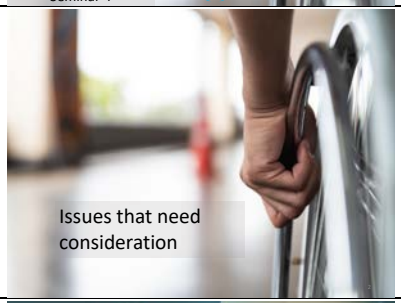
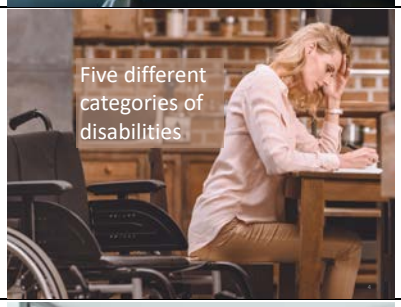
IOSH Fire Risk Management Group

Seminar 4: How can an organisation / company effectively deal people with disabilities during fire emergencies?

Presentation with speaker notes

Slide 1		Title slide Purposely left blank *Elements of the text of this presentation are reproduced with permission from the National Fire Protection Association, copyright © 2016, NFPA, Quincy, MA. All rights reserved.* Photo credit iStock- 1006038806
Slide 2		Purposely left blank Photo credit iStock- 1006038806
Slide 3		A thorough fire risk assessment (including population or people at risk) needs to be undertaken by a competent person leading to a series of control measures to remove or mitigate the risks Photo credit iStock-838527566
Slide 4		The five different categories of disabilities according to the US NFPA: - Mobility - Blind or Low Vision - Deaf or Hard of Hearing - Speech - Cognitive Photo credit iStock-935482784
Slide 5		People with mobility issues may use one or more devices, such as canes, crutches, a power-driven or manually operated wheelchair, or a three-wheeled cart or scooter, to maneuver through the environment. People who use such devices have some of the most obvious access/egress problems. Typical problems include maneuvering through narrow spaces, going up or down steep paths, moving over rough or uneven surfaces, using toilet and bathing facilities, reaching and seeing items placed at conventional heights, and negotiating steps or changes in level at the entrance/exit point of a building. Photo credit iStock-905840804

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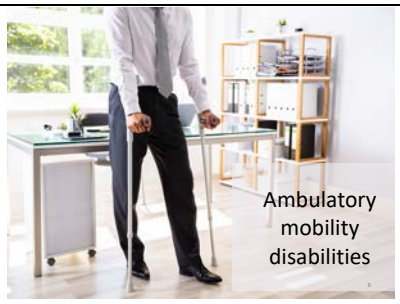
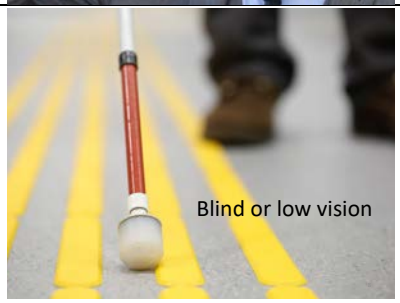
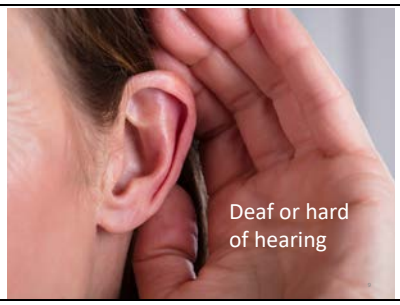
Slide 6		**- T**his includes people who can walk but with difficulty or who have a disability that affects gait. It also includes people who do not have full use of their arms or hands or who lack coordination. People who use crutches, canes, walkers, braces, artificial limbs, or orthopedic shoes are included in this category. - Activities that may be difficult for people with mobility disabilities include walking, climbing steps or slopes, standing for extended periods of time, reaching, and fine finger manipulation. - Generally speaking, if a person cannot physically negotiate, use, or operate some part or element of a standard building egress system, like stairs or the door locks or latches, then that person has a mobility impairment that affects his or her ability to evacuate in an emergency unless alternatives are provided. Photo credit iStock- 1021542894
Slide 7		People with respiratory impairments can generally use the components of the egress system but may have difficulty safely evacuating due to dizziness, nausea, breathing difficulties, tightening of the throat, or difficulty concentrating. Such people may require rest breaks while evacuating. Photo credit iStock-1004212476
Slide 8		- This includes people with partial or total vision loss. Some people with a visual disability can distinguish light and dark, sharply contrasting colours, or large print but cannot read small print, negotiate dimly lit spaces, or tolerate high glare. Many people who are blind depend on their sense of touch and hearing to perceive their environment. For assistance while in transit, walking, or riding, many people with visual impairments use a white cane or have a service animal. - There is a risk that a person with a visual impairment would miss a visual cue, such as a new obstruction that occurred during the emergency event, that could affect egress. - If a person cannot use or operate some part or element of a standard building egress system or access displayed information, like signage, because that element or information requires vision in order to be used or understood, then that person has a visual impairment that could affect his or her ability to evacuate in an emergency unless alternatives are provided. Photo credit iStock- 536674898
Slide 9		- People with partial hearing often use a combination of speech reading and hearing aids, which amplify and clarify available sounds. Echo, reverberation, and extraneous background noise can distort hearing aid transmission. People who are deaf or hard of hearing and who rely on lip reading for information must be able to clearly see the face of the person who is speaking. Those who use sign language to communicate may be adversely affected by poor lighting. - People who are hard of hearing or deaf may have difficulty understanding oral communication and receiving notification

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		by equipment that is exclusively auditory, such as telephones, fire alarms, and public address systems. - There is a risk that a person with a hearing loss or deafness would miss an auditory cue to the location of a dangerous situation, affecting his or her ability to find safe egress. - If a person cannot receive some or all of the information emitted by a standard building egress system, like a fire alarm horn or voice instructions, then that person has a hearing impairment that could affect his or her ability to evacuate in an emergency unless alternatives are provided. Photo credit iStock- 958335944
Slide 10		- Speech impairments prevent a person from using or accessing information or building features that require the ability to speak. The only "standard" building egress systems that may require a person to have the ability to speak in order to evacuate a building are the emergency phone systems in areas of refuge, elevators, or similar locations. - These systems need to be assessed in the planning process. Photo credit iStock-175389687
Slide 11		- Cognitive impairments prevent a person from using or accessing building features due to an inability to process or understand the information necessary to use those features. - Cognitive impairments can be caused by a wide range of conditions, including but not limited to developmental disabilities, multiple sclerosis, depression, alcoholism, Alzheimer's disease, Parkinson disease, traumatic brain injury, chronic fatigue syndrome, stroke, and some psychiatric conditions, but all result in some decreased or impaired level in the ability to process or understand the information received by the senses. Photo credit iStock-618454008
Slide 12		- In addition to people with permanent or long-term disabilities, there are others who have temporary conditions that affect their usual abilities. Broken bones, illness, trauma, or surgery can affect a person's use of the built environment for a short time. Diseases of the heart or lungs, neurological diseases with a resulting lack of coordination, arthritis, and rheumatism can reduce a person's physical stamina or cause pain. Other disabilities include multiple chemical sensitivities and seizure disorders. Reduction in overall ability is also experienced by many people as they age. People of extreme size or weight often need accommodation as well. - It is not uncommon for people to have multiple disabilities. For example, someone could have a combination of visual, speech, and hearing disabilities. Evacuation planning for people with multiple disabilities is essentially the same process as for those with individual disabilities, although it will require more steps to develop and complete more options or alternatives. Photo credit iStock-513396687

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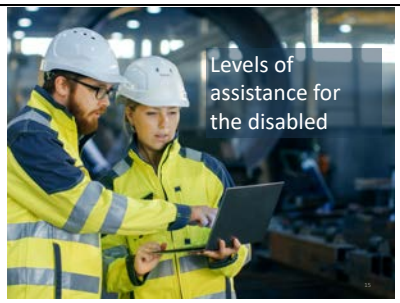
Slide 13		**Elements that need to be taken into account to assist people with disabilities in the risk assessment and emergency action planning process:** - **Occupant notification systems:** Can the person hear standard alarms and voice announcements and can see activated visual notification appliances (strobe lights) that warn of danger and the need to evacuate? - **Way finding:** Can the individual evacuate unassisted to a designated external emergency assembly area or an area of refuge? - **Designated paths:** Are there designated, marked, lighted and unobstructed pathways where a person in a wheel chair can move from their workstation to a designated external emergency assembly area or an area of refuge? Photo credit iStock- 480322858
Slide 14		**If assistance is required, who will provide assistance?** People with risk profiles who are able to go up and down stairs easily may have trouble operating door locks, latches, and other devices due to impairments of their hands or arms can be assisted by anyone. A viable plan to address this situation may be for the person with the disability to be aware that he or she will need to ask someone for assistance with a particular door or a particular device. It is important to remember that not everyone in a building is familiar with all the various circulations paths everywhere in the building and that they may have to use an unfamiliar one in the event of an emergency. Photo credit iStock- 918789092
Slide 15		What assistance will the person(s) provide? **Guidance** 1. Explaining how and where the person needs to go to get to the usable circulation path 2. Escorting the person to and/or through the usable circulation path **Minor Physical Effort** 1. Offering an arm to assist the person to/through usable circulation path 2. Opening the door(s) in the usable circulation path **Major Physical Effort** 1. Operating a stair-descent device 2. Participating in carrying a wheelchair down the stairs 3. Carrying a person down the stairs Photo credit iStock- 879813818