BUSINESS INTELLIGENCE MANUAL

DESIGNER SEAT

TECHNICAL DOCUMENTATION

Table of Contents

INTRODUCTION

Medata Business Intelligence (BI) is a complete, technology-driven software and service solution for analyzing data and presenting actionable information to help end users make informed business decisions.

Why Medata Business Intelligence?

Medata BI is designed to help users

- get quick and easy access to historical and current data via dynamic and interactive dashboards,
- identify trends and patterns within data,
- filter and drill down data to expose the information most relevant to a user,
- export and share results in various formats with other users,
- alert users on changes of Key Performance Indicators (KPI) values.

ACCESSING MEDATA BUSINESS INTELLIGENCE

Medata BI is accessed through Toolbox, Medata web-based application. Toolbox main page has a Medata BI drop-down menu:

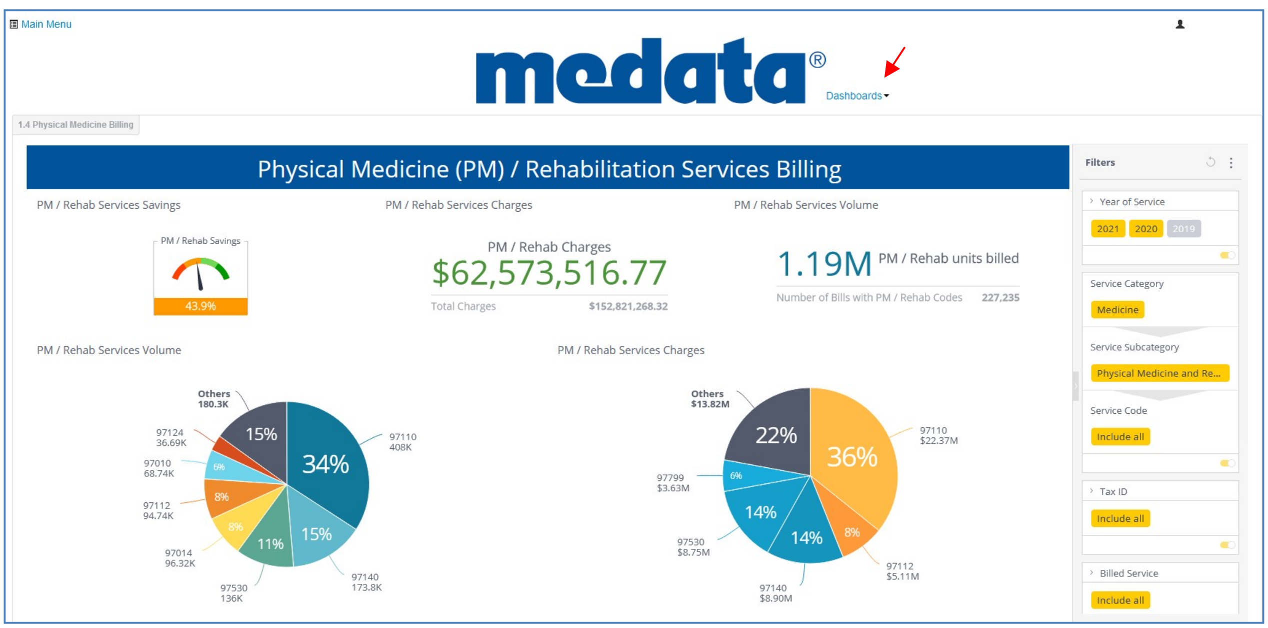

Figure 1 Access BI Dashboards via Toolbox

Medata BI can also be accessed via Toolbox **Main Menu** > **Business Intelligence** option.

BASIC CONCEPTS AND TERMINOLOGY

Module:

A module is defined as a pre-defined collection of dashboards, aggregated by one theme accessed from the menu screen.

Figure 2 Module - Collection of Dashboards

Dashboard:

Dashboard is a collection of one or more widgets that visualize the data that you select and design.

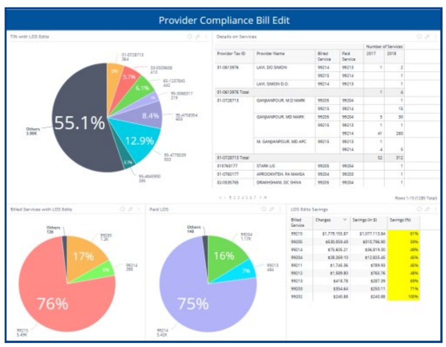

Figure 3 Example of a BI Dashboard

Widget:

A widget is the smallest unit of dynamic visualization of data.

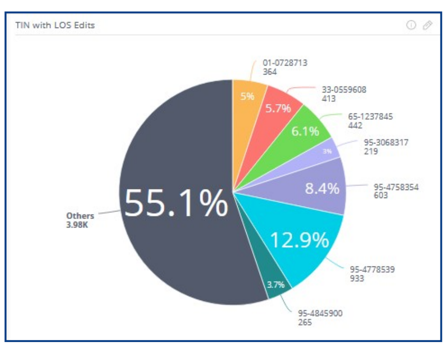

Figure 4 Example of a widget

Filter:

A filter allows the user to restrict the data displayed in the dashboards.

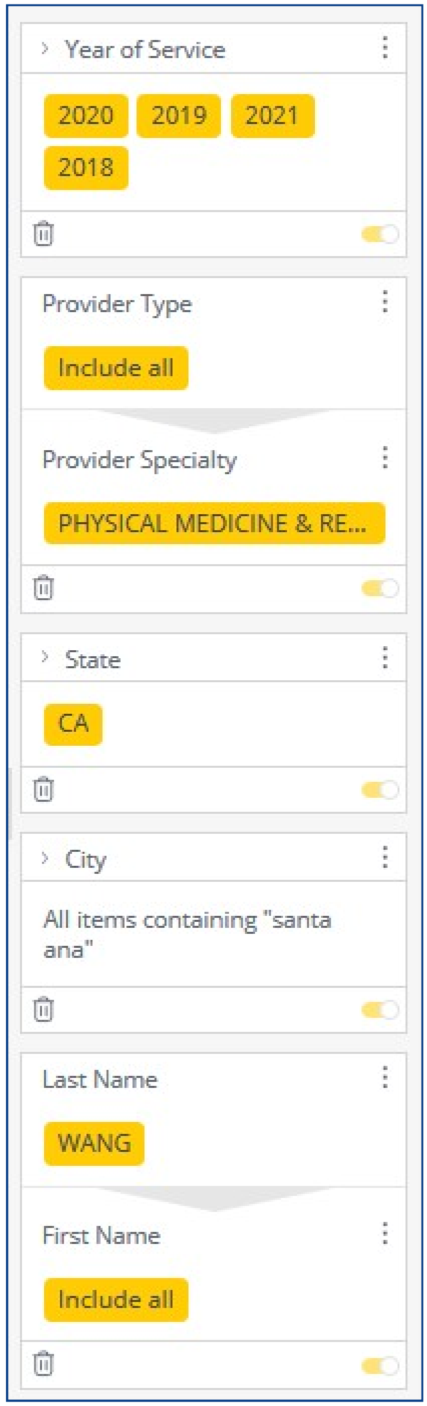

Figure 5 Example of filters

User:

Selected individuals will be provided log-in credentials for access into the BI tool.

MEDATA BI MODULES AND DASHBOARDS

Medata BI comes with a package of pre-built dashboards that deliver valuable data and analysis via various KPIs, dimensions, risk factors, trend reports, and metrics. Users with designer level of access can easily modify these dashboards by adding, removing or editing the widgets to better suite their needs. Designer users can then save the dashboards in their prirvate folders or share with other team members.

Since the same information can be analyzed from different perspectives such as Financial, Operational, Executive, Compliance, etc., we packaged our dashboards into seven modules that provide users all tools they need for analyzing the performance of their organizational domain. Below you will find the description of modules and dashboards. Please note that the dashboards numbering may differ based on the custom settings.

Provider Compliance Module

Capture provider billing and treatment patterns to identify outliers or irregularities.

Dashboard 1.1 Providers with Level of Service Edits

Investigate provider billing patterns for Evaluation and Management Services. Identify providers that are repeatedly billing a higher-level service and the frequency of the level of service edits.

Dashboard 1.2 DME Billing

Study payment and savings trends for Durable Medical Equipment items. Identify provider billing patterns for E1399, *Durable Medical Equipment, Miscellaneous*, and further investigate providers that are frequently selecting E1399 among other DME codes.

Dashboard 1.3 Medical-Legal Billing

Study payment and savings trends for Medical-Legal Evaluations. Identify provider billing patterns for ML104, *Comprehensive Medical-legal Evaluation,* and further investigate providers that are repeatedly billing ML104 code.

Dashboard 1.4 Physical Medicine Billing

Study payment and savings trends for Physical Medicine (PM) / Rehabilitation Services. Identify provider billing patterns for 97799, *Unlisted Medicine/Rehabilitation Service or Procedure.* Further investigate providers that are consistently billing 97799.

Dashboard 1.5 Patients Volume

Provide provider comparison analysis by average charge per claim and average charge per visit. Bring providers with high number of patient visits per day/month to users attention.

Dashboard 1.6 Opiate Provider Compliance

Identify patterns by provider drug dispensing and injured worker early opioid use putting an early spotlight on destructive patterns.

Dashboard 1.7 Provider Profile Composite Data

Access risk factors, charge/reduction/allowance metrics and details on provider billing across Composite Data set.

Dashboard 1.8 Provider Search

Provide access to full provider profiles based on the search criteria including all or some of the following parameters: DOS, type and/or specialty, state, city, last and/or first name, NPI, etc.

Operations Productivity Module

Study the current bill inventory and user productivity, monitor trends in Turn Around Time (TAT) and identify areas of improvement.

Dashboard 2.1 Bill Inventory

Investigate current Open, Reconsideration, Posted Bills Inventory and trends and identify the areas that may require immediate action.

Dashboard 2.2 Adjuster Productivity

Investigate adjuster productivity against different measurements including average TAT and number of completed and pen bills per a defined period of time.

Dashboard 2.3 Operations TAT

Track monthly/weekly/daily production and TAT metrics with ability to drill to detailed information on processed bills by provider type.

Dashboard 2.4 Received Bills Volume

Monitor the volume of received bills and compare with the previous year numbers.

Dashboard 2.5 Duplicate Bills

Get a detailed analysis of the full duplicate bills by provider type, state, and date. Identify the areas where the duplicate counts are exceeding normal values.

Dashboard 2.6 Keyer Productivity

Track monthly and daily productivity of bill entry groups for easy identification of top and low performing individuals, days with higher and lower bill entries, types of bills that take more time to be keyed into the system.

Savings Module

Demonstrate and evaluate savings and payments over various Key Performance Indicators (KPIs).

Dashboard 3.1 Total Savings

Investigate medical savings for a selected period of time and compare the performance against any past time interval.

Dashboard 3.2 Comparison Savings

Perform comparison between performance of your business with the data from the Composite Dataset based on the various metrics and trend widgets.

Dashboard 3.3 Annual Data Compare

Compare your financial performance between the current and the past years to identify areas of growth.

Dashboard 3.4 Savings by Service

Dive deeper into investigation of charges and allowances of a certain procedure code(s) for a selected time interval and review the bill details.

Dashboard 3.5 Reconsiderations in Bill Review Process

Investigate reconsiderations rates and trends for a selected time interval and/or state. Measure associated bill underpayments or overpayments.

Dashboard 3.6 Rx Savings

Review and measure Rx savings and payments with further focus on Opioid spent specifics and trends.

Dashboard 3.7 Savings by Type of Reduction

Provide the breakdown of all bill line reductions by reason codes and client reason codes. This allows to measure the sizes of reduction "buckets" and, therefore, identity bill review processes that provide higher savings efficiencies.

PPO Analysis Module

Provide thorough evaluations of PPO savings with ability to perform comparative analysis of different PPO networks.

Dashboard 4.1 PPO Savings

Review main PPO performance metrics and get the details on each PPO Network savings and penetration by moths, states, type of bills.

Dashboard 4.2 PPO Annual Savings

Compare PPO performance metrics and trends between the current and the past years.

Dashboard 4.3 PPO Comparison Savings

Perform comparison between PPO performance of your business with the data from the Composite Dataset based on the various metrics and trend widgets to identify additional savings opportunities.

Dashboard 4.4 PPO Network Comparison Detail

Get detailed comparison of current PPO program savings across various types of bills for selected period of time. Customize or use the default color coding for easy and quick evaluation of “good” and “problem” zones.

Dashboard 4.5 PPO Penetration per Claim

Dive deeper into PPO penetration rates on a claim level with a focus on the claims having facilities-based physicians who are out-of-network. For example, investigate the claims with in-network surgeon but with out-of-network facility, or anesthesiologist, or radiologist on staff.

Dashboard 4.6 PPO Performance

Track bill transfer to different PPO networks including transfer dates, return dates, and turn-around time. Evaluate PPO effectiveness based on processing time, savings and penetration.

Claim Analysis Module

Comprehensive claims analysis and alerts solution that uses statistical methods in recognizing high-risk claims, providers with improper billing practices, opioid prescription activity that can impact costs and treatment outcomes.

Dashboard 5.1 Claim Analysis

Get a full review of any selected claim or the list of claims that may require review based on the risky factors. Investigate claims Duration of Care (DOC), i.e. the number of days between the first and the last dates of service, and compare it against the claims from Medata’s composite research data set that includes around 300K claims.

Dashboard 5.2 Patient Rx Care

Investigate the claims based on drug utilization patterns including multiple dispensing providers on a claim, high opioid usage, risky drug interactions, etc.

Dashboard 5.3 Surgical Spend by Body Part

Compare the cost of a surgery and all treatments preceding and following the surgery on a shoulder, a knee or a spine, and identify the claims with highest spent for additional investigation.

Dashboard 5.4 Telemedicine review

Monitor trends, evaluate the volume of bills and cost associated with telehealth services.

Dashboard 5.5 COVID-19 Monitoring

Get an insight into claims with COVID-19 related diagnosis codes or COVID-19 laboratory test service codes.

Dashboard 5.6 Diagnosis Lookup

Investigate frequency, charges, geographical distribution, providers billing patterns, services associated with any selected diagnosis code.

Executive Panel Module

Executive level information via major KPI's and metrics.

Dashboard 6.1 Executive Panel

Review major KPI's and metrics related to financial performance, bill volume, claims status, PPO performance, and provider profiles.

Dashboard 5.2 Top 10 Report

Access information on top ten claims by charges, service categories and subcategories by bill volume; services by billed units, providers by bill volume.

Designer Portal

Helpful resources for designer users including metrics and formulas library.

Dashboard 7.1 Metrics & Formulas library

List of main metrics and formulas for designer users.

Dashboard 7.2 Service Categories

Reference table containing hierarchy of service categories and subcategories, alpha-numeric codes and short descriptions per the standard Centers for Medicare and Medicaid (CMS) and American Medical Association (AMA) categorization.

Utilization Review Module

Study the current Request for Authorization inventory and user productivity and identify trends in Turn Around Time (TAT) and areas of improvement.

Dashboard 7.1 UR Summary Activity Report

Get a high level UR activity summary including request’s volume, determinations, monthly TAT, peer review ratio with a breakdown by initial requests and appeals.

Dashboard 7.2 UR Activity Detail Report

Provide a thorough review of the submitted requests for a given time interval.

Dashboard 7.3 UR Report by Weekly Volume

Monitor the volume of received UR requests and identify the top requested service categories and procedures.

Dashboard 7.4 UR Report By State

Investigate the states with the highest volume of UR requests and compare TAT and compliance rates. Identify areas that require strategic actions to improve the operational performance.

Dashboard 7.5 UR Top 10 Report

Access information on top ten claims by UR request volume, requested service categories and subcategories, requesting providers.

CREATING AND MANAGING DASHBOARDS

COMPONENTS OF A DASHBOARD

A user can interact with the data from the data model through a dashboard.

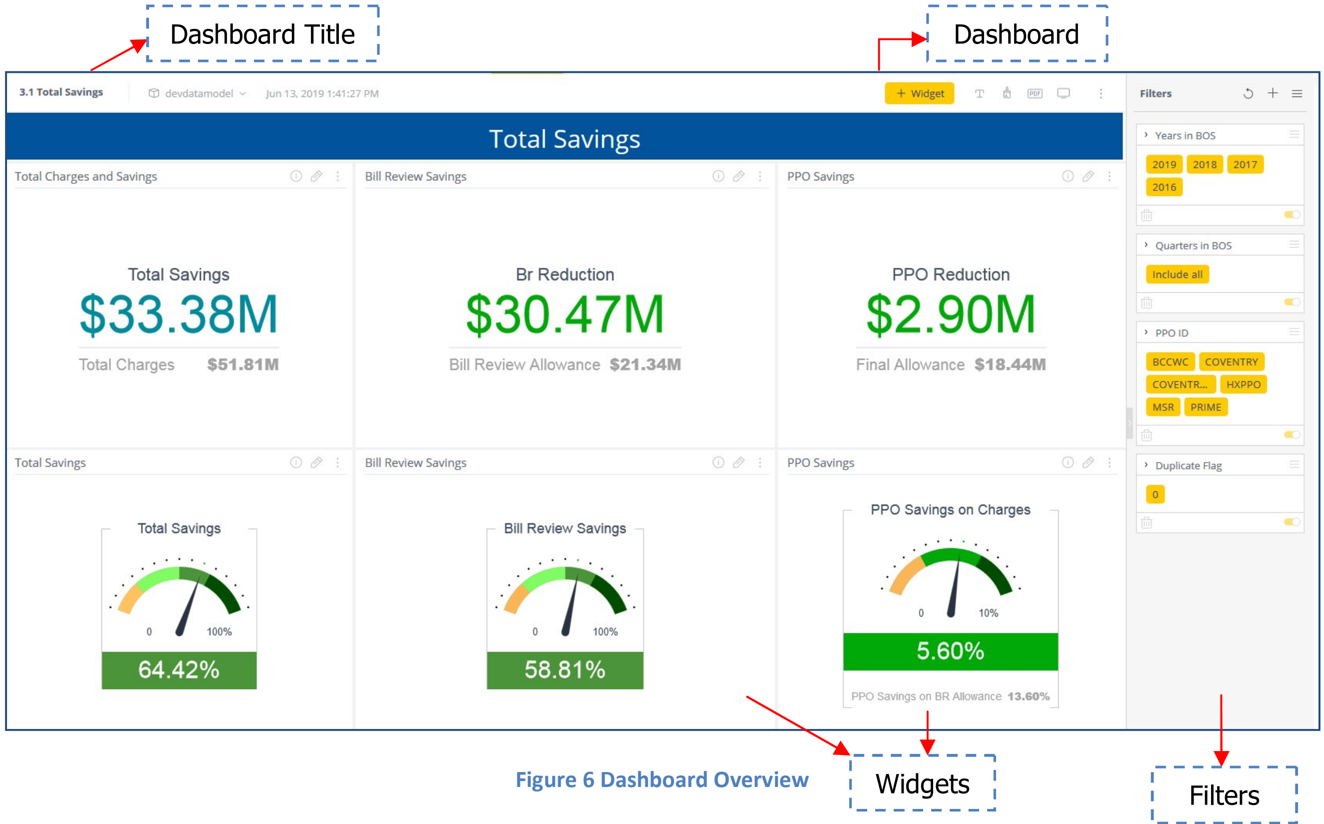

Figure 6 Dashboard Overview

The individual components which hold visualizations are called widgets. A dashboard is made of multiple widgets.

Creating and Managing Widgets

Adding Widgets To Dashboards

- To add a widget to the dashboard, click the 

button on the top-right hand corner.
- The user can add a title to the widget now or after creating the widget.

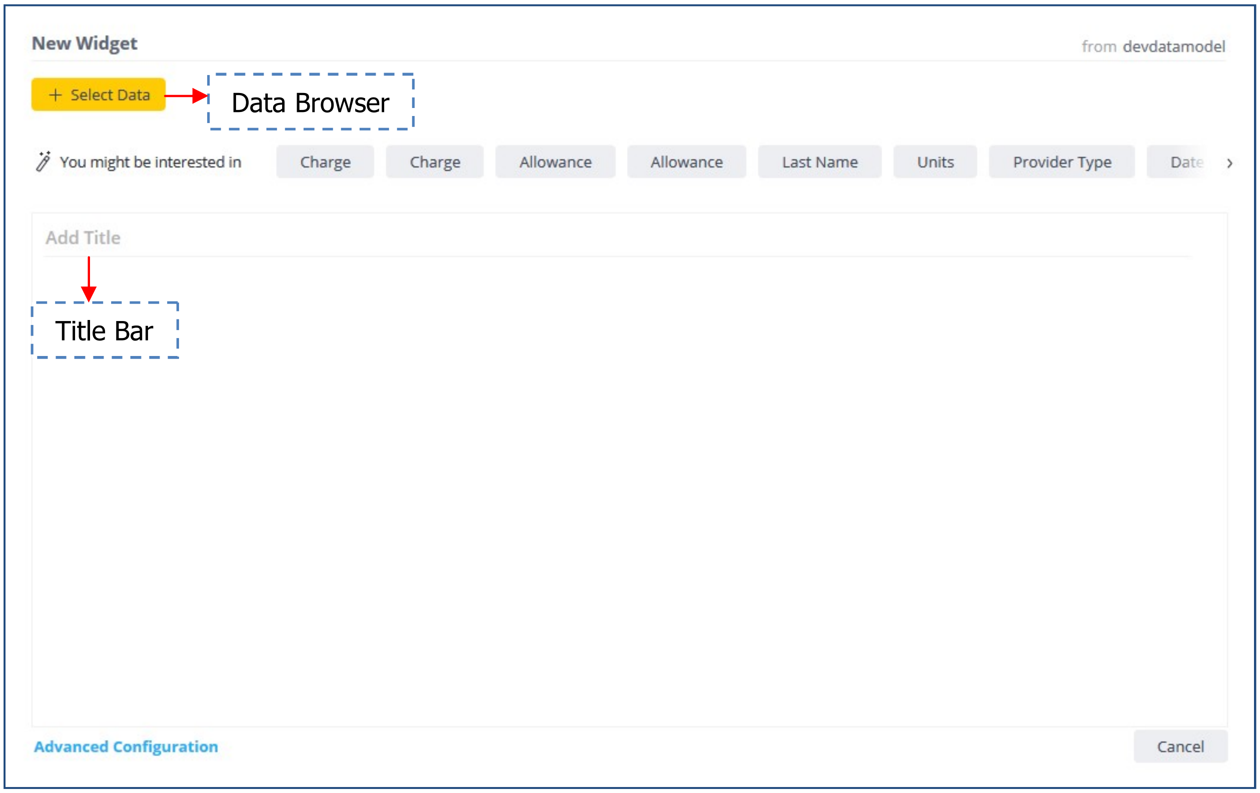

Figure 7 New Widget Window

- In the Data Browser, select a field to add to your widget. The field that you select is automatically displayed in a suggested widget.
- When only a single numeric field is selected, it is displayed as an Indicator widget. A single descriptive field is displayed as a Pivot widget.
- Repeat the step above to add more fields to the widget.
- As you add fields, the relevant options are displayed as buttons to the left of your selection.
- The fields that you select are listed across the top left of the wizard.
- You can click on each visualization button to display the selected fields in that visualization/chart. The yellow pointer on the widget browser displays the visualization the data is presented in currently.

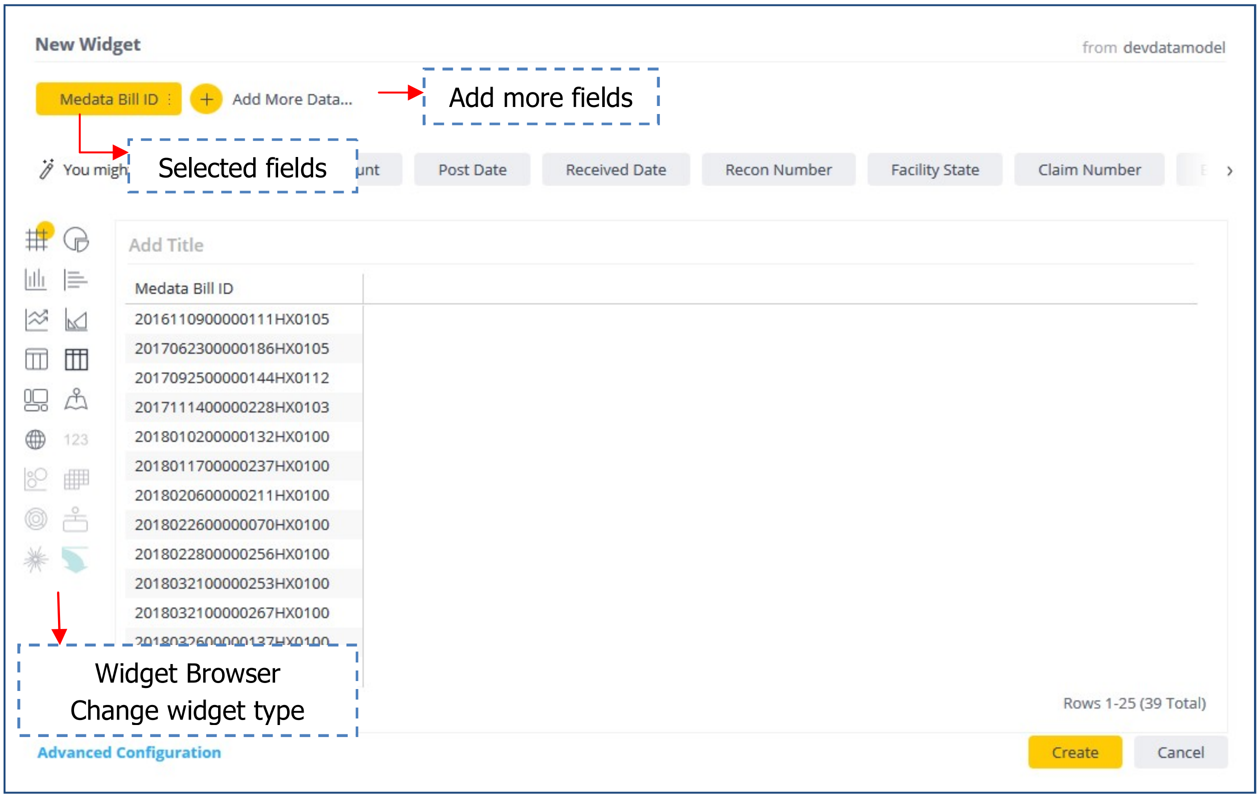

Figure 8 Components of a new widget window

Customizing a Dashboard

Layout

A dashboard is created with one column, by default. Click on the dashboard's menu, and select Columns and the number of columns. The user can add up to four columns. Each column can contain multiple widgets.

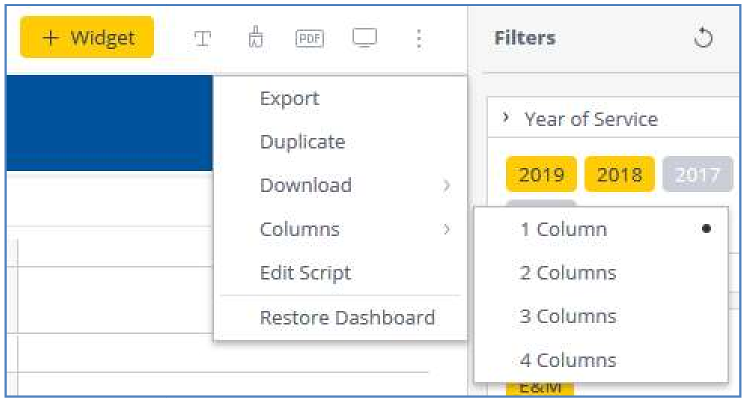

Figure 9 Column Layout

Changing Color Palette

Click  in the dashboard menu and select the preferred color palette. The default palette is Vivid.

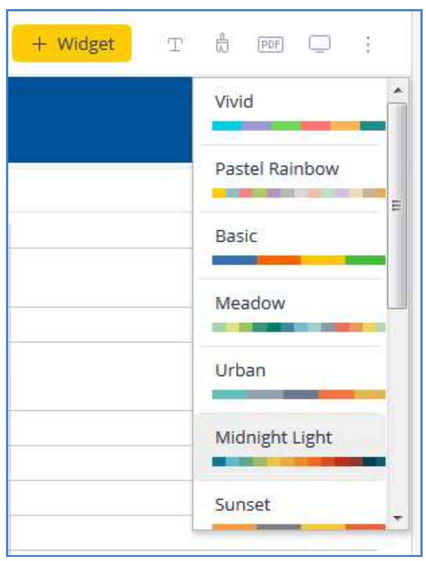

Figure 10 Color Palette

Types of Data Visualization

The user can choose the chart type from the widget browser. The different visualizations offered are area chart, bar chart, box and whisker plot, heat map, column chart, indicator, line chart, pie chart, pivot, polar chart, scatter char, scatter map, sunburst, table, text, tree map.

Area Chart

The area chart is a combination of a line chart and a stacked bar chart, which gives a sense of overall volume. It is used for representing data across continuous dates.

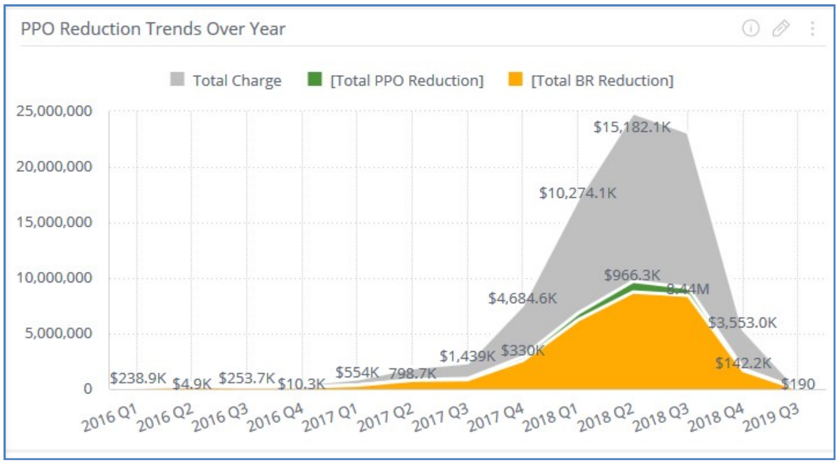

Figure 11 Area Chart

Area Map

The area map can be used to visualize geographical data. It depicts the distribution of a calculated field over various regions.

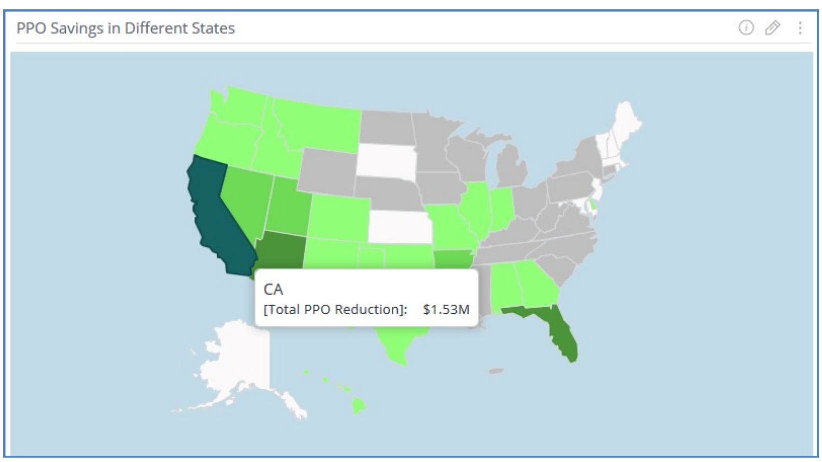

Figure 12 Area Map

Bar Chart

Bar charts are the most commonly used visualization. It helps to see the distribution of numbers over various categories.

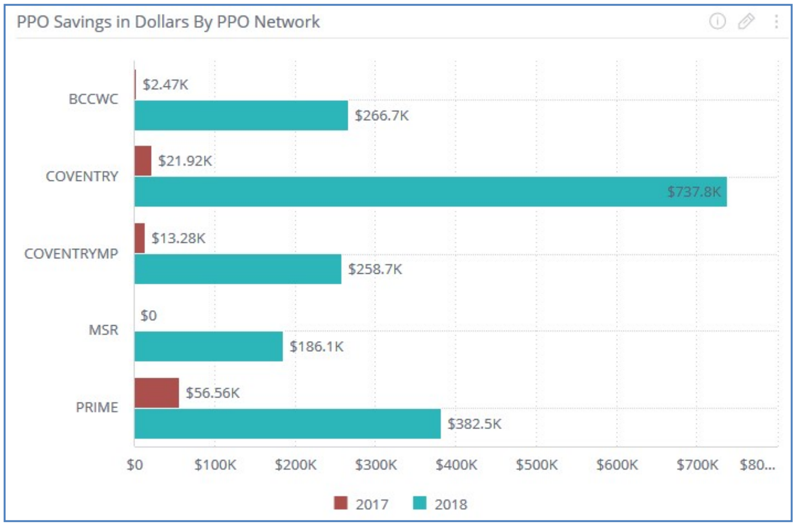

Figure 53 Bar Chart

Different types of bar charts are available in the design tab, on the right side of the widget designer.

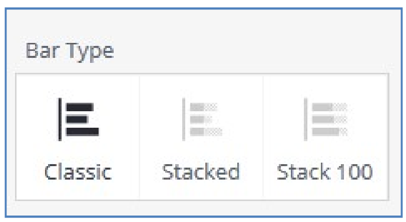

Figure 14 Types of Bar Charts

Classic: Bars are displayed side by side

Stacked: Bars are stacked on top of each other and do not overlap

Stack 100: Bars are stacked on top of each other. It is used to show relative percentage of the data, where the total of each bar equals a 100%.

Box and Whisker Plot

A box and whisker plot is a complex chart which represents distribution of data using medians and quartiles.

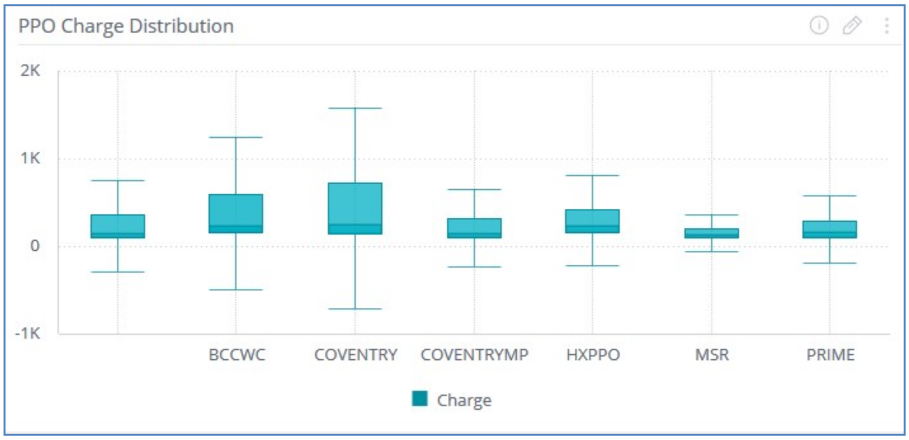

Figure 15 Box and Whisker Plot

The box represents the first and third quartile and the whiskers represent the distance between the lowest value to the first quartile and highest value to fourth quartile. It is useful to analyze the statistics between four equal quartiles.

Column Chart

Column charts are also another commonly used visualization, to compare data side by side. The types of column charts available are the same as that of bar charts.

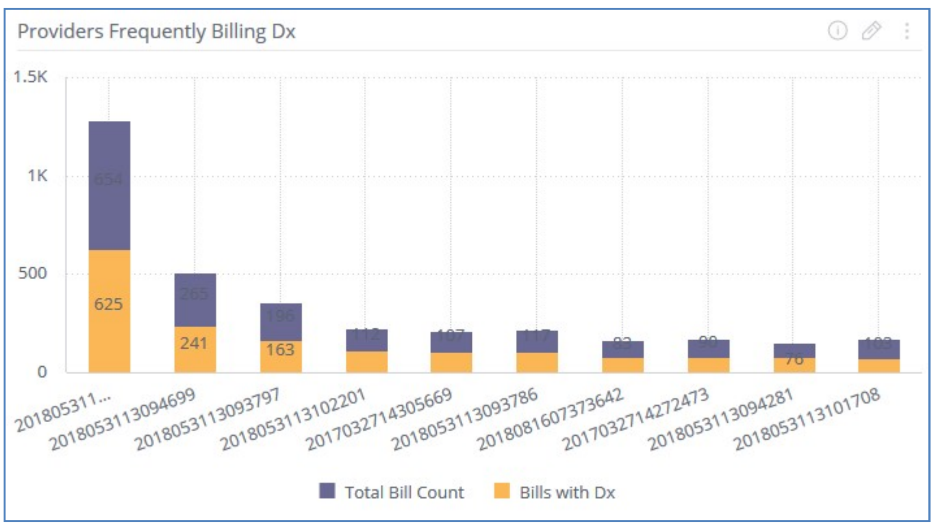

Figure 16 Column Chart

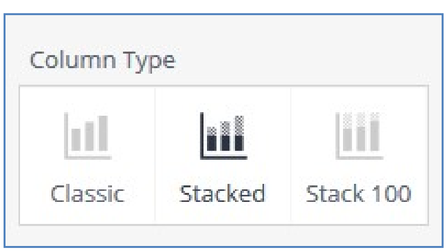

Figure 6 Types of Column Charts

Indicator

The indicator widget is used to represent a single KPI or measure. It is used to get an immediate understanding of how well one measure is doing.

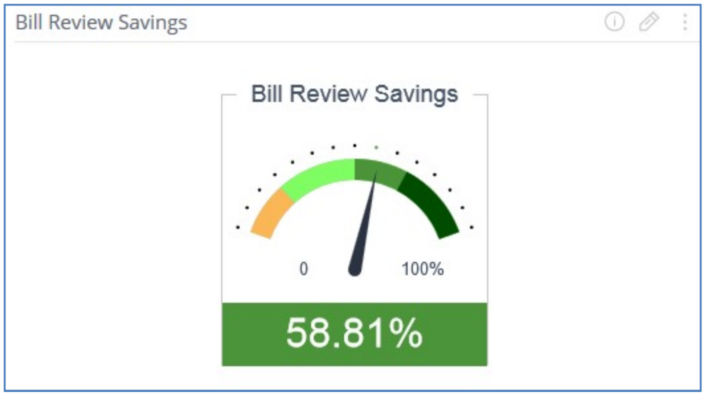

Figure 18 Indicator

The value can be represented as a gauge indicating where the measure lies within a range or as a numeric value.

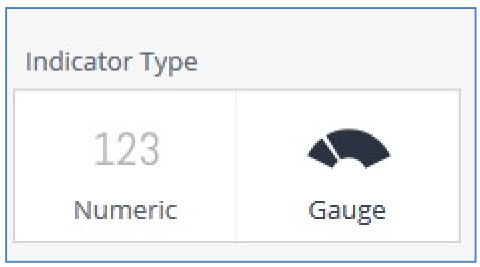

Figure 7 Types of Indicator widgets

Line Chart

Line charts are used to depict overall trends for different categories over the same period of time. A line chart can have several lines in the view, to compare across different time periods, for example.

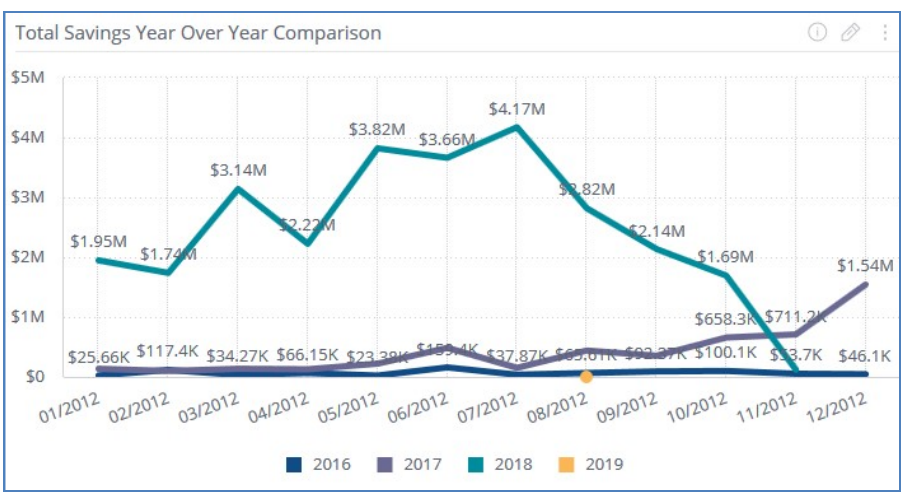

Figure 20 Line Chart

Pivot

Pivot tables provide a detailed understanding about the underlying data, rather than just data trends. It is used to summarize data in the form of a table, where you can perform aggregations. The number of rows displayed can be adjusted using the **Items Per Page** control, in the design tab in the widget designer.

Details on Volume and Charges

Tax ID	Last Name	Billed Service	2018		
			Total Count	Total Charge	Average Charge
0005668215	WILLIAMS, DO	80305	3	$375.00	$125.00
		99215	1	$227.00	$227.00
		99213	2	$284.00	$142.00
		99214	5	$845.00	$169.00
005682052	INES MONGUIO, PH.D	WC002	4	$99.68	$24.92
		90837	8	$2,797.92	$349.74
00568205200	MONGUIO, PHD	WC002	1	$24.92	$24.92
		90837	2	$699.48	$349.74
010479137	CRAIG R. PARENT, DPM	11000	4	$260.00	$65.00
		99213	4	$360.00	$90.00
010593298	KPB ANESTHESIA MEDICAL GROUP,	01936	45	$1,080.00	$24.00
		01992	22	$840.00	$38.18
010613976	LAVI, DO	WC002	7	$265.86	$37.98
		99214	7	$1,158.01	$165.43
	LAVI, SIMON D.O.	99214	2	$330.86	$165.43

« ‹ 1 2 3 4 5 6 7 › » Rows 1-20 (32547 Total)

Figure 21 Pivot Table

Pie Chart

A pie chart gives the relative value of a category when compared to the whole. The percentages add up to a 100%. The labels for the chart, including category name, value and percentage can be displayed using the design tab in the widget designer window.

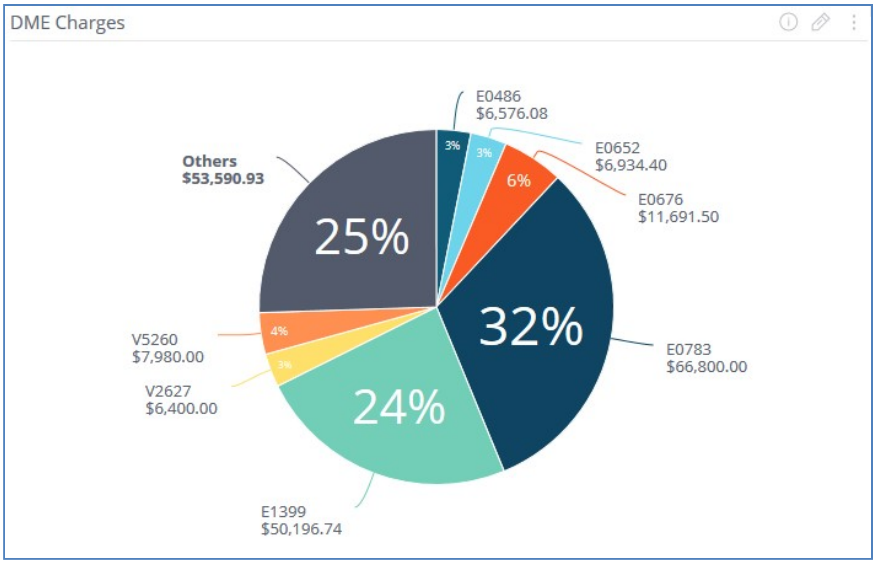

Figure 22 Pie Chart

Scatter Chart

Scatter Plots are useful to show the relationship between two variables.

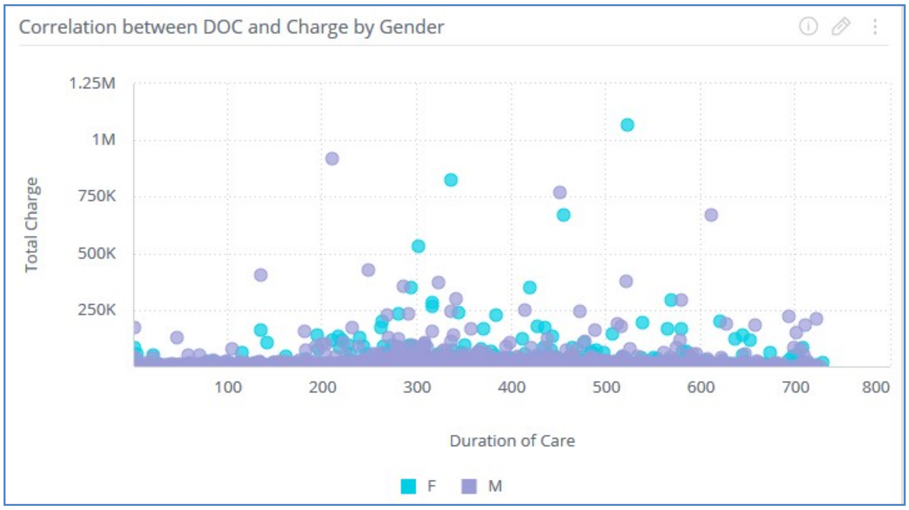

Figure 238 Scatter Plot

HOW TO SELECT A DATA VISUALIZATION

In summary, a visualization that will convey the point across to the audience should be chosen. Following are the commonly used chart types,

To show data trend over time

- Line Chart
- Column Chart

To compare values from different categories

- Column Chart
- Bar Chart

To show the composition of a total

- Pie Chart
- Stacked Bar/Column Charts

To show relationship between two values

- Scatter Plot

To understand data distribution

- Scatter Plot
- Box and Whisker Plot

DATA BROWSER

The data browser is used to select and add columns from the data model to the widget on a dashboard.

An icon to the left of each field indicates its data type:

Numeric - Integer or Decimal
Date
Text

As the user types into the data browser, the list is dynamically filtered to only show the fields that contain the text.

Hover over a field in the Data Browser and click **More..** to display additional aggregation and filtering options.

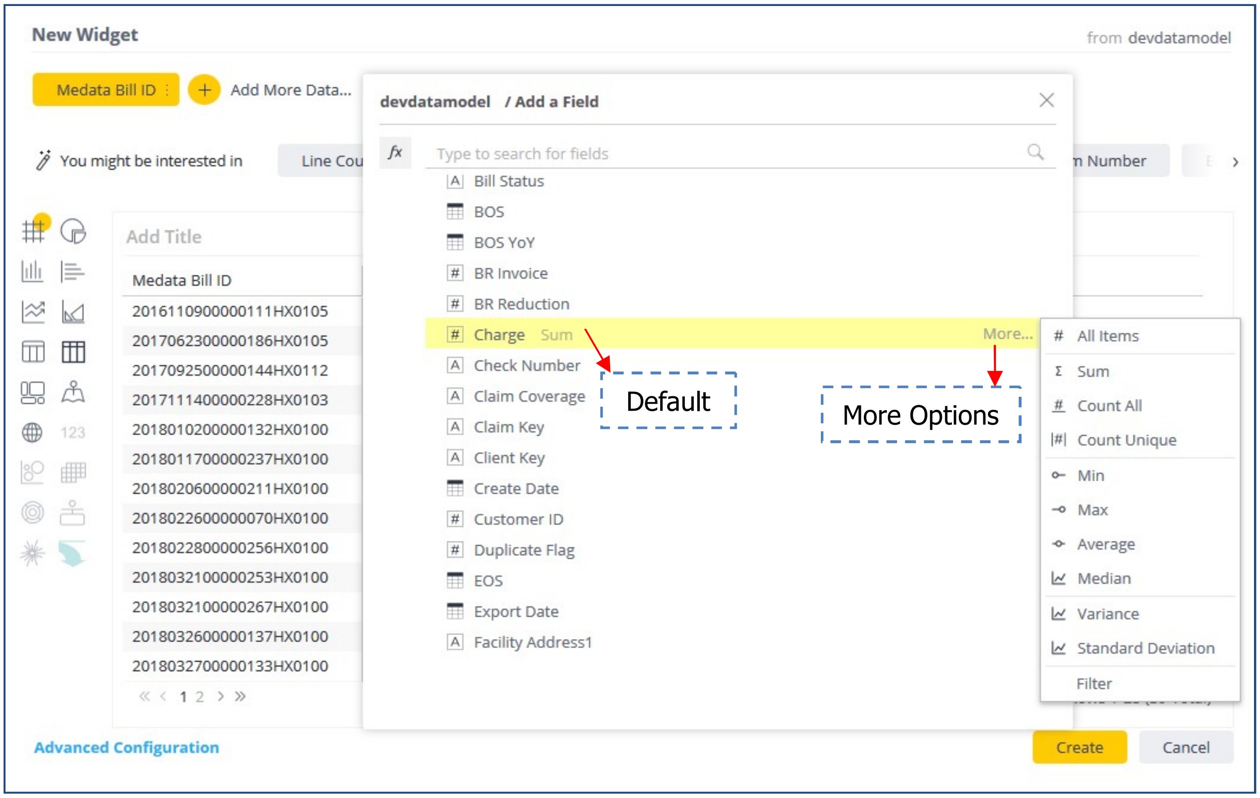

Figure 24 Data Browser

Widget Designer

A widget designer is used to modify a widget's appearance and behavior.

To modify an already existing widget on the dashboard, click on  button that appears in the top-right corner of a widget.

To open the widget designer while creating a new widget, click on **Advanced Configuration** option that appears at the bottom-left of each window.

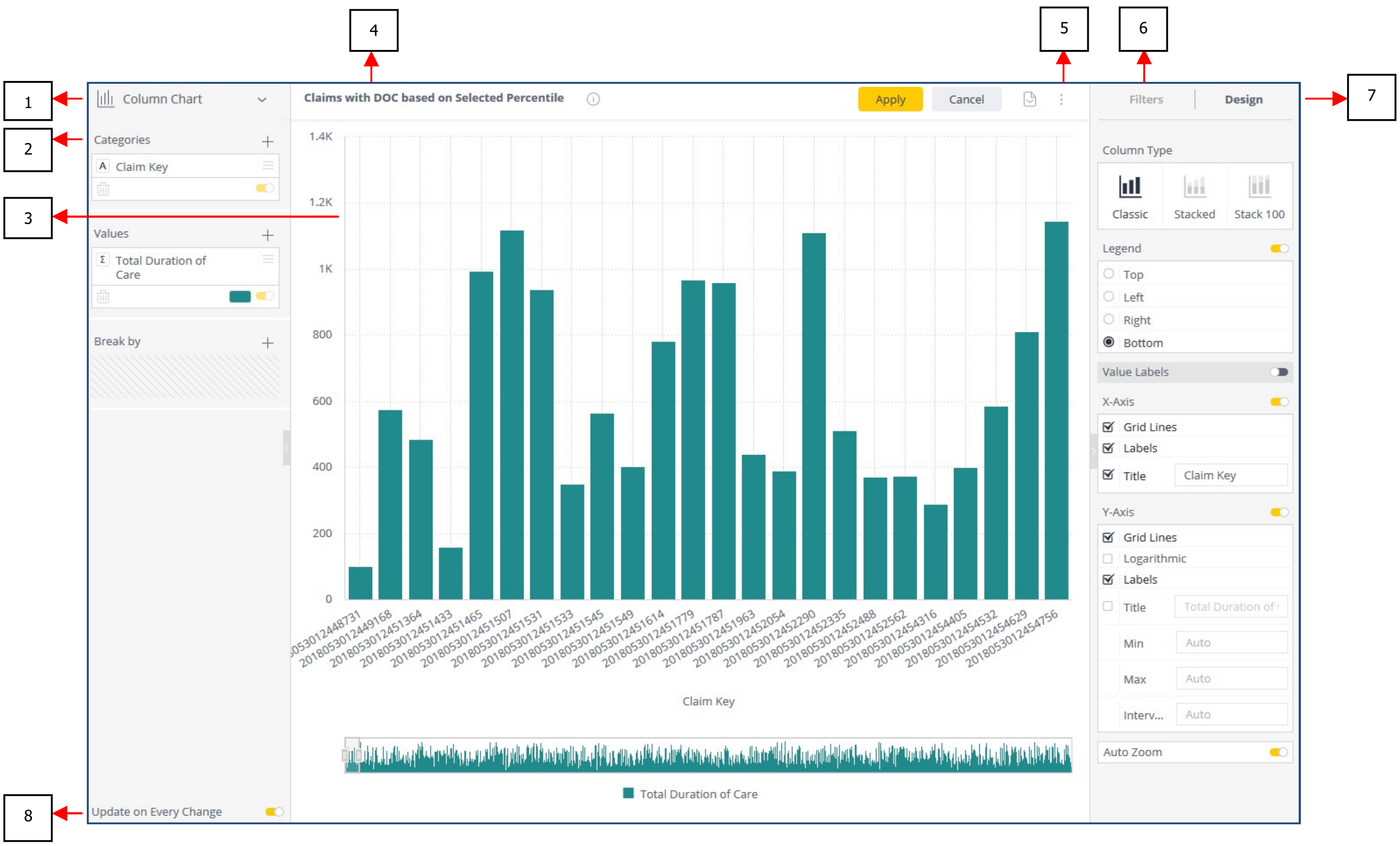

Figure 9 Widget Designer

1. Enables the user to select the widget visualization
2. Used for adding data to the widget
3. Displays a preview of the widget
4. Add or Edit title of the widget
5. Displays a menu of additional options for the widget
6. Manage filters that affect this widget
7. Design options for editing the appearance of the widget
8. If selected, the data changes automatically and dynamically updates the display
   If not selected, manually update the widget to display changes

Managing Widgets

To copy a Widget within the same dashboard

In Dashboard view, click the widget menu ⋮ button in the top-right corner of the widget to be copied and select Duplicate.

If you are editing the widget, click the widget menu ⋮ button in the top-right corner of the widget to be copied and select Save A Copy.

To copy a Widget to another dashboard

Select the Header of the widget to be copied and drag it to the dashboard you want to copy it to.

To delete a Widget

Click the widget menu ⋮ in the top-right corner of the Widget and select Delete. Confirm the deletion.

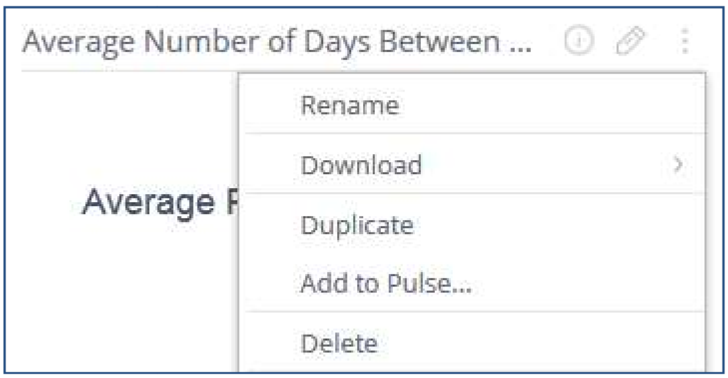

Figure 10 Widget Menu

To move a widget on the dashboard

Make sure that you are in Layout mode (default mode). The Layout mode indicator is displayed in the top-right corner of the dashboard. Otherwise, click to go from View Mode to Layout mode.

Drag and drop the widget into the desired position by dragging it by the top part of the widget.

Place widgets side by side by putting each widget in a different column or by dragging one widget on top of the other. Both these widgets will then be in the same column.

To resize a widget

Resize the widget by dragging its edges right, left, up or down.

To download a widget

A widget can be downloaded as a PDF or an image, CSV, PDF or excel sheet.

FILTERS

Filters are used to interact with the dashboard, while analyzing data. A dashboard can have multiple filters. Filters can also be set on an individual widget level. Each time a user interacts with a filter, by selecting or entering a value, the filter is immediately applied to the dashboard.

Dashboard Filters

Different ways to interact with filters, using the filter pane on the right side of the dashboard:

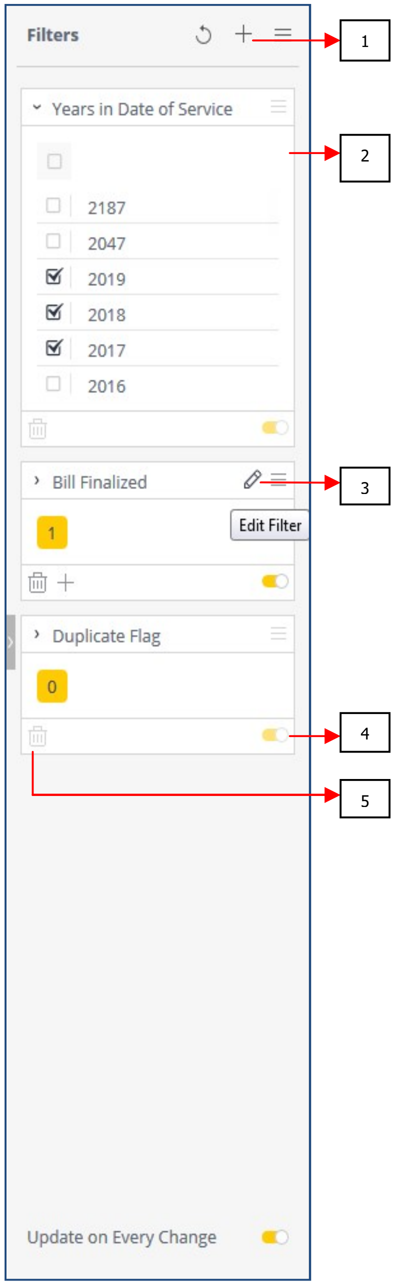

Figure 117 Dashboard Filters

1. To create a new filter, click on the + sign on the top-right corner of the filter pane
2. Make a different selection in the filter controls displayed in the filters pane
3. Click on the pencil icon next to the filter name in the filter pane to display edit filter window
4. The toggle switch used to toggle filters on and off. It is used to compare the visualizations with and without the filter, or to temporarily disable a filter, rather than deleting it.
5. Delete a filter, by clicking on the icon.

Widget Filters

The difference between a dashboard filter and a widget filter is that the widget filter only affects its hosting widget, and is accessible only via the widget designer, not directly from the dashboard.

To add a widget filter,

- Click on edit widget in the dashboard
- Click on Filters tab in the left side of the widget designer
- The Filters panel is displayed showing the filters defined for this Widget. Click on the **+** button to display the Data Browser, which lists the fields in the data model.
- Click on a field in the data browser to add it as a filter

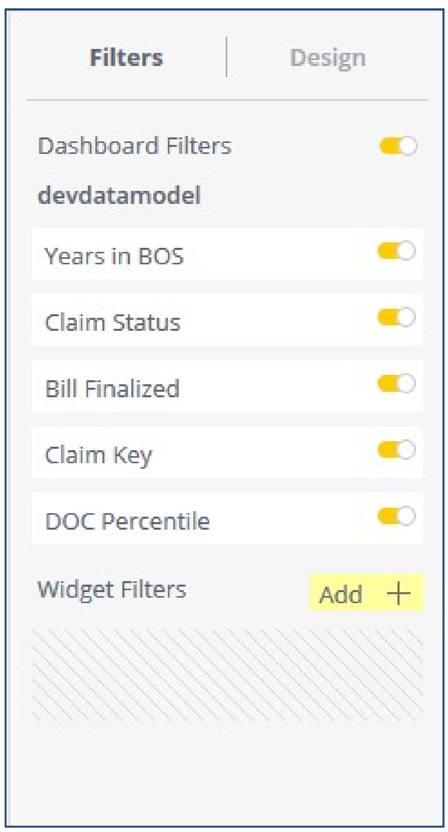

Figure 2812 Widget Filters - Add new widget

To add a widget filter to an existing field,

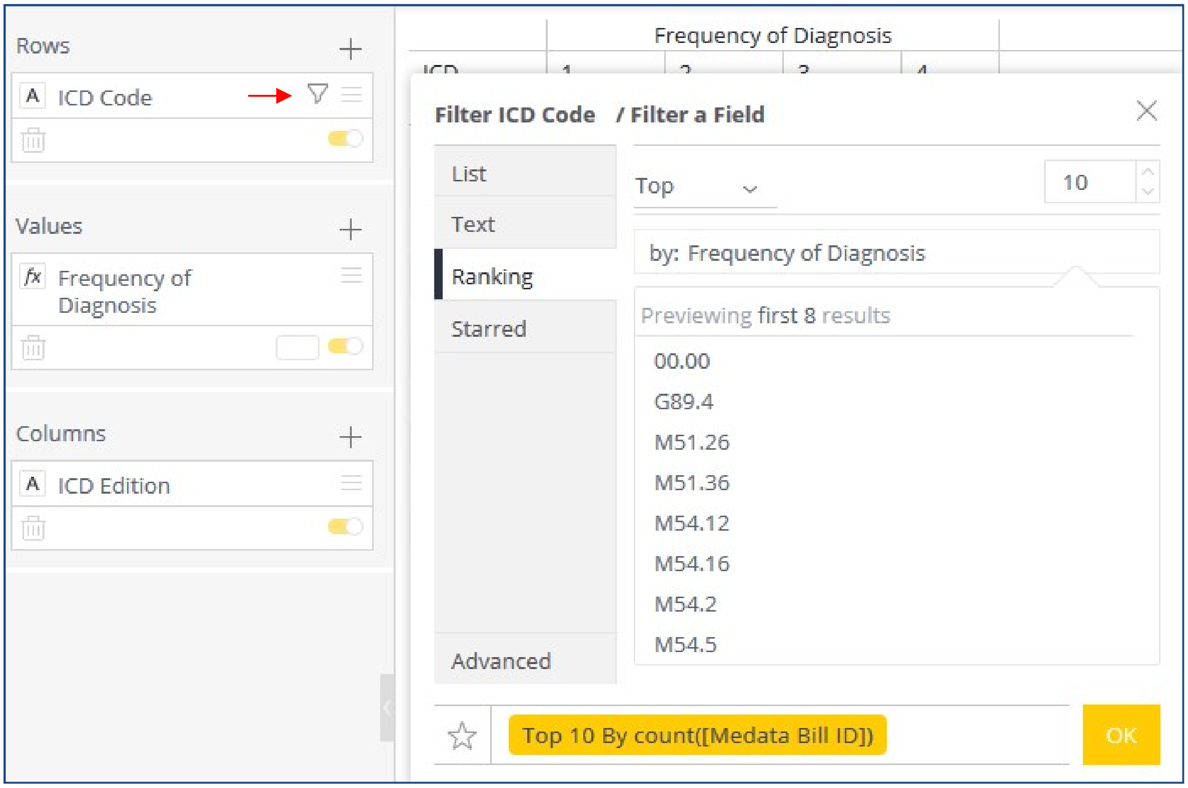

Figure 13 Add widget filter to an existing field

Hover over the field you want to filter on the left pane of the widget designer, and click the  icon

Filter Setting – Single or Multi Selection

By default, list filters are set to multi selection. To toggle between single and multi selection, click the button on the upper-right of the list filter.

Multi selection:

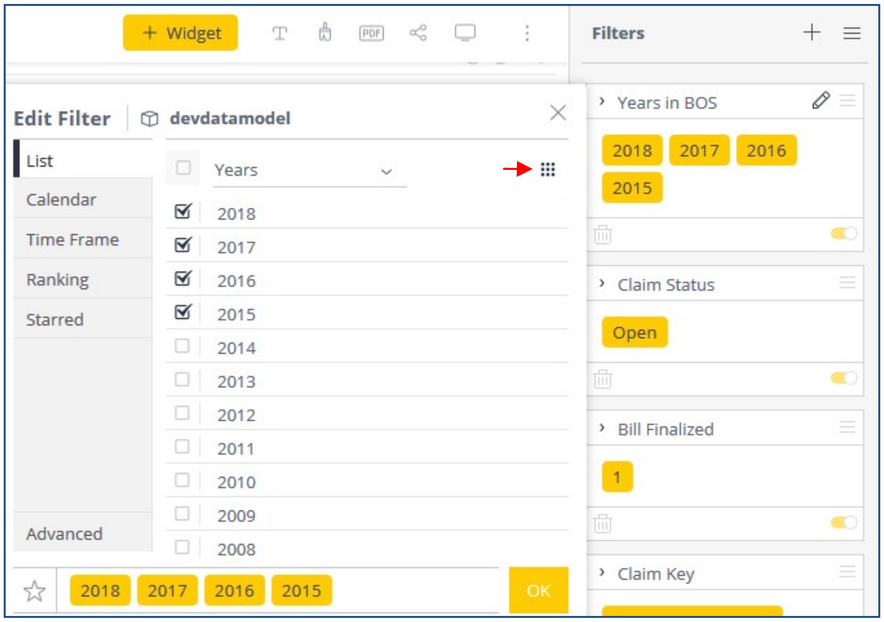

Figure 3014 Multi selection list filter

Single selection:

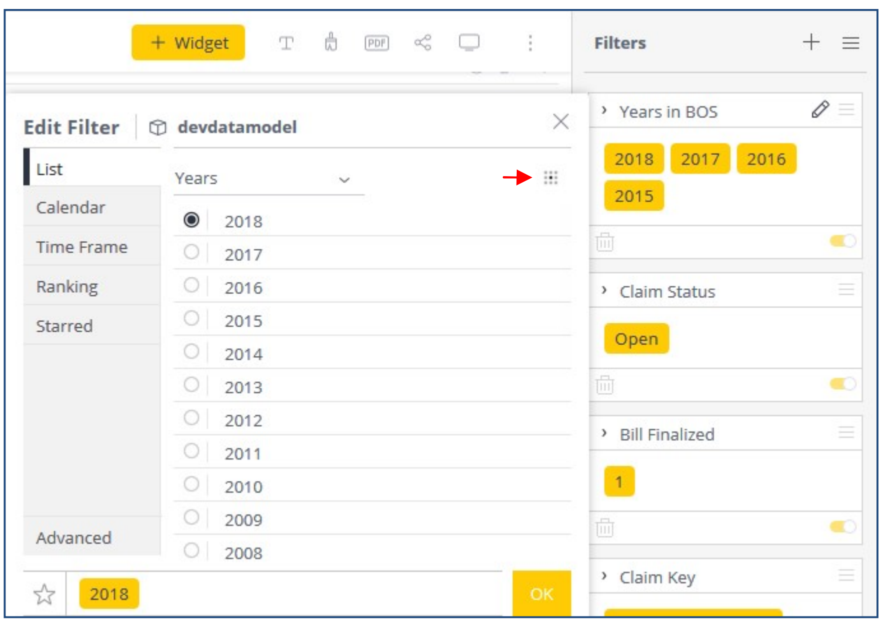

Figure 3115 Single selection list filter

Filtering Options

The options provided for types of filters may vary according to the selected field type (Date, Numeric or Descriptive).

Creating an Include/Exclude Filter

Select the list option in the left panel. Select or clear the field values to be included or excluded in the dashboard.

Click **OK** to filter the data in the Dashboard and add a List filter to the Filter panel of the Dashboard.

Creating a Text/Numeric/Date Filter

Text - Select the text tab and select a textual field. Select the operator, for example starts with or containing. Type in the value by which to filter

Numeric - Select the values tab and select the operator, for example Equals or Greater than. Type in the value by which to filter

If you require additional conditions, click **+ Add condition**. Select **AND** or **OR** to define how filter operators are combined.

Creating a Top or Bottom Ranking Filter

Select the Ranking filter tab

Select Top or Bottom and the number of items to include

In the **By** field, select a field by which to rank the fields. A list of the fields that match these definitions is displayed so that you can verify that the results are as you expect.

Click **OK** to filter the data in the Dashboard and add a Ranking filter to the Filter panel of the Dashboard.

Creating a Time Filter

Select the Calendar filter tab

Use the quick navigation menu to jump to a point in time

Select a date range using any of the following methods:

Use the calendar to select a date range to filter by. Use the left calendar to select the starting date of the range, and the right calendar to select the end date.

Type in the dates.

Use a shortcut such as Earliest Date or Today.

Click **OK** to filter the data in the dashboard and add a date filter to the filter panel of the dashboard.

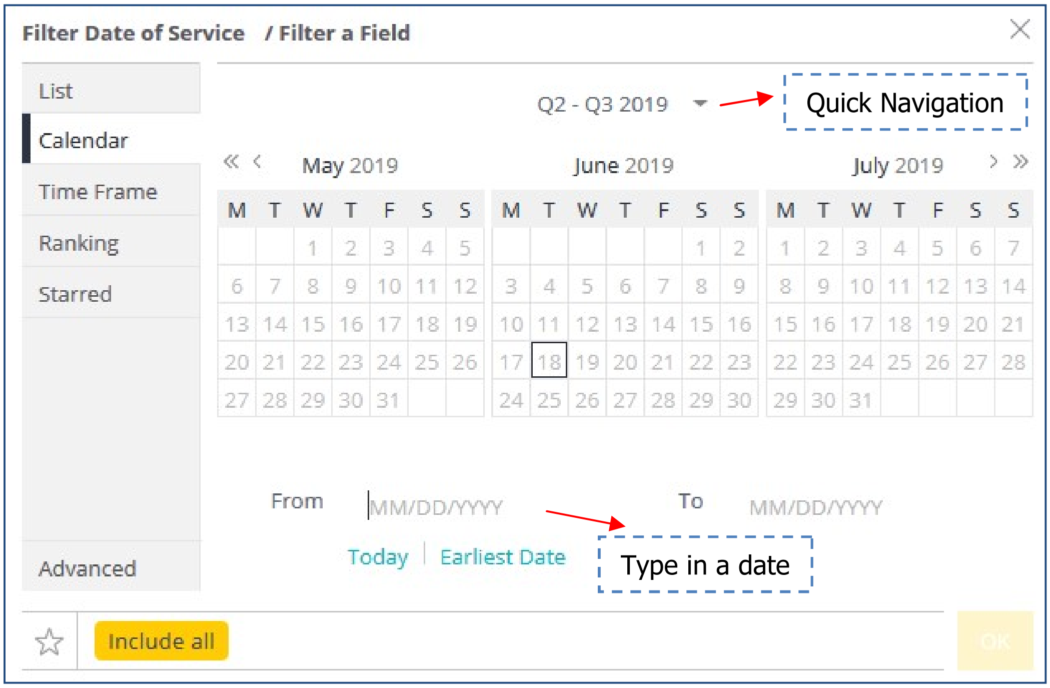

Figure 32 Calendar Filter

Caution: All changes made on a widget are irreversible. While editing a widget, once the user clicks on **Apply**, the changes made are saved and the user cannot go back to the previous version of the widget. The same applies for dashboards. The changes made on dashboards such as addition or delete cannot be undone.

Solution: Duplicate dashboards from Medata Dashboard List, and make changes on the duplicate copy, to retain the original version.

Drilling Down in a Widget

A user can drill down into the data to get an in-depth view of a selected value.

To drill down into a chart

- Right click on the item in the widget into which you want to drill down
- To manually select the drill hierarchy path, select **Drill Into**, and then in the Data Browser, select the field into which to drill down
- If you have already drilled into this chart, then you will have shortcuts to previously selected fields, or select **Choose Another Field** to select a different field for the first time

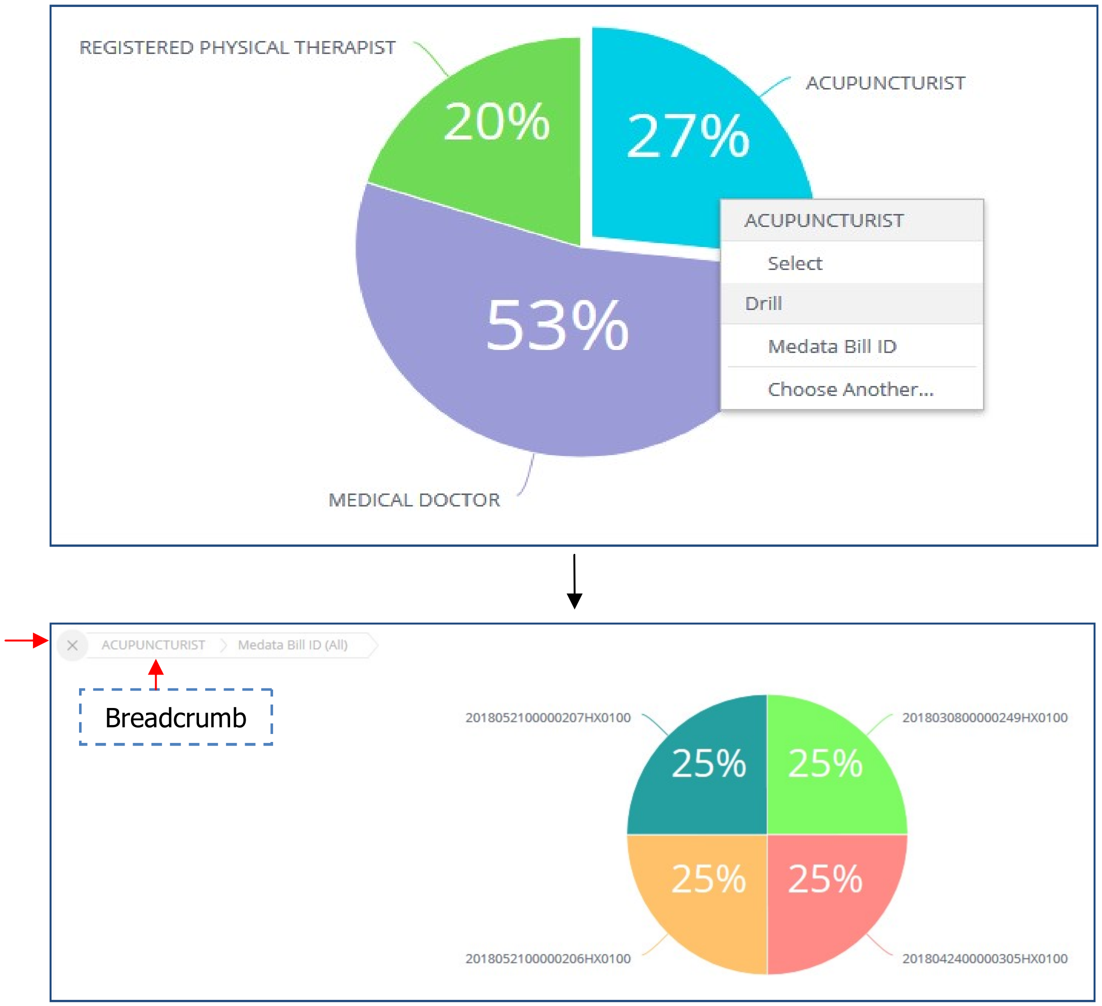

Figure 33 Drill down a widget

- To drill up to a higher level, click on a breadcrumb.
- To drill all the way up, click on the X icon

Exporting Results

Dashboards are exported as a .dash file.

To export a single dashboard

Open the dashboard's menu ⋮ on the top-right corner of the dashboard and click **Export**.

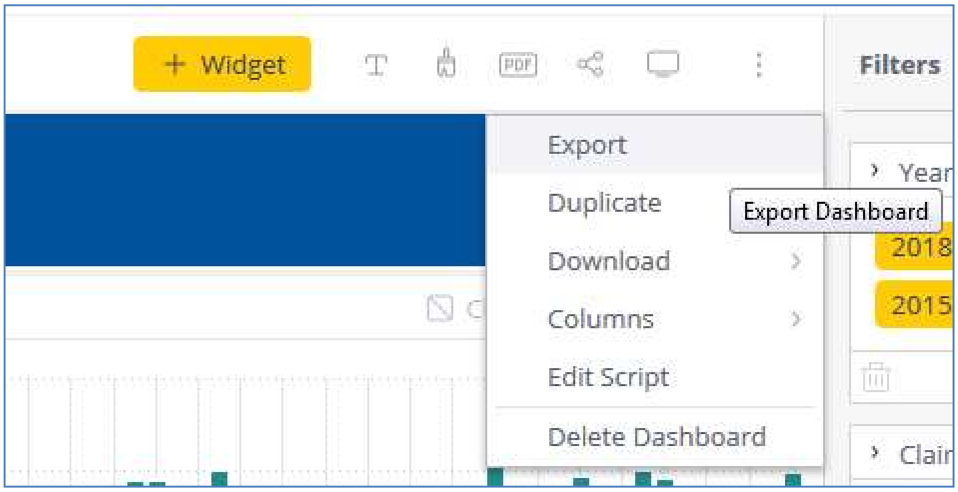

Figure 16 Export menu of a dashboard

To export a single widget

Individual widgets can be downloaded from a dashboard using the **download** option on the widget menu ⋮, on the top right corner.

The widgets can be downloaded as an image or a CSV file. A csv file downloads the underlying table structure of the widget.

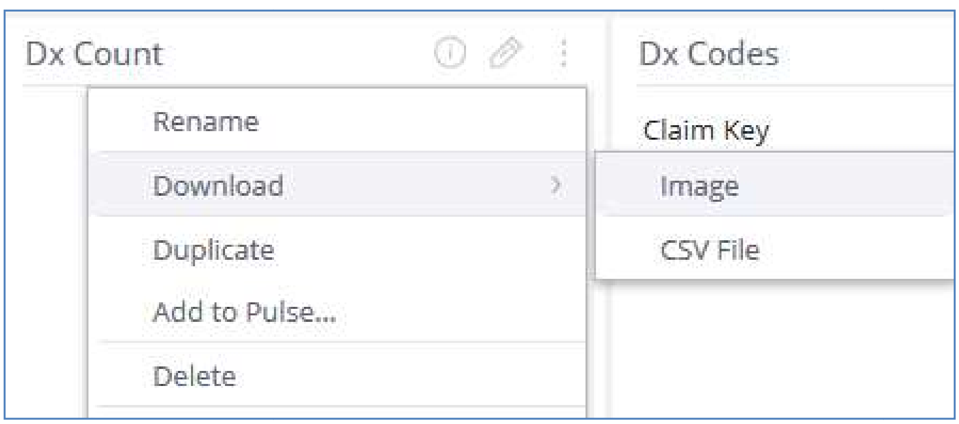

Figure 35 Export menu of a single widget

To download a dashboard

To download a dashboard, click on download option on the dashboard menu ⋮, on the top right corner. While downloading as a PDF, in edit mode, widgets can be resized to fit the page by using the mouse to resize the widgets, change page orientation, header and footer details using the settings option on the left.

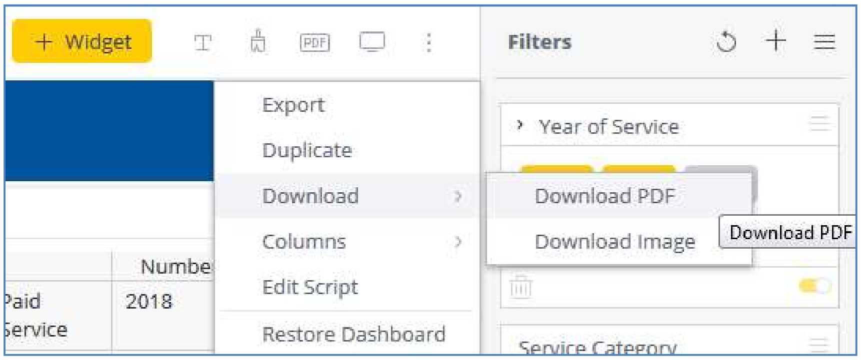

Figure 36 Download options

Figure 37 PDF Download Options and Edit Mode

Data Model Entity Relationship Diagram

The data model serves as a representation of the various tables involved in the BI process. It helps to provide an understanding of the relationships between the tables, the fields that establish the relation and their properties.

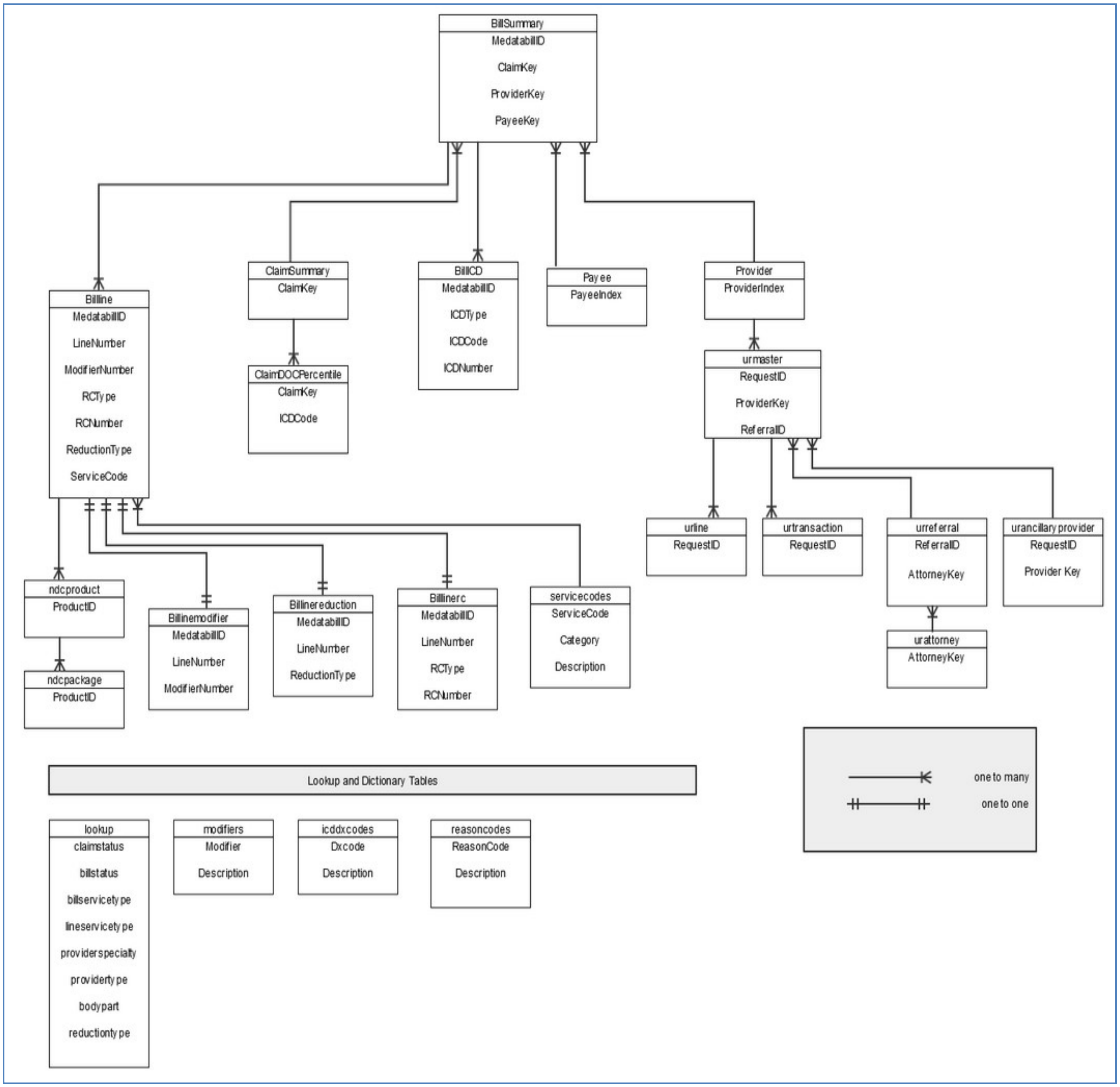

Figure 38 DevDataModel Entity Relationship Diagram

Bill Data Tables

billsummary

The billsummary table serves as a **master table**. It contains information about a bill on a header level such as received date, total charge, reduction, allowance, review state, etc. There are three important columns in 'billSummary' table:

- 'Bill Finalized': value '1' corresponds to the latest **posted** iteration of the bill.
- 'Last Iteration': value '1' corresponds to the latest iteration of the bill regardless of the bill status.
- 'Duplicate flag': value '0' indicates that is not a full duplicate bill entry.

Setting 'Bill Finalized' to '1' and 'Duplicate Flag' to '0' ensures that only posted and non-duplicate bills are included into calculation on the dashboards.

billicd

The billicd table contains a list of all ICD codes along with their order on the bill.

clientrecord

The clientrecord table provides details on clients or lines of business, such as WC or Auto.

insurercompany

The insurercompany table stores individual insurer information pertaining to the company and provides details on insurer company name, address, Federal Employer Identification Number (FEIN).

insuredcorporation

The insurercompany table holds individual Insured information pertaining to the Corporation holding the insurance policy.

Bill Line Data Tables

billline

The billline table contains information about a bill on a line level. Using 'Medata Bill ID' and 'Line Number' enables a user to uniquely identify the details, such as a service code, date of service, charge, reduction, allowance, etc., on a bill line.

billlinereduction

The billlinereduction table contains a breakdown by type of reduction, Bill Review and/or PPO, applied on a bill line.

billlinerc

The billlinerc table provides the details on bill line reason codes and associated reduction amounts.

billlinecrc

The billlinecrc table provides the details on bill line client reason codes and associated reduction amounts.

Claim Data Tables

claimsummary

The claimsummary table contains comprehensive information about a claim such as claimant data, overall charges, allowance, duration of care, number of visits, and number of bills.

claimdocpercentile

The claimdocpercentile table contains percentiles of the duration of care for each ICD code associated with a claim based on statistical analysis of Medata's historical comparison data set.

claimsurgicalepisode

The claimsurgicalepisode table combines all bills on a claim related to a surgery on a specific body part. This table provides an opportunity to aggregate the charges associated with the surgery by body part per claim.

Provider/Payee Data Tables

provider

The provider table contains information about providers including names, addresses, provider types and specialties, NPI's, Tax ID's, etc.

payee

The payee table contains information about payee including names, addresses, Tax ID's, licenses, etc.

General Information Tables

servicecodes

The servicecodes table contains current and historical CPT, HCPCS, NDC, revenue and state-specific codes along with their descriptions and categorization.

clientreasoncodes

The clientreasoncodes table provides details on existing client reason codes and their descriptions.

reasoncodes

The reasoncodes table provides details on existing Medata reason codes and their descriptions.

icddxcodes

The icddxcodes table serves as a lookup table for ICD diagnosis codes and their descriptions.

modifiers

The modifiers table contains the list of modifiers and their descriptions.

ndcproduct

The ndcproduct is a drug database that contains information about NDC's product name, substance, pharmacy class, etc. The ndcproduct is linked to the billline table via 'Product NDC' and 'NDC' columns correspondingly.

ndcpackage

The ndcpackage table contains packaging information of NDC products from 'NDCProduct' table.

lookup

The lookup table serves as a master dictionary table with descriptions for bill status, claim status, provider specialty, provider type which are referenced in the other tables for descriptions.

Utilization Review Data Tables

urtransaction

The urtransaction is the main table for the details on UR requests. It contains the details on UR request transactions including status, review level and type, determination, received date, decision date, peer review dates, etc.

urmaster

The urmaster table contains three key elements that join a utilization review request for authorization with other tables in the data model by Medata Bill ID, claim key, and provider key.

urline

The urline table contains information on requested services and procedures, requested and authorized units, etc.

urreferral

The urreferral table contains three key elements including attorney key, defense attorney key and provider referrals.

urattorney

The urattorney table contains attorney information.

urancillaryprovider

The urancillaryprovider table contains information about ancillary providers.

urpeerprovider

The urpeerprovider table contains information about peer providers including name, specialty, and contact details.

urpeerorganization

The urpeerorganization table contains information about peer organizations including name, address, contancts.

urpeerlicense

The urpeerlicense table provides the peer provider's state license information.

urusers

The urusers table provides the information on the users of UR application.

urdocument

The urdocument table serves as a bridge between UR tables and the other bill related tables such as billsummary. It contains information on all UR documents, their associated request ID's and Medata Bill ID's.

State Reporting Data Tables

srsummary

The srsummary table provides the information on the state reporting process for every qualified bill including transfer date, status, acknowledgement, etc.

srerrors

The srerrors table provides the information on bills' errors that appeared during the state reporting process.

DATA DICTIONARY

General Tables

adjustors

The adjustors table maintains all the essential information about adjustors, their status, supervisors and managers ID, last active login details and more.

Column Header	Data Type	Description	
ID	Integer	Table row ID	
Claim Adjustor ID	Text	Claim Adjustor Identifier	
First Name	Text	Name	
Last Name	Text		
Login	Text	Adjustor Login Credentials	
Status	Text	Status	Active/Inactive/New/XMLLoaded
Last Login	DateTime	Last Login Details	
Supervisor ID	Integer	Supervisor Identifier	
Manager ID	Integer	Manager Identifier	
Edit Date	DateTime	Record Edit Date	
Address 1	Text	Adjustor Address Information	
Address 2	Text		
City	Text		
State	Text		
Zip Code	Text		
Phone Number	Text		
Email Address	Text		

Primary Key

* A primary key is a special database table column (or combination of columns) designated to uniquely identify all table records. A primary key must contain a unique value for each row of data.

adjustormanagers

The adjustormanagers table maintains all the essential information about adjustor managers.

Column Header	Data Type	Description	Values
ID	Integer	Table row ID	
First Name	Text	Adjustor Manager Name	
Last Name	Text		
Login	Text	Login Credentials	
Status	Integer	Status	Active/Inactive/New/XMLLoaded
Last Login	DateTime	Last Login Details	
Edit Date	DateTime	Record Edit Date	
Claim Adjustor ID	Text	Claim Adjustor ID	
Email Address	Text	Adjustor Email Adress	

Primary Key

adjustorsupervisors

The adjustorsupervisors table maintains all the essential information about adjustor supervisors.

Column Header	Data Type	Description	Values
ID	Integer	Table row ID	
First Name	Text	Adjustor Supervisor Name	
Last Name	Text		
Login	Text	Login Credentials	
Status	Integer	Status	Active/Inactive/New/XMLLoaded
Last Login	DateTime	Last Login Details	
Manager ID	Text	Manager Identifier	
Edit Date	DateTime	Record Edit Date	

Primary Key

billicd

The billicd table maintains a list of all the ICD codes that have appeared on a bill, along with the order of diagnosis.

Column Header	Data Type	Description
Medata Bill ID	Text	Unique Bill Identifier
ICD Type	Char	Type of ICD Code: D – Diagnosis, P – Procedural
ICD Number	Integer	Order in which the Dx code appeared on the bill
ICD Edition	Char	ICD format 9 or 10
ICD Code	Text	ICD Code
Update Date	DateTime	Bill ICD Record update timestamp
Customer ID	Integer	Customer Identifier
Medata Bill ID Pre	Text	Medata Bill ID without iteration number
Recon Number	Integer	Number of times bill was sent back for reconsideration
ICD Code Description	Text	Dx Code Description

Primary Key

* A primary key is a special database table column (or combination of columns) designated to uniquely identify all table records. A primary key must contain a unique value for each row of data.

billline

It comprises information about a bill on a line level. Using the Medata Bill ID and the line number, it enables the user to uniquely identify the details, such as service code, date of service, etc., on a line level on a bill.

Column Header	Data Type	Description	Values
Medata Bill ID	Text	Unique Bill Identifier	
Line Number	Integer	Line Number on the bill	
Service Code	Text	Finalized service code after review	
Modifier 1	Text	Modifier Code	
Modifier 2	Text	Modifier Code	
FS CPT Indicator	Char	Fee Schedule / CPT Code / Drug Indicator	
Billed Service	Text	Billed Service Code	
Date of Service	Date	Date service was performed	
POS	Char	Place of Service	
TOS	Text	Type of Service	
Units	Integer	Quantity of service performed	
Charge	Decimal	Total charge for service performed	
Allowance	Decimal	Recommended total allowance for service performed	
Anes Time	Text		
Anes Minutes	Text		
Which ICD	Text	To which ICD-9 code is the procedure code related	
Line Type	Text		00 – Normal 04 – Taxes 05 – Penalties 06 – Discounts 07 – Deductible 08 – Copay 09 – Surcharge 10 - PPO Discount 11 – Undercharge 12 - Limit Red 13 - Care Fee 14 – Appointment 15 – Offset 16 - Outlier
Service Type	Char	Service Type Indicator	! – Ignore Procedure P - Procedure X - Drug supply M – Manual Procedure Z – Book keeping record
Service Code2	Text	Service code for PA Workers' Compensation Fee Schedule (PA WS)	
Service Code2 Indicator	Char		

Service Code Modified	Integer	Indicates if billed service code has been edited
Compound Drug Flag	Integer	Compound drug indicator
Rx Number	Text	Prescription drug number
Pharmacy Days	Text	
Update Date	DateTime	Billline record update timestamp
Customer ID	Integer	Customer Identifier
Medata Bill ID Pre	Text	Medata Bill ID without iteration
Recon Number	Integer	Number of times bill was sent back for reconsideration
NDC	Text	Links NDC codes to ndcproduct table

Primary Key

billlinerc

The billlinerc table contains information about the reduction amount and their corresponding reason codes on a bill line level.

Column Header	Data Type	Description
Medata Bill ID	Text	Unique Bill Identifier
Line Number	Integer	Line number on the bill
RC Number	Integer	Order in which the reason code appeared on the bill
Reason Code	Text	Reason Codes
RC Reduction	Decimal	RC associated reduction value
RC Override	Integer	Reason Code Override Flag
Update Date	Date	Billlinerc record update timestamp
Customer ID	Integer	Customer Identifier
Medata Bill ID Pre	Text	Medata Bill ID without iteration
Recon Number	Integer	Number of times bill was sent back for reconsideration
RC Description	Text	Reason Code Description

Primary Key

billlinecrc

The billlinecrc table contains information about the reduction amount and their corresponding client reason codes on a bill line level.

Column Header	Data Type	Description
Medata Bill ID	Text	Unique Bill Identifier
Line Number	Integer	Line number on the bill
CRC Number	Integer	Order in which the reason code appeared on the bill
Reason Code	Text	Reason Codes
CRC Reduction	Decimal	RC associated reduction value
CRC Override	Integer	Reason Code Override Flag
Update Date	Date	Billlinerc record update timestamp
Customer ID	Integer	Customer Identifier
Medata Bill ID Pre	Text	Medata Bill ID without iteration
Recon Number	Integer	Number of times bill was sent back for reconsideration
CRC Description	Text	Client Reason Code Description

Primary Key

billlinereduction

The billlinereduction table contains information on the reductions applied and the type of reduction on the line level on a bill.

Column Header	Data Type	Description
Medata Bill ID	Text	Unique Bill Identifier
Line Number	Integer	Line number on the bill
Reduction Type ID	Integer	Reduction Type Identifier
Reduction	Decimal	Reduction value
Update Date	DateTime	Billlinereduction record update timestamp
Customer ID	Integer	Customer Identifier
Medata Bill ID Pre	Text	Medata Bill ID without iteration
Recon Number	Integer	Number of times bill was sent back for reconsideration
Reduction Type	Text	Type of Reduction: Eg., Bill Review Reduction, PPO Reduction

Primary Key

billsummary

The bill summary table serves as a master table, which comprises information about a bill on a header level. The tables that contain information on a line level, reference the bill summary table using the Medata Bill ID.

Column Header	Data Type	Description	Values
Medata Bill ID	Text	Unique Bill Identifier	
Medata Bill ID Pre	Text	Bill identifier without bill iteration number	
Bill Finalized	Integer	Indicates that it is the latest version of the bill. Only posted bills are marked as finalized. No recons have been processed.	
Last Iteration	Integer	Flag to indicate that the iteration of the bill is the latest	
Recon Number	Integer	Number of times bill has been sent for reconsideration	
Bill Status	Char	Status of a bill	A - Adjusted D - Deleted M - Payment Recon N - Undeleted P - Paid Q - Sendback R - Rerun S - Suspended U - Unsuspended W - Rework
Claim Coverage State	Char	Claim Coverage State	
Claim Coverage Type	Char	Claim Coverage Type	
Review State	Char	Review State	
Review Type	Char	Review Type	WC / NF
Duplicate Flag	Integer	Duplicate bill indicator	
Line Count	Integer	Total number of lines on the bill	
Origin Indicator	Char	Identifies if the bill is a converted historical bill or current Medata Bill	C – Converted 0 – Medata Bill
Pay Type Code	Text		
Pay Kind Code	Text		
Object Type	Char	Object Type	B – Bill D – Document M - Mixed
PPO ID	Text	PPO ID	
PPO Subnetwork	Text	PPO Subnetwork Name	
Provider Type ID	Text	Provider Type Identifier	
Provider Specialty ID	Text	Provider Specialty Identifier	
UB Type	Text	Bill Type	
Hospital Facility Type	Text	Type of Hospital facility, if applicable	I – Inpatient O- Outpatient NH – Not Hospital

BOS	Date	Date of first treatment	
EOS	Date	Date of last treatment	
Client Key	Text	Client Identifier	
Claim Key	Text	Claim Identifier	
Provider Key	Text	Provider Identifier	
Payee Key	Text	Payee Identifier	
Submitter ID	Text	Submitter Identifier	
External Bill ID	Text	External Bill Identifier	
Insurer Corp Key	Text	Corporation Key	
Insurer Company Key	Text	Insurer Company Key	
Insurer Location Key	Text	Insurer Location Key	
Insurer Policy Key	Text	Insurer Policy Key	
Insured Corp Key	Text	Insured Corporation Key	
Insured Company Key	Text	Insured Company Key	
Insured Location Key	Text	Insured Location Key	
Received Date	Text	Client Received Date	
Received Date2	Text	Medata Received Date	
Pend Date	DateTime		
Create Date	DateTime	Date bill was created	
Post Date	DateTime	Date bill was posted	
Review Date	DateTime	Date bill was reviewed	
Export Date	DateTime	Date bill was exported	
Paid Date	DateTime	Date bill was paid	
Reported Date	DateTime		
Bill Overall TAT	Integer	Number of business days between client received date and bill post date	
Bill Medata TAT	Integer	Number of business days between medata client received date and bill post date	
Bill Paid TAT	Integer	Number of business days between client received date and bill paid date	
Charge	Decimal	Charge	
Allowance	Decimal	Allowance	
Reduction	Decimal	Total Reduction on the bill	
BR Reduction	Decimal	BR Reduction	
PPO Reduction	Decimal	PPO Reduction	
Other Reduction	Decimal	Other Reduction	
Total Allowance Delta	Decimal	Indicates overpayment/ underpayment amount of a bill	'-' indicates overpayment if previous posted bill was paid.
BR Reduction Delta	Decimal	Indicates dollar amount of difference in BR reduction in comparison with previous posted bill	
PPO Reduction Delta	Decimal	Indicates dollar amount of difference in PPO reduction in comparison with previous	

		posted bill
BR Invoice	Decimal	BR Invoice amount
PPO Invoice	Decimal	PPO Invoice amount
Other Invoice	Decimal	Other Invoice amount
Pend Batch ID	Text	
Pend Bill ID	Text	
Payment ID	Text	
Check Number	Text	
Referring Provider Last Name	Text	Referring Provider Name and License Information
Referring Provider First Name	Text	
Referring Provider License	Text	
Referring Provider NPI	Text	
Facility Address1	Text	Provider Facility's Address Details
Facility Address2	Text	
Facility City	Text	
Facility State	Text	
Facility Zip Code	Text	
Facility License	Text	
Keyer	Text	Bill Keyer / UserID
Update Date	DateTime	Billsummary record update timestamp
Customer ID	Integer	Customer Identifier
BOS YoY	Date	Date field used to compare year over year

Primary Key

claimdocpercentile

The claimdocpercentile table contains the percentile values for the duration of care on a Dx code level, for all the unique Dx codes that have appeared on a claim, based on Medata's historical research data set.

Column Header	Data Type	Description
Claim Key	Text	Unique Claim Identifier
ICD Code	Text	Dx Code
Duration of Care	Integer	Number of days between first and last date of service
DOC Percentile	Integer	Percentile in which the ICD code's duration of care falls, based on Medata's historical research data set
Customer ID	Integer	Customer Identifier
ICD Code Description	Text	Dx Code Description

Primary Key

claimsummary

The claimsummary table comprises comprehensive information about a claim. It provides an overview about the claim's overall charges, allowance, duration of care, number of visits, number of bills.

Column Header	Date Type	Description
Claim key	Text	Unique Claim Identifier
Client Number	Text	Client Number
Claim Number	Text	Claim Number
Coverage State	Char	Claim Coverage State
Coverage Type	Char	Claim Coverage Type (WC or NF)
Last Name	Text	Claimant's Last Name
First Name	Text	Claimant's First Name
Middle Initital	Char	Claimant's Middle Initial
SSN	Text	Claimant's Social Security Number
Gender	Char	Claimant's Gender
Date of Birth	Date	Claimant's Date of Birth
Date of Injury	Date	Date of Injury
Age at DOI	Integer	Claimant's age at the date of injury
BOS	Date	Date of the first treatment
EOS	Date	Date of the last treatment
Duration of Care	Integer	Number of days between BOS and EOS
DOC Percentile	Integer	Percentile in which the claim's DOC falls, based on Medata's historical research data set
Number of Visits	Integer	Total number of visits from all bills throughout the duration of the claim
Total Charge	Decimal	Total Charge on a claim level
Total BR Reduction	Decimal	Total Bill Review Reduction on a claim level
Total PPO Reduction	Decimal	Total PPO reduction on a claim level
Total Other Reduction	Decimal	
Total Allowance	Decimal	Total recommended allowance on a claim level
Number of Posted Bills	Integer	Total number of posted bills in the claim
Days to First Tx	Integer	Number of days between the date of injury and the first treatment (BOS)
Claim Status ID	Text	Claim Status Identifier
Certified Plan	Text	HCN or MPN Certified plan for Texas
Claim Adjustor ID	Text	Claim Adjustor Identifier
Address1	Text	Claimant's Address Information
Address2	Text	
City	Text	
State	Char	
Zip Code	Text	
Update Date	DateTime	Claim Record Update Timestamp
Customer ID	Integer	Customer Identifier
Claim Status	Text	Status of a claim: Open/Closed/Inactive
Coverage State	Text	Claim Coverage State

Primary Key

claimsurgicalepisode

The claimsurgicalepisode table aggregates all the surgical episodes based on body part for a claim.

Column Header	Date Type	Description
Claim Key	Text	Claim Identifier
Body Part	Varchar	Surgeries grouped by body part
Medata Bill ID Pre	Varchar	Bill identifier without bill iteration number
Recon Number	Integer	Number of times bill was sent back for reconsideration
Update Date	DateTime	Timestamp when record was updated

Primary Key

clientrecord

The clientrecord table provides details on client groups, such as WC or Auto.

Column Header	Date Type	Description
Client Key	Text	Client Identifier
Client Number	Text	Client Number
Client Name	Text	Client Key
Update Date	Date	Client Record Update Timestamp
CustomerID	Text	Customer Identifier

Primary Key

clientreasoncodes

The clientreasoncodes table provides details on client reason codes and their descriptions.

Column Header	Date Type	Description
Client Number	Text	Client Number
Client Reason Code	Text	Client Reason Code
Description	Date	Description

Primary Key

icddxcodes

The icddxcodes table serves as a lookup table with the Dx codes and their descriptions.

Column Header	Date Type	Description
Dx Code	Text	Dx Code
Dx Edition	Integer	Dx Edition ICD-9 or ICD-10
Description	Text	Dx Code description

Primary Key

insurercompany

The insurercompany table stores individual insurer information pertaining to the company and provides details on insurer company name, address, Federal Employer Identification Number (FEIN).

Column Header	Data Type	Description
Insurer Key	Text	Unique Insurer Company Identifier
Insurer Company Name	Text	Insurer Company Name
Insurer Company Number	Text	Insurer Company Number
Address1	Text	Insurer Company Address Details
Address2	Text	
City	Text	
State	Char	
Zip Code	Text	
NCCI Carrier Number	Text	National Council on Compensation Insurance Carrier Number
Insurer FEIN	Text	Insurer Federal Employer Identification Number
Update Date	DateTime	Insurer company record update timestamp
Customer ID	Integer	Customer Identifier

Primary Key

insuredcorporation

The insurercompany table holds individual Insured information pertaining to the Corporation holding the insurance policy.

Column Header	Data Type	Description
Insured Corp Key	Text	Unique Insured Corporation Identifier
Insured Corp Name	Text	Insured Corporation Name
Insured Corp Number	Text	Insured Corp Number
Address1	Text	Insured Corporation Address Details
Address2	Text	
City	Text	
State	Char	
Zip Code	Text	
Insured Corp FEIN	Text	Insured Corporation Federal Employer Identification Number
Update Date	DateTime	Insured Corporation record update timestamp
Customer ID	Integer	Customer Identifier

Primary Key

lookup

The lookup table serves as a master table with descriptions for billstatus, claimstatus, provider specialty, provider type which are referenced in the other tables for descriptions.

Column Header	Date Type	Description
Ltype	Text	Lookup Type BillStatus / Billstype / BodyPart / ClaimStatus / LinesType / ProviderSpecialty / ProviderType / ReductionType
ID	Text	ID
Description	Text	Description
Update Date	DataTime	Update Date

Primary Key

modifiers

The modifiers table serves as a lookup table with the modifier numbers and their descriptions.

Column Header	Date Type	Description
Modifier	Char	Modifier ID
Description	Text	Description

Primary Key

ndcpackage

The ndcpackage table contains packaging information for the NDC products from the ndcproduct table.

Column Header	Date Type	Description
Product ID	Text	Product ID
Product NDC	Text	Product NDC
NDC Package Code	Text	NDC Package Code
Package Description	Text	Package Description
Start Marketing Date	Text	Start Marketing Date
End Marketing Date	Text	End Marketing Date
NDC Exclude Flag	Char	
Sample Package	Char	Sample package indicator

Primary Key

ndcproduct

The ndcproduct table contains all the information about the NDC Product. The Product NDC is linked to the service codes table via the NDC column.

Column Header	Date Type	Description
Product ID	Text	Product ID
Product NDC	Text	Product NDC
Product Type Name	Text	Product Type Name
Proprietary Name	Text	Proprietary Name
Proprietary Name Suffix	Text	Proprietary Name Suffix
Non-Proprietary Name	Text	Non-Proprietary Name
Dosage Form Name	Text	Dosage Form Name
Route Name	Text	Route Name
Start Marketing Date	Text	Start Marketing Date
End Marketing Date	Text	End Marketing Date
Marketing Category Name	Text	Marketing Category Name
Application Number	Text	Application Number
Labeler Name	Text	Labeler Name
Substance Name	Text	Substance Name
Active Numerator Strength	Text	Active Numerator Strength
Active Ingred Unit	Text	Active Ingredient Unit
Pharm Classes	Text	Pharmacy Classes
DEA Schedule	Text	DEA Schedule
NDC Exclude Flag	Char	NDC Exclude Flag
Listing Record Certified Through	Text	Listing Record Certified Through Date

Primary Key

payee

The payee table contains information about the payee.

Column Header	Data Type	Description	Values
Payee Index	Text	Unique Provider Identifier	
Payee ID	Text	Payee ID	
Tax ID	Text	Tax ID	
Name Type	Char	Name Type Provider Name / Entity Name	
Last Name	Text	Payee's Name and Address Details	
First Name	Text		
Middle Initial	Char		
Address1	Text		
Address2	Text		
City	Text		
State	Char		
Zip Code	Text		
Payment Method Flag	Text	Payment Method	UD – Undefined Payment Method CK – Check Payment EV – Electronic Voucher
EDI Ref Number Qualifier	Text	EDI Ref Number Qualifier	
EDI Ref Number	Text	EDI Ref Number	
Payee Status	Char	Payee Status	A - Active B - Blocked I - Inactive L - Locked U - Unmatched
NPI	Text	National Provider Identifier	
External Payee ID	Text	External Payee ID	
External Payee ID2	Text	External Payee ID2	
WC Policy Number	Text	WC Policy Number	
Bank Account Number	Text	Bank Account Number	
Bank Routing Number	Text	Bank Routing Number	
Routing Code	Text	Routing Code	
License	Text	License	
Update Date	DateTime	Update Date	
Customer ID	Integer	Customer ID	

Primary Key

ppobridge

The ppobridge table contains information table that holds information on bill processing by different PPO networks and allows users to track bill transfer dates, return dates, turn-around time, PPO savings and penetration.

Column Header	Data Type	Description	Values
Medata Bill ID	Text	Unique bill identifier	
Medata Bill Id Pre	Text	Medata bill ID without iteration	
Last Record	Integer	Flag indicating the latest transaction. If a bill was processed by multiple PPO networks, the latest transaction gets value '1' and the previous transactions have value '2'.	1 – the latest transaction 0 – past transaction
PPO ID	Text	PPO Network	
Bill Form	Text	HCFA or UB92 form	
Transfer Flag	Text	Flag indicating that a bill was successfully transferred to a PPO network	Y – transferred bill N – not transferred
Transfer Date	Date	The date of a transfer to a PPO network	
Return Flag	Text	Flag indicating that a bill was successfully returned from a PPO network	Y – returned bill N – not returned
Return Date	Date	The date of a return from a PPO network	
Previous Process	Text	Previous step in the bill process	'Unsuspended from Toolbox' – an unsuspended bill was then suspended to the PPO bridge 'Straight into PPO' – a bill went directly to the PPO bridge 'Rerun after post' – a posted bill was then suspended to the PPO bridge 'Adjusted from CORE' – a bill was adjusted in CORE to move to the PPO bridge
PPO Par	Text	Flag indicating if a bill is PPO par or non-par	Y – PPO par N – PPO non-par
PPO Reduction	Decimal	PPO reduction in dollars	
PPO Percent Reduction	Decimal	Percent of a PPO reduction calculated by the formula below: $\frac{\text{PPO Reduction}}{\text{Charge} - \text{Bill Review Reduction}}$	
PPO Business TAT	Integer	Number of business days between Transfer and Return dates	
PPO Calendar TAT	Integer	Number of calendar days between Transfer and Return dates	
Update Date	DateTime	PPOBridge record update timestamp	
Customer ID	Integer	Customer Identifier	

Primary Key

provider

The provider table contains information about the provider, such as, the provider's name and address details, provider type and specialty, NPI, etc.

Column Header	Data Type	Description	Values
Provider Index	Text	Unique Provider Identifier	
Provider ID	Text	Provider ID	
Tax ID	Text	Tax ID	
Name Type	Char	Name Type - Entity / Provider	
Last Name	Text	Provider's Name and Address Details	
First Name	Text		
Middle Initial	Char		
Address1	Text		
Address2	Text		
City	Text		
State	Char		
Zip Code	Text		
Zip Code3	Text		
Provider Type ID	Text	Provider Type ID	
Specialty ID	Text	Specialty ID	
Medicare Specialty	Text	Medicare Specialty ID	
Trauma Center	Integer	Trauma Center Indicator	
Burn Center	Integer	Burn Center Indicator	
Rating	Char		A – Accredited C – Certified E - Eligible
License	Text	Provider License Number	
Medicare ID	Text	Medicare ID	
Hospital ID	Text	Hospital ID	
Provider Status	Char	Current status of provider	A - Active B - Blocked I - Inactive L - Locked U - Unmatched
NPI	Text	National Provider Identifier	
Taxonomy	Text	Provider's Taxonomy Code	
Update Date	DateTime	Provider record update timestamp	
Customer ID	Integer	Customer Identifier	
Provider Type	Text	Provider Type description	
Provider Specialty	Text	Provider Specialty description	

Primary Key

reasoncodes

The reasoncodes table serves as a lookup table containing information about the reason codes and their descriptions.

Column Header	Data Type	Description	Values
Reason Code	Text	Reason code	
Description	Text	Description	
RC Category	Text	Category	Charge, Procedure, Audit, PPO, Util, Dupl

Primary Key

servicecodes

The servicecodes table serves as a lookup table containing a list of all the service codes categorized as CPT, HCPCS, Revenue codes etc, along with their descriptions.

Column Header	Data Type	Description
Service Code	Text	Service Code
Section	Text	Medata Internal Section
Short Description	Text	Short Description of the service code
Long Description	Text	Long Description of the service code
Category	Text	Category: Eg.,CPT Category1, CPT Category2, HCPCS, Revenue
Tier1	Text	Classification within the category Eg., CPT Category 1 - Surgery
Tier2	Text	Sub classification within the Tier1 Eg., Surgery - Musculoskeletal System

Primary Key

zipregion

The zipregion table provides the mapping of the zip codes into corresponding regions. This information can be used to group the providers' data and identify average charges and allowances within a region.

Column Header	Data Type	Description
State	Text	State
Zipcode	Text	Zip Code
PSRO Region	Text	Professional Standard Review Organization region
HIAA Region	Text	Health Insurance Association of America region
HIAA Med Region	Text	Health Insurance Association of America Medical Region
State Region	Text	
RBRVS Region	Text	Resource based relative value scale region
County	Text	County
Change User ID	Text	User ID of user who updated the record
Change Date	DateTime	Timestamp when record was updated

Primary Key

srsummary

The srsummary table contains the summary of the current status of the bills in the state reporting system.

Column Header	Data Type	Description	Values
Medata Bill ID	Text	Unique Bill Identifier	
Medata Bill ID Pre	Text	Medata Bill ID without iteration	
Latest Status	Integer	Flag to indicate latest bill record	
Attempt Number	Integer	Total number of attempts	
Transfer Status	Text	Bill transfer status	Reported Bypassed Unreported
Transfer Indicator	Text	Indicator of the transfer status	T - Transferred C - Cancelled B - Bypassed R - Rejected bill F - Rejected file N - Not exported U - Unpaid V - Voided Bill M – Medata utility program bypassed
Acknowledgement	Text	Acknowledgement from the state	Accepted Rejected Pending Response
Ack Indicator	Text	Acknowledgement indicator	N - No feedback R - Rejected A - Accepted W – State accepted but withdrawn by Medata utility program D - Medata withdrawn
Paid Date	Datetime	Bill paid date	
First Transfer Attempt	Datetime	Date of the first transfer attempt	
Transfer Date	Datetime	Bill transfer date	
Due Date	Datetime	Due date to report	
Status Date	Datetime	Date when the status was updated	
Iteration	Text	Order of the bill in 837 file	
Update User	Text	ID of a user who updated the record	
Update Date	Datetime	Date the record was updated	
Customer ID	Integer	Customer identifier	
Days to Report	Integer	Number of days between paid date and transfer date on reported bills	
Days to Accept	Integer	Number of days between paid date and date accepted by state	
TAT Compliant	Integer	Indicator of compliant case (when a bill was reported prior to the due date) or non-compliant case	1 – compliant 0 – non-compliant

Primary Key

srerrors

srerrors table contains the details of all the errors that occurred on the bills on various transfer attempt dates.

Column Header	Data Type	Description	Values
Medata Bill ID	Text	Unique Bill Identifier	
Medata Bill ID Pre	Text	Medata Bill ID without iteration	
Sequence	Int	Error sequence number	1 – first error 2 – second error …
Transfer Date	Datetime	Bill transfer date	
Error Type	Text	Type of error	837, 824, ACK
Error Code	Text	Error code	B013, DN508, 064, etc.
Error Data Element	Text	Error value	
Invalid Value	Text	Description of the error	"Date paid is ZERO." "Non reportable Provider Type of bill." …
Error Date	Datetime	Date when the error was reported	
Update User	Text	ID of a user who updated the record	
Update Date	Datetime	Date the record was updated	
Customer ID	Int	Customer identifier	
Error Description	Text	Error code description	

Primary Key

UR-Specific Tables

urattorney

The urattorney table contains attorney information.

Column Header	Data Type	Description
Attorney Key	Text	Unique Attorney Identifier
First Name	Text	Attorney's Name, Address and Contact Details
Last Name	Text	
Middle Initial	Char	
Title	Text	
Office	Text	
Address1	Text	
Address2	Text	
City	Text	
State	Char	
Zip Code	Text	
Phone	Text	
Fax	Text	
Email	Text	
Change Date	DateTime	Timestamp of record update
Change User	Text	Source of update
Customer ID	Integer	Customer Identifier

Primary Key

urdocument

The urdocument table serves as a bridge between UR tables and the other bill related tables such as billsummary. It contains information on all UR Documents, their associated requestIDs and medata control numbers.

Column Header	Data Type	Description
Medata Bill ID Pre	Text	Medata Bill Identifier without bill iteration number
Request ID	Integer	Unique Request ID
Update Date	DateTime	Record update timestamp
Customer ID	Integer	Customer Identifier

Primary Key

urline

The urline table contains information on a request on a line level.

Column Header	Data Type	Description
Request ID	Text	Unique Request ID
Line Number	Integer	Line Number
Service Code	Text	Service Code
Service Type	Char	Service Type
Charge	Decimal	Charge
Allowance	Decimal	Allowance
Start Date	Date	Start Date
End Date	Date	End Date
POS	Text	Place of Service
Authorized	Integer	
Authorization Count	Integer	
Requested Count	Decimal	
Daily Quantity	Decimal	
Change Date	DateTime	Timestamp of record update
Change User	Text	Source of update
Customer ID	Integer	Customer Identifier

Primary Key

urmaster

The urmaster table contains information about a request on a header level.

Column Header	Data Type	Description
Request Id	Text	Unique Request ID
Coverage	Text	Claim Coverage State
Medata Bill ID Pre	Text	Medata Control Number without bill iteration number
UR Status	Text	
Provider Key	Text	Provider ID
Claim Key	Text	Claim ID
Case Management ID	Text	Case Management ID
Referral ID	Text	Referral ID
Authorized Flag	Char	Authorized Flag
Exported Flag	Char	Exported Flag
Change Date	DateTime	Timestamp of record update
Change User	Text	Source of update
Customer ID	Integer	Customer Identifier

Primary Key

urreferral

The urreferral table contains information about the attorney, defense attorney and provider referrals.

Column Header	Data Type	Description
Referral ID	Text	Unique Referral ID
Referral Status	Char	Referral status – Open / Closed
Attorney Key	Text	Attorney Key
Defense Attorney Key	Text	Defense Attorney Key
Treatment Physician Key	Text	Treating Physician Key
Received Date	DateTime	Received Date
Change Date	DateTime	Timestamp of record update
Change User	Text	Source of update
Customer ID	Integer	Customer Identifier

Primary Key

urtransaction

urtransaction table contains information about all the transactions made on a request.

Column Header	Data Type	Description	Values
Request ID	Text	Request ID	
Transaction Number	Integer	Unique Transaction Number	
Request Status	Integer	Request Status	
Assigned User	Int	User assigned to work on the request	
Medata Bill ID Pre	Text	Medata Control Number without bill iteration number	
Transaction Date	Date	Transaction Date	
Transaction User	Text	User who worked on the request	
Decision Date	DateTime	Decision Date	
Additional Info Received Date	DateTime	Additional Info Received Date	
Received Date	DateTime	Received Date	
Medata Received Date	DateTime	Medata Received Date	
Due Date	DateTime	Due Date	
Follow Thru Date	DateTime	Follow Through Date	
Provider Submit Date	DateTime	Provider Bill Submission Date	
Peer Organization ID	Int	Peer Organization Identifier	
Peer Provider ID	Int	Peer Provider Identifier	
To Peer Date	DateTime	To Peer Date	
From Peer Date	DateTime	From Peer Date	
Additional Info Request Date	DateTime	Additional Information Request Date	
Additional Info Sent Date	DateTime	Additional Information Sent Date	
Referral Time	Integer	Number of business days between Received Date and Medata Received Date	
Referral Time Compliance	Text	Flag to indicate if Request was sent to Medata at least 2 business days prior to due date	Y, N
TAT Compliance	Text	Flag to indicate if decision date is on or before due date	Y, N
Request Overall TAT	Integer	Number of business days between received date and Decision date	
Request Medata TAT	Integer	Number of business days between medata received date and Decision date	
Review Type	Text	Review Type	Prospective

			Retrospective IMR Request
Determination	Text	Request Determination	In Process Delay Modify Withdrawal Approved Approve Deny
Withdraw Type	Text		
IP Admission Reason	Text		
IP Extension Count	Integer		
IP Days Authorized	Integer		
Review Level	Integer		
Change Date	DateTime	Timestamp when record was updated in the UR application	
Change User	Text	User ID of user who updated the record	
Customer ID	Integer	Customer Identifier	

Primary Key

urancillaryprovider

The urancillaryprovider table contains information about ancillary providers.

Column Header	Data Type	Description
Request ID	Text	Unique Request ID
Provider Key	Text	Provider Key
Tax ID	Text	Provider Information
Name Type	Char	
Last Name	Text	
First Name	Text	
Middle Initial	Char	
Address1	Text	
Address2	Text	
City	Text	
State	Char	
Zip Code	Text	
Phone	Text	
Fax	DateTime	
Provider Type ID	Text	
Specialty ID	Text	
Network Code	Text	
Strategic Partner Flag	Char	
Strategic Partner Number	Integer	
Change Date	DateTime	Timestamp of record update
Update User	Text	Source of update
Customer ID	Integer	Customer Identifier

Primary Key

urusers

The urusers table contains information about the users of the UR application.

Column Header	Data Type	Description
User ID	Int	User Name and Contact Details
First Name	Text	
Last Name	Text	
User Type	Text	
Title	Text	
Email	Text	
Phone	Text	
Created	DateTime	Timestamp when record was created
Last Login	DateTime	Timestamp when user last logged into the application
Active	Int	Flag to indicate if user is active
Update User	Int	User ID who updated the record
Change Date	Datetime	Timestamp of record update
Customer ID	Int	Customer Identifier

Primary Key

urpeerprovider

The URPeerProvider table provides Peer Provider information, such as Name, Specialty and contact details. Peer Provider ID field in URTransaction table references this table.

Column Header	Data Type	Description
Provider ID	Int	Peer Provider Identifier
Organization ID	Int	Peer Organization Identifier
Full Name	Text	Provider Name and Address Details Indicates if provider is currently active Timestamp when record was updated
First Name	Text	
Last Name	Text	
Middle Initial	Char	
Name Type	Text	
Title	Text	
Specialty	Char	
Address 1	Text	
Address 2	Text	
City	Text	
State	Char	
Zip Code	Text	
Phone	Text	
Fax	Text	
Email	Text	
Active	Boolean	
Update Date	Datetime	

Primary Key

urpeerorganization

The URPeerOrganization table provides all the essential information about Peer Organizations, such as Name, Address and contact details.

Column Header	Data Type	Description
Organization ID	Int	Peer Organization Identifier
Name	Text	Peer Organization Name and Address Details
Address 1	Text	
Address 2	Text	
City	Text	
State	Char	
Zip Code	Text	
Phone	Text	
Fax	Text	
Email	Text	
Update Date	Datetime	Timestamp when record was updated

Primary Key

urpeerlicense

The URPeerLicense table provides the license information of the provider.

Column Header	Data Type	Description
License ID	Int	Peer License ID
Peer Provider ID	Int	Peer Provider Identifier
State	Char	State
License	Text	License Number
Update Date	Datetime	Timestamp when record was updated

Primary Key

FORMULA HANDBOOK

Bill Header Level

When there is a need to calculate charges, allowances, reductions, etc. on a *bill level*, then use table `BillSummary`:

1. **Bill Review Allowance** = [Total Charge]-[Total BR Reduction] or sum([Charge]) – sum([BR Reduction]) where [Charge] and [BR Reduction] are columns in `BillSummary` table
2. **Bill Review Savings % =** [Total BR Reduction]/ [Total Charge]
3. **PPO Savings on Charges (PPO Reduction %)** = [Total PPO Reduction]/ [Total Charge]
4. **PPO Savings on BR Allowance =** [Total PPO Reduction] /([Total Charge] - [Total BR Reduction])
5. **Total Savings** = [Total BR Reduction]+[Total PPO Reduction]+[Total Other Reduction]
6. **Total Savings %** =
   ([Total BR Reduction] + [Total PPO Reduction]+[Total Other Reduction]) / ([Total Charge])
7. **Total Charges** = [Total Charge]
8. **Total Allowance =** [Total Allowance]
9. **Total PPO Reduction =** [Total PPO Reduction]
10. **Average Bill TAT =** DDIFF([Days in Post Date],[Days in Received Date])
11. **Total Number of Bills** = [# of unique Medata Bill ID] (or) count([Medata Bill ID Pre])

Bill Line Level – used in widgets with filters on specific service codes, or categories of codes, or modifiers

In case when we need to calculate charges, allowances, reductions, etc. on a *line level*, then use table 'BillLine'. For example, if we want to calculate charges related to surgical service codes, then we set a filter on a dashboard or a widget level on table `ServiceCodes` column `Tier1` = "Surgery" and use formula 12 below:

12. **Total Line Charges** = [Total Charge] or sum([Charge]) where [Charge] is grabbed from `BillLine` table
13. **Average Charge =** [Total Charge]/[Total Units]
14. **Savings** = [Total Reduction]
15. **Savings % =** [Total Reduction]/[Total Charge]
16. **Total Count =** [Total Units]
17. **Frequency of Billing, by service code**= ([Total Units], [Billed Service]) / [Total Units]

Bill Count over a Time period

Set the desired time period using the date filter.

18. **Posted Bill Count** = count([Medata Bill ID Pre])
    where Bill Finalized = 1
19. **Exported Bill Count** = count([Medata Bill ID Pre])
    where Bill Finalized = 1 and Export Date is specified
20. **Paid Bill Count** = count([Medata Bill ID Pre])
    where Bill Finalized = 1 and Paid Date is specified

21. **Number of Open (Suspended) Bills =** (count([Medata Bill ID Pre]),[Bill Status])
    where Bill Status = S
22. **Percentage of Open (Suspended) Bills** = (count([Medata Bill ID Pre]),[Bill Status]) / count([Medata Bill ID Pre])
    where Bill Status = S
23. **Unpaid Bill Count** = (count([Medata Bill ID Pre]),[Days in Paid Date])
    where Bill Finalized =1 and Days in Paid Date = "N/A"
24. **Percentage of Unpaid Bills out of Posted Bills** =
    (count([Medata Bill ID Pre]),[Days in Paid Date]) / (count([Medata Bill ID Pre]))
    where Bill Finalized =1 and Days in Paid Date = "N/A"
25. **Number of Recons Received** = (count([Medata Bill ID Pre]), [Recon Number])
    where Bill Status = P and Recon Number > 0
26. **Percentage of Bills Reconed** =
    (count([Medata Bill ID Pre]),[Recon Number]) / (DUPCOUNT([Medata Bill ID Pre]))

where Bill Status = P and Recon Number > 0.

USE CASES

USE CASE #1 *Need the last 12 months total charge, bill review reduction, PPO reduction, and final allowable amount by state.*

Filters

Since all data is based on the bill level, we set up the following filters on **BillSummary** table columns:

Table	Column	Value
billSummary	Bill Finalized	1
billSummary	Duplicate Flag	0
billSummary	Post Date	*Select 12 months of data*

Widget

1. Start creating a new widget and select data from **BillSummary** table \`Review State\` column.

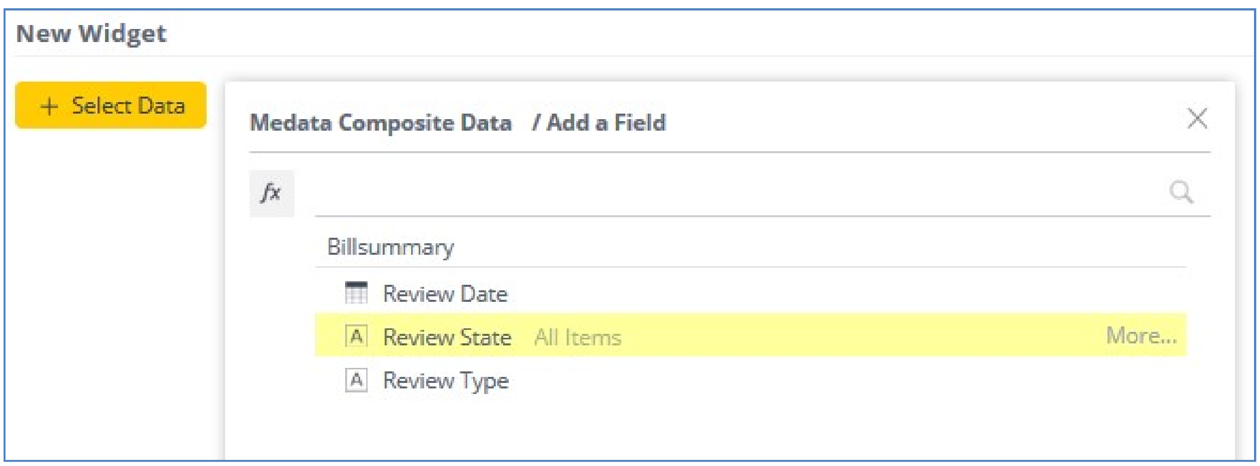

Figure 39 Initial step of a new widget creation

2. For advanced designer options, click on **Advanced Configuration**.

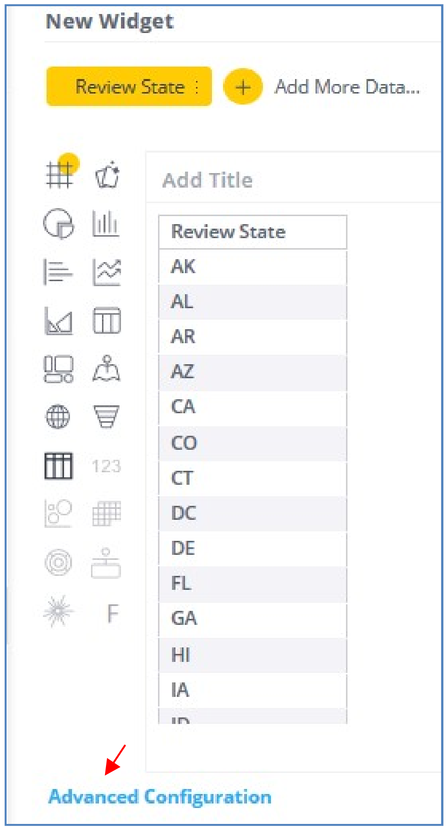

Figure 40 Advanced configuration option

Pivot table will be automatically selected as a recommended widget with **Rows** populated with `Review State`.

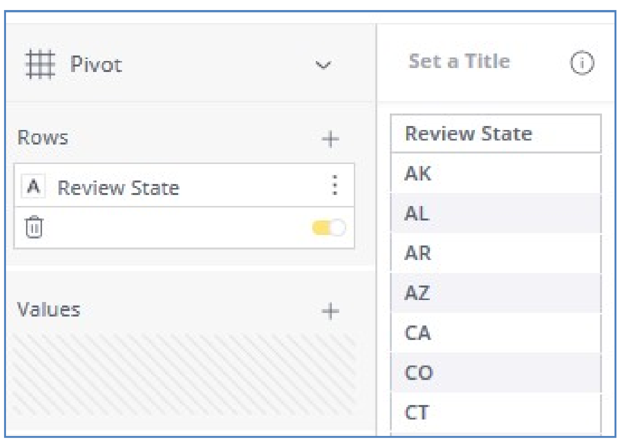

Figure 41 Automatic population of Rows with `Review State`

3. Using Pivot widget type start populating **Values** with total charges.

> **IMPORTANT**: Since we are aggregating the data based on the bill level and not a bill's line or claim levels, then select `Charge` from **BillSummary** table.

Since `Charge` column contains numeric values, aggregation by **Sum** will be displayed as the default option. This option works for our use case as we need to get the sum of bill charges.

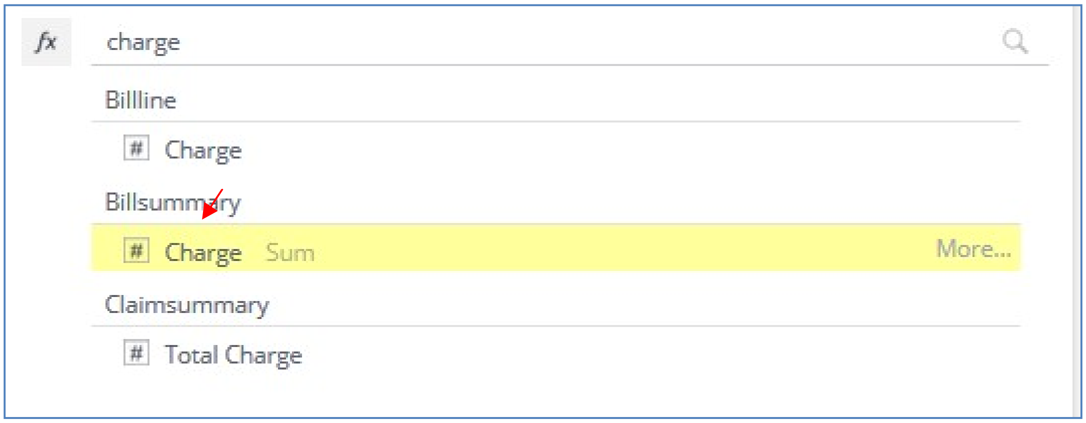

Figure 42 Populating values with `Charge`

4. We can now change the format of the values to currency by clicking on **123** option:

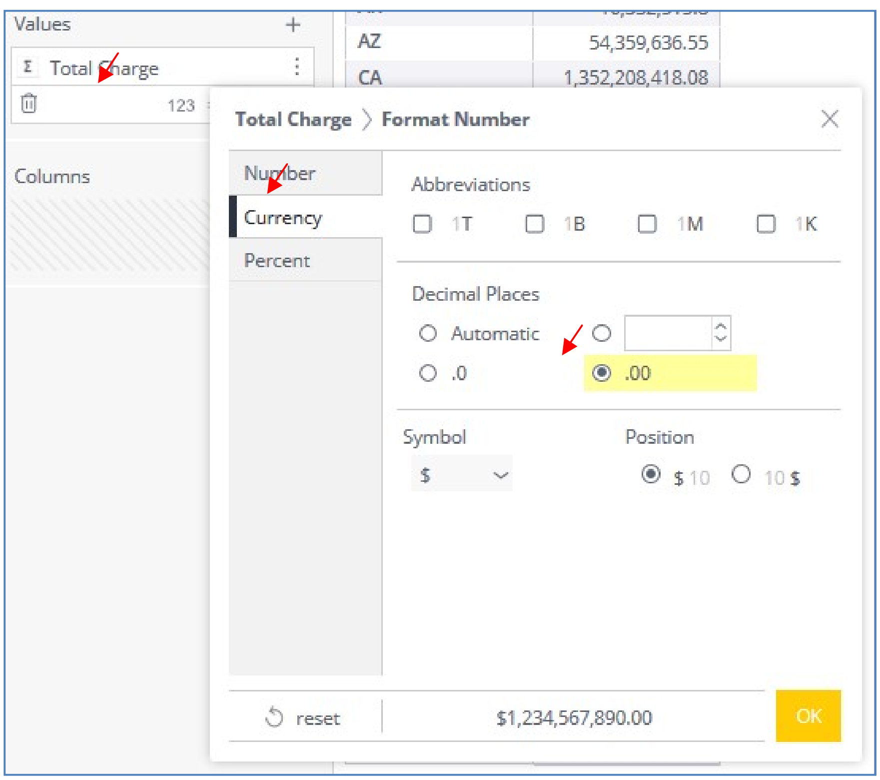

Figure 43 Format change to "Currency"

5. Now we can add `BR Reduction` and `PPO Reduction` from **BillSummary** tables in a similar fashion

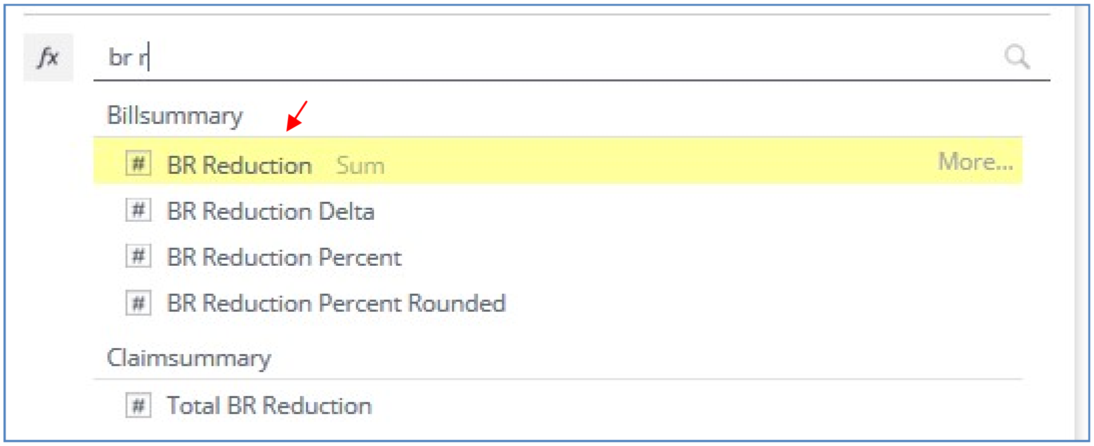

Figure 44 Populating values with `BR Reduction`

6. After adding `Allowance` from **BillSummary** table, we will get the final result.

Review State	Total Charge	Total BR Reduction	Total PPO Reduction	Total Allowance
AK	$7,631,181.34	$4,654,877.37	$155,178.49	$2,821,125.48
AL	$9,112,345.85	$3,207,359.29	$941,798.60	$4,963,187.96
AR	$4,120,451.91	$1,510,881.54	$447,135.11	$2,162,435.26
AZ	$22,649,942.47	$8,983,653.76	$2,280,422.21	$11,385,866.50
CA	$520,226,857.34	$341,106,947.59	$19,765,656.59	$159,353,799.81

Figure 45 Final look of the widget

Additional changes can be made to the design of the pivot table like:

- Length of the columns can be adjusted by holding down the left mouse button and moving the cursor between the columns

Review State	Total Charge	Total BR Reduction	Total PPO Reduction	Total Allowance
AK	$7,631,181.34	$4,654,877.37	$155,178.49	$2,821,125.48
AL	$9,112,345.85	$3,207,359.29	$941,798.60	$4,963,187.96
AR	$4,120,451.91	$1,510,881.54	$447,135.11	$2,162,435.26

Figure 46 Change of the column length

- Column names can be changed by double clicking or clicking on three dots next to the value name

Figure 47 Change of the column names

- Header row can be highlighted with grey color by selecting **Column Headers** in **Design** section on the right hand side

Review State	Total Charge ($)	Total BR Reduction ($)	Total PPO Reduction ($)	Total Allowance ($)
AK	$7,631,181.34	$4,654,877.37	$155,178.49	$2,821,125.48
AL	$9,112,345.85	$3,207,359.29	$941,798.60	$4,963,187.96
AR	$4,120,451.91	$1,510,881.54	$447,135.11	$2,162,435.26

Figure 48 Change of the column headers color

USE CASE #2	*Need to calculate bill review reduction percent and total bill reduction percent for the current year.*

Filters

Since all data is based on the bill level, we set up the following filters on **BillSummary** table columns:

Table	Column	Value
billSummary	Bill Finalized	1
billSummary	Duplicate Flag	0
billSummary	Post Date	*Select "This Year" in 'Time Frame' section*

Widget

1. Since the requested bill metrics need to be calculated based on the data in **BillSummary** table, we need to start creating a widget by clicking on + Widget and selecting **Advanced Configuration**.

2. Select Indicator type of a widget. Click on + sign next to **Values** to start calculation of a bill review reduction percent and then click on *fx* function option

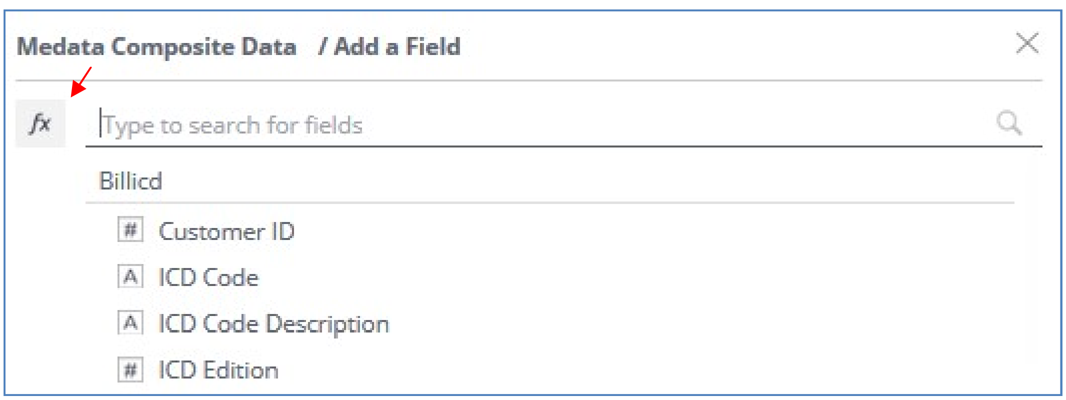

Figure 49 Accessing function option for formulas

3. Since the formula for the bill review reduction percent is calculated by dividing bill review reduction by the total charges, then in the Data Browser search window type "BR reduction" and select `BR Reduction` from **BillSummary** table aggregated by **Sum**:

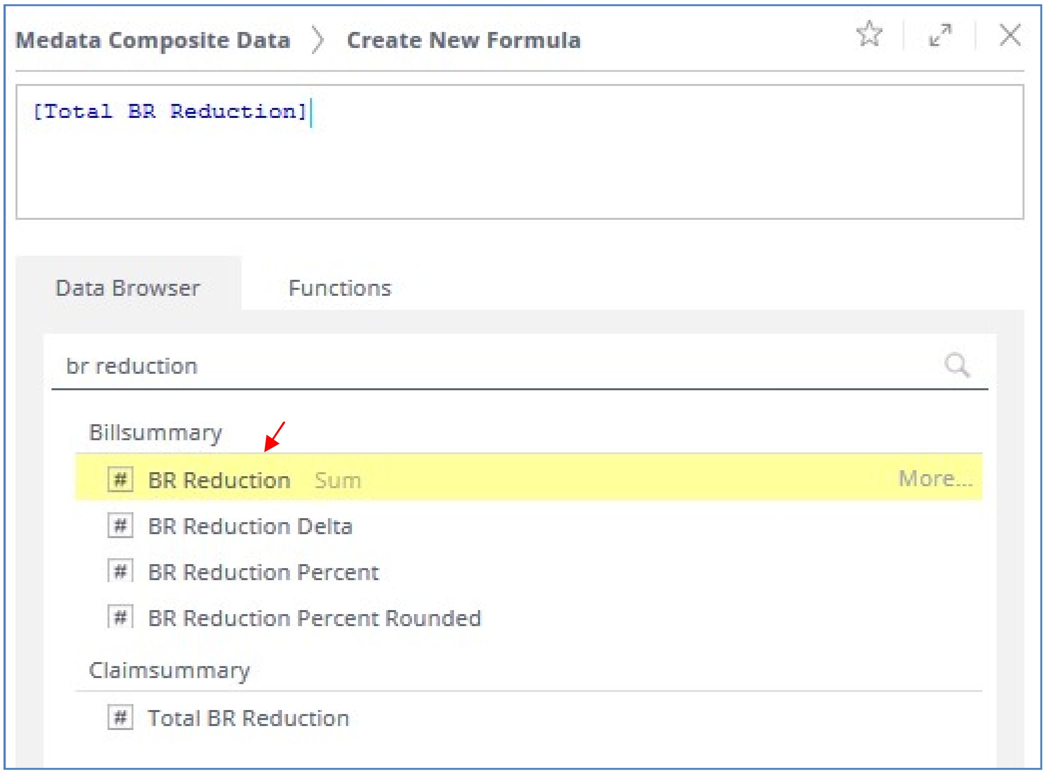

Figure 50 Adding sum of values from `BR Reduction`

4. Enter division operator "/" after "[Total BR Reduction]". Then type "Charge" in the Data Browser search window and select `Charge` column from BillSummary table aggregated by **Sum** and click **OK**:

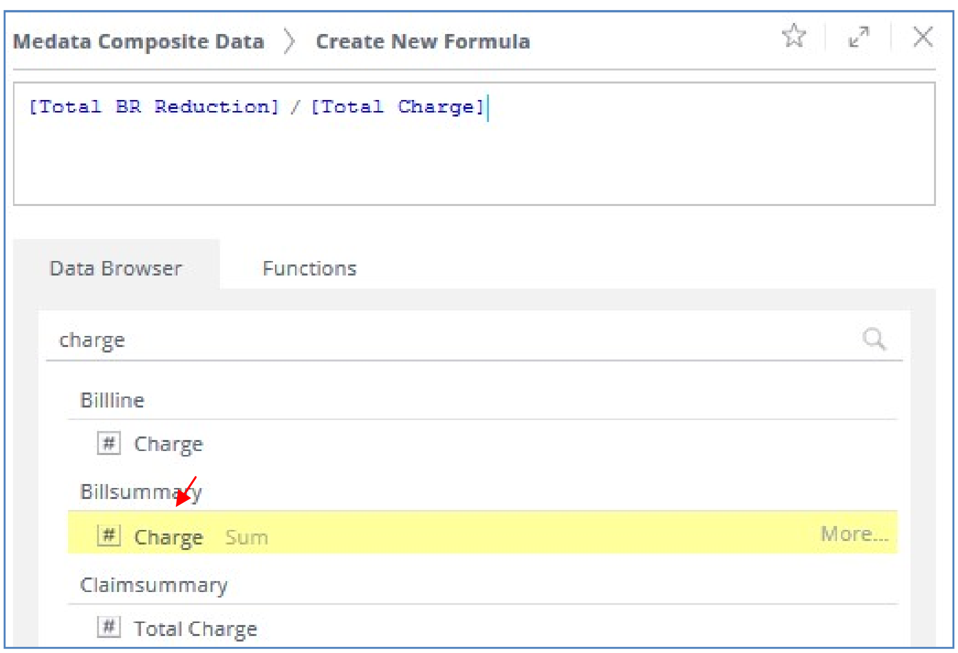

Figure 51 Adding sum of values from `Charge`

5. Now you can make design changes to the calculated value like:

- Changing the name of the value by clicking on ⋮ next to "[Total BR Reduction] / [Total Charge]"

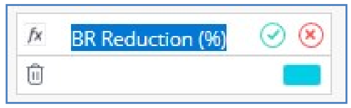

Figure 52 Change of the column names

- Changing the format to percent by clicking on **123** option to the left from the color box:

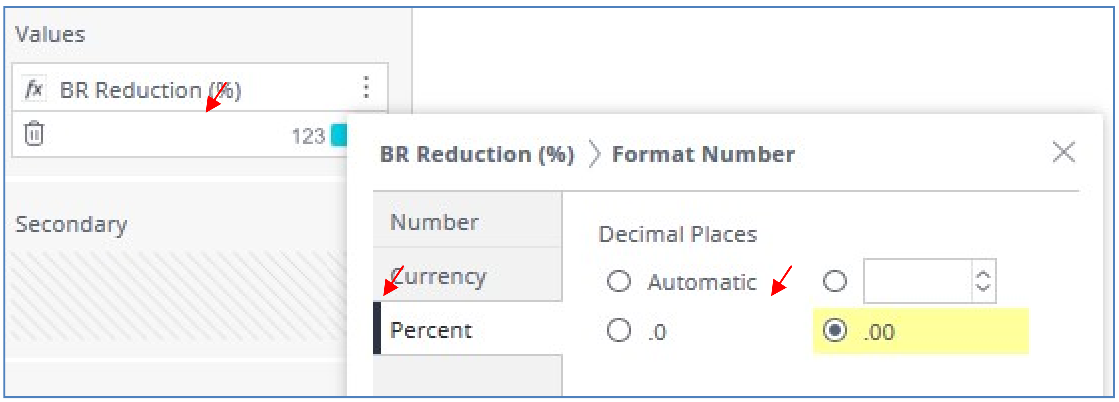

Figure 53 Change of the data format to percent

So your widget will get the following look

Figure 54 Final look of the widget

6. The second metric, total bill reduction percent, can be calculated in a similar way by creating another indicator widget or it can be included as a secondary value on the widget that we just created. Just click on **Add +** in the **Secondary** value section and repeat the same steps as above except for selecting `Reduction` column instead of `BR Reduction` column from **BillSummary**.

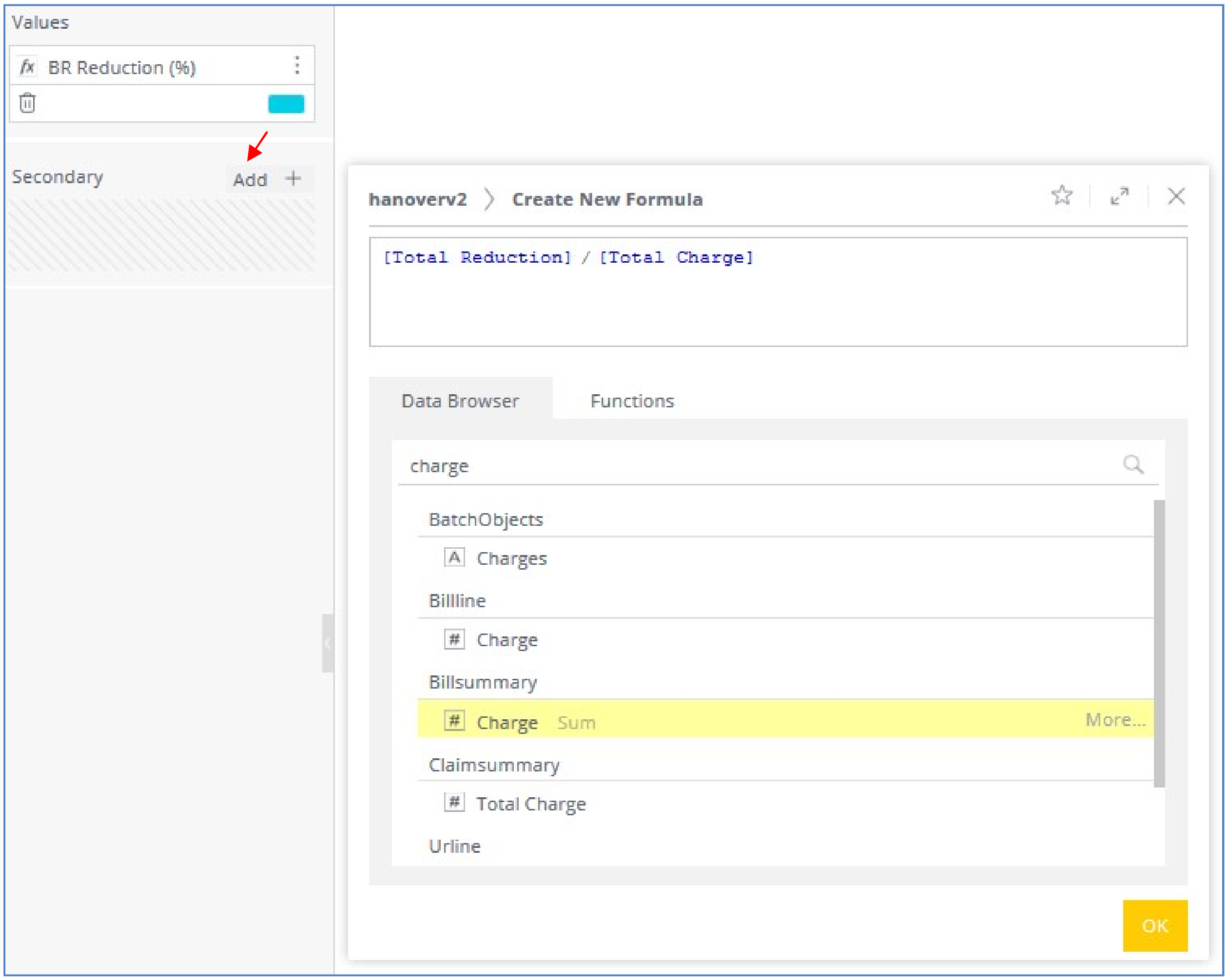

Figure 55 Adding secondary calculation on an indicator widget

So the final widget will look as follows

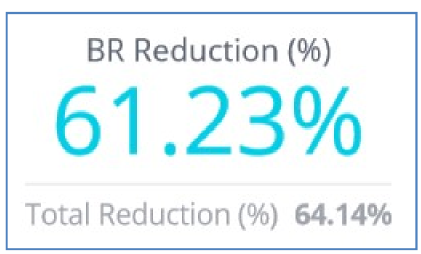

Figure 56 Final look of the widget with two metrics