicize the program.

As of July 2007, our survey results for this program include a high return rate (70%) with 38.3% consumers responding that they have modified their behavior due to information presented through this program. Although this percentage is under 50%, this is an extremely high percentage of people reporting behavior change related to fire safety. Specific comments about behavior change include the following:

- Candle safety
- Now I turn off heating pad when not in use
- We developed an escape plan with our daughter
- Talked to grandchildren about how to get out
- Moved dishtowels from stove area
- Get away "accidental" fires [meaning this respondent knows how to avoid accidental fires]

Eighty-eight percent say their sense of personal safety has increased, and 75% report they are better able to manage their personal safety. When they explain how the smoke alarm has impacted others, they state the following:

- Kids are more aware
- Spouse has peace of mind when working nights
- Relieved of worry
- Gives the entire family a better sense of security

Overall, 90% would recommend this program to others because 85% were satisfied or very satisfied with the alarm installation and 81.3% were satisfied or very satisfied with the fire safety messages. They say this is an "excellent program," and many want others to be as safe as they now feel with the specialized alarm and messages.

Reaching Out to Senior Citizens

We quickly realized that senior citizens do not identify themselves as "people with disabilities". Although this is one of our larger populations served, senior citizens may not believe they qualify for this program given its title. Instead, to encourage them to apply, we explain the program serves those with hearing, vision and mobility losses, giving them the example of someone who takes out their hearing aids at night and cannot hear standard smoke alarms.

Some senior citizens may initially apply but then believe they do not need the specialized alarm, especially once they realize the alarm for people with hearing impairments has three separate parts. One woman was convinced the bed shaker would electrocute her and asked us to remove the alarm after two weeks. Once we spoke with her, we realized that her real fear was how the equipment made her bedroom look different from her friends' bedrooms and that the equipment made her feel sick or old. These are important issues to anticipate when working with senior citizens.

Publicizing the Program

Throughout the program, we have attempted several ways to publicize the services available. Because our program involves going into different fire department juridictions across the state, we feel it is important for Oklahoma fire departments and related organizations to be aware of the program and the protocol established. In the beginning, as a courtesy, we called fire organizations in the state and wrote newsletter articles and sent press releases to explain the program. In addition, phone calls to fire chiefs, fire marshals, public information officers and public educators were made, and letters and emails were sent.

Working with our public information office, we have sent press releases to the major newspapers across the state, invited many of them to attend installations and have continued to send specialized press releases during fire prevention week and after installations in more rural areas. To improve the chances of a newspaper picking up the story, we try to send photographs with each press release. Last year, the Oklahoma Educational Television Authority (OETA), the PBS affiliate for Oklahoma, ran a news segment about the smoke alarm program, including interviews with the state fire marshal and the research director of FPP.

On a state and national level, we have attended conferences focused on fire protection and those focused on different types of disability. We have given research presentations and workshops and have also distributed information as conference exhibitors. Smaller venues for presentations have also worked well, such as the Lions and Rotary clubs, VA meetings and registration days and sports events at the School for the Deaf and the School for the Blind. Any time we anticipate meeting people who are deaf we take an interpreter to that event or meeting.

Locating Materials

To ensure more publicity of the program and to offer an easy way to find these specialized materials, we created a new portion of the ABLE Tech website. Within the Fire Safety section, people can find all the materials in downloadable and accessible formats. The website also has an online application and links to other websites for working with people with disabilities. Each of the fire safety messages and the installer's guide are downloadable in regular and large print. If an individual needs the materials in another format, our contact information is provided. In the future, we hope to add additional links and information related to fire prevention and emergency management for people with disabilities, so people can find a repository of useful information easily and quickly.

The ABLE Tech website is fully compliant with Web Content Accessibility Guidelines 1.0 (WCAG) and will maintain compliance as the working draft of WCAG 2.0 is approved. These guidelines are imperative for organizations' websites if they want to reach people who use screen reading software, keyboard-only navigation and other assistive technology devices.

To learn more about website accessibility, visit the Web Accessibility Initiative at http://www.w3.org/WAI/ and visit WebAIM at http://www.webaim.org/.

Vision for Future Projects

Clearly, this program has been a good step forward in meeting the needs of people with disabilities and ensuring they can become more proactive in their personal safety. But there are many remaining gaps to be filled through future projects concerning fire safety and people with disabilities. For example, we requested Silent Call to provide a rechargeable battery back-up for the strobe light and bed shaker given that those are the devices required to alert people with hearing impairments. In addition, more products designed to help people with disabilities evacuate in emergency situations should be created with and tested by people with disabilities.

A central repository of information for and about people with disabilities, especially concerning emergency situations, is needed with an accessible interface and with both industry and academic research included. Finally, data tracking methods should be improved to better reflect the number of people with disabilities injured or killed in residential and commercial fires so that the public is more aware of the need for better materials, products and services for people with disabilities.

Appendix

A) Application & FAQ
B) Sample confirmation letter
C) Follow-up survey & letter
D) Installation manual & form
E) Social etiquette guide
F) People-first checklist (writing for people with disabilities)
G) Plain language checklist (writing for people who are deaf)
H) APH guidelines for large print (writing for people with visual impairments)

Appendix A
Application & FAQ

Customize the application and FAQ to fit your program

"Fire Safety Solutions for Oklahomans with Disabilities" Smoke Alarm Application

Date of Application: _____

To participate in this program, you must

- **Answer all questions, on both the front and back sides of this form**
- Be an Oklahoma resident with a hearing, visual, or mobility impairment
- Provide proof of your disability (letter from doctor, medical provider, audiologist, professional, etc.)
- NOT live in an institutional facility (dorm, nursing home, etc.)

Applicant (Person with a disability)

Last Name: _____ **First Name**: _____ **Md. Initial**: _____

Street/Mailing Address: _____ **City**: _____ **Zip**: _____

Home Phone: _____ **Work Ph**: _____ **Cell Ph**: _____

Email address: _____ **Is Email a good way to contact you?** ☐ Yes ☐ No

Date of Birth: _____ ☐ **Male** ☐ **Female**

Contact Person

Please provide a **contact person** if you need assistance with scheduling the smoke alarm installation.

Last Name: _____ **First Name**: _____ **Md. Initial**: _____

Street Address: _____ **City**: _____ **Zip**: _____

Home Phone: _____ **Work Ph**: _____ **Cell Ph**: _____

Relationship to Applicant: _____

Did someone prepare this application for you? ☐ No ☐ Yes, _____ **[name]**

Preparer's Phone: _____ **Email address**: _____

Residence

Check the answer to the following questions. Your answers will help us know which smoke alarm meets your need.

1. **Type of residence:**
   - ☐ One family
   - ☐ Multi-family
   - ☐ Apartment
   - ☐ Mobile home
2. **Is this your permanent residence?**
   - ☐ Yes
   - ☐ No
3. **Number of levels (stories) in the home:**
   - ☐ One
   - ☐ Two
   - ☐ Three or more
4. **How many people live in the household?**

   _____
5. **In what room or area does the person with a disability sleep?**

   _____
6. **Number of smoke alarms currently in the home:**
   - ☐ Zero
   - ☐ One
   - ☐ Two
   - ☐ Three or more

Please turn over and complete the other side of this application

7. **Is there at least one smoke alarm on every level of the home?**
   - ☐ Yes
   - ☐ No

8. **If no, which level(s) does not have a smoke alarm?**

   _____

9. **Is there at least one smoke alarm near all sleeping areas?**
   - ☐ Yes
   - ☐ No

Disability

1. **Check the PRIMARY and SECONDARY disability for which you need the alarm.**
   If you do not have a secondary disability, continue with the next question.

   PRIMARY:
   - ☐ Deaf
   - ☐ Hard of Hearing
   - ☐ Blind
   - ☐ Visually Impaired
   - ☐ Mobility Impaired

   SECONDARY:
   - ☐ Deaf
   - ☐ Hard of Hearing
   - ☐ Blind
   - ☐ Visually Impaired
   - ☐ Mobility Impaired

2. **Primary Language:**
   - ☐ English
   - ☐ American Sign Language (ASL)
   - ☐ Other:

   _____

3. **If you selected deaf or hard of hearing as your primary or secondary disability, what is your situation regarding an interpreter when an installer comes to your home?**
   - ☐ I do not need an interpreter.
   - ☐ I have someone who can interpret for me.
   - ☐ I need an interpreter. Please provide one for me at no charge.

4. **If you selected deaf or hard of hearing, do you have a seizure disorder that might be triggered by a strobe light?**
   - ☐ Yes
   - ☐ No

5. **What is your preferred format for home fire safety messages?**
   - ☐ Standard Print
   - ☐ Large Print
   - ☐ Braille
   - ☐ Audio Tape
   - ☐ CD
   - ☐ DVD in American Sign Language
   - ☐ VHS in American Sign Language

After your smoke alarm is approved, you will be contacted to arrange a time for installation.

What is the best way to contact you?

- ☐ **Phone—List the phone number where we can call you Monday-Friday 8:00 am - 5:00 pm**
  Phone: _____ **TTY?** ☐ Yes ☐ No **Video Phone** ☐ Yes ☐ No
- ☐ **Email—Email address:** _____
- ☐ **Contact Person as listed above**

Mail or fax this completed application and your proof of disability to:

Oklahoma ABLE Tech, Smoke Alarm Application
OSU-Seretean Wellness Center, 1514 W Hall of Fame, Stillwater, OK 74078

Fax: 405-744-2487

Any questions, please call 405-744-9748 (V/TDD) or toll-free 888-885-5588 (V/TDD)

Oklahoma ABLE Tech

Fire Safety Solutions for Oklahomans with Disabilities

What is this program for?

This program, "Fire Safety Solutions for Oklahomans with Disabilities," is designed to distribute and install free smoke alarms, as well as provide fire safety messages to Oklahomans with disabilities. Fire Protection Publications and Oklahoma ABLE Tech, both at Oklahoma State University, have created a partnership to provide specific fire safety messages to people who are deaf, hard of hearing, blind/low vision, or mobility impaired.

This program will also serve as an important example to other states, so they have a model to establish their own smoke alarm distribution program for people with disabilities.

Who is eligible to participate in this program?

You must be an Oklahoma resident who has documented proof of a hearing, visual, or mobility impairment.

What must I do to participate in this program?

You must:

1. Complete an application form—print application or online version at http://okabletech.okstate.edu (select "Fire Safety")
2. Provide proof of your disability (proof of disability may include a letter from a doctor, therapist, or other medical provider, or a copy of your driver's license stating your disability).

What happens after I apply?

After you complete the application and provide proof of disability, Oklahoma ABLE Tech will determine your eligibility. This information will be passed along to Fire Protection Publications, and they will contact you to set an appointment for installation.

Approximately three months after the installation, you will be contacted by a surveyor from Oklahoma ABLE Tech, who will request that you answer brief follow-up questions.

How long will this program last?

Supplies are limited. We began installing smoke alarms in January 2005 and will continue with this project as long as supplies and funding are available.

How can I get more information about this program?

Contact:

Oklahoma ABLE Tech
1514 W. Hall of Fame
Stillwater, Oklahoma 74078
1-888-885-5588 (V/TDD)
(405) 744-9748 (V/TDD)
(405) 744-2487 (Fax)

Or visit our website:

http://okabletech.okstate.edu
Select "Fire Safety"

Appendix B
Sample Confirmation Letter

Send out the confirmation letter shortly after approving applications to help consumers understand the process

March 23, 2007

Dear Smoke Alarm Recipient:

Congratulations! We have been notified by Oklahoma ABLE Tech that your application to receive a smoke alarm through the "Fire Safety Solutions for Oklahomans with Disabilities" grant project has been approved.

The response to this research project has been extremely positive. We have made steady progress with our installations for the approved applicants and are moving along as quickly as possible. Our applicants come from every part of the state, so I'm sure you appreciate the amount of time and effort it takes to reach everyone. However, we **will** reach everyone and will contact you at our earliest opportunity.

Meanwhile, we wanted to let you know that you will be receiving a new smoke alarm and that we will be in contact with you in the near future to schedule a convenient time for the installation.

Having the correct method to reach you is imperative. We use the information you turned in on your application to contact you, so if this should ever change or is not valid, please contact me so we know how to communicate with you. We usually phone or email during the day, Monday through Friday. If the information on your application is not correct, please let me know so we know the best time and method to contact you.

If you have any questions or your address or communication information changes, please contact me. I can be reached at 405-744-8301 or by email at cfinkle@osufpp.org, or by mail. Thank you and we look forward to working with you.

Sincerely,

Cindy Finkle
Research Coordinator
Fire Protection Publications

CLF

Appendix C
Follow-up Survey & Letter

The survey captures important information to help you demonstrate the success of your program

OSU Seretean Wellness Center
1514 W Hall of Fame
Stillwater, OK 74078-2026

ABLE Tech INFO-Line
888-885-5588 V/TTY

OKLAHOMA ABLE TECH
405-744-9748 V/TTY 800-257-1705 V/TTY FAX: 405-744-2487
http://okabletech.okstate.edu

March 16, 2007
Application Number

Internal Address

RE: **Follow-up Survey for Smoke Alarm**

Dear Consumer Name:

Thank you for taking part in the *Fire Safety Solutions for Oklahomans with Disabilities* program. We hope the new smoke alarm and fire safety information are helping you to feel safe.

With this letter is a brief follow-up survey. Please take a few minutes to complete this survey, and return it in the pre-paid envelope. We keep all answers private.

The survey is optional. But any information you can give us, or suggestions you can make, will help to make this program even better. If you have any questions, please contact Oklahoma ABLE Tech at **1-888-885-5588** (TTY/TDD).

Thank you for your time,

Lacy Landrum
lacy.landrum@okstate.edu

Application Number:_____

Smoke Alarm Installation Follow-up Survey Form

"Fire Safety Solutions for Oklahomans with Disabilities" Program

Recently you participated in the "Fire Safety Solutions for Oklahomans with Disabilities" program, sponsored by Oklahoma ABLE Tech and Fire Protection Publications, and funded by the Federal Emergency Management Agency (FEMA). At this time we would like for you to complete this survey. All information is confidential. Please answer the questions below. You may refuse to answer any or all questions. If you do not wish to answer, please check the "No response" box. We encourage you to answer as many questions as you can, so that we can have the best program possible for people with disabilities. Your comments are helpful.

1. Is your smoke alarm currently working?

- ☐ Yes
- ☐ No

If no, please explain:

_____

_____

2. When was the last time you tested your alarm?

- ☐ Within the last week
- ☐ 1 week – 1 month ago
- ☐ 1-2 months ago
- ☐ 2-3 months ago
- ☐ Haven't tested it
- ☐ Don't know
- ☐ No response

3. During the smoke alarm installation, did you receive information regarding fire prevention and safety for people with disabilities?

- ☐ Yes
- ☐ No
- ☐ No response

Was the information helpful to you?

- ☐ Yes
- ☐ No
- ☐ No response

4. If you are deaf, did you receive the VHS or DVD of the Fire Safety Messages?

- ☐ Yes
- ☐ No
- ☐ No response

Was it helpful? If yes, how?

_____

_____

5. Did you change your behavior based on the information received?

- ☐ Yes
- ☐ No
- ☐ No response

If yes, how?

_____

_____

6. Did you develop a fire escape plan with the person who installed your smoke alarm(s)?

- ☐ Yes
- ☐ No
- ☐ No response

If yes, have you practiced your home escape plan?

- ☐ Yes
- ☐ No
- ☐ No response

7. Do you know your local emergency number?

- ☐ Yes
- ☐ No
- ☐ No response

8. Has your smoke alarm been set off?

- ☐ Yes
- ☐ No
- ☐ No response

If yes, what caused the alarm?

- ☐ Smoke from cooking
- ☐ Steam from bathroom
- ☐ Wood stove/Fireplace
- ☐ Other
- ☐ Don't know
- ☐ No response

If yes, was there a fire that you did not know about?

- ☐ Yes
- ☐ No
- ☐ No response

If yes, did you call the fire department?

- ☐ Yes
- ☐ No
- ☐ No response

9. Do other people in your life know about your smoke alarm?

- ☐ Yes
- ☐ No
- ☐ No response

How do they feel?

_____

_____

- ☐ No response

10. Have the smoke alarm and fire safety materials helped you, by:
For each question, mark in one box (Yes, No, or No response).

	Yes	No	No response
Making you feel safer?			
Reminding you to be aware, such as rolling up your sleeves when cooking?			
Making your living situation easier (for example, you can stay without an attendant)?			
Allowing you to manage personal safety?			
Allowing you to control your life and life decisions?			
Allowing you to control or manage the amount of physical assistance or attendant care used during the day/night?			

- ☐ No response

11. What were the reasons for applying for the "Fire Safety Solutions for Oklahomans with Disabilities" program?
Check all that apply.

- ☐ I wanted to personally own a smoke alarm that best met my needs.
- ☐ I wanted to make certain my household was prepared for fire emergencies.
- ☐ I wanted to receive fire safety information that specifically addressed the needs of people with disabilities.
- ☐ Other

_____

_____

- ☐ No response

12. What suggestions/ recommendations do you have for improving this program?

_____

_____

☐ No response

13. Would you recommend this program to other people who need smoke alarms for people with disabilities?

☐ Yes

☐ No

☐ No response

Why or why not?

_____

☐ No response

14. Overall, how satisfied were you with the services received?
For each question, mark in one box on each line.

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Installation of smoke alarm?					
Distribution of fire prevention and safety information?					

☐ No response

Household Information (please fill in the appropriate information, or check No response)

Number of people living in household? _____ ( ) No response

Total monthly household income? _____ ( ) No response

Is your community rural or urban? _____ ( ) No response

Is it inside or outside city limits? _____ ( ) No response

Who do you call for emergencies? _____ ( ) No response

How many smoke alarms in your house are older than 10 years? _____ ( ) No response

Information about person with disability

Age: _____ ( ) No response

Race: ( ) African America ( ) Alaskan Indian ( ) Hispanic ( ) Asian American
( ) Caucasian ( ) Asian ( ) Native American ( ) Native Hawaiian
( ) Pacific Islander ( ) No response

Employment
Status: ( ) Full Time ( ) Half -Time ( ) Unemployed ( ) No response

Appendix D
Installation Manual & Form

Use the manual to train new installers, and use the installation checklist and form to ensure quality control

FIRE SAFETY

For Persons with Disabilities

Installation Manual

Provided by
Fire Safety Solutions for Oklahomans with Disabilities
A joint project of Oklahoma ABLE Tech and Fire Protection Publications
at Oklahoma State University

Smoke Alarm Installation Guidelines

Who to contact with questions?

If you have any questions, please call:

- Administrative Questions: Cindy Finkle 405-744-8301
- Technical Questions: Tom Hughes 405-744-4258

Tools

The following is a list of tools that you will need for installations:

- Goggles or protective glasses
- Flat-head & Phillips-head screwdrivers
- Drill (small bit for pilot hole)
- Ladder
- Vacuum
- Assortment of screws with anchors
- TV Remote Control (First Alert SA302 installation only)
- Box Cutter
- Assortment of Sharpie Markers, Fine Tip and regular (or other permanent type markers)
- Multi-Tool (Leatherman type tool)
- Smoke Alarm Installation Guidelines

Home Fire Safety Messages

The following is a list of information that you will receive from OSU that you will need to take with you for the installations. The DVD, tape or alternative formats will only be sent to you when requested by the consumer in the application.

- Installation Checklist for Installer
- Smoke Alarm Installation Form
- Home Escape Plan Grid Sheet
- OSU business cards for follow up questions
- Home Fire Safety Messages (specific for the consumer) and
    - Home Fire Safety DVD or tape for people who are deaf
    - Home Fire Safety Messages in alternative formats: Braille, large type, CD or audio tape when requested

Dress Code

The proper dress code for this project is business casual or department uniform:

- Departmental Uniform or
    - Slacks or jeans
    - Shoes, no flip-flops
    - Collared shirt, no t-shirts (unless the t-shirt has the departmental logo)
- Name tag and/or department ID

Know what to say

When you arrive at the consumer's home, be prepared to introduce yourself. Explain who you are, the agency that you are representing, and that you are here to install a smoke alarm as part of the Fire Safety Solutions for Oklahomans with Disabilities Project with Fire Protection Publications and ABLE Tech at OSU. It is important to establish rapport with the consumer.

General Safety

Please follow general safety practices when installing the smoke alarm:

- Wear protective glasses when drilling a hole
- Do not stand on a chair or stool. Use a ladder.

Main Points for Installation

- Use the Installation Checklist for Installer as a step-by-step guide. This checklist will walk you through the installation process.

- Smoke alarms must be located outside of each sleeping area in the home. You should place the smoke alarm outside of the sleeping area(s) and on every level of the home following the in the manufacturer instructions. Please refer to the manufacturer's manual included with the smoke alarm(s) you are installing.

  SPECIAL NOTE FOR MOBILE HOMES AND RV'S

  Smoke alarms will be installed in the following locations:

  In all sleeping rooms

  Outside of each separate sleeping area

  On each additional story of the manufactured home

- Many older mobile homes (especially those built before 1978) have little or no insulation in the walls or ceilings. If the mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install smoke alarms on inside walls only and not on the ceiling or an outside wall.

- Avoid installing a smoke alarm in dead air space by following the illustrations in Appendix A

Consumer Education

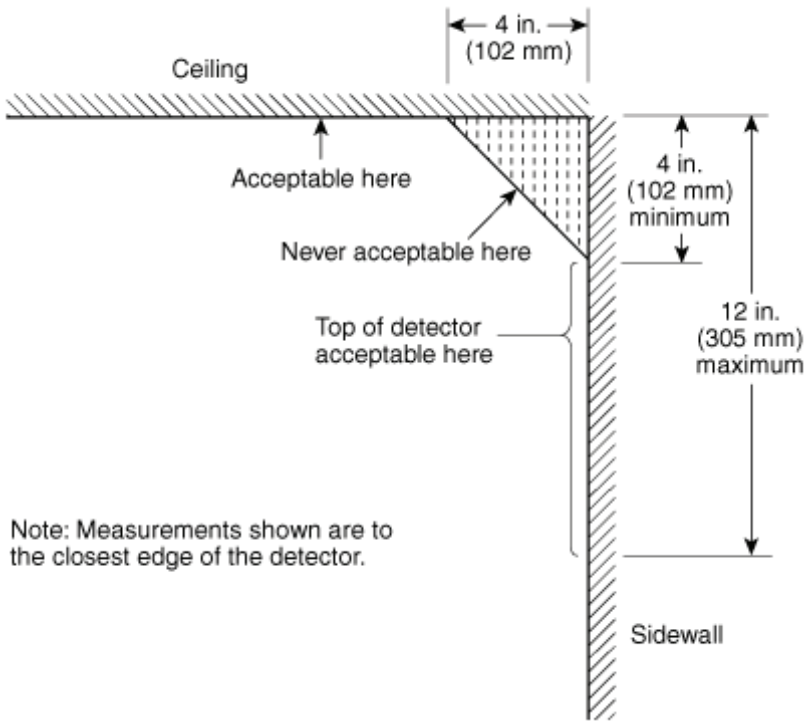
- Let the consumer see and hold the smoke alarm before you install it.
- Explain that the smoke alarm is battery powered:
    - The Silent Call smoke alarm has two batteries that must be replaced every year or when the low battery signal notifies you to replace the batteries
        - The switch on the Receiver must be turned to "ON".
    - The First Alert SA302 smoke alarm has a 10-year lithium battery. This battery should operate for the ten-year life of the smoke alarm. If the low battery signal notifies you of a low battery, contact the manufacturer.
- Explain that the smoke alarm provides early warning of a fire at night – the smoke reaches the smoke alarm before it reaches you and alerts you, so you can escape.
- Explain how to clean the detector. The detector can be dusted or vacuumed.
- Review the Home Fire Safety Messages document with the consumer.
- Create a home escape plan with the consumer and their family. Recommend practicing the plan.
    - Use a broad tip marker to draw the floor plan and the two ways out of each sleeping room. This makes the drawing more visible and easier to understand.
- Write the local emergency number on the home escape plan.

Completing the Installation

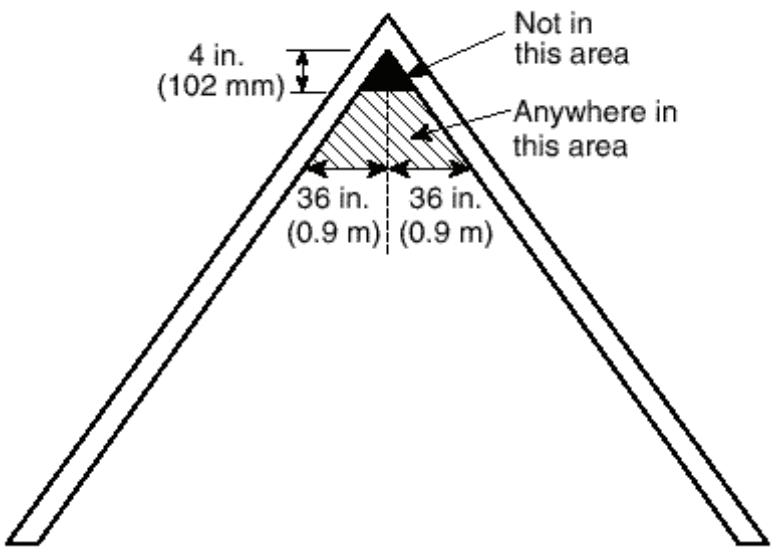
- Clean up.
- Complete the Installation Checklist.
- Complete the Smoke Alarm Installation Form with the consumer.
- Ask the consumer if they have any additional questions or concerns.
- Leave information with the consumer:
    - Home Fire Safety Messages document and the DVD or tape for consumers who are deaf and if requested the messages in an alternative format
    - Home Escape Plan with Local Emergency Number
    - Smoke Alarm Manufacturer's User's/Owner's Manual
    - OSU business cards for follow up questions
- Say good-bye to the consumer and return the two forms to OSU.

Appendix A
Smoke Alarm Installation to Avoid Dead Air Space

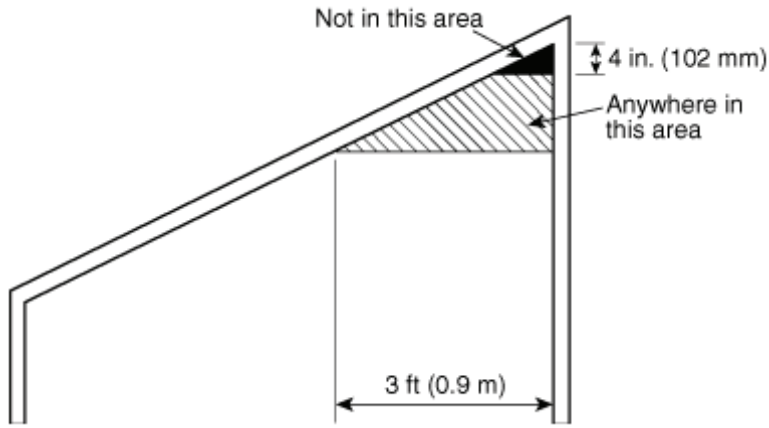
Smoke alarm placement high on the sidewall or on the ceiling to avoid the dead air space.



Smoke alarm placement for sloped ceiling - peaked type.



Smoke alarm placement for sloped ceiling – shed type



Installation Checklist for Installers

Please complete one copy of this form for **each** residence in which you install a smoke alarm(s)

Installer Information

Name: _____ **Date of Installation:** _____

Consumer Information

Last Name: _____ **First Name:** _____

Street Address:_____ **City:** _____

Before Arrival

☐ Make sure you have reviewed and are familiar with the following materials:

Etiquette Guide

Smoke Alarm Manufacturers User's or Owners Manual

Home Fire Safety Messages specific for the consumer. Some consumers may have requested the messages in an alternative format, if so OSU will send them to you prior to the installation. These will be the same messages in a different format such as Braille or large print.

☐ Make sure you know the type of disability(s) of the consumer.

After Arrival

☐ Verify you are at the correct address and the correct home.

☐ Introduce yourself and explain that you are here to install the smoke alarm(s) as arranged by OSU.

☐ Give appropriate materials to consumer: Smoke Alarm Manufacturer User's or Owners Manual, and Fire Safety Messages, and the DVD or tape for people who are deaf.

☐ Show the smoke alarm to the consumer—let them look at and hold the smoke alarm.

☐ Identify the location(s) outside of all sleeping area(s) and on each level of the home to install the alarm(s) Note: there are additional alarms required for mobile homes.

☐ Write the date of the installation on the back of each smoke alarm before you install.

☐ Install the smoke alarm(s).

☐ Clean up any mess made by installing the alarm – vacuum drywall dust, etc.

☐ Explain and show how the alarm(s) work.

Silent Call – smoke alarm sends wireless signal to receiver and sets off strobe and shaker.

First Alert – alarm can be tested and silenced with television remote control.

☐ Show how to test the smoke alarm and have the consumer test the alarm while you are there.

Silent Call – hold the test button for at least 20 seconds till alarm sounds, check to see strobe and/or vibrator work

First Alert – using the consumer's TV remote control, point the remote at the smoke alarm and hold the volume or channel button down for 3-5 seconds. This will activate the alarm.

☐ Discuss the importance of a home escape plan and review the materials for the home escape plan with the consumer.

- ☐ Verify the local fire emergency number. Use their phone book if necessary to find the number. It should be in the first few pages. Write the number on the top of the home escape plan.
- ☐ Create the home escape plan by drawing a floor plan of the home and marking two ways out of each sleeping area.
- ☐ Recommend practicing the plan (it is important to discuss opening windows and moving any furniture that blocks an escape route).
- ☐ Tell the consumer if they have any questions after you leave they can call or email.
  Make sure the consumer has OSU business cards for follow up questions.
  Technical questions: Tom Hughes 405-744-4258 tahughes@osufpp.org
  Administrative questions: Cindy Finkle 405-744-8301 CFinkle@osufpp.org
- ☐ Explain that someone from Oklahoma ABLE Tech at OSU will contact them in a few months for a follow-up survey.
- ☐ Complete the Installation Form.

Time of Arrival _____ Time of Completion _____

Verify that the smoke alarm installation is complete _____
Installer's Signature

_____
Installer's Signature

Please mail or fax this Checklist along with the Installation Form to Fire Protection Publications when the smoke alarm installation is completed.

Fax:
405-744-4112

Mail:
Fire Protection Publications
Attention: Tom Hughes
930 N. Willis
Stillwater, OK 74078

Date of Installation: _____

Applicant Number: _____

Smoke Alarm Installation Form

Please complete one copy of this form for each residence in which you install a smoke alarm.

Installer Information

Time of Arrival: _____ **Time of Departure**: _____

Last Name: _____

Occupant Information

Last Name: _____ **First Name**: _____

Disability: ☐ Blind ☐ Vision Impaired ☐ Deaf ☐ Hard of Hearing ☐ Mobility Impaired

New Smoke Alarm(s) Information

Serial # (1): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Serial # (2): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Serial # (3): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Serial # (4): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Serial # (5): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Serial # (6): _____
☐ Bed shaker
☐ Strobe receiver
☐ Receiver without strobe

Residence Information

Type of Residence:
☐ One family ☐ Multi-family
☐ Apartment ☐ Mobile home

Number of levels in the home:
☐ 1 ☐ 2
☐ 3

Number of smoke alarms currently in the home:
☐ 0 ☐ 1
☐ 2 ☐ 3+

Was there at least one smoke alarm on every level of the home?
☐ Yes ☐ No

If no, which level(s) did not have a smoke alarm?
☐ Basement ☐ 1st floor
☐ 2nd floor
☐ Other: _____

Was there at least one smoke alarm near all sleeping areas?
☐ Yes ☐ No

If no, which area(s) did not have a smoke alarm? Specify:
_____
_____

Number of smoke alarms tested:
☐ 0 ☐ 1
☐ 2 ☐ 3+
☐ Declined

Number of smoke alarms that did not work:
☐ 0 ☐ 1
☐ 2 ☐ 3+
☐ N/A

If smoke alarms did not work, indicate how many alarms had the following problems:
_____ Disconnected battery
_____ Dead battery
_____ Missing battery
_____ Other: _____

Number of smoke alarms more than 10 years old:
☐ 0 ☐ 1
☐ 2 ☐ 3+
☐ Unknown

What did you leave with the home's occupant?
☐ Fire safety messages
☐ Video
☐ DVD
☐ Owner's manual

Did you help occupant find two ways out of every room?
☐ Yes ☐ Discussed ☐ Declined

Did you help occupant select an outside meeting place?
☐ Yes ☐ Discussed ☐ Declined

Preferred method of contact:
☐ Letter
☐ Email: _____
☐ Phone Call:_____

Appendix E
Social Etiquette Guide

The etiquette guide provides helpful tips when communicating and interacting with people with disabilities

Social Etiquette

Tips for Firefighters Who work with People with Disabilities

Provided by
Fire Safety Solutions for Oklahomans with Disabilities
A joint project of Oklahoma ABLE Tech and Fire Protection Publications
at Oklahoma State University

About This Guide

Who is this guide for?

This guide is for fire protection personnel and students who are participating in the Fire Safety Solutions for Oklahomans with Disabilities project. As a participant in this project, you will work with people with disabilities.

Who are people with disabilities?

According to the 2000 United States Census, 32.6% of Oklahomans reported having a disability. Of that total, 16% have some form of sensory disability, and 30% have some physical disability.

People with disabilities are also more likely to be in low-income and low-education brackets, so their chances of dying or being injured in a fire may be even more compounded.

Having a disability does not automatically mean that the person is blind, deaf, or in a wheelchair. Disabilities encompass a wide range of impairments. It may not be apparent to you that some people have disabilities. People with disabilities may include people like the following:

- A construction worker who is becoming increasingly hard of hearing because he works around loud machinery every day
- A young woman with cerebral palsy
- A senior citizen who wears hearing aids
- A senior citizen who has rheumatoid arthritis and can't get around as well as he used to

What is this guide for?

This guide describes how to interact with people with disabilities. This guide helps you to know what to expect when you visit the home of a person with a disability, how to communicate effectively with that person, and how to react to situations you may encounter.

How do I use this guide?

You should read this guide from cover to cover because you cannot be certain that you will only work with people who are blind or with people who are deaf or with people with mobility impairments.

Why should I read this guide?

Social etiquette and working with people may seem like common sense. But working with people with disabilities introduces many new environmental variables, such as service animals and interpreters. You may find that when you work with people with disabilities you feel uncertain of acceptable social etiquette because the situation is new to you.

By reading this guide, you can be prepared to work with interpreters and to respect the work of service animals. The working experience can be positive for everyone.

In addition, you need to learn the terms considered improper, discriminatory, and out-of-date, so you can avoid insulting people with disabilities. If you use these terms you are demonstrating a lack of respect because such terms cause hurt feelings. As in any working relationship, hurt feelings can lead to lack of cooperation, which could lead to the failure of this program. Remember, you need to be respectful of people with disabilities even if you do not believe that such terms are unacceptable. Simply put: The use of such terms is unacceptable.

What will be covered in this guide?

This guide covers basic social etiquette, greetings, providing information and requesting information, and working with service animals and interpreters.

General Tips for Social Etiquette

Social etiquette remains, in many ways, the same across cultures. You should be polite and courteous just as you would with anyone in which you interact; however, you need to make a few adjustments when greeting, assisting, and communicating with people with disabilities. Here are a few tips you should consider when communicating with people with disabilities, no matter what disability the person has.

Use "people first" language.

For example, do not say "deaf person." Instead, say "a person who is deaf." The easiest way to avoid insulting people with disabilities is to learn their names and directly refer to them.

Never say "handicapped," "challenged," or "special."

These words are insulting and unacceptable.

Never touch or distract a service animal without prior permission.

The service animal is on-duty, just as you are.

Avoid making assumptions.

Assumptions are typically incorrect and only create more difficulty in the communication process. Do not assume you know what people with disabilities can and cannot do. Typically, what you think people with disabilities can do is far less than what they can actually do.

Try to give People with disabilities options.

Rather than telling people with disabilities what to do, just ask them, "How can I best assist you?" You should try to give them options. Then they can determine which option or options best meet their needs.

Disregard the idea that you are saving people with disabilities.

Simply put: you are not. Many people with disabilities, such as those with hearing loss, vision loss, and mobility loss, retain the ability to save themselves. You need to encourage them to be self-reliant and to be independent in the decision-making process.

Follow a few simple guidelines when greeting people with disabilities.

Treat adults as adults. Address people with disabilities by their first name if you are addressing everyone by their first name.

Don't be embarrassed if you use common expressions such as "See you later," or "Did you hear about that?" that seem to relate to the person's disability.

Don't be afraid to ask questions when you are unsure of what to do.

General Terms and Definitions

Visual Impairment

People with visual impairment have a medical condition or impairment that impedes their ability to have aided or unaided vision. They may have one of the following:

- astigmatisms in one or both eyes
- low vision whether unaided or aided with corrective lenses
- tunnel vision
- night blindness
- non-peripheral vision

Blind

People who are blind have a medical condition or impairment that completely impedes their ability to have aided or unaided vision. They may have:

- light blindness
- total blindness

Mobility Impairment

People with mobility impairment have a disability or medical condition that impedes their ability to stand aided or unaided without support of an assistive device. The device may be:

- wheelchair (powered or non-powered)
- walker
- cane
- leg braces with crutches
- forearm cuffs (Canadian Cuffs)
- crutches
- electric scooter

Deaf

People who are deaf may have either a medical condition or impairment that impedes their ability to hear. Not all people who are deaf can read lips.

Hard of Hearing

People who are hard of hearing may have been born hard of hearing or have lost their ability to hear later in life. They may use one of the following assistive devices:

- cochlear implant
- hearing aid

However, when they take out these assistive devices, they are deaf.

Interacting with People who are visually impaired or blind

Approximately 70% of people with severe visual impairments are over the age of 65. Only a small number of people with visual impairments are completely blind. Visual impairments include cataracts, partial sight, and tunnel vision. People with visual impairments must rely on their other senses to obtain information about their environment. Thus, it is important for you to give directions that rely on senses other than sight.

Social Etiquette

Tell people with visual impairments when you leave, if even for a minute. Also identify how long you will be gone.

Identify to whom you are speaking if there is a group of people present. That way people with visual impairments know to whom you are speaking.

Explain to people with visual impairments where you will place tools and other objects that you bring with you for the installation process. Remember, their surroundings need to remain as consistent as possible to help avoid injury.

Do not move items without telling people with visual impairments. Moving items can be dangerous.

Try to give people with visual impairments options rather than telling them what to do.

When working with people with visual impairments who use a service animal, walk on the side opposite the animal.

If people with visual impairments use a cane and have set it down, do not move it. Instead, ask them to move it themselves. Moving the cane may present a hazard to them if they need to move from one place to another.

Greetings

When you approach people with visual impairments, state clearly who you are in a normal tone of voice.

When extending a handshake, say "let's shake hands," so people with visual impairments know what you are doing.

Announce your presence by speaking first. Touch people with visual impairments lightly on the arm to indicate exactly where you are located. Sometimes it is difficult for them to determine exactly where you are because the acoustics of rooms vary.

Look directly at people with visual impairments. This may feel awkward at first because you are used to having direct eye contact with the person with whom you are speaking. People with visual impairments may not be used to looking directly at you, but you should still practice direct eye contact. If you keep direct eye contact, you help them stay focused on where you are in the room. In addition, if you keep direct eye contact, you ensure that you will be more easily heard because you are speaking directly to them.

Providing directions

Provide people with visual impairments verbal directions. Do not grab their arm and attempt to guide them.

When giving directions, be specific. For example, if you are approaching steps, state how many steps and if the steps go up or down.

Avoid giving directions that are clarified through body language. For example, if you say "over there," you mean "look at where I am pointing." If you say "by the green dumpster," you are giving a visual clue. Instead, say "Take twelve steps forward, turn to your right, and take six steps forward" or "Just to the right of the dumpster which is twelve steps from your back exit." You can use shape descriptions if doing so will assist them in understanding the size of an object.

Interacting with People who are Mobility impaired

Mobility impairments are often difficult to detect. A person with mobility impairment may be in a wheelchair, or may not use any type of mobility device, but may have difficulty standing up for long periods of time. Mobility impairment can restrict a person's range of movements, stamina, or ability to negotiate stairs.

Social Etiquette

If possible, place yourself at eye level with people with mobility impairments, preventing them from getting a kink in their neck. If you cannot lower yourself to eye level, you need to allow enough distance between yourself and people with mobility impairments so as not to force their head into an awkward position.

The taller you are, the more distance you should allow. If the conversation will take awhile, find a chair.

When talking to people with mobility impairments, sit directly in front of them. Sometimes it is difficult for them to turn their body in the wheelchair to see you.

Never pat them on the head or shoulder. You would never pat anyone else on the head; it is degrading.

Do not lean on the wheelchair, or any other assistive devices (canes, walkers, etc.). Assistive devices are an extension of their personal space.

Try to give people with mobility impairments options rather than telling them what to do. Then they can adapt to fit their needs and abilities.

Do not assume all exits work with all types of mobility devices. Wheelchairs vary in size and functionality. Make sure you develop exit routes with assistive devices in mind. If people with mobility impairments indicate that a pathway is not accessible, respect their authority on the matter because they have accurate knowledge about how their assistive technology functions in their own home.

Do not place any items on the desktop of people with mobility impairments, if they have one attached to the wheelchair. This is inconsiderate unless they offer first.

Greetings

Extend your hand for the usual handshake greeting. Let people with mobility impairments decide how long and the strength of the handshake. It may seem awkward at first. Remember, shaking hands indicates that you respect them.

Providing Directions

Do not assume that people with mobility impairments want you to push their wheelchair. Ask first.

Interacting with People who are Deaf or Hard of Hearing

Although people who are deaf or hard of hearing may not be able to hear you, it is important that you speak clearly and face them when you are speaking with them.

People who are deaf often communicate through American Sign Language (ASL). ASL is a unique language, just like Spanish or Russian. You will not be able to intuitively translate because ASL has a unique syntax (the ordering of words is not the same as in English). You may have to work with an interpreter. When you speak, the interpreter will translate what you say to the person who is deaf. *Therefore, you should expect your interactions to take twice as long.*

Social Etiquette

Ask people who are deaf or hard of hearing what their preferred method of communication is if they do not tell you. There are three methods by which people who are deaf or hard of hearing may want to communicate: lip reading, sign language, and written language. People who are deaf or hard of hearing should decide which communication method to use and should reserve the right to change communication methods during your visit. Lip reading is fatiguing for those who are deaf or hard of hearing, so you should keep the conversation short and concise. A person who is lip reading may only get 30-50% of what you say. Be patient and understanding.

Make eye contact and hold up your hand to get the attention of the person before speaking. This alerts them that you wish to speak with them.

Literacy is not a gauge of intelligence, and English is the second language of people who use ASL. People who are deaf or hard of hearing may have difficulty reading and writing in English because ASL has a different structure and set of rules.

Do not write in the air. No one, hearing or otherwise, can remember air-written letters and words. Use paper and pencil in such cases.

Do not stand between people who are deaf or hard of hearing and the interpreter. If you do this, you are interrupting the conversation, which is rude. If you must pass through, do so quickly.

If people who are deaf or hard of hearing use a hearing aid, ask them if there are any background noise distractions. They may request that you minimize these noises. For example, if you are wearing a radio, the static noise may create too much background noise.

Try to give people who are deaf or hard of hearing options rather than telling them what to do.

Avoid showing impatience because less assertive people who are deaf or hard of hearing may indicate they understand concepts that they do not understand. Why? They say they understand to avoid conflict.

Explain any interruption before attending to it. For example, if your cell phone rings, excuse yourself first.

Avoid saying "Never mind" or "It's not important" when people who are deaf or hard of hearing do not understand. This is insulting because it is often seen as an indication that they do not deserve the patience involved in repeated communication processes.

Greetings

Speak clearly in a normal tone of voice. Do not exaggerate your lip movements.

Remember, not all people who are deaf or hard of hearing can read lips. If they do read lips, they will struggle to understand how you articulate your words. Still, do not exaggerate or change the way you speak.

Do not chew gum or tobacco. Remove your sunglasses, so people who are deaf or hard of hearing can see your eyes.

Avoid touching your face while speaking. This prevents people who are deaf or hard of hearing from seeing your mouth.

Requesting Information

Use short simple sentences.

Do not fluctuate the volume of your speech.

When you seek a lot of information, ask for feedback to make sure you are understood. You may have to repeat your request verbatim several times. When you request something complex, give examples.

Giving directions

Use short simple sentences.

Do not fluctuate the volume of your speech. When you have a lot of information to convey, ask people who are deaf or hard of hearing for feedback to make sure they understand. You may have to repeat information verbatim several times. When you talk about something complex, give examples.

Try to give people who are deaf or hard of hearing options rather than telling them what to do.

Working with an Interpreter

Speak directly to people who are deaf or hard of hearing, not the interpreter. Remember, the people who are deaf or hard of hearing are the people with whom you are speaking.

Do not fluctuate the volume of your speech.

When you have a lot of information to convey, ask people who are deaf or hard of hearing for feedback to make sure they understand. Sometimes information is lost during the interpretation process. You may have to repeat information verbatim several times. When you talk about something complex, give examples.

Plan for frequent breaks. Interpreting is physically and mentally demanding because the interpreter translates the information into another language.

Appendix F
People-first Checklist
Writing for People with Disabilities

Easy modifications to your writing style will ensure you communicate effectively with people with disabilities

EXAMPLES OF PEOPLE FIRST LANGUAGE

BY KATHIE SNOW

VISIT WWW.DISABILITYISNATURAL.COM TO SEE THE COMPLETE ARTICLE

SAY:	INSTEAD OF:
People with disabilities.	The handicapped or disabled.
He has a cognitive disability/diagnosis.	He's mentally retarded.
She has autism (or a diagnosis of...).	She's autistic.
He has Down syndrome (or a diagnosis of...)	He's Down's; a mongoloid.
She has a learning disability (diagnosis).	She's learning disabled.
He has a physical disability (diagnosis).	He's a quadriplegic/is crippled.
She's of short stature/she's a little person.	She's a dwarf/midget.
He has a mental health condition/diagnosis.	He's emotionally disturbed/mentally ill.
She uses a wheelchair/mobility chair.	She's confined to/is wheelchair bound.
He receives special ed services.	He's in special ed.
She has a developmental delay.	She's developmentally delayed.
Children without disabilities.	Normal or healthy kids.
Communicates with her eyes/device/etc.	Is non-verbal.
Customer	Client, consumer, recipient, etc.
Congenital disability	Birth defect
Brain injury	Brain damaged
Accessible parking, hotel room, etc.	Handicapped parking, hotel room, etc.
She needs . . . or she uses . . .	She has a problem with . . . She has special needs.

Keep thinking—there are many other descriptors we need to change!

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Excerpted from Kathie's People First Language article, available at www.disabilityisnatural.com.
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VISIT WWW.DISABILITYISNATURAL.COM FOR OTHER NEW WAYS OF THINKING!

Appendix G
Plain Language Checklist
Writing for People who are Deaf

Writing concisely and precisely will enable you to communicate effectively with people who are deaf

Plain language ensures that your audience can understand not only the technical terms and concepts but also the directions and descriptions you provide. Writing in a concise form with an emphasis on the most important information will help your audience understand your meaning and engage more fully in the concepts.

Visit http://www.plainlanguage.gov for more tips and resources on writing in a plain language style.

Lead with your main point(s) in the beginning of your message.

Use active voice verbs. If the sentence uses is/am/were _____ by the _____, then you've probably got a passive construction. Pull out the main concept/character and action. Then rewrite.

Bad: The smoke alarm **was included** in the installation **by** the firefighter.
Good: The firefighter installed a smoke alarm.

Use positive methods when describing what actions people should take. Negative forms of expression may confuse people during an emergency situation.

Bad: **Do not put** a hot pan directly on the table.
Good: Set the hot pan on a heat resistance surface.

Introduce key details to clarify, but limit the jargon.

Bad: The detector has **dual photoelectric and ionization smoke sensing technology and electrodes** so that it alerts the residents through a better **early warning system**.
Good: The smoke alarm has sensors to detect both smoldering fires and flaming fires, so people are alerted earlier, giving them more time to escape.

Avoid hyping the information with too many adjectives or stylistic embellishments.

Bad: During a fire, the **deadly** heat and **toxic** smoke will rise and **mercilessly engulf** your **defenseless** body, making escape **impossible**.
Good: During a fire, rising smoke and heat make escape difficult.

Avoid using colloquial and idiomatic expressions. They add more concepts or noise instead of explaining the main concepts.

Bad: When it comes to fire safety, you cannot **pass the buck**; everyone must protect themselves.
Good: When it comes to fire safety, you must be responsible for your own safety.

Remove as many words as possible while ensuring your meaning is clear. Fewer words to read leads to faster, more interested reading.

Bad: A good home escape plan is **absolutely essential** in planning your response to a **sudden and unexpected** home fire.
Good: A home escape plan will help you respond to a fire.

Appendix H
APH Guidelines for Large Print
Writing for People with Visual Impairments

Downloading APH's font and formatting your documents with the right type sizes will ensure people with visual impairments can read your messages

These guidelines are specified by the American Printing House for the Blind (APH). For more information, visit http://sun1.aph.org/edresearch/lpguide.htm

Definition of Large Print

Large print is generally defined as print for text passages that is larger than the print used by that segment of the population with normal vision. The sizes of print most commonly used by the sighted population range from 8-12 points in size. The American Printing House (APH)for the Blind takes the position that large print for use by the low vision population is print that is 18 points in size or larger.

Guidelines

APH's recommendations are based on replicated research performed by APH and other agencies. Researchers studied the impact of various large print characteristics on reading speed, comprehension, literacy, and usability by large print users and found subjects had better scores in all areas tested when using APHont.

1. A font that is at least 18 points in size.
2. X-height and t-heights of at least 1/8 inch.
3. A typeface without serifs.
4. Spacing between lines of print of at least 1.25 spaces.
5. Headings and subheadings that are larger and bolder than regular large print text.
6. Paragraphs that are block style and use 1 inch margins. The left margin should be justified and the right hand margin should not be justified. There should be no first-line indentations to delineate paragraphs.
7. Printed materials with no columns or divided words.
8. Black print on white, ivory, cream, or yellow paper with a dull finish so as not to promote glare.
9. Print that is not used over a background design or other graphical material.
10. Graphics that are not only enlarged, but maintain the same contrast, clarity, and appropriate coloration as those prepared for their sighted peers.
11. Graphic materials, such as maps, graphs, and charts, which also adhere to type size, font, and other large print guidelines.
12. Full-color or high-quality black line art rather than gray-scale or shaded drawings.
13. Books that weigh no more than 32 ounces and are no larger in dimension than 9 inches by 12 inches by 2.5 inches.

APHont™ Character Set

APHont Regular:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890.,/;'[]-=
!@#$%^&*()><:"{}_+

APHont Italic:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890.,/;'[]-=
!@#$%^&()><:"{}_+*

APHont Bold:
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abcdefghijklmnopqrstuvwxyz
1234567890.,/;'[]-=
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APHont Bold Italic:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890.,/;'[]-=
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How do I get APHont?

To download the new APHont Suite, visit http://sun1.aph.org/products/aphont.html

For More Information

Fire Protection Publications
1-800-654-4055
http://www.ifsta.org

Oklahoma ABLE Tech
1-888-885-5588 (V/TDD) or 405-744-9748
http://okabletech.okstate.edu

Located at Oklahoma State University