The HHS emPOWER Emergency Planning De-identified Dataset informs and supports emergency preparedness, response, recovery, mitigation, and resilience activities. This restricted tool, updated monthly, provides public health authorities (PHA) with the total number of Medicare claims by type of electricity-dependent durable medical equipment (DME) and cardiac device, and certain health care services in a geographic area.

How can a PHA access this dataset?

ASPR Regional Administrators and/or Regional Emergency Coordinators (RA/REC) distribute the HHS emPOWER Emergency Planning De-identified Dataset each month to approved state, territorial, and certain major metropolitan area (MMA) (as defined by ASPR’s Hospital Preparedness Program) PHAs. The HHS emPOWER Emergency Planning Dataset is approved for use by the state/territory and local health department, either directly or in collaboration with their ESF-8 and 6, or other partners as appropriate, for public health emergency preparedness, response, recovery, mitigation, and resilience activities only.

This data is not to be used for research purposes, and all other potential uses of this data, including public reports and media, require prior approval from ASPR and CMS. All requests for approval must be sent to the HHS emPOWER Program Director at empower@hhs.gov.

What information is included in this dataset?

The HHS emPOWER Emergency Planning Dataset provides monthly total counts of Medicare claims by type of electricity-dependent DME and cardiac device as well as additional health care services, provided below. More detailed information on each data type is available in the Quick Data Reference Guide:

- **Electricity-dependent DME and Cardiac Devices**: Ventilators, oxygen concentrators, BiPAPs, enteral feeding machines, intravenous (IV) pumps, suction pumps, at-home dialysis machines, electric wheel chairs and scooters, electric beds, and cardiac devices that include right, left, and biventricular assistive devices (LVAD, RVAD, BIVAD) and total artificial hearts (TAHs).
- **Outpatient Facility Dialysis**: Services for dialysis treatment in an outpatient facility.
- **Home Health Care Services**: Services for home health care, including skilled nursing care, physical therapy, etc.
- **Oxygen Tank Services**: Home oxygen tank service delivery for patients with qualifying conditions.
- **Home Hospice Care Services**: Hospice services provided in a personal residence for an individual with a terminal illness.

What are some uses for this dataset?

Authorized PHAs receive the dataset each month and use its detailed de-identified data (the data does not include any protected individual or health information) to inform and support decision making prior to, during, and after an incident, emergency, or disaster. Key activities may include, but are not limited to:

- Anticipate potential health system surge and leverage resources to mitigate stress
- Assess accessible transportation needs and evacuation routes
- Identify and address potential gaps in emergency resources
- Identify optimal locations, staffing, resources, and power needs for shelters and/or charging stations
- Develop emergency plans, systems, processes, and triggers
- Inform power restoration prioritization decisions
To protect the privacy of Medicare beneficiaries, the HHS emPOWER Program uses several de-identification methods\(^1\) to minimize, if not eliminate, the possibility that someone could identify individuals based on location or the type of DME or health care service used.

Data included in this dataset is limited to only the minimum necessary to inform emergency preparedness, response, recovery, mitigation, and resilience public health activities.

This dataset only includes living, current enrollees in Medicare Fee-for-Service (Parts A, B) and Medicare Advantage (Part C) that had a claim for certain DME and health care services during a specific period of time. The primary de-identification methods are as follows:

**Remove all personally identifiable information** (e.g., name, date of birth, race, gender, age, etc.) to minimize, if not mitigate, risk of re-identification from distinguishability or replicability from other data.

**Aggregate all data** to the state, territory, county, MMA, and ZIP Code levels to blur data precision.

Identify all states, territories, MMAs, counties, or ZIP Codes that have a claims total between 1 and 10 (e.g., a ZIP Code with only 3 Medicare claims), and mask them so that they are shown as 11. This step most commonly occurs at the ZIP Code level.

- **The HHS emPOWER Program uses a threshold of 11 in accordance with federal government and the Centers for Medicare & Medicaid Services (CMS) policy requirements\(^2\) to minimize re-identification risk while still providing an appropriate level of information to inform and support emergency preparedness, response, recovery, mitigation, and resilience activities.**

- **State/Territorial and MMA Data Totals.** State and territory aggregated data totals include actual values, unless the state or territory has only one masked ZIP Code.

- **States/Territories/MMAs with only one masked ZIP Code** (with a value of 11) will have an aggregated total that includes the masked ZIP Code as an “11” rather than its actual value. This ensures that the individuals in the ZIP Code cannot be easily discovered.

- **County Data Totals.** When computing county aggregated data totals, the actual ZIP Code values (those greater than 11) and masked ZIP Code values (those less than 11) for that county are added together. This additional protective measure ensures the small cell size cannot be identified by comparing data at the other geographic levels.

Conduct rigorous tests each month on each of the datasets to ensure all protective methods have been applied. If a new risk is identified, additional de-identification methods will be developed, implemented, and integrated into the data cycle to minimize, if not mitigate, risk of small cell value deduction or re-identification from data-linking.

\(^1\) Methodologies in accordance with the Health Information Portability Act of 1996 information and portability expert determination requirements. More information is available at https://www.hhs.gov/hipaa/for-professionals/privacy/special-topics/de-identification/index.html.

\(^2\) CMS Cell Size Suppression Policy dictates that no cell can be reported that allows a value of 1 to 10 to be derived from other reported cells or information. More information is available at https://www.resdac.org/articles/cms-cell-size-suppression-policy.
Follow this guide to explore the key components of the HHS emPOWER Emergency Planning De-identified Dataset and apply basic analytic techniques to support planning activities.

**Get Started**

1. Access your most recent emPOWER Emergency Planning Dataset or your county's information from your state, territorial, or MMA PHA.
2. Open the Excel formatted dataset in Microsoft Excel.
3. Familiarize yourself with the various dataset tabs:

   - **Menu**
     - Table of contents, data descriptions, and lookback periods for each DME, device, and health care service.

   - **Data Overview**
     - Detailed descriptions of data types (e.g., DME) and data reference periods.

   - **State/ Territory/ MMA Actual Data**
     - Totals counts of beneficiaries by type of DME, device, and health care service, and other information at the state, territory, or MMA level.

   - **County De-identified Data**
     - Total counts of beneficiaries by type of DME, device, and health care service at the county or MMA level.

   - **ZIP Code De-identified Data**
     - Total counts of beneficiaries by type of DME, device, and health care service at the ZIP Code level.

   - **Parent-Child ZIP Code Mapping**
     - A key showing the ZIP Codes (Child) without geospatial boundaries (e.g., P.O. Box) that have been added to the ZIP Code (Parent) they reside in that has geospatial boundaries.

**Dive In: Familiarize Yourself with the Data**

**Step 1: Review the Menu Tab**

Review the geographic areas covered by this dataset, the types of DME, device, and health care service data provided, and the number of months that the data covers (shown as the "lookback period" column).

Scroll down to note the de-identification methods and considerations included at the bottom of the tab.

**Key Concept: Lookback Period**

A lookback period is the range of time during which the HHS emPOWER Program looks for a claim for a device, DME, or health care service. The lookback period starts on a reference date and looks backwards for 3, 13, or 36 months, or 5 years, depending on the reimbursement policy for each type of device, DME, or health care service.

For example, a Jan 2019 dataset had accurate data as of Dec 28, 2018. This dataset would include all of the in-facility ESRD claims from the prior 3 months, between Sept 29, 2018 and Dec 28, 2018.
Step 2: Review the Data Overview Tab

1. Review the **Reference Dates** section: Provides the date for each CMS database that beneficiary and claim data was obtained to generate the current emPOWER Emergency Planning De-Identified Dataset.

2. Review the **Data Description** section: Provides definitions and criteria for the various DME, device, and health care services included in this dataset.

3. Review the **Notes**: Summarizes methods to de-identify the data (described on page 2) and ZIP Code (parent/child) considerations.

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**Table 1. Complete ZIP Code list**

<table>
<thead>
<tr>
<th>ZIP Code</th>
<th>ZIP Code Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001</td>
<td></td>
</tr>
<tr>
<td>10002</td>
<td></td>
</tr>
<tr>
<td>10003</td>
<td></td>
</tr>
<tr>
<td>10004</td>
<td></td>
</tr>
<tr>
<td>10005</td>
<td></td>
</tr>
<tr>
<td>10006</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2. Parent ZIP Codes with corresponding Child ZIP Codes**

<table>
<thead>
<tr>
<th>Parent ZIP Code</th>
<th>Parent ZIP Code Name</th>
<th>Child ZIP Codes Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>10001</td>
<td>ZIP Code 1</td>
<td>10002, 10005</td>
</tr>
<tr>
<td>10006</td>
<td>ZIP Code 6</td>
<td>10004</td>
</tr>
</tbody>
</table>

*Parent/Child is a term of art for component geographies, or boundaries selected within larger boundaries. This term does not refer to human parents and children.*

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Step 3: Review the “Parent/Child ZIP Code Mapping” Tab

Read the description of Parent/Child ZIP Codes in the upper left-hand corner of the “Parent/Child ZIP Code Mapping” tab. Then, review the Parent/Child* ZIP Codes listed on that tab.

**Key Concept: Parent/Child ZIP Codes**

Some ZIP Codes do not have specific geospatial boundaries (e.g., P.O. Box ZIP Codes). To ensure we continue to capture the population data for planning purposes, the HHS emPOWER Program identified the larger boundary ZIP Code (Parent) within which the non-boundary ZIP Code (Child) resides. The totals are added together and displayed under the parent ZIP Code.
Obtain Insights: Review and Evaluate the Data by Geographic Area

Step 1: Review the “State Actual Data,” “Territory Actual Data,” or “MMA Actual Data” Tab

This tab provides the total number of beneficiaries with a claim for select electricity-dependent DME and devices and/or health care services. This tab’s single row of data provides PHAs with an overview of the at-risk population in their state, territory, or MMA.

1. Open the “State Actual Data,” “Territory Actual Data,” or “MMA Actual Data” tab.
2. Review each of the columns and their totals. Scroll to the right on the Excel spreadsheet to view all of the columns.

Common Questions and Key Concepts

A Why is it important to know the number of beneficiaries enrolled in each Medicare plan or enrollment type?

CMS may temporarily waive or modify certain Medicare requirements in the event of a Presidential emergency or disaster declaration, or HHS Secretary-declared public health emergency, to help ensure sufficient health care items or services are available to meet the needs of individuals enrolled in Medicare residing within the emergency area. Due to plan differences between Medicare Fee-for-Service and Medicare Advantage, there may be variation in what is allowed and/or how it is implemented, which is important for informing continuity of care. Additional information in accessible formats is also available on the Medicare.gov website or by contacting 1-800-MEDICARE (1-800-633-4227).

B Why do we include information about Medicare beneficiaries that are “dual eligible” and enrolled in both a Medicare and state-operated Medicaid program?

Studies have shown that at-risk individuals that qualify and are enrolled in both a Medicare and state-operated Medicaid Program may be more adversely impacted in the event of an emergency due to their chronic illness, disability, and socioeconomic status. Many of these at-risk individuals commonly depend on public or locally supported medical and other accessible transportation services for transportation to and from their health care providers and services, including outpatient dialysis facilities.

C Why is the number in the “All Power Dependent” column lower than the combined numbers under “Power Dependent Devices and DME”?

The “All Power Dependent” column may be lower for two reasons:

1. Some columns are masked (11), so they represent anywhere from 1 to 11 individuals with that DME/device, and each column represents the aggregated total for just one specific DME or device within a geographic area.
2. Medicare beneficiaries are counted just once in the “All Power Dependent” column; however beneficiaries with claims for multiple DME and devices may be double-counted across all other columns for which they apply.

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3 Presidential declarations may be made under the Stafford Act or National Emergencies Act; HHS Secretary public health emergency declarations may be made under Section 319 of the Public Health Service Act.
Step 2: Review and Understand the “County De-identified Data” Tab

This tab provides the monthly total Medicare claims for select electricity-dependent DME and devices, as well as health care services, at the county level.

1. Open the “County De-identified Data” tab and review all of the columns. Reminder: County-level data totals include actual (>11) and masked (11) ZIP Code values.

2. Analyze the data using sort and filter functions, create charts, and/or map the data using a Geographic Information System (GIS) application.

What is a FIPS Code?
A Federal Information Processing Series (FIPS) code is a numeric code assigned by the National Institute of Standards and Technology to uniquely identify geographic areas. They are included in this dataset to assist GIS analysts in mapping and analyzing the data geospatially.

Why are there columns called “# Masked ZIP Codes”?
Since county aggregated totals are summarized from actual (>11) and masked (11) ZIP Code values, the number of masked ZIP codes, per county, is included to help analysts understand potential inflation.

In this example, the second county has 4 masked ZIP Codes for At-Home Hospice. The actual number of Medicare beneficiaries with a claim for at-home hospice is between 4 and 44, depending on the true value of the masked cells. Planners may want to use the baseline number, or they may use the higher number in this range. Using the higher number may help better address potential needs of these beneficiaries and individuals who are not included in the dataset but similarly rely on these essential services. For more information on why and how the data is masked, see page 2.

Step 3: Review and Understand the “ZIP Code De-identified Data” Tab

This tab provides the monthly de-identified total number of Medicare claims for select electricity-dependent DME and devices, as well as health care services, at the ZIP Code level.

1. Open the “ZIP Code De-identified Data” tab and review all the columns.

2. Analyze the data using sort and filter functions, create charts, and/or map the data using a GIS application.
De-identified emPOWER data can be used to understand the needs of specific at-risk populations, including oxygen-dependent, and implement targeted public health activities across the emergency management cycle to protect health and save lives.

**Use the data to answer:** How many O2 dependent at-risk individuals are in this state?

- **30,982** O2 Services (tanks)
- **63,655** O2 Concentrators
- **2,971** BiPAPs
- **2,916** Ventilators
- **100,524** O2 Dependent*

*HHS emPOWER Program Medicare data, Illinois, January 2019. Note that the de-identified total may be slightly larger than the actual total as some individuals may have a claim for more than one of the listed DME or services.

**Partner With State, Regional, and Local Partners (as appropriate)**

- **Preparedness:** Assess & establish plans, contracts, capabilities, & communications to assist DME population shelter, re-charging station, evacuation, & power restoration needs.
- **Response:** Activate plans, capabilities, and contracts to support the needs and assess supplier capacity for continuing community-based health services during the emergency.
- **Recovery:** Prioritize DME and healthcare suppliers’ access to shelters/community to expedite repair, replacement, or services to help expedite safe returns to personal residences or alternate locations.
- **Mitigation:** Integrate power needs into shelter and recharging station planning and transportation support to expedite resources for DME and healthcare needs in the future.

**Exercise: Using the Data to Identify Oxygen Needs**

**Example Scenario:** A county is facing a wildfire threat and working to open a general population shelter to accommodate evacuees and their access and functional needs. Use the HHS emPOWER Emergency Planning De-Identified Dataset to help inform potential oxygen needs in the shelter. Open the most recent dataset or access county specific data in the dataset to complete this exercise.

**Step 1:** On the “ZIP Code De-identified Data” tab, sort the dataset so that you only see data for a specific county.

- **A. Select the triangle on the County column**
- **B. In the drop-down box, unselect “Select All” and select the county name**
- **C. Select the “OK” button to finish**

- After filtering, this example shows only the three rows for County B:

**Step 2:** Scroll to the right to view the de-identified claims totals for oxygen tank services, oxygen concentrators, and BiPAPs in the county.

**Step 3:** Add all totals together to identify a baseline total of oxygen needs for the shelter. In this example for County B, the baseline oxygen need for concentrators is roughly between 101 and 111.

**Step 4:** Using a Geographic Information System (GIS) application, if available, assess the density of oxygen populations across the county and in relation to identified shelter locations in the county.

**Step 5:** Determine if the county’s current contracted amount for oxygen can address the oxygen needs of at-risk individuals based on evacuation plans and routes and current geospatial densities of them in relation to the locations of shelters. Determine if current shelter staffing and credentialed medical volunteers can assist the projected number of individuals that may require assistance. Based on these analyses, adjust emergency planning and response operation asset allocation and resources to better ensure continuity of services and assistance for the oxygen dependent populations.

Contact empower@hhs.gov for more information

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