

Developing Evacuation Plans

Evacuating People With Disabilities

Creating an evacuation plan may seem like a daunting task, especially for a larger company. However, including the physically or mentally disabled can make the task seem much more difficult. When creating an evacuation plan, SH&E professionals should determine how to communicate with the hearing or vision impaired, how to help the physically disabled down stairs and how to include in the plan those who may become incapacitated during an emergency. Proper planning, communication and review can help create an effective emergency evacuation plan that caters to the disabled and entices upper management.

According to NFPA's 2007 Emergency Evacuation for People With Disabilities Guide, 48.9 million Americans have a disability and 70% of people will

have a disability at some point in their lives. A disability is not limited to the permanently handicapped; a broken leg or hernia is also considered a disability that hinders movement. A disability can affect a person at any time.

Disability evacuation plans must take these factors into account and must attempt to cover the widest range of people possible, says Kevin Curtin, director of U.S. Department of Agriculture's TARGET Center. Created in 1992, the TARGET Center works with companies to find ways to enforce and implement federal disability legislation.

COMMUNICATION IS KEY

A webcast titled *Discover How to Make Your Emergency Accessible to Everyone* discussed what safety engineers need to include in their ideas for accessible emergency escape plans and what employers need to do to properly implement them. One critical factor of an escape plan is the ability to communicate the plan and alerts to employees, disabled or not. "If you are not (communicating) . . . it does not matter how good your plan is," Curtin says.

Communication can entail including employees in the plan-making process and making sure they know a plan exists. Relaying information through e-mails, pamphlets and practice drills can prepare employees and inform them of disabled coworkers' needs, as well as educate them on how to react if they become disabled during the emergency procedure. Establishing a hotline can keep communication lines open and can allow employees to get information, alert people to emergencies and voice their opinions about the evacuation plan.

Communication for alerting employees that an emergency is occurring is also vital. Hearing impaired employees will not hear sirens, and visually impaired employees will not see text messages or flashing lights. Using more than one emergency alert system can prevent this, and in the event that one system does not work, the other can always be used. Systems such as the Computer Emergency Notification System can alert employees on their computer, then lock the keyboard to ensure that they read the message. Special paging systems can alert the hearing impaired through emergency pages as well.

"We are talking about a wide variety of communication tools that will not only benefit persons with

NFPA's Five Disability Categories

NFPA's Evacuation Planning Guide for People With Disabilities defines the five categories of disabilities and explains the different needs for safe evacuation.

Mobility. This includes wheelchair users and those with ambulatory mobility disabilities and respiratory impairments. Such impairments may require the use of maneuverable devices. These impairments cause difficulty in safely evacuating due to a building's egress system, lack of coordination or dizziness.

Hearing. Echoes, extraneous background noise and reverberation can distort hearing aid transmission. If a person cannot receive information emitted by a building egress system such as a fire alarm or voice instructions, alternatives must be provided.

Speech. Emergency phone systems need to be assessed during evacuation plans for people with speech impairments.

Cognitive. Caused by an inability to process necessary evacuation information, these impairments result in some decreased ability to process or understand information received by the senses.

Visual. Some people may be able to distinguish from light and dark, sharply contrasting colors or large print but may not be able to read small print, negotiate dark spaces or tolerate high glares. Visually impaired people depend highly on their sense of touch and hearing to perceive their environment.

disabilities but will benefit a wide range of people as well,” Curtin says.

Aside from communication, the new plan must also be sold to management and decision makers. The best way to do that is to make sure that a person on the company’s incident management team is dedicated solely to the causes of the disabled, a special needs specialist, for example, who has direct contact and communication with the incident commander, Curtin says. This person can continuously work toward making sure the disabled are part of evacuation plans and processes and integrating the plan into all parts of the business. Curtin says the most difficult thing to do is to get the disabled to self-identify. Some physical disabilities may be obvious, but cognitive or sensory disabilities can be harder to identify. If a person indicates him/herself as disabled, s/he can indicate any special needs to include in the evacuation plan and can provide input for what does and does not work. However, some people may not be aware of their disability, or because of disability stereotypes, may not want to identify themselves to avoid embarrassment.

A plan should attempt to address all disabilities regardless of their known existence, but focusing too much on the needs of one individual can lead to mistakes and problems as well. “When you are planning, you are trying to consider a solution from every possible angle,” Curtin says.

FORMULATING A PLAN

When creating a plan, a company must keep several things in mind to comply with the law. The Americans With Disabilities Act (ADA), passed in 1990, prohibits discrimination based on disability. The act claims that no disabled person should be kept from goods and services based on any disabilities. Recent amendments to the act also demand that employers cannot restrict “major life activities” such as eating and sleeping. The act also states that all emergency evacuation plans must include measures to ensure the safe evacuation of disabled employees or citizens. This makes accounting for the disabled imperative for a business.

Guidelines found in **NFPA’s Emergency Evacuation Planning Guide for People With Disabilities** are not enforced, but they are a good source of information for safety professionals who want to create an evacuation program. The guidelines place disabilities into five categories: mobility, hearing, speech, cognitive and visual. Each disability has specific information regarding how to handle people with that disability in terms of notification, way finding, use of the way and assistance. The guide is detailed and addresses multiple disabilities and animals as well. It helps the user plan unobstructed circulation paths for the disabled and creates communication and visible signs to those exits. It also suggests installing and implementing lifts, ramps, elevators or other means of

escape for those who are disabled if necessary.

“The first thing to remember . . . is that you want to cast the widest possible net,” Curtin says.

Despite the planning and legal necessity, some companies are still not doing enough, says Kevin McGuire, head of McGuire Associates Inc. His company works with organizations and businesses to help them follow ADA standards and creates disability evacuation plans. McGuire, disabled since age 7 because of a car accident involving a drunk driver, is happy to see the issue addressed more in businesses and society but still struggles to get companies to come around to more frequent and regular practices and planning sessions. Plans should also be reviewed often and revised easily.

“People address it more . . . but on the negative side, I just see people using one evacuation chair per floor and thinking that is enough,” he says.

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McGuire says he has heard many stories about disabled people being trapped in buildings, unable to escape. One story involves a woman in a wheelchair left on the 17th floor who crawled down the stairs after she was left at her area of rescue for 45 minutes with no communication. McGuire says such stories prove

that not enough is being done, and the effort needs to come from companies just as much as from employees.


According to an article McGuire wrote in 2005 for NFPA, businesses need to do five things to create an effective disability evacuation plan: learn the building layout; identify the disabled in the workplace; review

NFPA Emergency Evacuation Planning Guide for People With Disabilities


NFPA's **Emergency Evacuation Planning Guide for People With Disabilities** provides detailed guidelines for evacuating individuals with mobility, hearing, speech, cognitive and visual disabilities.

The guide includes a checklist that facilities can use to evaluate their preparedness, which covers issues such as occupant notification, way finding, use of the way, types of assistance needed and service animals.

NFPA also provides additional **educational materials** regarding evacuation procedures for individuals with disabilities, including fact sheets in both English and Spanish.



PERSONAL EMERGENCY EVACUATION PLANNING CHECKLIST



Name: _____ Primary Location: _____

Building (home, office, etc.): _____ Primary Phone: _____

Address: _____ Cell Phone: _____

Floor: _____ E-mail: _____

Service Animal: ☐ Yes ☐ No

OCCUPANT NOTIFICATION

Type of Emergency	Method or Device for Notification
Fire:	_____
Earthquake:	_____
Flood:	_____
Storm:	_____
Attack:	_____
Other (specify):	_____

	YES	NO	N/A	Comments
Are there emergency notification devices (alarms, etc.) appropriate for this person?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does this person know the location of each emergency notification device/system and understand its meaning/function?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does this person know how to sound the alert for emergencies (manual pull box alarms, public address systems, radio, telephones)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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evacuation equipment; train the staff; and coordinate with local law and emergency enforcement. In learning the floor plan, one must notice problem areas that disabled employees may encounter as well as exits. Proper equipment can include light evacuation chairs for people in wheelchairs and easy-to-read signs. Working with local emergency medical technicians and police departments can also make evacuations better and can allow police to reach trapped disabled people faster.

TRAINING TECHNIQUES

Training tends to be the most neglected part of the overall planning process. To counter this, McGuire says that training should be a part of employee orientation. If no one knows how to handle or assist the disabled during evacuations, more accidents may occur during the procedure.

“Training is a key thing,” McGuire says. “I think you need to train everyone.”

A training and evacuation technique that McGuire sees as flawed is the buddy system. The buddy system involves one or two employees being assigned to a disabled person as assistants to help him/her out of the building during an emergency. Many issues keep this strategy from being effective. The assigned employee could be out of the office that day or possibly trapped in another part of the building and separated from the disabled person. Coworkers not assigned to this person are likely not trained to help, and the disabled person may wait far too long for help to come, possibly resulting in injury or death.

McGuire and Curtin agree that training employees properly and often is vital to the success of any disabled evacuation plan. But, it is impossible to know what will happen during a drill and to always know where disabled employees are. Therefore, everyone needs to be ready to handle the emergencies as they

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arise and to be able to communicate throughout the company. If disabled people, upper management and other employees get involved in the plan's creation and train together, it can save lives.

“The more flexible they are, the more they will benefit all people,” Curtin says. “It is more than just the quarterly fire drill.” ☺

Michael Logli is employed by the American Oil Chemists' Society, where he works as an associate editor of Oil Mill Gazetteer and science writer for Inform Magazine. His previous work experience includes an editorial internship at ASSE.

¿Hablas Español?

ASSE has launched a **Spanish website**, featuring Spanish versions of several archived *Professional Safety* articles, as well as a blog, videos and membership information. The website also links to other SH&E resources, including the Spanish versions of OSHA's website and NIOSH's website.