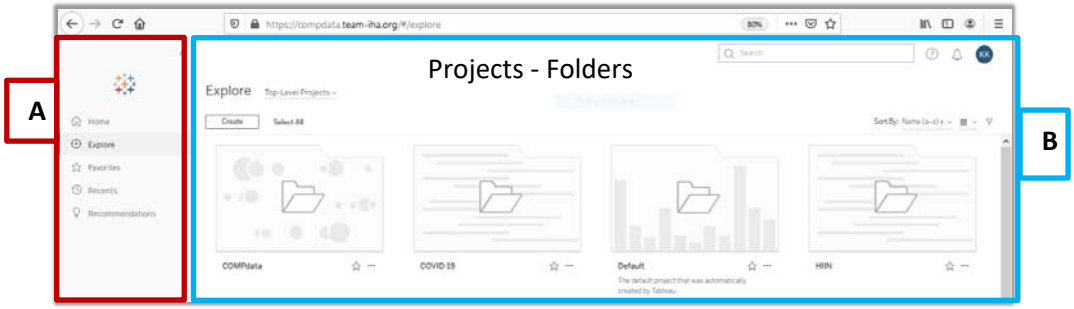
HIDI Advantage Optics Technical Guide

Table of Contents

User Roles and Access Requirements	HIDI Advantage Optics is designed for hospital team members to interact with various data sources in a visual medium. This helps reduce the need for external, third-party tools. Access is provided to users via Hospital User Authorization, or similar document.
Login	To login into the system, please follow this link https://optics.hidiadvantage.net/
Password Policy	Passwords must have a minimum of 8 characters and maximum of 64 characters in length and must include at least 3 of the 4 elements listed: • Upper-case letters • Lower-case letters • Numbers • Symbols or Special Characters
Multi-factor Authentication	Advantage Optics will use multi-factor authentication. Multi-factor Authentication (MFA) is an authentication method that requires the user to provide a verification factor to gain access to Advantage Optics. After entering password, the user will be prompted to add a safe and secure verification method to validate the identity of the user.

Data Uses	Users utilize the data to support key strategic decisions for the hospital or system and the community served.
	
	Some key decisions and analytics include:
	• Executive level reports assessing utilization and length of stay
	• Compare hospital and their peers:
	  o Market share of service area
	  o Payer Mix
	  o Service lines
	• Community needs assessment evaluation
	• Physician analytics – admitting/discharge patterns, service area needs, and market penetration
	• Evaluate data to improve quality and performance
	
	The end users of this data are from various areas of the hospitals/systems:
	• C-suite
	• Hospital System vs individual hospital
	• Strategy and planning
	• Business development
	• IT
	• Directors of service lines
	• Quality departments

Project Landing Page



Navigator bar

A

- Home – Displays favorite, most recent accessed, and recommended dashboards
- Explore – Display all folders
- Favorite – Display dashboards marked as favorite
- Recent – Display the most recent accessed dashboard
- Recommended – Dashboards with new or more relevant content

Project – Folders Page

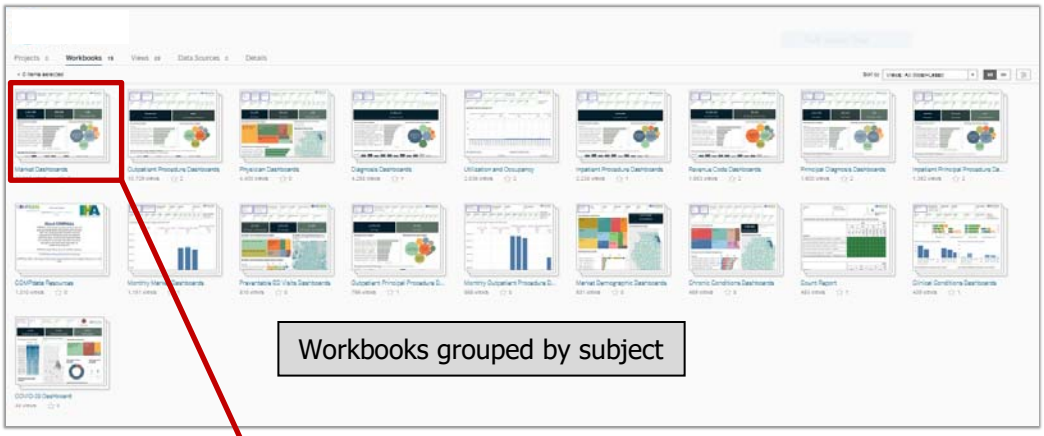
B

Projects are equivalent of folders, used to store, organize, and manage content at a high-level. Each project contains workbooks generally representative of a topic or category as it is titled. HIDI staff will add new projects for new topic analysis.

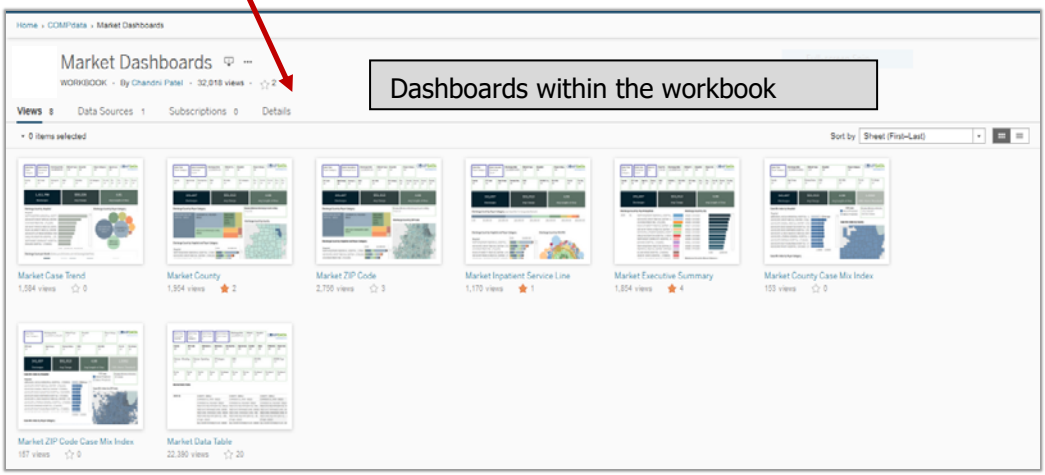
- Workbooks contain dashboards:
  - Organized by subject – i.e., Market, Physician, and Outpatient Procedure
  - Multiple dashboards within a workbook – i.e., Trend, County, ZIP Code, and Data Tables

Project examples highlighted below (nonexclusive)

Workbook Display



Dashboard Display



Dashboards General Information

Dashboards are available to analyze data in a creative and interactive visualization taking just minutes, even seconds to visualize the data.

Listed below are many different dashboards to choose:

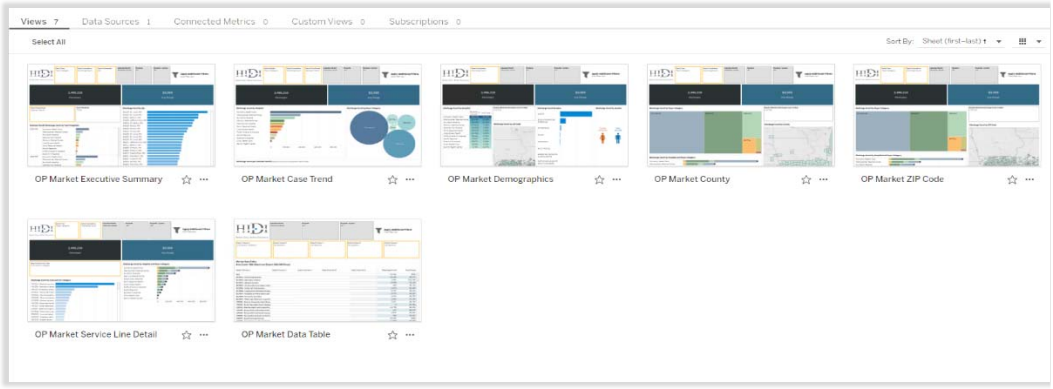
Inpatient
- Diagnosis (All)
- Market Share
- Physician
- Procedures (All)
- Revenue (All)

Emergency Department
- Diagnosis (All)
- Market Share
- Physician

Outpatient
- Diagnosis (All)
- Market Share
- Physician
- Procedures (All)

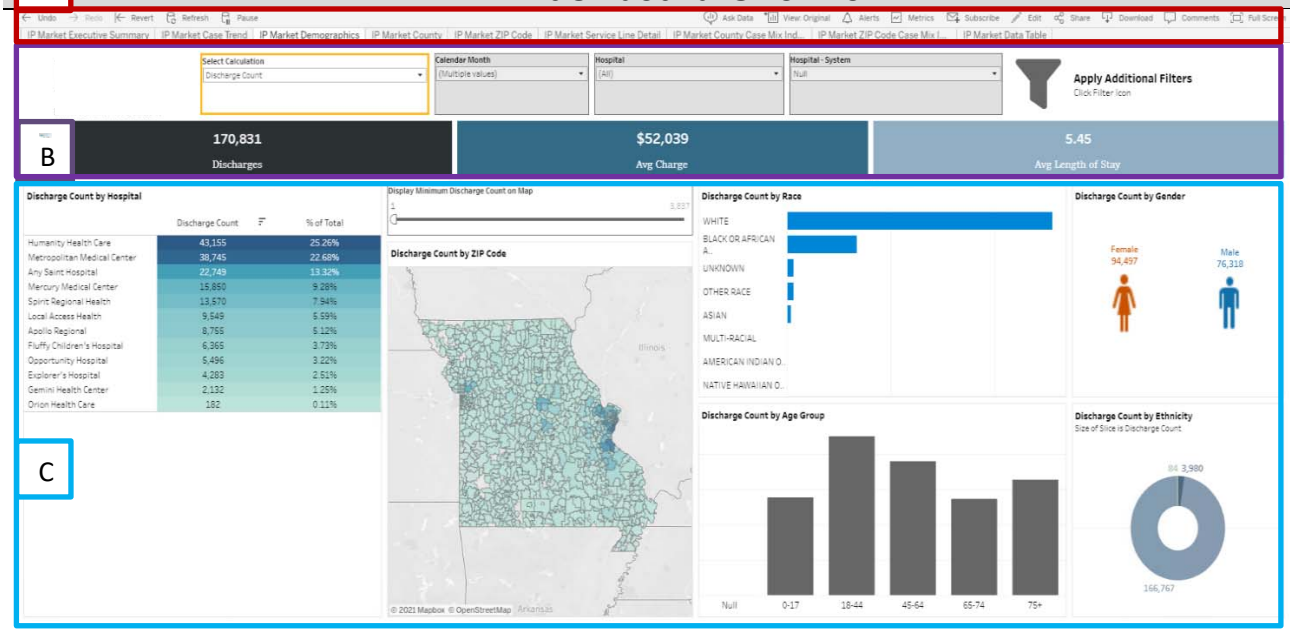
Census Demographic
- Displays Nielsen Claritas population data Market

Hospital Characteristics

Core Dashboards	***Core Dashboards*** within a workbook have similar layout with essential parts and are most frequently used. • Executive Summary • Case Trend • Demographics • County • ZIP Code • Service Line Detail • Data Table 

HIDI Advantage Optics Technical Guide

Dashboard Overview

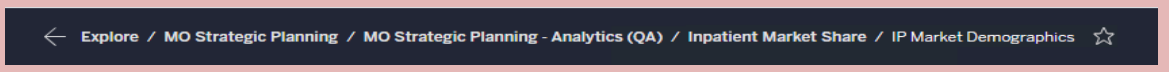


A	**Navigation Bar (Breadcrumb Trail)** – Indicates pathway like following a breadcrumb to show where started. The star marks favorites. Do not use arrow back on website. • **Tool Bars** – The left and right tool bar displays icons are different tools used throughout the dashboard. • **Dashboard Tabs** – A dashboard collection of views from multiple worksheets, displayed much like tabs in Microsoft Excel. These tabs will help organize the data for the user, making it easier to manage and tell a story about the data.
B	**Data Display Options** • **Graphic Display** – The **yellow boxes** are the lens through which the user views the data. Each box will provide a list of data fields for the user to choose to display and aggregate values in a chart. o The Select Tree/Calculation Data Display Option will correspond to chart title when changing it. In the example above, Payer Category in Select Tree changed data field displayed on tree chart and stacked bar chart. • **Global Filter** – The **gray shaded boxes** are global filters sharing the same filter using the same source data across multiple (or) all worksheets within a workbook. • **Apply Additional Filters** – The **funnel icon** contains names, values, and quantities that will be displayed on the dashboard. Filters can limit the dataset based on the filters chosen. Using filters in a view will narrow the visualization on the dashboard to display only the data of interest.
C	**Data Visualization** • **BINs** – "Big Interesting Numbers" display summary counts and measures, updates are based on filters applied. • **Data Visualization** – interactive graphs and charts in the form of dashboards to gain business insights. The data and the visualization work together combining analysis with great storytelling. o **Charts** – Go to detail chart information (Tree, Stacked Bar, or Heat Map)

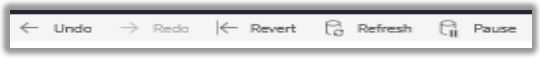
Dashboard Overview Detail

A

Navigation Bar (Breadcrumb Trail) – Indicates the pathway like following a breadcrumb to show where user started. The star marks user favorites. Example below:

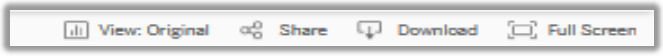


Left Tool Bar



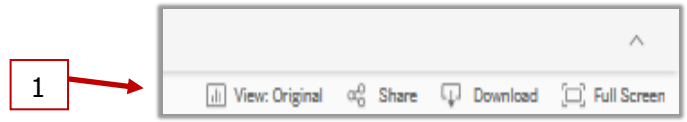
- Undo – This tool will take the user back to the previous display on the dashboard. It applies to the display and filter options; it does not change what the user has chosen (clicked) on the dashboard display itself.
- Revert – This tool will take the user back to the original (default) display.
- Refresh – This tool will re-query the active dashboard display.
- Pause – This tool will stop the auto-refresh on the dashboard data query while selecting from multiple display options (Blue and Green Boxes). The user can then click the "Resume" button to update the dashboard with the input criteria.

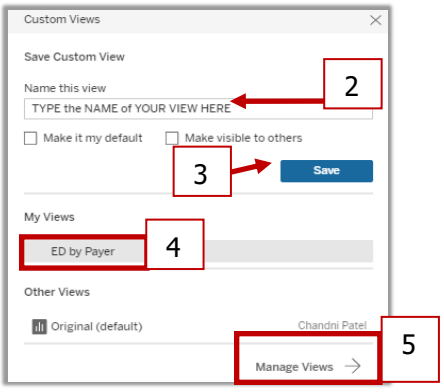
Right Tool Bar

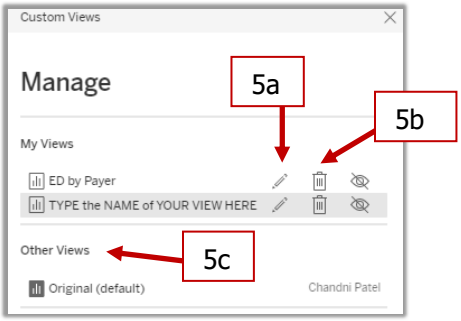


- View Original – Click to revert all changes back to original version.
- Share – Share content directly with other users on the site, an email with a link to that content is sent to other users.
- Download – This will download formats available to the user.
- Full Screen – Expands the workbook to fill the entire screen.

Original View / Create Custom Views







A view is a dashboard with specific input applied to it. Save a dashboard view the user can visit in the future with specific changes made to the dashboard filters and display options. This allows users to avoid having to recreate an analysis that is helpful or will want to repeat when new data becomes available.

1. Click on the "View: Original" icon in the right tool bar.
2. Name the view something significant that will help the user remember the view.
3. Click on Save.
4. Under "My Views" the saved view will be saved to the specific dashboard the user saves it on.

- Saved views show under “My Views”.
- Other Views is the state-wide default setting.

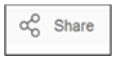
5. Manage Views
   5a. Pen – Edit dashboard name.
   5b. Garbage can – Delete dashboard view.
   5c. Private Acess to View – This allows for every member in and outside the organization to see the view – keep private.

Dashboard Tabs

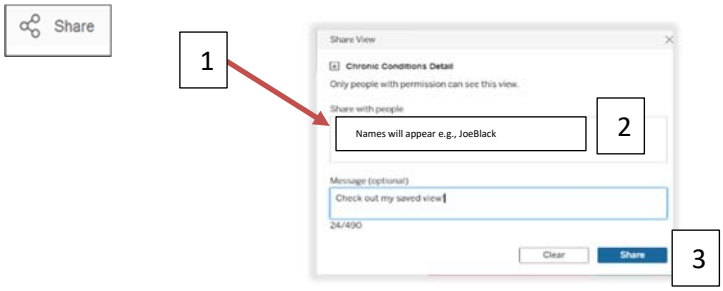
A collection of dashboard views of multiple worksheets, displayed much like tabs in Microsoft Excel. These tabs will help:

- The user organize the data.
- Manage and analyze data.
- Understand the data by telling a story.

Share

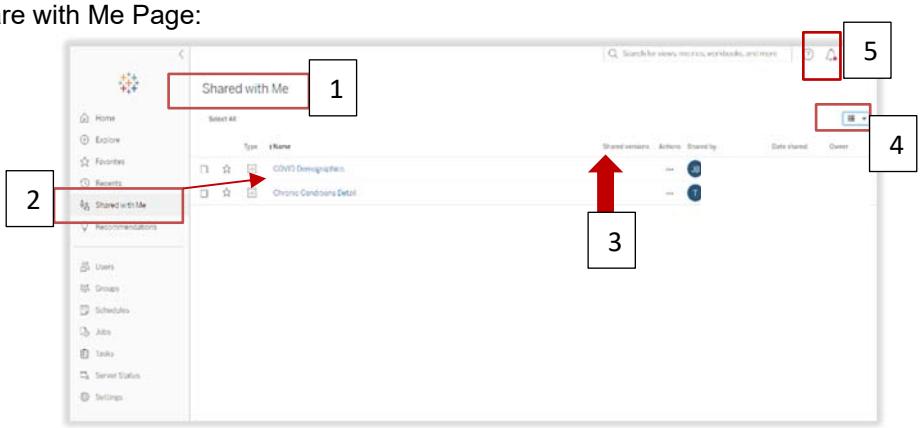


Creates an email link of the current dashboard – Viewed only by those with ID’s.



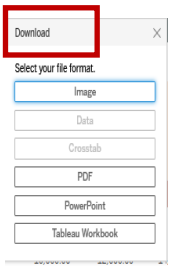
1. Share a dashboard view with other users.
2. Enter and select on usernames to share the view with multiple users.
3. Once the user clicks on “Share”, the user will receive the view on the “Shared with Me” page.

Share with Me Page:



1. “Share with me”: This will display any view that is shared with the user.
2. Share view names: Select on the name of the view to be redirected to the shared view with defined filters applied.
3. Share versions: If someone shares multiple views with others that come from the same dashboard, the views will show up under the “Shared versions” selection.
4. Layout: Option to display shared views in List or Grid format.
5. Notifications: The bell icon will have a red dot when someone has shared a view.

Download



Click on "Download" →

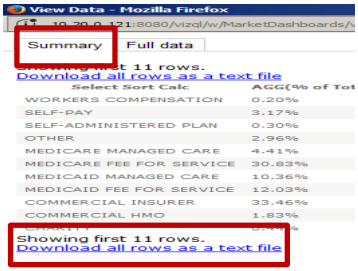
- Image – Creates photo (png) image of dashboard (screenshot of dashboard view) and share the analysis using the Image or PDF options.
- Data – Creates download set of users' current dashboard to analyze further.
- Crosstab – Creates download set of users' current dashboard in crosstab format.
- PDF – Creates PDF version of dashboard (screenshot of dashboard view).
- PowerPoint – Creates a PowerPoint version of the dashboard (screenshot of dashboard view).

Important Note

If Data and Crosstab are grayed out, move the mouse arrow and click on the title of the graph wanted in the download then go back to the "Download" icon.

Data: Click on 'Data' to view data screen:

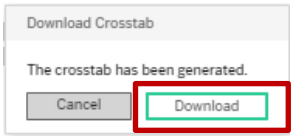
Summary Screen →



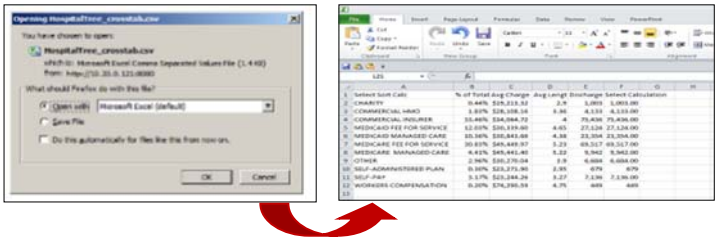
- Data displays summary in table format
- Download all rows as a text file
  - o Export summary table to excel

Crosstab

1. Click on 'Crosstab'
2. Click on 'Download'

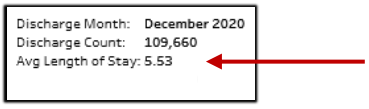


3. The summary table should open up in excel or export to excel.



Tooltip

Tooltips are details that appear when a user rests the pointer over one or more marks in the view. Tooltips also offer convenient tools to quickly filter, remove a selection, select marks that have the same value, or view underlying data.

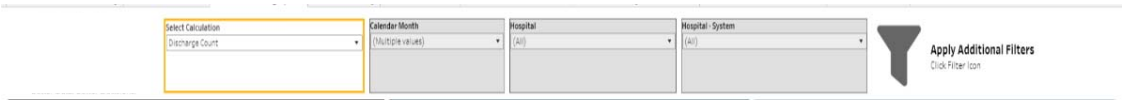


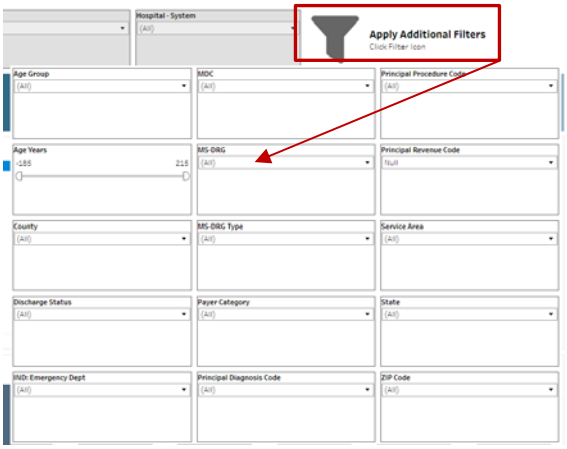
Full Screen

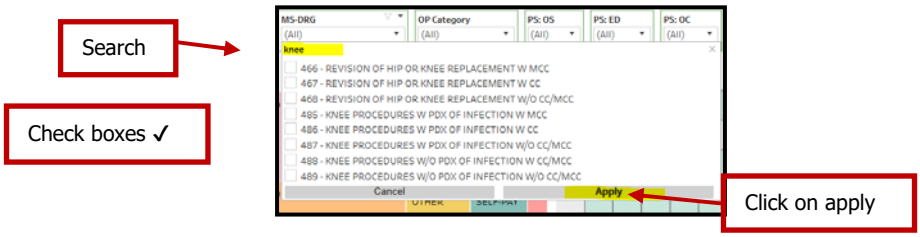
Displays the dashboard in full screen mode.

Display Options and Filters

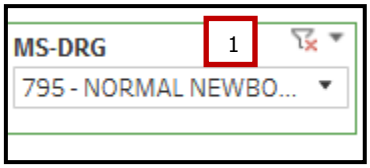
B

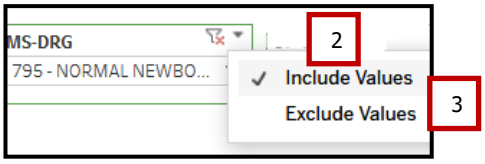


Display Graphic	***Yellow boxes*** – control what data is displayed in the visualization. **Select Bubble:** changes the type of data displayed in the Bubble chart • Changes the aggregation of visual • Selected Bubble field will match the chart title **Select Tree:** changes the type of data displayed in the Tree chart • Selected Tree field will match the chart title **Select Calculation:** changes metric displayed in visuals • Discharge Count, Occurrence Count, Avg. LOS, Avg. Charge, Avg. Daily Census • Selected calculation will match the chart title **Other Display Options:** • Select Geography, Select Physician Type and Select Preventable ED Category
Filters	***Gray Boxes*** **(Global Filters)** – Shares the same filter using the same source data across multiple (or) all worksheets within a workbook. ***Apply Additional Filters*** – Click on the Funnel at the right on the dashboard to add other filters. The Add Filter dialog box is displayed, select the data filter that contains the fields to filter. These filters limit the data set based on the filters chosen. It allows for a more specific analysis, such as analyzing for a specific MS-DRG service line.   • Search/Select by clicking arrow down on each filter – Allows for partial word or code searches – Click and select the values to filter on – Click ‘Apply’ when all required values are selected

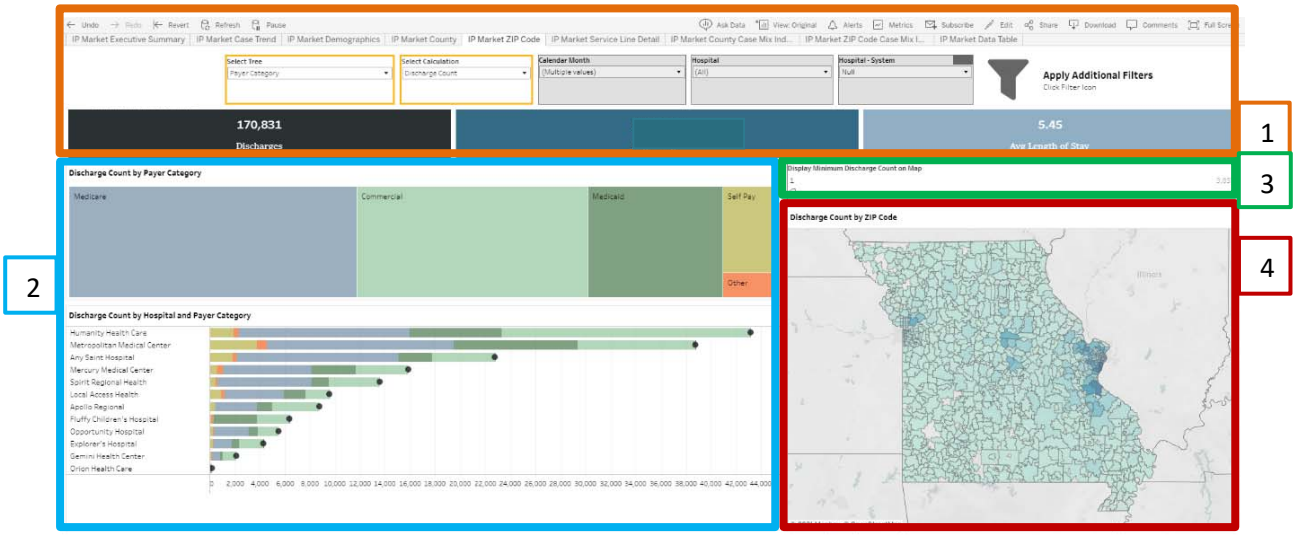


- There are a few different filter functions available to use:
    1. To remove filter selections, select the funnel icon with an ‘x’ on it.
    2. Users can also remove filter selections by selecting ‘All’ and clicking ‘Apply’.
    3. Click on the dropdown arrow next to the funnel icon to include or exlude certain values in the filter.





C Data Visualization Display – BINS, Charts, and Maps



1. **BINs** – "Big Interesting Numbers" display summary counts and measures. Can update based on filters applied and selections made on dashboards.
2. **Charts** – Charts change depending on dashboards which can be a Tree, Bar, Stacked Bar, Bubble, Line, Scatter Plot.
3. **Slider Bar** – Adjust numbers on the graph or map and only display counties or ZIPs with a minimum number of counts.
4. **Heat Maps –** Darker colors represent higher counts/measures**.**

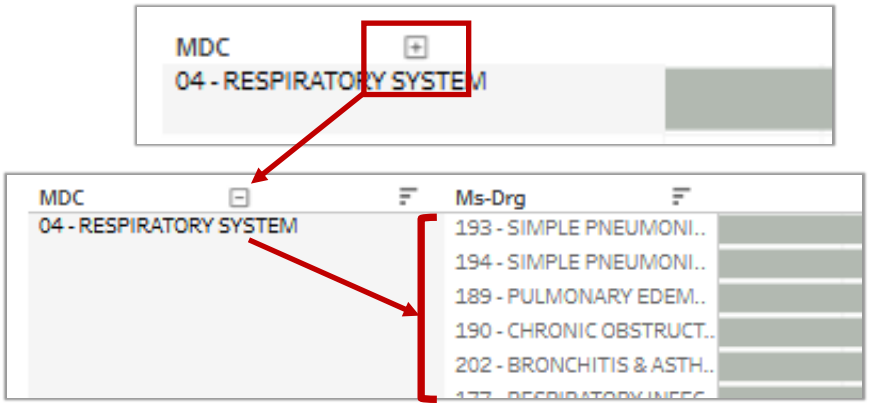
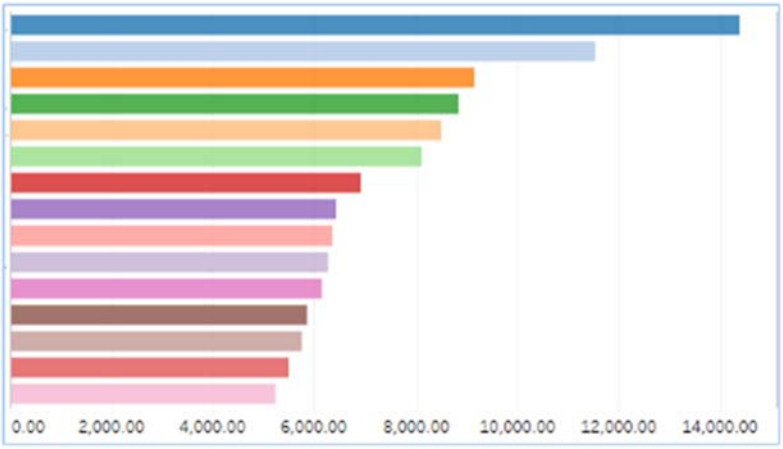
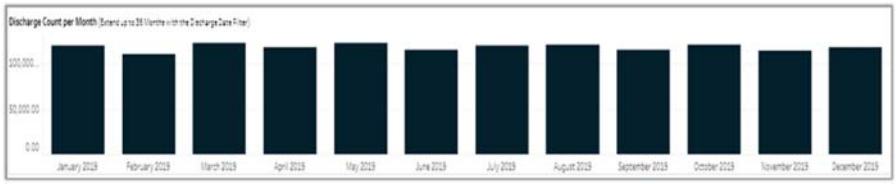
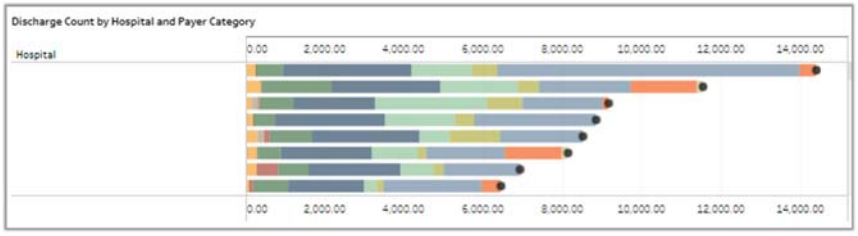
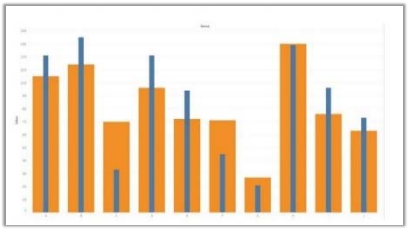
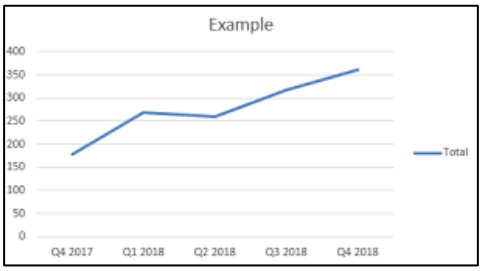
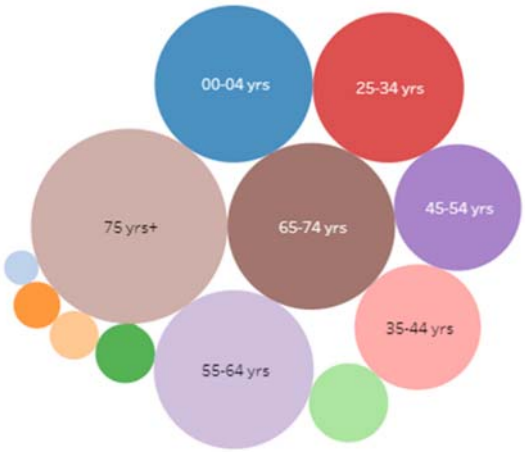
Sort Icon	 Hover over axis to sort bars in ascending, descending, or alphabetical order
Dashboard Plus / Minus Symbol	Use plus/minus signs to show or hide (expand/collapse) timeframes on dashboard. 

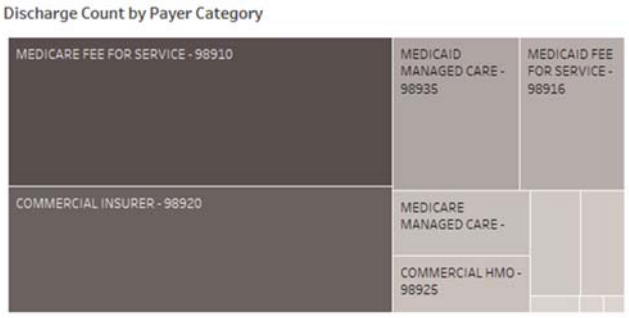
Chart Types Resource

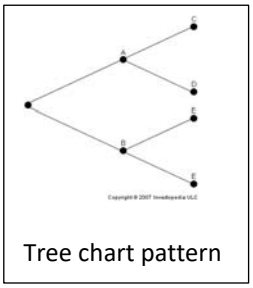
Bar Chart and Stacked Bar Chart	**Bar Chart** – Compares data across categories, displays change over time, or compares parts of the whole.   **Stacked Bar Chart** – Contains multiple part-to-whole relationships. Each bar in the chart represents a whole and the segments within the bar represent different parts or categories of that whole based on the Select Tree/Bar display option. Hovering over the black dot at the end of a stacked bar will display an overall summary for that bar. 
Bullet (Bar on Bar)	**Bullet (Patient Population Dashboard)** – Typically 2 measures (or more*) within one measure which acts as the main or actual measure in consideration and a threshold measure against which the main measure is compared. 

Line Graph	**Line-Graph** – Used to display information which changes over time. It is plotted on a graph as a series of points joined with straight lines. 
Packed Bubble Chart	**Packed Bubble Chart** – Displays the concentration of data by varying the size and color of the data points. The color of the bubble identifies different categories and larger bubbles equal larger values.  Discharge Count by Top MS-DRG 

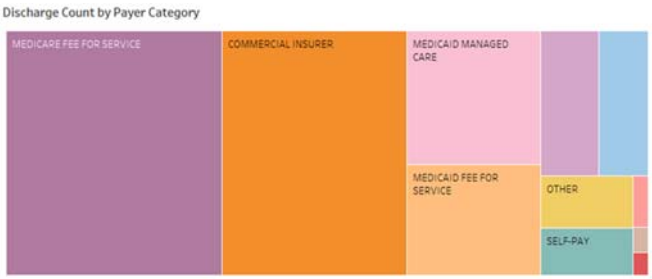
Tree Chart

Tree Chart – Box size corresponds with the size of data. Larger boxes equal larger values and appear on the left side of the chart. Single color shading also corresponds with size of data. Multi-color shading corresponds to the Select Tree display option





Tree chart pattern

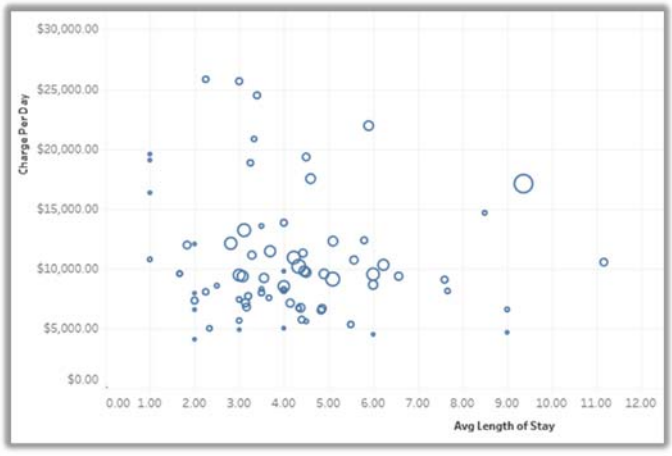


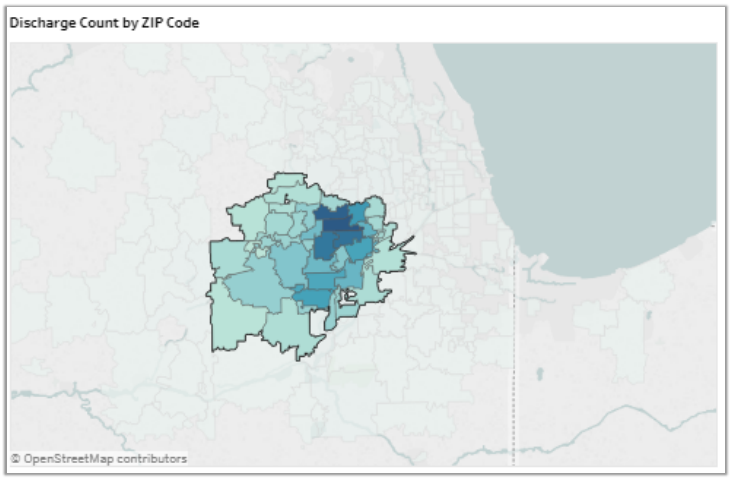
Scatter Plott

Scatter Plot – Investigates the relationship between different variables and compares three measures rather than just two. This is an effective way to provide sense of trends, concentrations, and outliers that will focus on the investigation.

Physician Module

- X: ALOS
- Y: Avg. Charge per Day
- Size: Discharge Count



Heat Map	**Heat Map** – Shows geocoded data whether it be zip codes, county, and/or state. Displays the relationship between two variables using color and shading to indicate a higher value as the CMI shows heat map of CMI and Readmissions will be a heat map based on Readmission Rate. Darker colors in the map indicate a higher volume in that area. 
Box and Whisker Plots	**Boxplot** – Standardized way of displaying the dataset based on a fine-number summary. The five-number summary are the minimum, first quartile, median, third quartile, and maximum. In a box plot, we draw a box from the first quartile to the third quartile. A vertical line goes through the box at the median. The whiskers go from each quartile to the minimum or maximum.