

Durable Medical Equipment in Disasters

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Advances in healthcare delivery and technology, including home-based durable medical equipment (DME), have better enabled members of at-risk populations with access and functional needs to live independently within their communities. New technologies, including many types of life-sustaining and assistive DME enable at-risk individuals to assist, support, or manage their own healthcare needs in non-acute and home settings. This ASPR TRACIE fact sheet provides information on general DME categories and focuses on electricity-dependent DME that may be affected by disasters and emergencies, including power failures. It also includes information to assist healthcare system preparedness stakeholders plan for medically vulnerable populations who rely on DME.

Durable Medical Equipment

DME is defined by the Centers for Medicare & Medicaid Services (CMS) as equipment that provides therapeutic benefits to a patient in need because of certain medical conditions and/or illnesses. DME must be ordered and prescribed by a doctor **and** meet these criteria:

- Durable (can withstand repeated use)
- Used for a medical reason
- Not usually useful to someone who isn't sick or injured
- Used in your home
- Has an expected lifetime of at least 3 years

Examples of DME include: wheelchairs (manual and electric), hospital beds, ventilators, oxygen concentrators (and accessories), nebulizers, monitors, traction equipment, canes, crutches, walkers, pressure mattresses, lifts, infusion and feeding pumps, and various other equipment.

DME that Medicare covers includes equipment that can be rented, such as:

- Air-fluidized beds and other support surfaces
- Diabetic supplies including blood sugar monitors and test strips
- Blood sugar (glucose) test strips
- Canes (except white canes for the blind)
- Commode chairs
- Continuous passive motion machine
- Crutches
- Hospital beds
- Infusion pumps and supplies (when necessary to administer certain drugs or nutrition)
- Manual wheelchairs and power mobility devices

- Nebulizers and nebulizer medications
- Oxygen equipment and accessories
- Patient lifts
- Sleep apnea and Continuous Positive Airway Pressure (CPAP) devices and accessories
- Suction pumps
- Traction equipment
- Walkers

Millions of individuals rely on DME to meet their activities of daily living needs, manage their chronic medical conditions, or support other functional needs. Disasters or emergencies can result in disruptions to critical infrastructure systems (electricity, power, water) which adversely affect individuals who rely on electricity-dependent DME for activities for daily living and critical life support functions. These disruptions can result in individuals having to evacuate or relocate from their homes and seek assistance to ensure their continued access to their DME or DME suppliers. Lack of ability to use certain types of equipment due to loss of electricity (e.g., CPAP machines), can also impact Medicare coverage and reimbursement. Some DME have a daily minimum usage requirement for coverage.

Replacing DME from CMS during a Disaster

CMS provides information on [coverage exceptions during a declared disaster](#) and information on [DME replacement in a disaster](#). CMS also provides [specific guidance](#) to beneficiaries affected by disasters, including a list of [DME Suppliers](#) that are searchable by zip code to assist in replacing damaged DME. Individuals covered by other insurance would need to check with their providers for this kind of information.

Electricity-Dependent Durable Medical Equipment

Disasters or emergencies, particularly those that disrupt critical infrastructure systems such as power or water, can cause life-threatening situations for those who depend on electricity-powered DME.

Electricity- and power-dependent DME consists of three overarching categories:

Oxygen and Related Respiratory Devices—Respiratory therapy equipment that provides treatment of breathing disorders and other cardiopulmonary needs.

- Ventilators
- C-PAP-Continuous Airway Pressure Device
- BiPAP Bi-Level Positive Airway Pressure Device
- Powered Suction Pumps
- Oxygen Concentrators

Infusion/Intravenous and Feeding Equipment—

Equipment/devices that deliver fluids, nutrients, and medications into an individual's body in controlled amounts.

- Infusion Pumps
- Insulin Pumps

Mobility Assistive Equipment—Equipment that provides the ability to perform one or more mobility-related activities of daily living (ADL) or instrumental activities of daily living (IADL) in or out of the home, including access to the community.

- Power Wheelchairs
- Power Scooters
- Semi-Electric Wheelchairs

The following quick reference list outlines key information on electricity-dependent DME.

Electricity-Dependent DME Quick Reference List

- **Bi-level Positive Airway Pressure Device (BiPAP)**- Provides pressure-controlled ventilation in a system allowing unrestricted spontaneous breathing at any moment of the ventilatory cycle.
- **Cardiac devices**-Include left, right, and bi-ventricular assist devices (VADs), and total artificial hearts (TAHs). VADs and TAHs are mechanical pumps that are used to support or replace heart function in people who have some form of heart failure.
- **Electric Bed**-Bed designed with features including adjustable height for the entire bed, the head, and the feet, adjustable side rails, and electronic buttons to operate both the bed and other nearby electronic devices.
- **Enteral Feeding Tube**-Medical device used to provide nutrition to patients who cannot obtain nutrition by mouth, are unable to swallow safely, or need nutritional supplementation.
- **IV Infusion Pump**-Used to deliver fluids, medication, or nutrients into a patient's circulatory system. Pumps are often used to deliver antibiotics, chemotherapy drugs, and pain relievers into a patient's body in controlled amounts.
- **Motorized Wheelchair or Scooter**-Useful for those unable to propel a manual wheelchair. They are used by both people with mobility impairments and those with cardiovascular or fatigue-based conditions.

It is important to note that many healthcare providers do not realize that insurers commonly require a prescription for the DME and a separate prescription for a back-up battery. Many at-risk individuals currently do not have back-up batteries due to lack of awareness across the healthcare system and provider communities. Healthcare providers should be encouraged to determine if their patient's insurance plans require a prescription for both and ensure their patients have both prescriptions to help protect their health in a prolonged power outage, emergency, or disaster.

- **Oxygen Concentrator**- Extracts and concentrates oxygen from the air and delivers it to the patient via tubes or masks. Concentrators may be used to provide life-maintaining/saving oxygen 24-7 or during select periods throughout the day to provide supplemental oxygen required for certain respiratory conditions.
- **Suction Pump**- Used by those who have difficulty raising or clearing mucosal secretions inside the air passages. They are often prescribed for conditions pertaining to air passages, the throat or mouth, dysfunction of the swallowing muscles, or tracheostomies.
- **Ventilator**- Provides life-maintaining/saving oxygen for an individual 24/7. Ventilators provide high frequency chest wall oscillation (inflating and deflating of the chest) to thin mucus and ultimately clear it from the lung airways.

Healthcare Utilization for Electricity-Dependent DME Needs

Emergencies, particularly with prolonged power outages or that require evacuation, can quickly create life threatening situations for people who depend on DME. Some may seek assistance from local emergency medical services (EMS) or access to care and electricity from local hospitals, other healthcare providers, or available shelters. Others may shelter-in-place and put themselves at risk due to a lack of resources, transportation, and/or the ability to evacuate. Both situations can lead to significant increases in healthcare system stress and potential adverse outcomes for these at-risk populations. It is imperative that healthcare organizations have plans to meet the needs of the electricity-dependent DME populations within the communities they serve.

Electricity-Dependent DME & Shelter Operations

Certain emergencies or disasters require electricity-dependent DME individuals to evacuate, leaving them inadvertently separated from their critical electricity supplies. In addition to healthcare facilities, electricity-dependent people will also seek support at community-based shelters. Emergency managers and public health providers should plan ahead to ensure that these community members will be able to obtain access to electricity and power sources to support DME equipment.

If electricity is available, priority should be given to electricity-dependent DME users who use life-sustaining (respiratory, cardiac) medical equipment. Those who depend on electricity-powered wheelchairs and scooters for mobility must be able to frequently recharge this equipment to ensure they are able to move about and participate in services offered by the shelter.

Special Needs Shelter Planning Resources

- [Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters](#)
- [Special Needs Sheltering](#)
- [Sample Special Needs Shelter Application](#)
- [Access and Functional Needs Topic Collection](#)
- [Utility Failures Topic Collection](#)

HHS emPOWER Map 3.0 Tool

To help communities address the added risks for these electricity-dependent vulnerable populations, ASPR developed the [HHS emPOWER Map](#) tool through a partnership with CMS. The HHS emPOWER Map strengthens the ability of local health departments, healthcare organizations, first responders and their community partners ability to anticipate, plan for, and support response and recovery activities for electricity-dependent DME users and other at-risk individuals with access and functional needs that may be adversely impacted and require assistance in an emergency. The innovative, public, and interactive map provides monthly de-identified Medicare data—down to the zip code level—and an expanded set of near real-time hazard tracking services. Together, this information provides enhanced situational awareness and actionable information for assisting areas and at-risk populations that may be impacted by severe weather, wildfires, earthquakes, and other disasters. Some examples of how this tool can be used include but are not limited to:

- Public health and emergency management officials can determine shelter locations and shelter resource needs, plan for evacuations by identifying potential routes, and develop improved public communications.
- Hospitals, healthcare coalitions, and first responders, including EMS, can identify healthcare resource needs and potential areas of hospital and EMS surge.
- Local electric companies can identify the areas that will require prioritized power restoration to protect health and save lives.
- Community businesses and civic organizations can use the data to identify ways to support the community in an emergency, such as providing charging stations for device batteries.

Public health authorities may access more detailed de-identified data for electricity-dependent populations via the HHS emPOWER Program. A [factsheet](#) regarding the HHS emPOWER Program is available under the resources section of the HHS emPOWER Map. Additional inquiries about this data should be directed to your appropriate [ASPR Regional Administrator/Emergency Coordinator](#) and the [HHS emPOWER Program](#).

The HHS emPOWER Map has been used for proactive outreach through HHS Joint exercises with City of New Orleans, State of Arizona, Broome County/New York State, City of Chicago, New York City, and real-world emergency responses throughout the country.

Planning & Response Considerations for Electricity-Dependent DME Users

Public health medical organizations, and other emergency support function partners can incorporate the following considerations in their preparedness and response efforts to meet the needs of electricity-dependent DME users:

- Community collaboration when planning for electricity-dependent populations can ensure a whole community approach to address the unique needs of the at-risk individuals with [access and functional needs](#), including older adults and people with chronic illnesses.

- Ensure [special needs registries](#) (for medical and specialty shelter planning) are frequently validated and updated, and identify and address registrants' preparedness resource gaps . These registries should properly coordinate care ahead of time and ensure registrants know what to do, where to go, and what to take with them to a shelter.
- Hospitals should engage their biomedical or clinical engineering departments as there may be an impact with existing policies that hospitals have in place regarding patients bringing, or not being allowed, to use their devices on hospital premises.
- DME suppliers will play a critical role in providing basic and advanced medical equipment to individuals and facilities across the healthcare community; it is imperative to ensure suppliers have emergency and business continuity plans which address [supply chain continuity](#).
- Identify regional [CMS-preferred DME suppliers](#) and reach out include them within the planning process. Consider engaging DME suppliers in drills and exercises.
- Healthcare coalition partners, EMS and local public health authorities, should utilize [HHS emPOWER Map 3.0](#) data to identify electricity dependence in their catchment area, anticipate a potential surge in care demands, update their emergency plans, and identify potential mitigation measures to reduce surge in an emergency.
- Coordination along the healthcare continuum can significantly enhance resource utilization. It is important to engage community-based healthcare providers (e.g., outpatient facilities) who may be able to support response efforts by providing electricity (if available) for the types of equipment that only need recharging.

Related ASPR TRACIE Fact Sheets

- [CMS and Disasters: Resources at Your Fingertips](#)
- [Considerations for Oxygen Therapy in Disasters](#)
- [EMTALA and Disasters](#)

Agencies and Organizations

Centers for Medicare & Medicaid Services (CMS)

- [Durable Medical Equipment](#)
- [Hurricane Maria and Medicare Disaster Related United States Virgin Islands and Commonwealth of Puerto Rico Claims](#)
- [Medicare Coverage of Durable Medical Equipment and Other Devices](#)
- [Medicare's Durable Medical Equipment Supplier Directory](#)
- [Requesting an 1135 Waiver](#)

U.S. Food and Drug Administration

- [Emergency Use Authorization of Medical Products and Related Authorities](#)
- [FDA Offers Tips about Medical Devices and Hurricane Disasters](#)
- [Medical Devices](#)
- [Medical Devices that Have Been Exposed to Heat and Humidity](#)

Electricity-Dependent Medical Equipment Planning Resources

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Mass Care and Shelter Operations Resources

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