HHS EMPOWER EMERGENCY PLANNING DATASET JOB AID

The <u>HHS emPOWER Emergency Planning Dataset</u> provides de-identified totals, which is updated monthly, for at-risk electricity-dependent Medicare beneficiaries in a geographic area, down to the ZIP Code. This restricted tool helps public health authorities (PHAs) and their approved partners better inform and support targeted emergency preparedness, mitigation, response, and recovery activities.

What is electricity dependency?

The HHS emPOWER Program data covers 4.5 million at-risk Medicare beneficiaries, of which approximately 3 million rely on electricity-dependent durable medical and assistive equipment (DME) and devices. Additionally, 2.8 million of the at-risk Medicare beneficiaries rely on certain essential health care service(s) (e.g., oxygen tank services, dialysis, etc.) to live independently in their home. Incidents that cause prolonged power outages, such as severe weather or disasters, can be life threatening for these individuals in hours to days. During power outages, many of these individuals quickly seek access to care and/or secure power, which can overwhelm emergency medical services (EMS), hospitals, and shelters. Others may shelter in place as they are unable to evacuate safely without assistance, putting their lives at risk. Please see below for additional data information.

How can a PHA access this dataset?

ASPR Regional Administrators and/or Regional Emergency Coordinators (RA/REC) distribute the HHS emPOWER Emergency Planning Dataset each month to approved state, territorial, and certain major metropolitan areas (MMAs) (as defined by ASPR's Hospital Preparedness Program) PHAs. The HHS emPOWER Emergency Planning Dataset is then approved for use by the state/territory and local health department, either directly or in collaboration with their Emergency Support Function (ESF)-8 and 6, or partners as appropriate, for emergency preparedness, mitigation, response, and recovery activities only. This dataset is not to be used for research purposes, and all other potential uses of this dataset, including public reports and media, require prior approval from ASPR and Centers for Medicare and Medicaid Services (CMS). All requests for approval must be sent to the HHS emPOWER Program Director at empower@hhs.gov.

📰 How can this dataset help PHAs and their partners prepare for an emergency?

Authorized PHAs and their partners, such as health care coalitions, use the HHS emPOWER Emergency Planning Dataset to inform and support decision making prior to, during, and after an incident, emergency, or disaster. Examples include:



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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

\downarrow_z^A What data is included in the dataset?

The HHS emPOWER Emergency Planning Dataset provides monthly total counts of Medicare claims by type of electricity-dependent DME and cardiac device, certain essential health care services and combinations of these at-risk data. More detailed information on each data type is available in the Quick Data Reference Guide:

- Electricity-dependent DME and Cardiac Devices: Ventilators, oxygen concentrators, Bi-level Positive Airway Pressure Device, enteral feeding machines, intravenous pumps, suction pumps, at-home dialysis machines, electric wheelchairs and scooters, electric beds, and cardiac devices that include right, left, and biventricular assistive devices and total artificial hearts.
- **Outpatient Facility Dialysis:** Services for dialysis treatment in an outpatient facility.
- Home Health Care Services: Services for home health care, including but not limited to: 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 terminally ill individual.



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 decision making



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DE-IDENTIFICATION METHODS

To protect the privacy of Medicare beneficiaries, the HHS emPOWER Program uses several de-identification methods¹ to minimize, if not eliminate, the possibility that someone could identify individuals based on location, the type of electricity-dependent DME and devices used, and or the health care service received.

Data included in this dataset is limited to only the minimum necessary to inform emergency preparedness, mitigation, response, and recovery 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 electricity-dependent DME and/or certain essential health care services during a specific period. The primary de-identification methods are as follows:

Remove all personally identifiable information (e.g., name, date of birth) 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.

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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 CMS policy requirements² to minimize re-identification risk while still providing an appropriate level of information to inform and support emergency preparedness, mitigation, response, and recovery.
- 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.

# O2 Services [Tanks]	# Masked Zip Codes in County	
426	10	
65	3	
93	3	•
185	3	



For example, for the first row, the O2 Services (Tanks) actual total may be between 316 and 426:

County Aggregated Totals

- If every ZIP Code marked with an 11 was a 1, then the total number of O2 Services (Tanks) would be 426 minus 11x10 (110), or 316.
- If every cell marked with an 11 was 11, then 426 is the real total.

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 <u>Methodologies in accordance with the Health Information Portability Act of 1996 information and portability expert determination requirements</u>. 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

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.



HHS EMPOWER PROGRAM

HOW TO USE THE HHS EMPOWER EMERGENCY PLANNING DATASET (PART 1 OF 4)

Follow this guide to explore the key components of the HHS emPOWER Emergency Planning Dataset and apply basic analytic techniques to support planning activities.

Get Started

- 1. Access the most recent HHS 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 below:

Zip Code	P.O. Boxes and Unknowns)	Dialysis (3 months)	Services [Tanks] (13 months)	(3 months)	Hospice (3 months)	Dependent Devices and DME	(5 years)	(13 months)
60025	7,569	19	58	126	18	218	11	12
60026	3,175	11	16	46	11	93	11	11
60029	48	0	11	11	11	11	0	0
Menu	Data Overview	Parent-Child Zip	Code Mapping	State Actual	Data County	De-Identified Data	Zip Code De	-Identified Data
(1)	(2)		3	(4)		5		6

Menu

Table of contents, data descriptions, and lookback periods for each electricity-dependent DME and devices, and health care service.

2 Data Overview

Detailed descriptions of data types (e.g., electricity-dependent DME) and data reference periods.

3 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 electricity-dependent DME and devices, 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 the type of electricitydependent DME and devices and 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 DME, device, and health care service.

4 State / Territory / MMA Actual Data

Totals counts of beneficiaries by type of electricitydependent DME and devices, health care service, and the at-risk combinations data at the state, territory, or MMA level.

5 County De-Identified Data

Total counts of beneficiaries by type of electricitydependent DME and devices, health care service, and at-risk combinations data at the county level.

6 ZIP Code De-Identified Data

Total counts of beneficiaries by type of electricitydependent DME and devices, health care service, and at-risk combinations data at the ZIP Code level.

Number of Beneficiary Addresses (Excludes P.O. Boxes and Unknowns)**

At Risk Populations*:	Lookback Periods
In-Facility ESRD	3 months
Oxygen Services (Tanks)	13 months
Home Health Services	3 months
At-Home Hospice	3 months
Power Dependent [All Devices and DME]***	Varied
Power Dependent Cardiac Devices	5 years
Ventilators	13 months
BIPAPs	13 months
Oxygen Concentrators	36 months
Enteral Feeding	13 months
IV Infusion Pumps	13 months
Suction Pumps	13 months
At-Home ESRD	3 months
Motorized Wheelchairs or Scooters	13 months
Electric Beds	13 months

De-Identification Methods/Privacy Protection

Removed all personal identifiers and information. Aggregated data to the county level using sums of actual and masked zip code values. Masked all data variables with a cell size between 1-10 to 11.

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ASPR Administration for Strategic **Preparedness & Response** HHS HOW TO USE THE HHS EMPOWER EMERGENCY EMPOWER PLANNING DATASET (PART 2 OF 4) PROGRAM Step 2: Review the Data Overview Tab Review the Reference Dates section: Provides the date for each CMS database from which beneficiary and claim data was obtained to generate the current HHS emPOWER Emergency Planning Dataset. Review the **Data Description** section: Provides definitions and criteria for the various electricitydependent DME and devices and certain essential health care services included in this dataset. Review the **Notes**: Summarizes methods to de-identify the data (described on page 2) and ZIP Code (parent/child) considerations. HHS emPOWER Program - August 2022 Update Data Overview REFERENCE DATES DATA DESCRIPTION End-Stage Renal Disease (ESRD)-In-Facility Dialysis Data: This data is comprised of all Medicare Description Data as of Category beneficiaries that have been identified as having received dialysis treatment in an outpatient facility in the past 3 We restrict the Medicare population beneficiaries alive as of the most recent Medicare Enrollment Database (EDB) available. We Enrollment and additionally restrict to beneficiaries who are enrolled in either Oxygen Services [Tanks] Data: This data is comprised of all Medicare beneficiaries that have been identified 6/1/2022 original Medicare (Parts A/B, also known as fee-for-service or Death as living at home (i.e., not in Long Term Care/Nursing Home) with a rental of oxygen tank services. The rental cap FFS), or Medicare Advantage (Part C), as of the most recent period is 36 months. Dxygen tanks contain oxygen and provide supplemental oxygen required for certain respirator month available in the EDB. conditions. Home Health Services Data: This data is comprised of all Medicare beneficiaries that have been identified as Nursing home residence is determined by using a combination of nursing home-related Medicare FESIMedicare Advantage living at home (i.e., not in Long Term Care/Nursing Home) with a home health visit in the past 3 months. Home healt 5/1/2022 Nursing home claims and the Long-Term Care Minimum Data Set (MDS) visits can be for intermittent skilled nursing care, physical therapy, speech-language pathology services, or assessments as of this date continued occupational therapy services. At-Home Hospice Services Data: This data is comprised of all Medicare beneficiaries that have been identified Power Dependent Power-dependent device and durable medical equipment use is as receiving hospice care while living at home (i.e., not in Long Term Care/Nursing Home) in the past 3 months. Devices and determined by the presence of Medicare FFSIMedicare These services can be for skilled nursing care, physical or occupational therapy, speech-language pathology 7/22/2022 Durable Medical Advantage claims during various lookback periods, all ending on services, medical social services, home health aide services, physician services, related to medical supplies and Equipment Users this date. usage of medical appliances, counseling, and any other services. These services are conferred as part of palliative care for terminally ill beneficiaries who have forgone curative care ESBD natients are identified as receiving In-facility dialusis End-Stage Renal Power-dependent Devices and DME Data: This data is comprised of all Medicare beneficiaries that have treatment or at-home dialusis DME by the presence of Medicare 7/22/2022 been identified as living at home (i.e., not in Long Term Care/Nursing Home) with a rental claim for the specified Disease (ESRD) FFS claims/Medicare Advantage in the 3 months prior to this equipment. The reimbursement cap period for most types of DME is 13 months. The only exceptions are oxygen date. concentrators, at-home dialysis, and cardiac devices* Oxygen concentrators have a 36 month rental cap. 3 * At-home dialysis is identified through Medicare claims indicating receipt of dialysis treatments at home, not NOTES through Medicare DME claims. We use a 3 month lookback. Medicare requires that a dialusis facility be responsible * Power-dependent medical equipment users are included in counts only if they are not residing in a nursing for providing dialusis services to all patients receiving dialusis at-home should their equipment not function. home or are not receiving long term care. All cells with values from 1-10 have been replaced (masked) with 11. County level summary counts reflect sums of masked and unmasked zip codes Cardiac devices such as ventricular assist devices (VADs) and/or total artificial hearts (TAHs) are implanted withi

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.

Table 1. Complete ZIP	
Code list	

ZIP Code	ZIP Code Name
10001	ZIP Code 1
10002	ZIP Code 2
10003	ZIP Code 3
10004	ZIP Code 4
10005	ZIP Code 5
10006	ZIP Code 6

Table	2.	Parent ZIP	Codes	with	corresponding		
Child ZIP Codes							

Parent ZIP Code	Parent ZIP Code Name	Child ZIP Codes Included			
10001	ZIP Code 1	10002, 10005			
10006	ZIP Code 6	10004			

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



HOW TO USE THE HHS EMPOWER EMERGENCY PLANNING DATASET (PART 3 OF 4)

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 essential 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 the columns.
- 3. Review the Common Questions and Key Concepts below.

Common Questions and Key Concepts

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

CMS may temporarily <u>waive or modify</u> certain Medicare requirements in the event of a <u>Presidential emergency or</u> <u>disaster declaration</u>, or <u>HHS Secretary-declared public</u> <u>health emergency</u>,³ 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 <u>plan differences between</u> <u>Medicare Fee-for-Service and Medicare Advantage</u>, 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 <u>Medicare.gov</u> 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 essential services, including in-facility end-stage renal disease dialysis.

All Power Dependent	C Power Dependent Devices and DME										
# Electricity- Dependent Devices and DME	#Cardiac Devices (5 years)	# Ventilators (13 months)	# BiPAPs (13 months)	# O2 Concentrators (36 months)	# Enteral Feeding (13 months)	# IV Infusion Pumps (13 months)	# Suction Pumps (13 months)	# At-Home ESRD Dialysis (3 months)	# Motorized Wheelchairs or Scooters (13 months)	# Electric Beds (13 months)	
71	11	11	11	50	11	26	11	25	11	12	

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 or device, and each column represents the aggregated total for just one specific electricity-dependent DME or device within a geographic area.
- Medicare beneficiaries are counted just once in the "All Power Dependent" column, however, beneficiaries with claims for multiple electricity-dependent DME and devices may be double-counted across all other columns for which they apply.

³Presidential 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.



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HOW TO USE THE HHS EMPOWER EMERGENCY PLANNING DATASET (PART 4 OF 4)

Step 2: Review and Understand the "County De-Identified Data" Tab

This tab provides the monthly total Medicare claims for select electricitydependent DME and devices, health care services, and at-risk combinations for those that also rely on a health care service(s) and any electricity-dependent DME.

- 1. Open the "County De-Identified Data" tab and review all 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.

County FIPS Code	County	State FIPS Code	State
111	County1	71	AA
222	CountyA	71	AA
222	CountyA	71	AA
222	CountyA	71	AA

Services At-Home Hospice (3 months)			All Power	Dependent		
			Cardiac Device, Ventilator, Enteral Feeding, IV Infusion F ESRD, Motorized Wheelch	BiPAP, Oxygen Concentrator, hump, Suction Pump, At-Home hair, Scooter, or Electric Bed	Cardiac Devices (5 years)	
# At-Home Hospice		# Masked Zip Codes in County	# Electricity- Dependent Devices and DME	# Masked Zip Codes in County	# Cardiac Devices	# Masked Zip Codes in County
	٣	Ŧ		· ·	· ·	
2,021		113	25,462	7	1,336	120
44		4	577	6	55	5
33		3	233	5	0	0
22		2	181	6	22	2
22		2	76	2	11	1
101		8	1,226	10	44	4
11		1	117	4	22	2
		1	312	2	11	1

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 four 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 <u>page 2</u>.

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, essential health care services, and the at-risk combinations 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.

Services All Power Dependent Devices and DM							Comb	inations of At-Risk (iroups	
vices s)	# Home Health (3 months)	# At-Home Hospice (3 months)	# Electricity- Dependent Devices and DME	# Motorized Wheelchairs or Scooters (13 months)	# Electric Beds (13 months)	# In-Facility ESRD # Oxygen Service Dialysis and [Tanks] and Am Any DME DME		# Home Health and Any DME	# At-Home Hospice and Any DME	
Π.	v	v	v	v	v	v	v	v	v	
—	87	11	168	11	20	11	64	19	11	
	135	19	319	11	70	11	73	27	11	
	85	11	169	11	36	11	48	12	11	



To Sort: On the pop-up menu, select "Sort Largest to Smallest" or "Sort Smallest to Largest," depending on what you're looking for. This will re-order the list by number of claims.

To Filter: On the pop-up menu, type a number in the search bar to find a specific number (e.g., all of the 11's), or select only the numbers you wish to display.



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HHS EMPOWER EMERGENCY PLANNING DATASET: PRACTICE SCENARIO

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.



Recovery: Prioritize DME and health care suppliers' access to shelters/community to expedite repair, replacement, or services to help expedite safe returns to personal residences or alternate locations.

Exercise: Using the Data to Identify Oxygen Needs

may have a claim for more than one of the listed electricity-dependent DME or

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 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

devices, and/or essential health care services.



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 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 atrisk 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 allocations and resources to better ensure continuity of services and assistance for the oxygen-dependent populations.



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