Caliper Healthcare Data - August 2017

These data are based on the National Plan and Provider Enumeration System (NPPES) from the Centers for Medicare and Medicaid Service (CMS), a part of the United States Department of Health and Human Services. The Data Dissemination Public File for August 2017 contains 3.8 million individual records and 1.2 million organization records. We also include Medicare payment information. Each record for a provider has a mailing address and a location address. We used the location addresses to locate the records as points in a geographic file. We have only included active providers with location addresses in the United States. A fraction of a percent of records was not located, but those records have been included for completeness.

There are two point geographic files, one for individuals and one for organizations. The organization files have a Provider Organization Name field and fields for the authorized official's last name, first name, middle name, title or position, and telephone number. The individual files have fields for last name, first name, middle name, name prefix, name suffix, credentials, and gender code, as well as a field indicating whether the individual is a sole proprietor. Otherwise, the point geographic files have the same fields.

Each record has one or more taxonomy codes that indicate the licenses held by the provider. One taxonomy code is supposed to be flagged as primary. If no taxonomy code is flagged, the first taxonomy code is the value in the "Primary Taxonomy" field.

There can be up to 15 taxonomy codes. We have removed duplicate codes and sorted the codes in ascending order. The "Taxonomy Codes" field gives the number of codes for a record. All the taxonomy codes are shown twice, one field with the actual code (e.g., "Primary Taxonomy") and a second field with the description (e.g., "Primary Taxonomy Description").

The descriptions are derived from the "Health Care Provider Taxonomy Code Set" at http://www.wpc-edi.com/reference/ The descriptions are designed to be unique in 50 characters or less, and to capture the information in the two or three levels of the taxonomy required for each code.

The original records have an Entity Type Code that is used to separate individuals and organizations. The taxonomy codes are used to separate physicians and other individuals, and separate hospitals, clinics, and other organizations. If any taxonomy code for an individual starts with "20" (Allopathic & Osteopathic Physicians), that individual is considered a physician; the rest are considered other individuals. The same method is used to separate hospitals (any code starting with "28") and clinics ("Ambulatory Health Care Facilities" with any code starting with "26") from other organizations.

The NPPES is for assigning a National Provider Identifier (NPI) to individuals and organizations. Very few individuals have more than one NPI, but many organizations do. Using a method for finding organizations with similar entries in the "Provider Organization Name" field that are at the same location, many records were removed. There can still be more than one organization at a location if the names are sufficiently different. The largest number of similar entries was 88, though 72% of the groups had just one other similar entry.

The Medicare fields come from the "Medicare Fee-For Service Provider Utilization & Payment Data" for 2015. That file has the NPI of the provider, so that records could be joined to the NPPES

records. Values for all the records in the original file are summed for an NPI, and then summed for the organization groups, in case an organization uses more than one NPI to request Medicare payment. The fields are:

- **Medicare Services**: Number of services provided
- **Medicare Beneficiaries**: Number of distinct Medicare beneficiaries receiving the service
- **Medicare Day Services**: Number of distinct Medicare beneficiary/per day services
- **Medicare Allowed Amount**: Medicare allowed amount for the service
- **Medicare Submitted Charges**: Charges that the provider submitted for the service
- **Medicare Payments**: Amount that Medicare paid after deductible and coinsurance amounts have been deducted for the line item service

Caliper Hospital Bed Data - August 2016

In addition, there is a point file with the locations of 6617 hospitals and some information about them, including the address, phone number, hospital type, and number of beds. The data came from the 2014 Indirect Medical Education and Graduate Medical Education data file, part of the Hospital 2552-10 Cost Report Data files from the Centers for Medicare & Medicaid Services, found at https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/Hospital-2010-form.html
These data were augmented with a list of 37 military hospitals, and with a list of 165 Veterans Administration hospitals, for which there is also the number of community-living center (CLC, formerly nursing home) beds.

Most records have a CMS Certification Number (CCN) Provider ID. Where possible, the NPI was determined.

Tips and Tricks for Using the Healthcare Data - August 2017

We have videos on our website to help you make the most out of the healthcare data:
http://www.caliper.com/healthcare/maptitude-healthcare-mapping-tips.htm
Also, in our monthly newsletter we have included various tips and tricks to help users effectively use the Health Care data. These are also available on our website. We have included this information below for your reference.

How Do I Download the Free Healthcare Map Layers for Maptitude – August 2017

June 2015

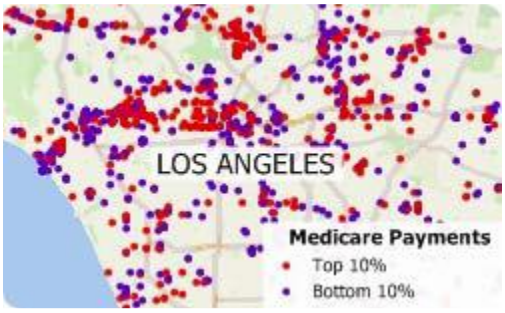
The healthcare map layers for Maptitude 2017 are accessible as a free download. In this tech tip we describe how to install the layers and add them to a map.

The following steps outline how to download and install the free health data layers for Maptitude:

1. Download the data from the Caliper Store.
2. Once the files are downloaded, click **OK**, and then click the **Install** button. Follow the prompts to install the five layers. The three files are **ccHealthcareOrganization.cdf, ccHealthcareProvider.cdf and ccHospital.cdf.**
3. To add one or more of the layers to a Maptitude map, open the map, click the Layers button on the Standard toolbar, and click **Add Layer** in the Layers dialog box.
4. Browse for the folder where the downloaded data are located (e.g., c:\ccdata) choose one or more of the health data layers, and click **Open** in the File Open dialog box.
5. Maptitude adds the layer(s) to the map. Close the layers dialog box to see the layers on the map. Note, you may have to zoom in or turn off autoscaling if your map scale is outside of the autoscale settings for the layer(s) you chose.

How Do I Filter Medicare Payments by Healthcare Provider?

December 2015



Maptitude allows you to filter data based on dollar amounts. Maptitude even has tools that automatically group your data into naturally occurring clusters that can then be filtered. We will show how to do this by filtering physicians by Medicare payments.

The following steps outline how to filter data by using a theme:

1. Choose ***File-New***, choose Map from the New File dialog box, and click OK to start Create-a-Map Wizard and create a General Pupose map of your area of interest.
2. Choose ***Map-Layers*** and click Add Layer to add the Healthcare Provider layer (ccHealthcareProvider.cdf) to the map.
3. Make the Healthcare Provider layer the working layer by choosing it from the drop-down list on the Standard toolbar.
4. Choose ***Map-Thematic Mapping-Color*** to display the Color Theme dialog box.
5. Choose **[Medicare Payments]** from the Field drop-down list, choose **Equal Number of Features** from the Method dropdown list, choose **10** from the # Classes drop-down list, and click **OK**. Maptitude creates 10 equal size groups and displays them as a color theme on the map.
6. Choose ***Selection-Select by Theme***, then click **OK** and then **Yes**. Your thematic data classification has been converted to selection filters.
7. You can now use the filters to analyze the data and you can, for example, hide and show providers based on their Medicare payments using the Display Manager.

How Do I Create a Ring that Encompasses Healthcare Providers?

November 2015

Maptitude allows you to see how big the area is that you will need to visit in relation to the number of healthcare providers that you want to target. Maptitude can create rings so that they contain a particular value such as number of doctor offices. For a video tutorial see: Creating Overlays and Buffers.

The following steps outline how to build a buffer that encompasses a particular type of healthcare provider:

Each record in the healthcare layers has up to 15 taxonomy codes for services provided. Therefore, to filter the records, you will need to create a filter that checks each of the taxonomy fields for the value of interest to you.

1. Choose File-New, choose Map from the New File dialog box, and click OK to start Create-a-Map Wizard and create a General Pupose map of your area of interest.
2. Choose ***Map-Layers*** and click Add Layer to add the healthcare layer you want to analyze.
3. Make the healthcare layer the working layer by choosing it from the drop-down list on the Standard toolbar.
4. Choose ***Dataview-Formula Fields*** to display the Formula dialog box. Use the Formula Builder to create an expression for each of the taxonomy fields for the code that interests you. For example, to use anesthesiologists (207L00000X) from the physician layer, create the following formula:
   if ([Taxonomy 1] = "207L00000X" or [Taxonomy 2] = "207L00000X" or [Taxonomy 3] = "207L00000X" or [Taxonomy 4] = "207L00000X" or [Taxonomy 5] = "207L00000X" or [Taxonomy 6] = "207L00000X" or [Taxonomy 7] = "207L00000X" or [Taxonomy 8] = "207L00000X" or [Taxonomy 9] = "207L00000X" or [Taxonomy 10] = "207L00000X" or [Taxonomy 11] = "207L00000X" or [Taxonomy 12] = "207L00000X" or [Taxonomy 13] = "207L00000X" or [Taxonomy 14] = "207L00000X" or [Taxonomy 15] = "207L00000X") then 1 else 0
5. Choose ***Tools- Analysis- Buffers Toolbox*** to display the Buffers toolbox.
6. Use the Add Temporary Points tool to add one or more points about which you want to study and then click Create Buffers in the toolbox.
7. Choose to create buffers around **All Features** from the Buffers Around drop-down list.
8. Type a name for the new map layer in the **Create Layer** edit box.
9. Check **Build to Value**, choose the source layer (e.g., Physicians) from the **Layer** drop-down list, and choose the formula field you created above from the **Field** drop-down list.
10. Enter the target values you want, separated by spaces or commas (e.g., 10, 50), in the **Values** edit box.
11. Check **Separate Buffers** to have each feature have its own separate buffers.
12. Click **OK**. Maptitude displays the Save As dialog box. Type a file name for the new geographic file, and click **Save**.
13. Maptitude creates a new layer containing the buffers and adds the new layer to the map.

How Do I Filter Healthcare Locations by Taxonomy

October 2015

Maptitude allows you to filter healthcare locations by taxonomy code. You will first need to download the five free healthcare layers here. These map layers include the taxonomy codes and descriptions for each location, e.g., Psychiatric Hospital (283Q00000X), Military Hospital (286500000X), General Acute Care Hospital Children (282NC2000X), Physical Therapy (261QP2000X). You can also filter using Medicare charges and payments.

The following steps outline how to filter the healthcare data:

Each record in the healthcare layers has up to 15 taxonomy codes for services provided. Therefore, to filter the records, you will need to create a filter that checks each of the taxonomy fields for the value of interest to you.

1. Open a map that contains the healthcare layer whose features you want to filter and make the layer the working layer in the map.
2. Choose **Selection-Select by Condition** to display the Select by Condition dialog box.
3. Use the Condition Builder to create a filter that checks each of the taxonomy fields for the code that interests you. For example, to filter anesthesiologists (207L00000X) from the physician layer, create the following formula:
   [Taxonomy 1] = "207L00000X" or [Taxonomy 2] = "207L00000X" or [Taxonomy 3] = "207L00000X" or [Taxonomy 4] = "207L00000X" or [Taxonomy 5] = "207L00000X" or [Taxonomy 6] = "207L00000X" or [Taxonomy 7] = "207L00000X" or [Taxonomy 8] = "207L00000X" or [Taxonomy 9] = "207L00000X" or [Taxonomy 10] = "207L00000X" or [Taxonomy 11] = "207L00000X" or [Taxonomy 12] = "207L00000X" or [Taxonomy 13] = "207L00000X" or [Taxonomy 14] = "207L00000X" or [Taxonomy 15] = "207L00000X"
   You can also copy this formula, paste it into the Select by Condition dialog box and edit the code values.
4. Type a name for the set in the Set Name box and click OK.
5. Maptitude highlights the selected feaures on the map. To hide the features that are not part of the filtered set, choose **Selection-Settings**, highlight the layer at the top of the scroll list, click **Status** to change its status to "invisible," and click Close. Only the filtered features will be displayed on the map.