



Emergency Preparedness and Response: What Community Planners and First Responders Need to Know

Introduction

Emergencies such as severe storms, floods, wildfires, and acts of terrorism present a serious challenge for the more than fifty-four million Americans with disabilities and for older adults, especially those who depend on assistive technology (AT) for their independence and wellbeing. Emergency situations can disproportionately affect people with access and functional needs. Being separated from AT such as electric wheelchairs, communication technology, and adaptive devices for eating, dressing, and bathing during emergencies may determine survival or significantly impact a person's recovery from an emergency. Protecting and assisting others when disaster strikes requires planning ahead. Visit the [AT3 Center's Emergency Management webpage](#) to access vital resources for before, during, and after an emergency.

What is Assistive Technology?

[Assistive Technology](#) (AT) is any item, device, or software used to maintain or improve the independence and functioning of people with disabilities and older adults with functional needs. AT devices can be "low tech," such as a built-up handle on a spoon to improve the ability to grasp, to "high tech," such as computers controlled with eye gaze. AT includes the services necessary to get and use the devices, including demonstration, assessment, customization, repair, and training. AT can help seniors safely age in place and address many functional limitations, including mental health issues stemming from social isolation.

Examples of Assistive Technology include:

- handheld video magnifier that provides portable magnification for people with decreased vision;
- text-to-speech software that reads text to an individual with a print disability;
- assistive listening devices, including personal amplified, FM, Infrared, Bluetooth, as well as audio induction or hearing loop systems for people who are Deaf or hard of hearing;
- speech-generating device used to facilitate communication by generating words and messages;
- switch adapted toys to foster independent play; and
- iPad with apps related to organizing, executive functioning, memory loss, etc., for an individual with intellectual or developmental disabilities or brain injury.

The Assistive Technology Act

The Assistive Technology Act of 2004 was reauthorized in December, 2022 ([The 21st Century Assistive Technology Act](#)) and provides grant funding to all fifty states, four US territories, the District of Columbia,

and Puerto Rico. The Act requires grantees to provide services to persons with all types of disabilities, all ages, in all environments (education, employment, community living, and information technology). [AT Act Programs](#) include device demonstrations, device short-term loans, device reutilization (including repair, refurbishment, and exchange) and associated state financing activities (such as financial loans, cooperative buy, funds of last resort, etc.).

Being in an Emergency Without Assistive Technology (AT)

During emergencies, people with access and functional needs who normally live independently may lose access to communication and transportation devices, caregivers, and other assistive tools for day-to-day living including loss of accessible living and work environments. This could have serious implications, such as losing power to life-saving equipment, not having access to emergency communications and being unable to communicate needs. Having AT access could determine survival or recovery from an emergency; accessing local AT Act Programs and their resources is critical for successful emergency responses.

Before an Emergency – AT Considerations

Given the increase in extreme weather across the globe, and the reality of personal safety concerns, it is vital to have a plan in case of an emergency. Individuals with access and functional needs, specifically those who rely on AT, may be especially vulnerable during emergencies that may limit their AT access. It is crucial that emergency plans include AT considerations, including power source backups, low-tech options, and connection to community and support networks that can help with AT needs during emergencies.

[AT Act Programs](#) have resources and provide services to assist individuals, first responders, and communities in planning for emergency situations. Examples include training for first responders, preparedness plan templates, suggestions for emergency kit contents, shelter assessments, and resources for planning councils and advisory groups. They are also able to demonstrate assistive technology, provide short-term device loans, and provide reused AT devices as well as provide information on potential funding to secure AT equipment for emergencies.

For example, the Colorado AT Act Program at the Center for Inclusive Design and Engineering (CIDE), University of Colorado, Denver, is a leader in providing [disaster preparedness resources](#) and training. They have participated on a regional, state, and national level in training first responders in assessing the needs of people with disabilities during emergencies and specifically considering AT needs. CIDE partners with the Federal Emergency Management Agency (FEMA), Homeland Security, Public Health, and others to advise on emergency response training. In response to recent emergencies, CIDE mapped out services available across the state, including AT equipment loan banks, Computer Assisted Real Time (CART) and sign language interpreters, support groups, cultural groups, childcare, assisted living centers and other resources, providing a vital information resource to connect people in need with services in their area. CIDE delivers emergency responder training during emergency drills with the Air National Guard and National Defense to help Colorado be better prepared for future emergencies. CIDE worked with The Red Cross and regional committees to advise on AT considerations for pop-up medical and vaccination facilities, such as having backup batteries and charging stations on hand. They set up functional need trailers filled with walkers, shower benches, chairs, canes, crutches, and low-tech pocket talkers. Medicaid funding helped CIDE develop Go Kit backpacks for people to use during emergencies. Smaller kits were developed in response to requests by seniors who needed something lighter and easier to hold while using mobility aids. Information on resources, including checklists, communication plans, and picture communication boards can be found on [the CIDE website](#).

The links below provide more information from AT Act Programs on how to make an emergency preparedness plan and how to build emergency preparedness kits:

- <https://www.dhs.wisconsin.gov/cpd/toolkit.htm>
- <https://techowlpa.org/eprep/>
- https://www1.ucdenver.edu/docs/librariesprovider38/ep-documents/disability-specific-72-hour-kit-supplies-for-emergencies.pdf?sfvrsn=b7908b9_2
- https://iod.unh.edu/sites/default/files/media/Project_Page_Resources/DPH/tothandbook.pdf
- <https://www.ohsu.edu/sites/default/files/2019-01/ReadyNow-2014.pdf>

In summary, emergency planning should include:

- knowing your AT Act Program and the services and resources it provides during emergencies;
- ensuring careful consideration of people with disabilities and their AT needs; and
- developing customized emergency plans for individuals, communities, and regions.

During an Emergency

Emergency Responders are often the first point of contact with people during an emergency. Therefore, responders must quickly and accurately assess the needs of people with disabilities, including identifying their assistive technology (AT) needs.

Organizations operating shelters during emergencies may need assistance in developing, acquiring, and using assistive technology to help people with disabilities feel safe and supported in a shelter, rather than in a segregated medical needs location. Here are a few examples of technical assistance services AT Act Programs may provide:

- assistance identifying AT needs based on the [CMIST Framework](#);
- access to AT for temporary use while sheltering or waiting for a lost or damaged device to be repaired or replaced; and
- information and referral to disability services and AT resources, including funding options for acquiring needed AT.

Many AT Act Programs have developed resources to help train first responders and shelter personnel. A few of these resources are listed below. Community emergency planners and first responders should contact their state or territory AT Act Program for information specific to their area.

Resource links:

- [Colorado AT Act Program training and resources](#)
- [Maryland shelter checklist](#)
- [Pennsylvania TechOWL resources](#)
- [U.S. Virgin Islands AT Act Program](#)
- [Virginia AT Act Program Emergency Kit & Resource Guidebook](#)

In summary during an emergency:

- Use an individual approach in assessing and sourcing needs for people with disabilities and AT needs.
- Be aware of different disabilities, needs, and AT resources.
- Identify and connect with community partners that can provide vital AT resources and services.
- Ensure shelters and emergency gathering spaces are accessible and have AT resources.
- Have alternative means of communication for people with access and functional needs to be able to get current emergency information.

After an Emergency – the storm has passed, what do you do now?

After an emergency, there may be a recovery period before life returns to normal. Recovery steps may include living in shelters or other temporary accommodations until people can return home. There may be an extended disruption to water and electrical services. Transportation and access to food and medical services may also be affected. For people with disabilities who rely on AT for their independence and well-being, it is essential to have access to AT or low and no-tech options during times of transition. Prolonged transition times before returning to life as it was before the emergency may also cause additional frustration and behavior challenges which can be exacerbated for people with access and functional needs. Having access to people who understand disabilities and AT needs, can help maintain calm during recovery transitions.

Immediately following a crisis is an ideal time to review and learn lessons from the recent emergency to build on strengths in preparation for the next emergency. Most counties, regions, or states have annual public health meetings where emergency plans are reviewed. Reviews may involve partners such as hospitals, community groups (such as AT Act Programs), shelters, and local, state, and federal agencies. Working effectively together can help ensure all involved in serving the community know which community resources each partner can provide to ensure these resources get to the people in need during an emergency. Invite feedback from people with disabilities, older adults, and others with access and functional needs to understand how their needs can be better met during future emergencies. After the debrief, emergency planning efforts can begin again, with improvements, to ensure a sound plan for the next crisis. Emergency kits may need to be restocked, batteries and devices charged, and plans revised. Policy and legislative changes may be required.

The Administration for Community Living (ACL) has resources for what to do following an emergency <https://acl.gov/programs/emergency-response-information>

Find more information on your state’s AT device reuse program at <https://at3center.net/state-at-programs/>

In summary during an emergency:

- ensure provisions and AT supplies are available during recovery;
- review the emergency response with community partners;
- include input from people with access and functional needs in reviews;
- restock emergency kits, AT equipment and emergency provisions; and
- make changes to emergency plans, including policy and legislative changes where needed.

Final Thoughts and Recommendations

Changing weather patterns with more extremes across the globe increases the likelihood of an emergency causing disruption to everyday life and is a compelling reason to plan for emergencies. Increased dependence on technology, such as cell phones, computers, the internet, and social media, highlights the need for emergency plans to include alternatives and backups for technology, including assistive technology.

Finally, ensure communities are collaboratively planning for emergencies and include people with access and functional needs to involve a wide diversity of disabilities in the planning process. Continue to visit the links in this document and the AT3 website for additional tools, resources, and stories about emergency preparedness for people with access and functional needs who use assistive technology.