MEDICARE CCLF ANALYTICS: MEDICARE ANALYTICS DATA ENGINE (MADE)

User Guide 1.2.4.39

July 12th, 2024

hMetrix

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1 WELCOME TO MEDICARE ANALYTICS DATA ENGINE

Medicare Analytics Data Engine (MADE) is a web-based application that consists of a suite of Population Analytics, Episode Analytics, Pharmacy Analytics and Monitoring reports built based on Claim and Claim Line Feed (CCLF) data for Maryland. hMetrix and CRISP have received the latest 36 months of data for 100% of the Maryland Medicare Fee for Service (FFS) beneficiaries. Using the beneficiary's unique identifier, beneficiary's claim payments, types of service, procedures, diagnoses and eligibility are tracked throughout the 36 months. This allows for analyses to be presented across the entire population, as well as episodes of care to be analyzed at the beneficiary level.

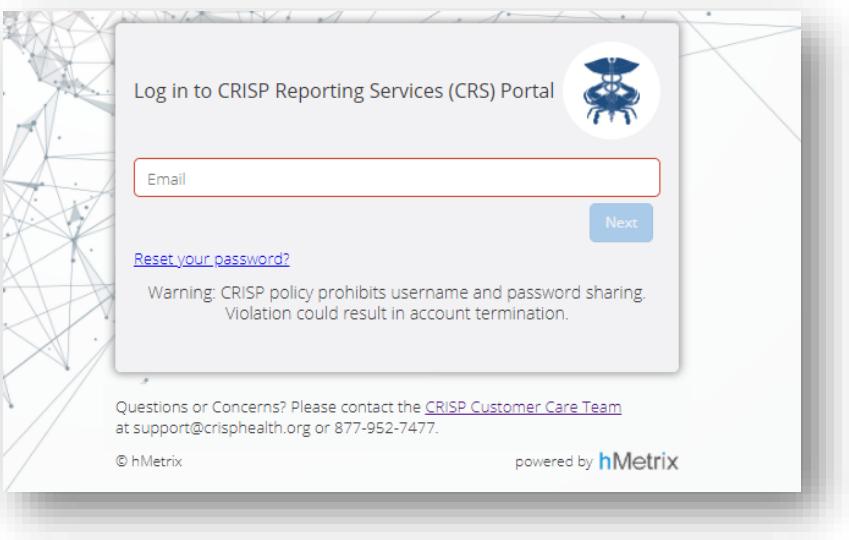
1.1 Software Requirements

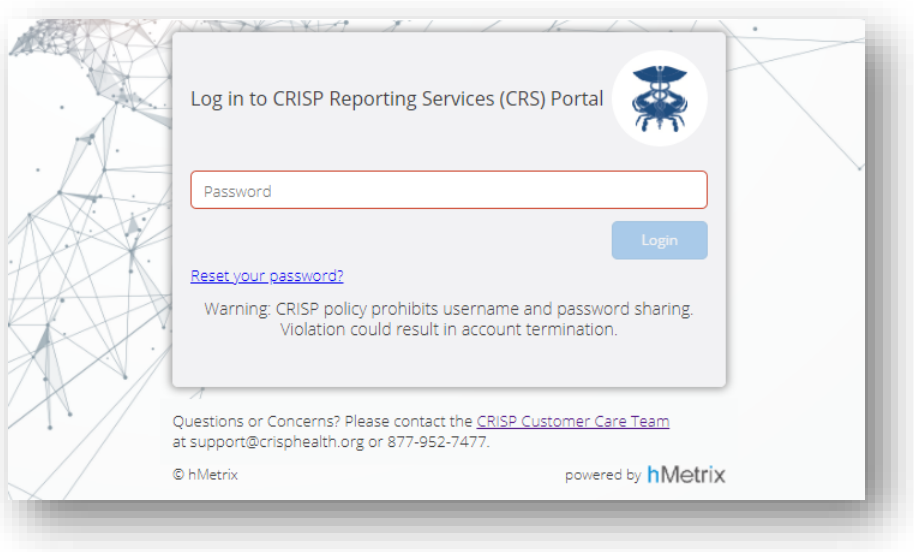
MADE is a web-based application accessible through a modern browser: Google Chrome 57 or higher, Internet Explorer 11 or higher, Firefox 52 or higher, and Safari 9 or higher.

1.2 Launching MADE

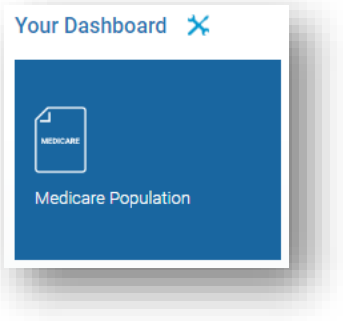
A user trying to access MADE must first login to the CRISP Hospital Reporting Portal. Once in the portal, the user shall click the Card named "Medicare Population." The following screen shots represent the user's workflow.

Step 1: Log into the CRISP Hospital Reporting Portal using the user ID and password provided for the portal - https://reports.crisphealth.org/



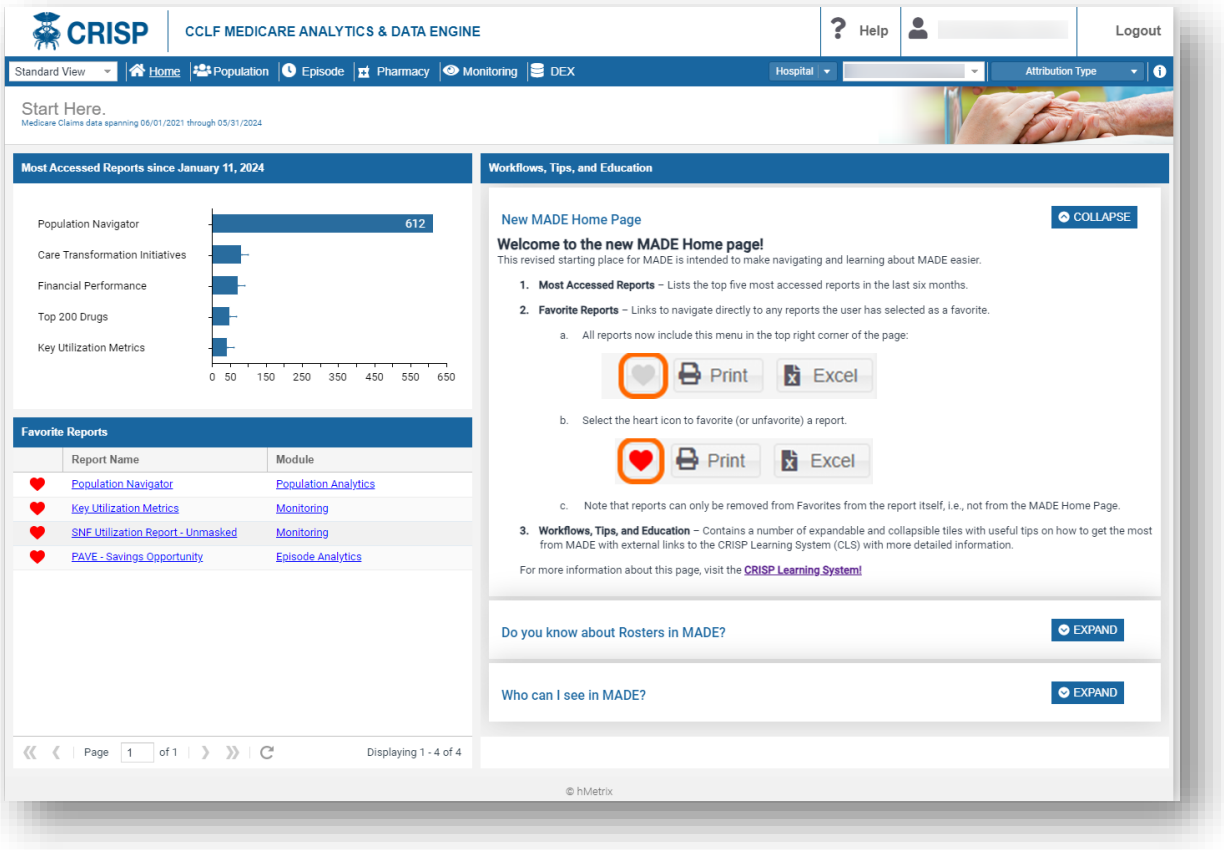


Step 2: Click the Card named “Medicare Population” within the Portal



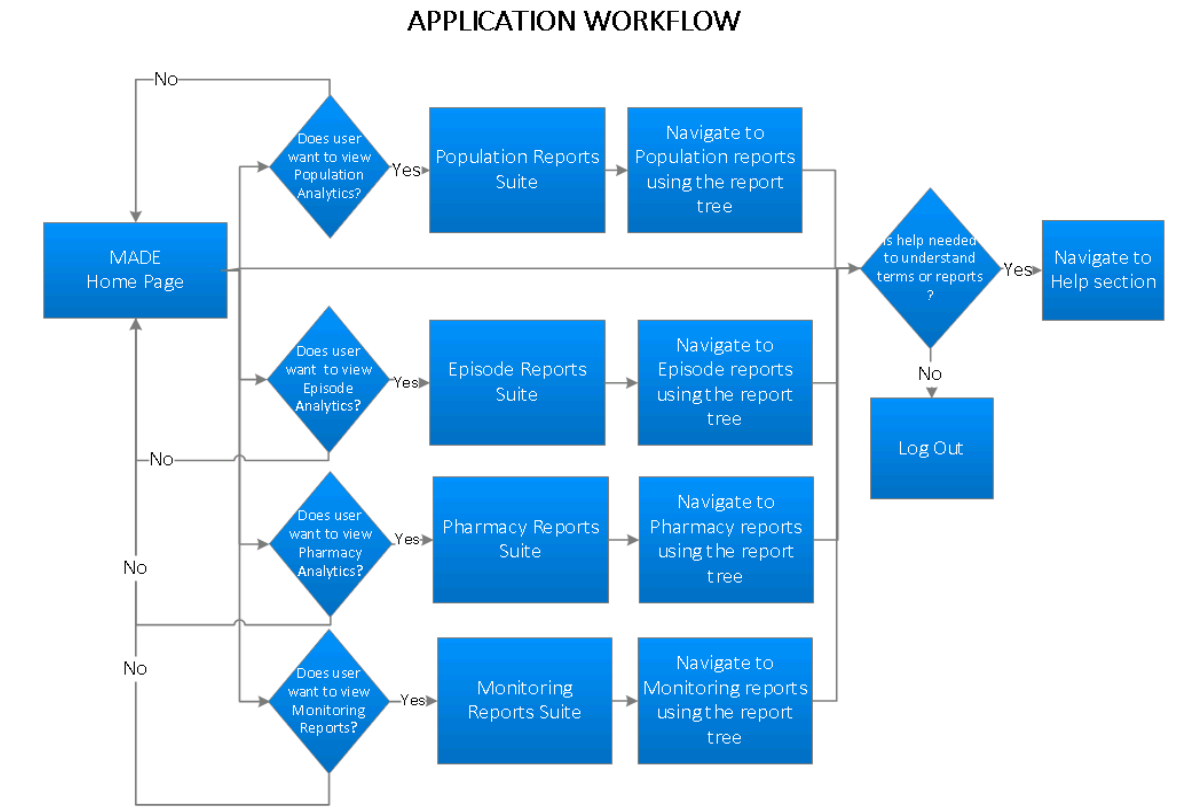
Step 3: Click the link next to “CCLF Medicare Analytics & Data Engine”

Step 4: Upon clicking the link, you will be directed to the MADE site in a new tab.



1.3 Workflow

The workflow of MADE is shown below.

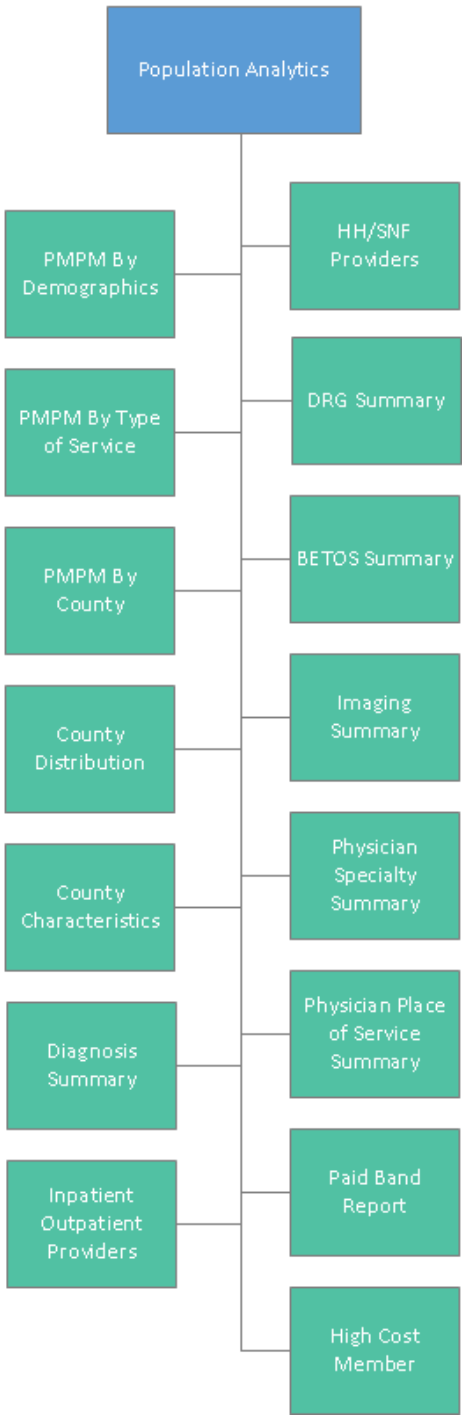


There are four suites of reports in MADE:

- Population Analytics Reports
- Episode Analytics Reports
- Pharmacy Analytics Reports
- Monitoring Reports

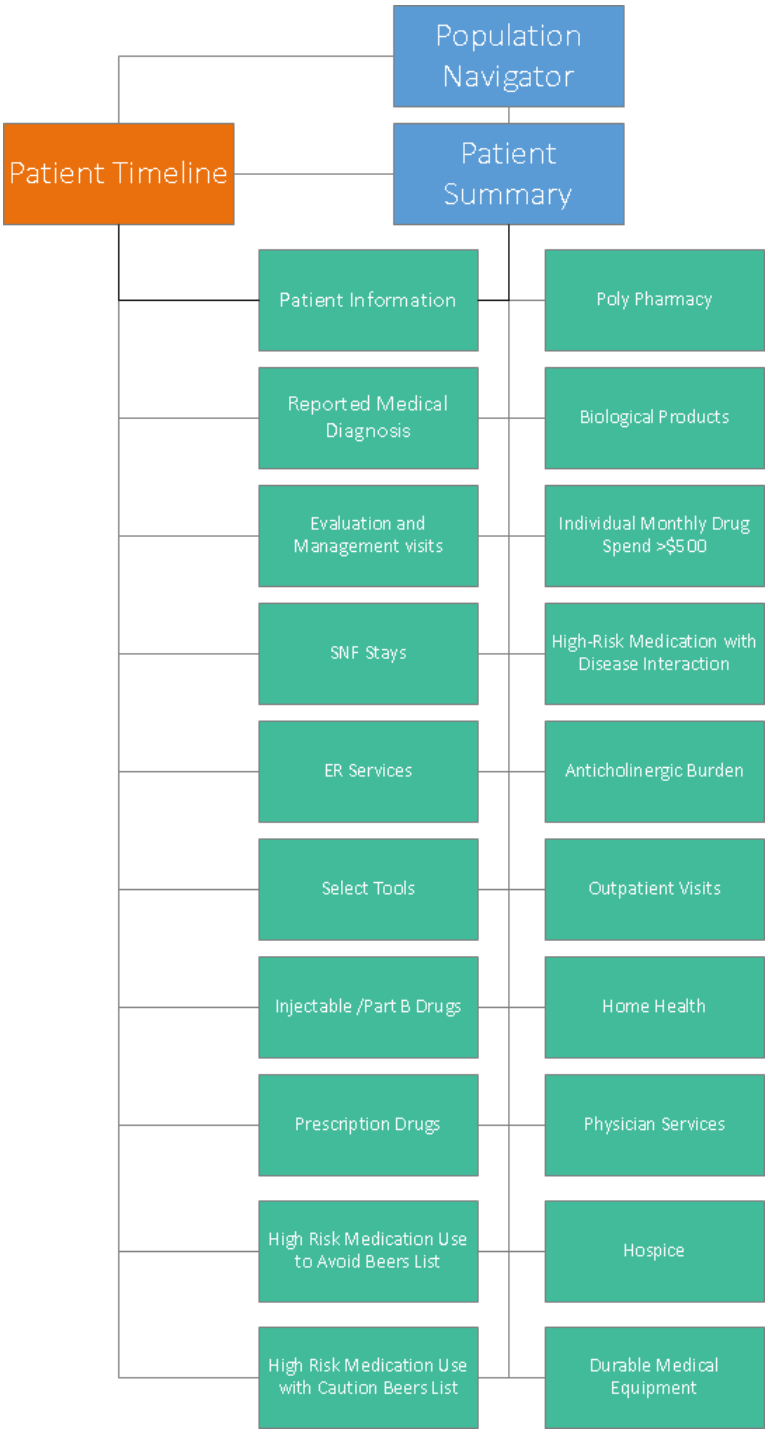
1.3.1 Population Analytics Reports

The **Population Analytics** reports are accessible by clicking on **Population** from the main menu and selecting **Population Analytics** from the side menu options. The breakdown of the **Population Analytics** reports and the navigation paths are shown in the diagram below.



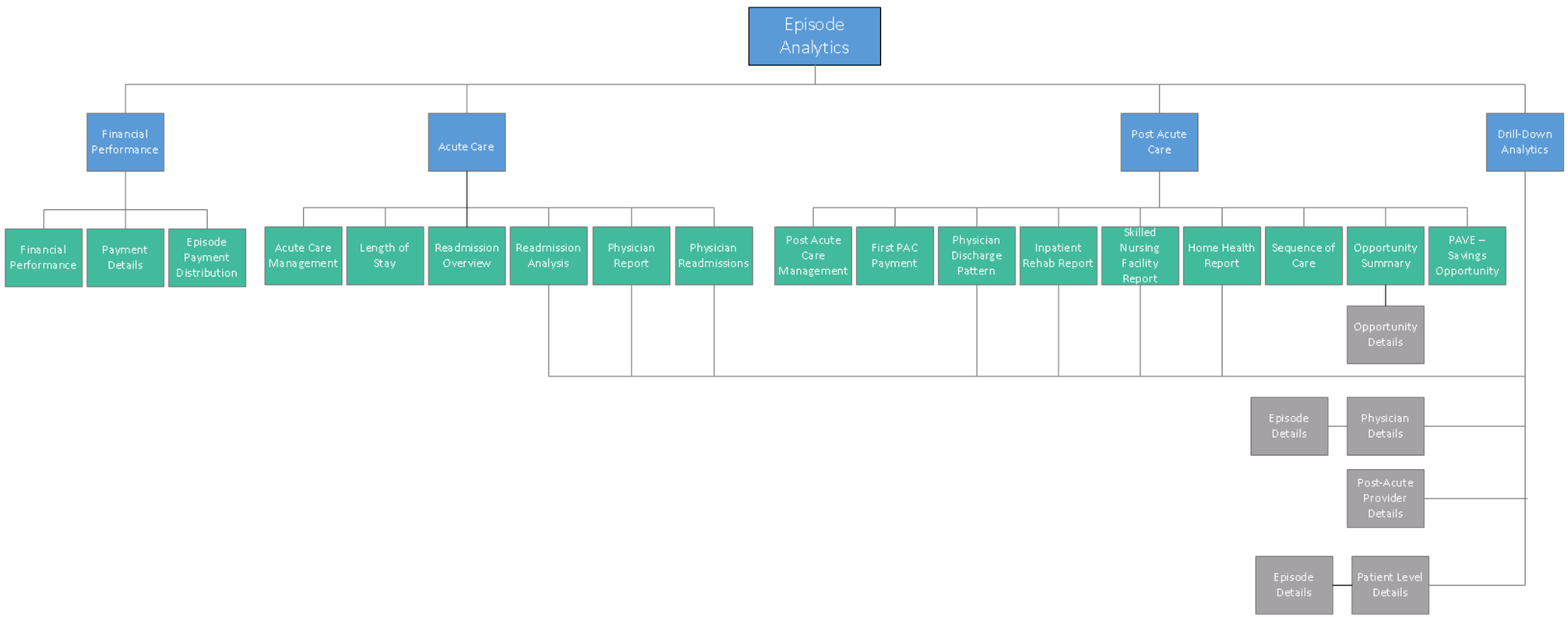
1.3.2 Patient Summary Reports

The **Patient Summary** reports are accessible by clicking on the **Patient Name** from the **Population Navigator**. The breakdown of the **Patient Summary** reports and the navigation paths are shown in the diagram below.



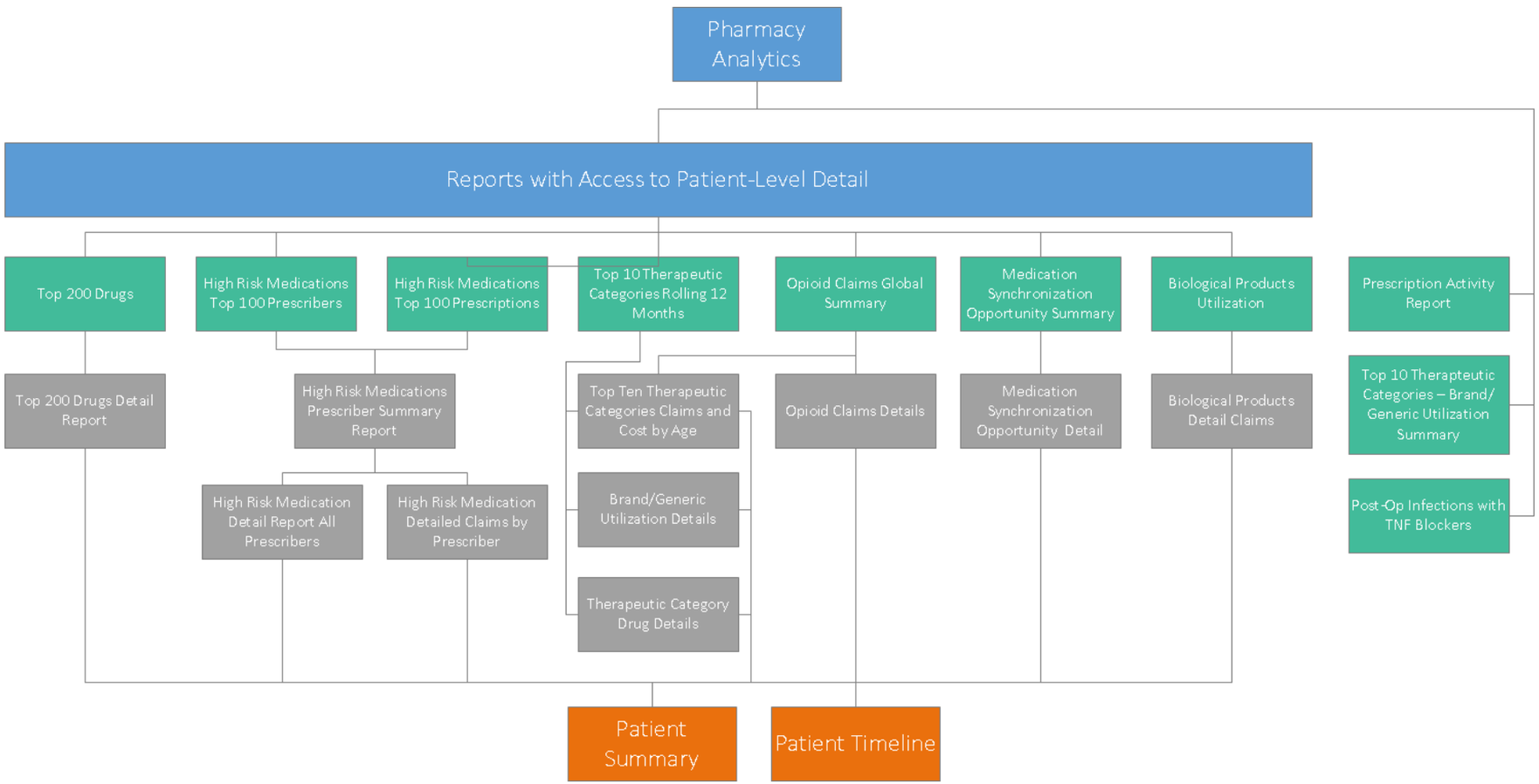
1.3.3 Episode Analytics Report

The **Episode Analytics** reports are accessible by clicking on **Episode** from the main menu. The breakdown of the **Episode Analytics** reports and the navigation paths are shown in the diagram below. The reports accessible from the main menu are represented by green, while the drill-through reports accessible from main reports or through the **Drill-Down Analytics** section are represented by grey. Blue represents the different section of the Episode Analytics module.



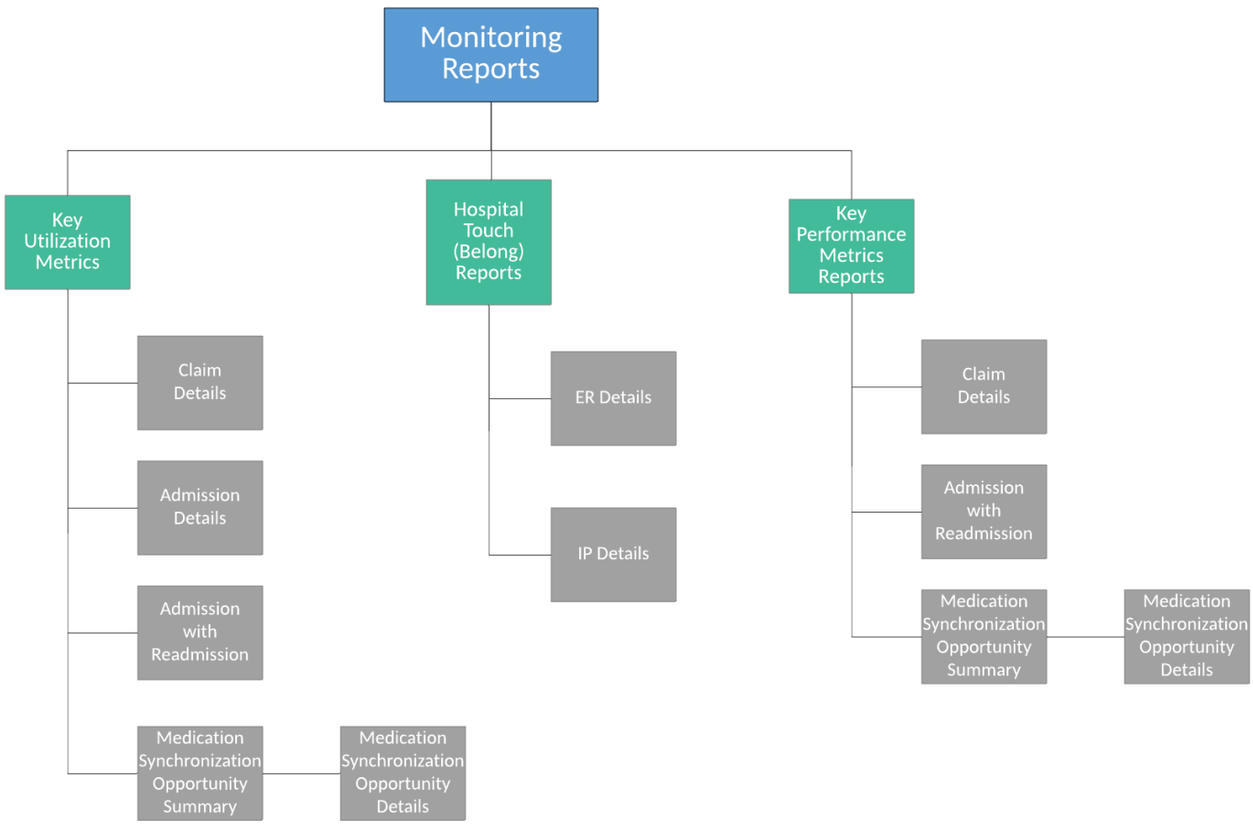
1.3.4 Pharmacy Analytics Report

The **Pharmacy Analytics** reports are accessible by clicking on **Pharmacy** from the main menu. The breakdown of the **Pharmacy Analytics** reports and the navigation paths are shown in the diagram below. The reports accessible from the main menu are represented by green, while the drill-through reports accessible from main are represented by grey. All reports under the sub-heading "Reports with Access to Patient-Level Detail" will direct the user to patient-level claims data in the Patient Summary and Patient Timeline.



1.3.5 Monitoring Reports

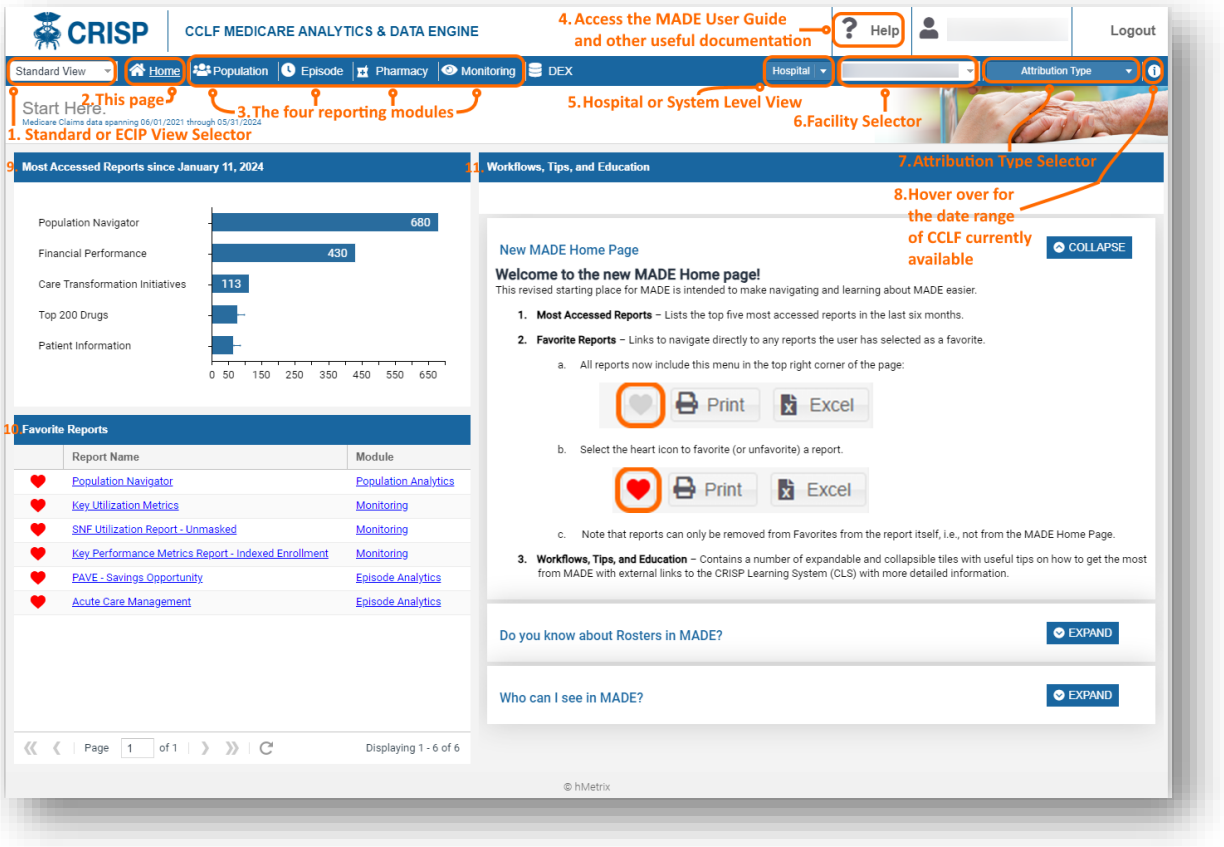
The **Monitoring Reports** are accessible by clicking on **Monitoring** from the main menu. The breakdown of the **Monitoring Reports** and the navigation paths are shown in the diagram below. The reports accessible from the main menu are represented by green, while the drill-through reports accessible from main are represented by grey.



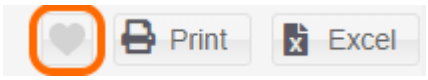
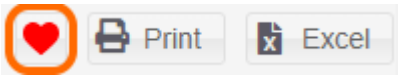
2 INTRODUCTION TO MADE

2.1 MADE Home Page

The MADE home page includes a list of the most accessed reports in the last six months, a user's favorite reports, and a list of workflows and other educational resources.



This home page contains three sections of content:

- **Most Accessed Reports** – Lists the top five most accessed reports in the last six months.
- **Favorite Reports** – Links to navigate directly to any reports the user has selected as a favorite.
  - All reports now include this menu in the top right corner of the page:
    - 
  - Select the heart icon to favorite (or unfavorite) a report.
    - 
  - Note that reports can only be removed from Favorites from the report itself, i.e., not from the MADE Home Page.

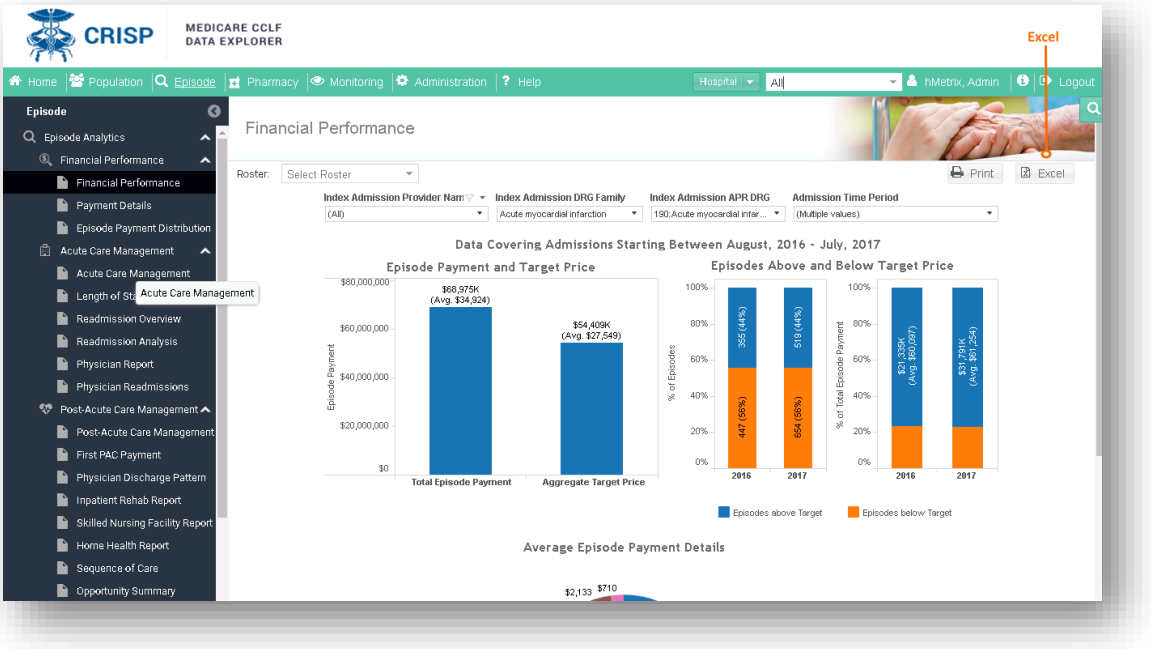
- **Workflows, Tips, and Education** – Contains a number of expandable and collapsible tiles with useful tips on how to get the most from MADE and external links to the CRISP Learning System (CLS) with more detailed information.

2.2 Common Functions

Exporting to PDF and Excel, Roster selection, and favoriting are available for all reports.

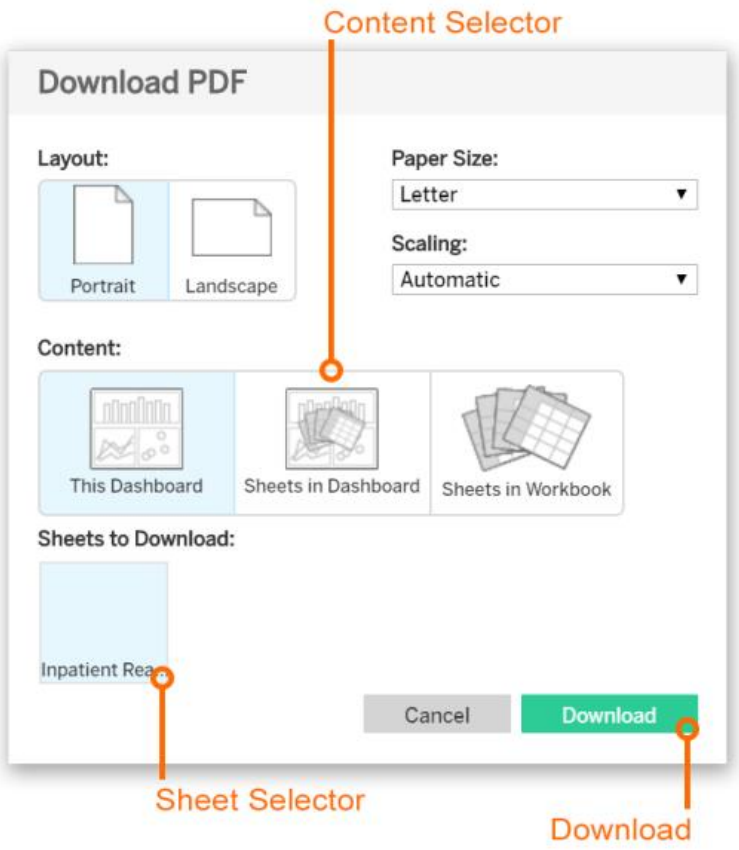
2.2.1 Download an Excel Report

To download a report to Excel, click the **Excel** button in the upper right corner of the report. Clicking this button will download the Excel workbook to the download folder on your computer.



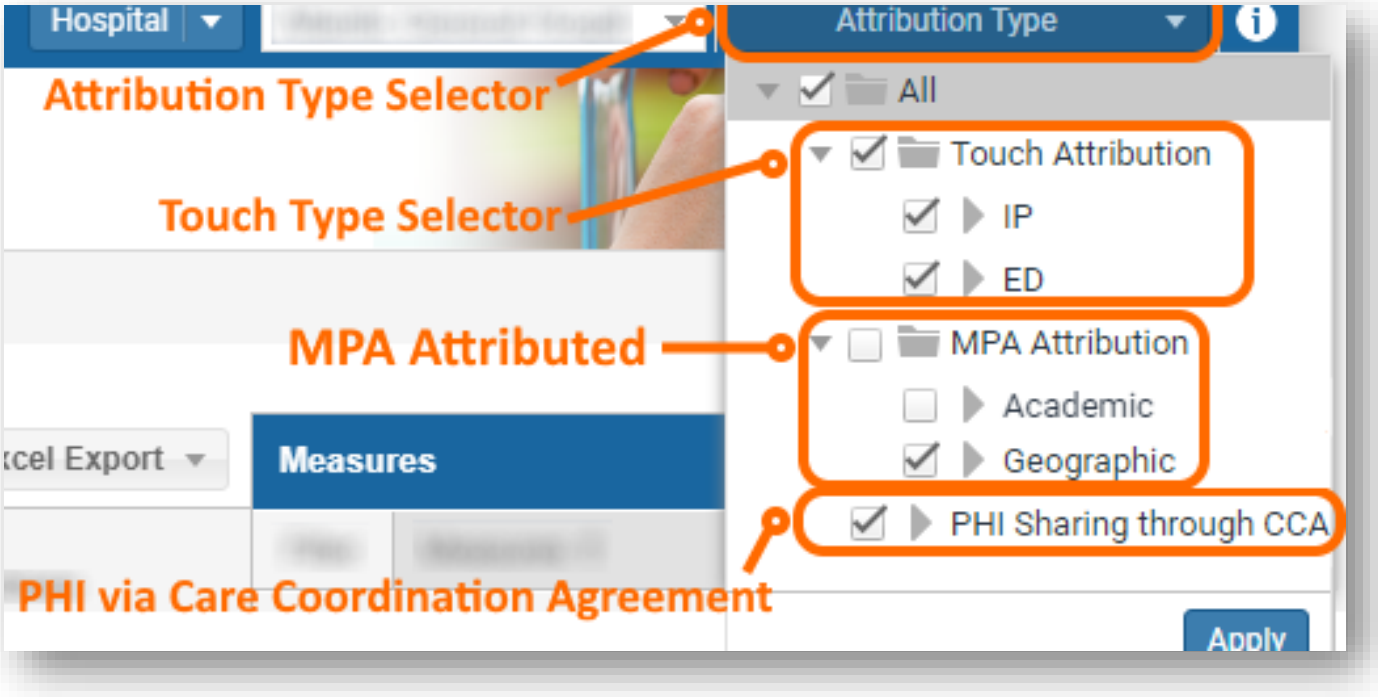
2.2.2 Export to PDF

To export a report to PDF, click the Print button in the upper right corner of the report. Clicking this button will show the PDF export menu. Click on the download button to download the PDF report to the download folder of your computer.



2.2.3 Attribution Type Selection

MADE allows for users to view patients attributed to their hospital using two different "touch" attribution methods as well as through Medicare Performance Adjustment (MPA) attribution methods. All attribution types are presented according to **OR** logic, such that all beneficiaries with any of multiple selected attribution types are shown. Simply select the desired attribution type(s) from the Attribution Type drop-down selector.



2.2.3.1 Touch Methodologies

Users can see patients attributed to their hospital based solely on inpatient hospitalizations (IP) or based on inpatient hospitalizations or emergency department visits (IP+ED) during the last 36 months. While data moving forward will be loaded into MADE based on the IP+ED algorithm, the IP attribution option allows hospitals to track a consistent panel of patients over time. The IP+ED selector is available for Episode reports. However, as by definition, all episodes begin with an inpatient hospitalization, so the ED attribution will not change the number of episodes initiated by the hospital.

Within Population Navigator, the column for Touch Attribution Type identifies the attribution method that captures a beneficiary - 'IP', "IP+ED", and 'Both'.

Beneficiaries with both an IP and ED 'touch' at the hospital, as described above, in the 36 months of CCLF data presented will have the value 'Both' indicated in the column, "Touch Attribution Type."

2.2.3.2 MPA Attribution Methodologies

Geographic – Beneficiary is attributed to a hospital based on the hospital's Primary Service Area (PSA) or by the PSA Plus (PSAP) methodology when PSAs overlap for multiple hospitals. Beneficiaries attributed under MPA by geography with a "touch" at the hospital are visible in the application, even if a Care Coordination Agreement is not available.

Academic – Beneficiary is attributed to an academic medical center (AMC), either Johns Hopkins Hospital or University of Maryland Medical Center, through an inpatient touch at the hospital for an admission that is associated with a case mix index (CMI) ≥ 1.5. Academic attribution is agnostic to the beneficiary's residence or Geographically attributed hospital.

Beneficiaries can be attributed to the same – or to different - hospitals under both Geographic and Academic attribution algorithms, as the logic is not mutually exclusive or hierarchical.

2.2.3.3 PHI Sharing through Care Coordination Agreement (CCA)

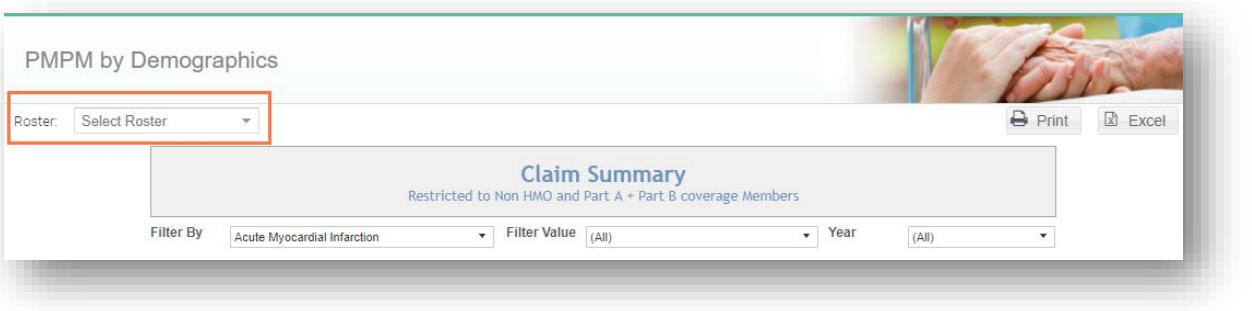
Hospitals may attest to legal arrangements with providers (individual clinicians and facilities). Through these arrangements, the hospitals are allowed to view PHI-level data for beneficiaries with treatment relationships with those providers. These arrangements – referred to as care coordination agreements – can include employment contracts and referral patterns, among others. A treatment relationship is defined differently for clinician and facility partners:

- Clinician partners: The beneficiary has at least one claim with an Evaluation and Management (E&M) code within the last 36 months from the clinician partner
- Facility partners: Every beneficiary that has an admission/episode of care within the last 36 months from the facility partner.

Note that, consistent with the Touch methodology, PHI Sharing through CCA is not an attribution approach, rather is simply a policy that allows beneficiary PHI level data to be shared with hospitals. It has no relation to the MPA attribution or touch methodologies. To explore a hospital's MPA attributed population, the user should select the MPA Attribution option.

2.2.4 Roster Selection

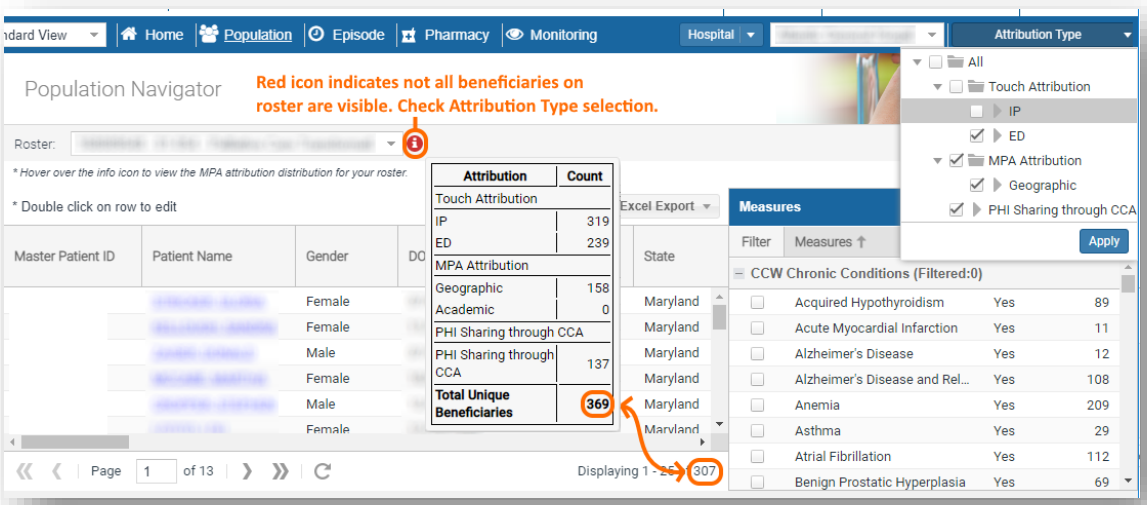
You can filter any report based on any defined Roster.

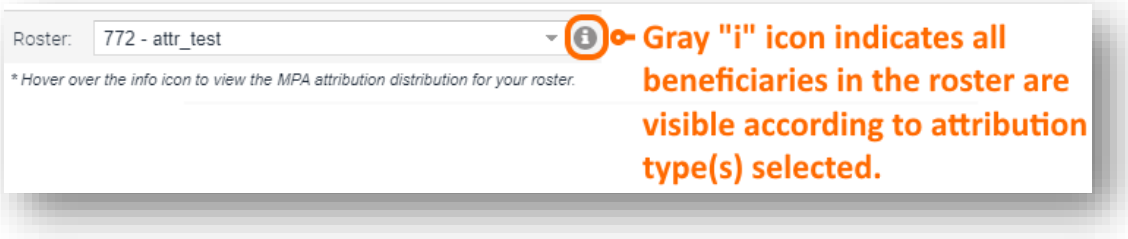


2.2.5 Roster Attribution Indication

When a roster is selected and loaded, an icon with an "i" will appear to the right of the selected roster. Hovering the cursor over this icon shows the distribution of roster beneficiaries by attribution type. The icon is colored grey when all beneficiaries in the roster are loaded into the reports. The icon is colored red when one or more beneficiaries in the roster are not loaded into the reports due to the current attribution type selected. An important note is that when using MADE, the default attribution type selection is the Touch Attribution "IP." Any beneficiaries available via the MPA attribution types that are not also attributed by an IP touch will not be shown with the default selection.

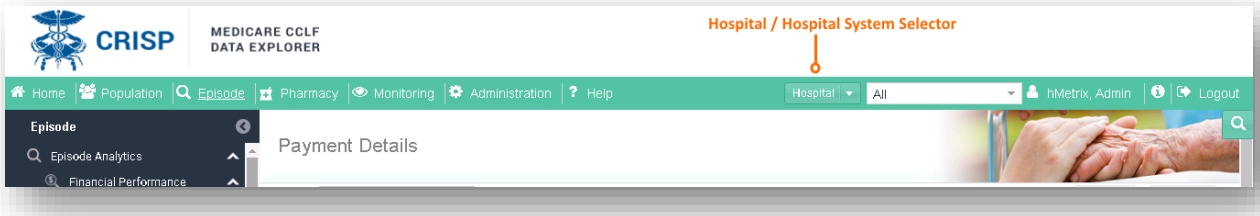
For example, with only IP attribution selected, loading a roster that contains beneficiaries with ED only or MPA attribution, the "i" icon will be red. In Population Navigator, the user can compare to the Total Unique Beneficiaries in the attribution table to the count indicated under the table. Note that beneficiaries may be attributed by MPA as well as by IP or ED touch, and/or PHI Sharing through CCA. Therefore, the "Total Unique Beneficiaries" in the attribution type table will often not reflect the sum attribution categories.


Home
Population
Episode
Pharmacy
Monitoring
Hospital
Attribution Type
Population Navigator
Red icon indicates not all beneficiaries on roster are visible. Check Attribution Type selection.
Roster:
* Hover over the info icon to view the MPA attribution distribution for your roster.
* Double click on row to edit
Excel Export
Measures
Filter
Measures
Apply
All
Touch Attribution
IP
ED
MPA Attribution
Geographic
PHI Sharing through CCA
Attribution
Count
Touch Attribution
IP 319
ED 239
MPA Attribution
Geographic 158
Academic 0
PHI Sharing through CCA
PHI Sharing through CCA 137
Total Unique Beneficiaries 369
Master Patient ID
Patient Name
Gender
State
Female
Male
Maryland
CCW Chronic Conditions (Filtered:0)
Acquired Hypothyroidism Yes 89
Acute Myocardial Infarction Yes 11
Alzheimer's Disease Yes 12
Alzheimer's Disease and Rel... Yes 108
Anemia Yes 209
Asthma Yes 29
Atrial Fibrillation Yes 112
Benign Prostatic Hyperplasia Yes 69
Page 1 of 13
Displaying 1 - 25 of 307


Roster:
772 - attr_test
* Hover over the info icon to view the MPA attribution distribution for your roster.
Gray "i" icon indicates all beneficiaries in the roster are visible according to attribution type(s) selected.

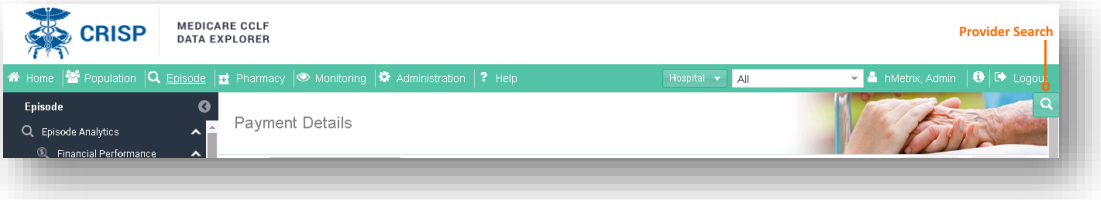
2.2.6 Hospital / Hospital System Selection

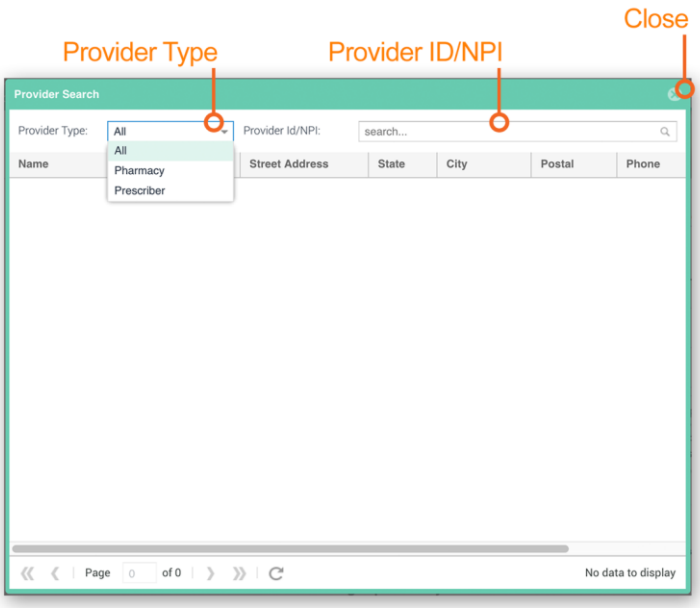
For users with access to more than one hospital within a hospital system, you can filter any report based on an individual hospital, or a hospital system. Select “Hospital” or “Hospital System” from the drop down and choose the entity of interest.



2.3 Provider Search

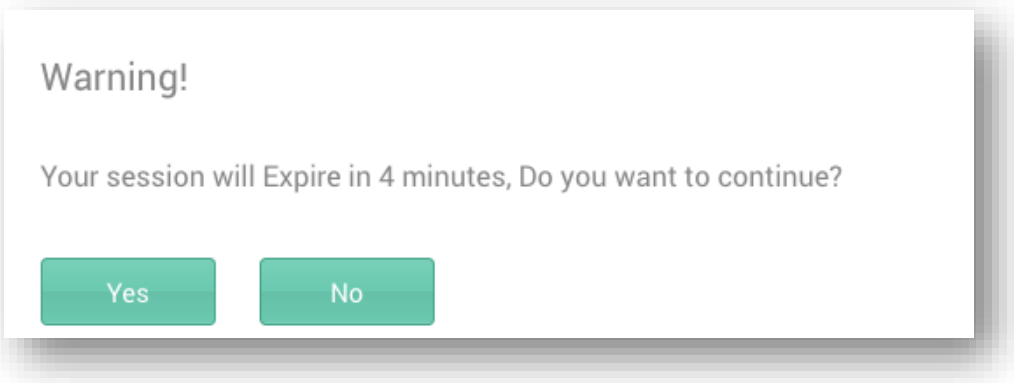
The Provider Search is a quick way to view prescriber or pharmacy information while viewing a report. The Provider Search icon is available on the top right-hand corner below the logout menu option. Select the Provider Type from the drop-down and then enter the Provider ID / or NPI into the field and the corresponding Provider information will be displayed in the grid below.



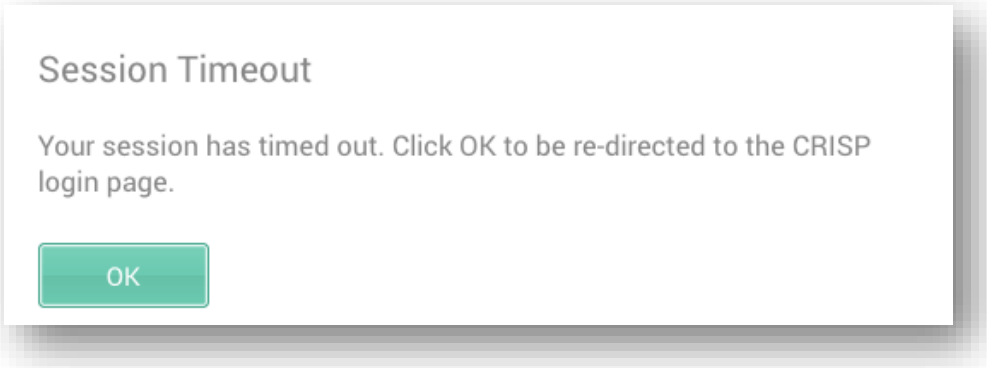


2.4 Session Timeout

To minimize unauthorized use of MADE, a user's session is set to time out after 30 minutes of inactivity. A warning message will be displayed 5 minutes before the session times out.

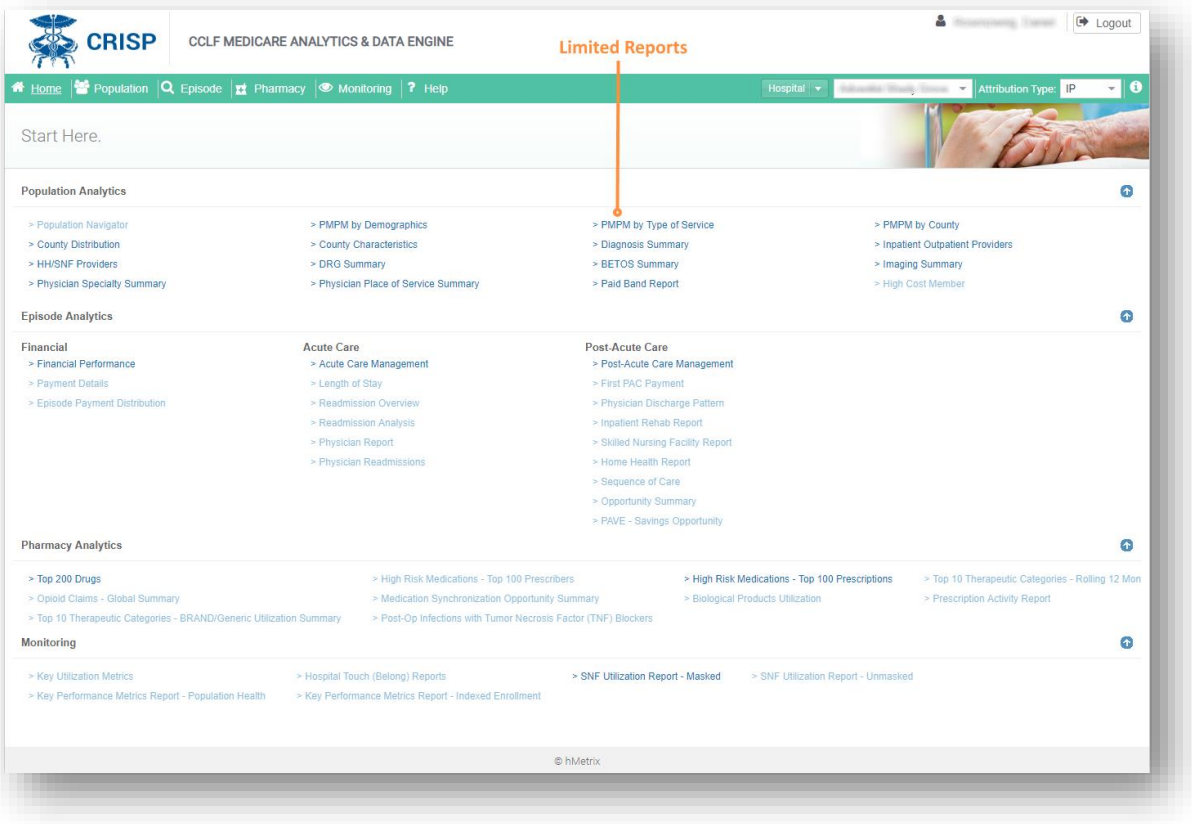


If the user clicks **Yes** to the warning message, then the user's session will be active for another 30 minutes. If the user clicks **No** or does not respond to the warning message, the user's session will time out and the Session Timeout warning message will be displayed.

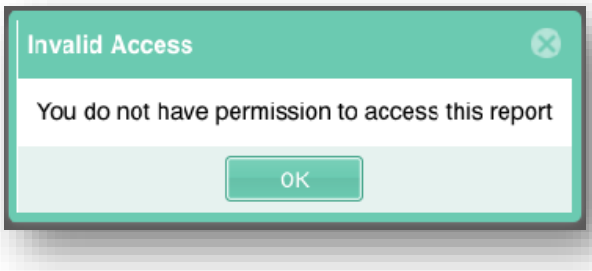


3 NON-PARTICIPATING HOSPITALS

Hospitals who have not yet registered for the CCLF reports can access a subset of summary reports. From the MADE home page, click on the report name to view more details. Reports that are in dark blue are accessible to non-participating hospitals and reports in light blue require you to be registered with CRISP.



An Invalid Access message will be displayed if a user attempts to access reports without the appropriate registration. Contact CRISP for instructions on how to register for additional reports.

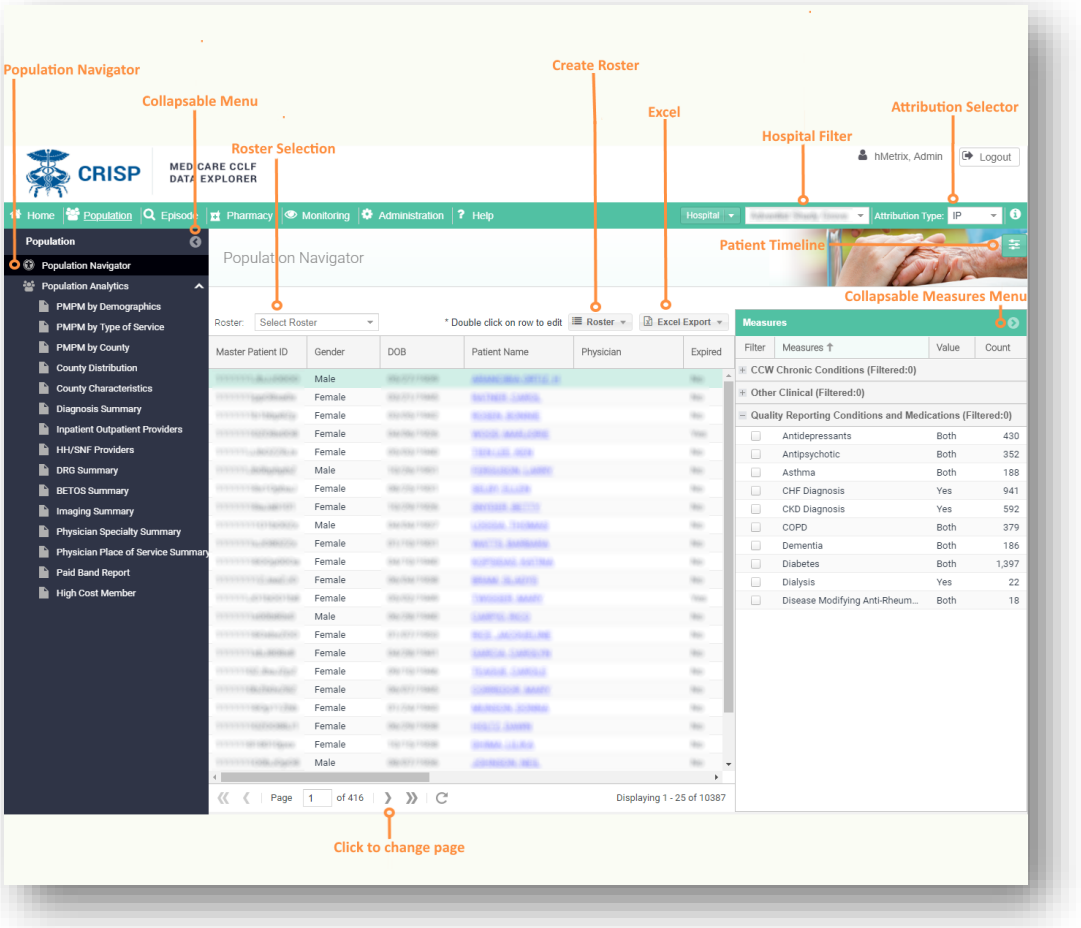


4 POPULATION ANALYTICS

The Population module includes the Population Navigator and Population Analytics reports. The Population Navigator provides a list of Patients enrolled in the program and specific Patient reports. The Population Navigator also includes the Patient Timeline, which graphically represents patient-specific care over time, and Patient Summary, which contains a series of patient-specific reports based on a series of diagnostic and utilization characteristics. The Population Analytics reports provide reports that aggregate the population based on series of variables. The Population module contains all health care utilization and payments for Part A and B Medicare services. Part D prescription drugs are included only in the Patient Navigator. The sections below provide further details on each section. For detailed information about the beneficiary attribution methodology, as well as the data analyzed in MADE, refer to the topic in CCLF Data Basics titled Population Assignment.

4.1 Population Navigator

The Population Navigator provides a list of patients attributed to a hospital, patients enrolled in a program and patient-specific reports.



4.1.1 Population Navigator Columns

There are two types of columns in Population Navigator:

- Standard columns with pre-populated fields that cannot be edited
- User defined fields, which are blank until information is populated by the user

User may reorder columns by clicking and dragging a column header to the desired location. Users an also select which columns to include in the view by hovering over a column header, clicking the resulting arrow to the right of the header, and selecting and deselecting column names.

4.1.1.1 Standard Columns

The below table describes each column in Population Navigator that contains beneficiary-level information from the CCLF data or otherwise derived by CRISP.

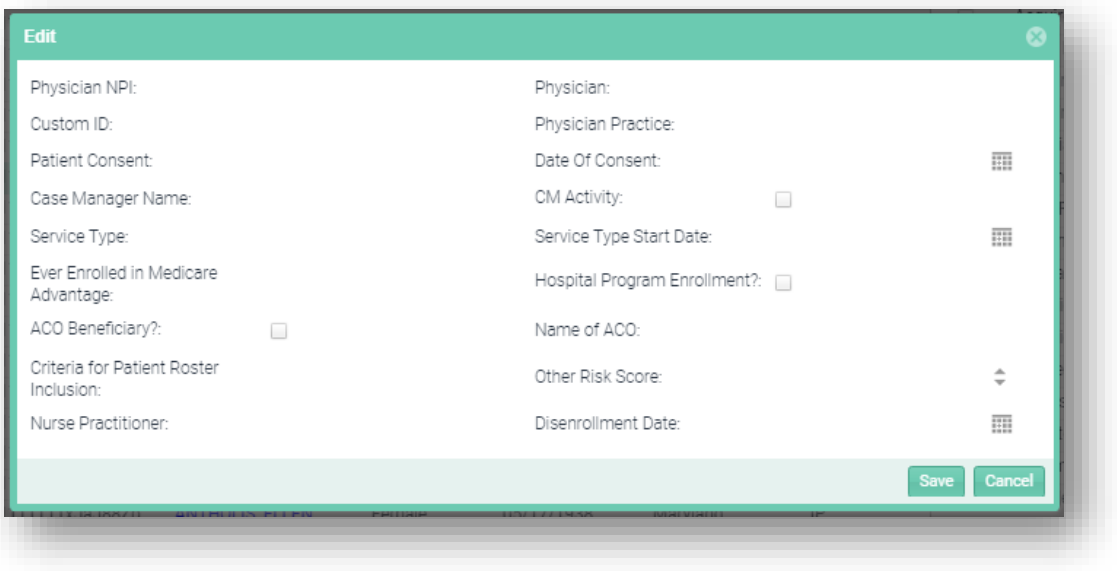
COLUMN NAME	DESCRIPTION
Master Patient ID	Medicare Beneficiary Identifier (MBI) contained in the CCLF data
Encrypted Patient ID	Legacy beneficiary identifier; a scrambled HICN
Patient Name	Concatenated patient name as presented in the CCLF; contains hyperlink to Patient Summary
Patient First Name	Patient first name; useful for filtering or sorting in MADE or in Excel export
Patient Middle Name	Patient middle initial; indicated as "^" when not available. Useful for filtering or sorting in MADE or in Excel export
Patient Last Name	Patient last name; useful for filtering or sorting in MADE or in Excel export
Gender	Identified as Male or Female
DOB	Date of birth in MM/DD/YYY format
Date of Death	Date of death as indicated in the CCLF 'BENE_DEATH_DT' variable. Only populated for beneficiaries with "Expired" status.
State	State of residence according to CMS beneficiary files; two letter state code
Touch Attribution	Identifies whether beneficiary has had a touch at the hospital in the last 36 months; IP, ED, or BOTH
MPA Attribution	Designates the whether the beneficiary is MPA attributed to the current hospital; geographic, academic, or both. See Section 2.2.3 for more details.
MPA Attributed Hospital	Name of the MPA Attributed hospital regardless of whether the beneficiary is attributed to the selected hospital. Shows "Multiple" for Geographically attributed beneficiaries with shared attribution across more than one hospital
Treated by Clinician/Facility with CCA	Indicates whether beneficiary has a treatment relationship with the clinician/provider and that the hospital has attested to having a CCA with the clinician/partner for PHI sharing purposes.

Treated by Clinician in CTO	Indicates whether beneficiary is attributed to an MDPCP participating physician that is affiliated with the hospital-based CTO.
Current Year Inpatient Admission Count	Count of all STACH Admissions in the most recent 12 months excluding the 3 month claim lag
Current Status	Eligibility status based on most recent month. Active (Part A and Part B, i.e. FFS), Disenrolled (no longer FFS in latest month's CCLF), Expired (deceased), HMO/Not Part A and Part B (Either only Part A, only Part B, or not entitled/eligible for Medicare benefits)
Dual Eligibility	Value is 'Yes' if the Medicare beneficiary also qualified for Medicaid for at least one month in the CCLF. Value is 'No' if the Medicare beneficiary did not also qualify for Medicaid for any month in the CCLF.
MRN	Medical Record Number; as indicated in the CCLF on claims for the selected hospital. Leading zeroes and alpha characters are removed. A beneficiary touch attributed to multiple hospitals will have a different MRN displayed in each hospital's view
Most Recent Encounter Date at Attributed Hospital	Date of most recent IP or ED admission at selected hospital
HCC Score Recent Full CY	Hierarchical Condition Category score; version 24 calculated for calendar year 2023 using the CCLF data.
HCC Score Prior Full CY	Version 24 calculated for calendar year 2022 using the CCLF data.
HCC Score Oldest Full CY	Version 24 calculated for calendar year 2021 using the CCLF data.
HCC Score Recent Full FY	Version 24 calculated for fiscal year 2023 using the CCLF data.
HCC Score Prior Full FY	Version 24 calculated for fiscal year 2022 using the CCLF data.
HCC Score Oldest Full FY	Version 24 calculated for fiscal year 2021 using the CCLF data.
Measure Count	Count of measures with positive values (see User Guide section 4.1.1.3)
hAM Score	hMetrix Advanced Model risk score; predicts likelihood of high healthcare utilization in the next 12 months, range 0-1. See Section 8.2.9 for more information.
Current Year Medical Paid	Sum of payments for medical claims in the most recent 12 months; excluding the 3 month claim lag
Previous Year Medical paid	Sum of payments for medical claims in the 12 months prior to the most recent 12 months; excluding the 3 month claim lag
Current Year Pharmacy Paid	Sum of estimated payments for Part D pharmacy claims in the most recent 12 months; excluding the 3 month claim lag (See Section 6 for additional detail)
Previous Year Pharmacy Paid	Sum of estimated payments for Part D pharmacy claims in the 12 months prior to the most recent 12 months; excluding the 3 month claim lag (See Section 6 for additional detail)

PQI 90 Admissions	Count of PQI admissions for measures included in the list of "PQI – Inpatient and OBS > 24" measures in Population Navigator that occurred at *any* hospital for the presented beneficiaries. A single discharge that qualifies for multiple PQIs is counted once in the composite measure.
ACO	For the latest year of data in the CCLF, this column indicates whether a beneficiary is enrolled in an Accountable Care Organization.
MDPCP	Using the latest quarterly MDPCP Attribution information, this indicates whether a beneficiary is attributed to an MDPCP participating practice. If a beneficiary is attributed to a practice that works with any hospital's or hospital system's Care Transformation Organization (CTO), their value in this column will be "Yes (Hospital CTO)."

4.1.1.2 User Defined Fields

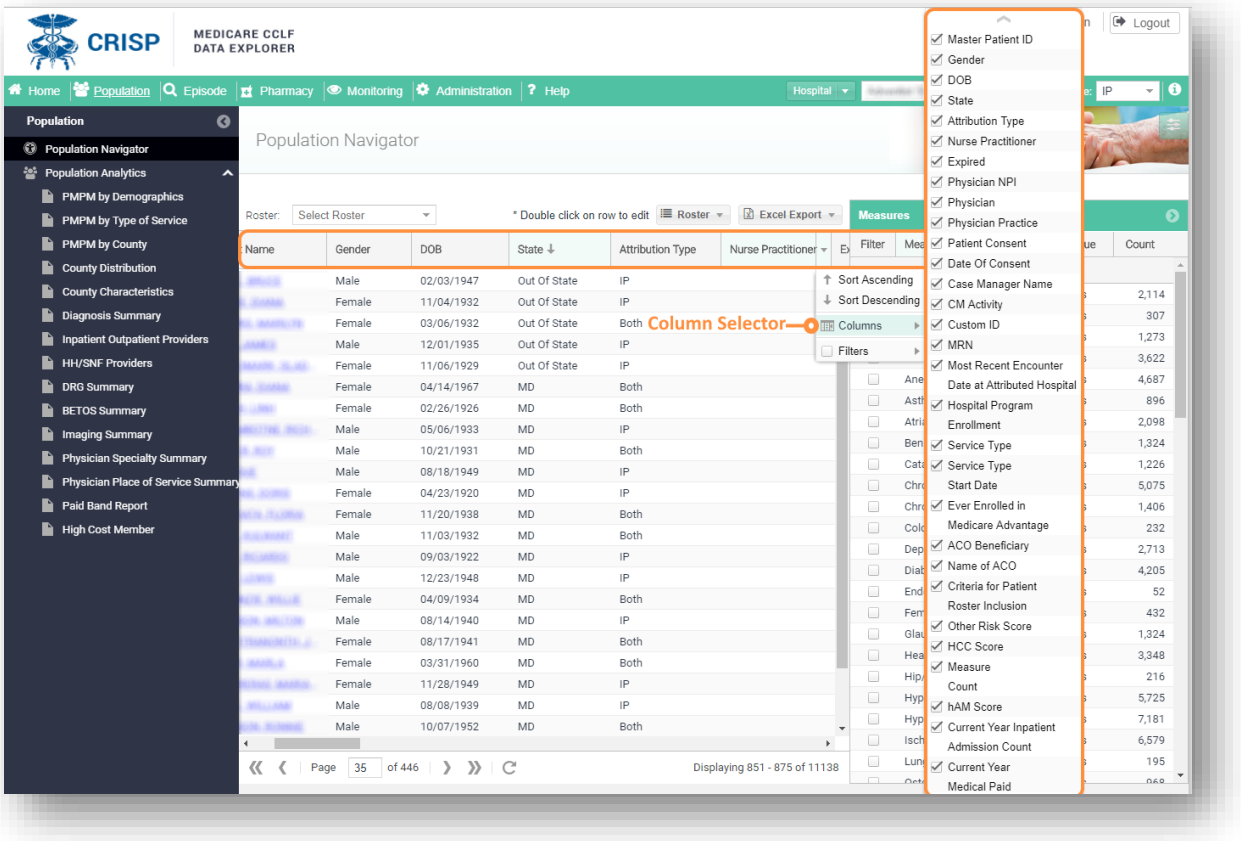
Population Navigator includes several fields/columns that can be populated and edited by a user in MADE; these fields do not contain any information by default. To populate these fields, a user can upload a completed Roster Template. Otherwise, double click on any field for a specific beneficiary and enter information for any user defined field.



Two User Defined fields, “Date of Consent” and “Disenrollment Date,” are roster-specific entries. Patients may have multiples dates of consent across multiple rosters. Entries into these fields will populate only with a roster loaded. These two fields are used to populate the Key Performance Metrics Reports within the Monitoring Module.

4.1.1.3 Population Navigator Column Selection and Filters

All column headers can be rearranged or changed by clicking on the column header. Each column header can be filtered using pre-set filters and sorted by ascending or descending order. Move your cursor over a column header and click the triangle to the right on the column name to view the different filter options. To change the sequence of the table column headers, hold and drag the columns to the desired location. The **Touch** and **MPA Attribution Type** columns identify the attribution method(s) that capture each beneficiary.



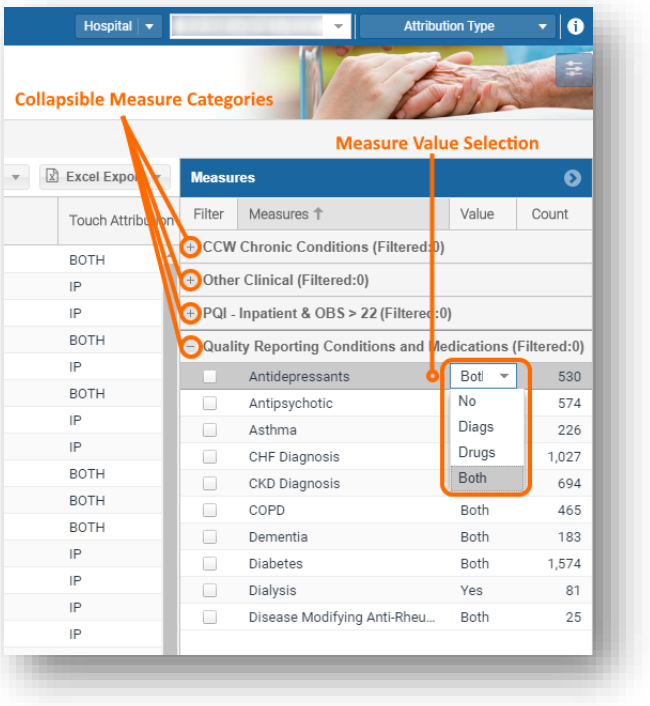
4.1.1.4 Measures

The Population Navigator roster can be refined using the **Measures** filter. There are four measure categories - Measure categories:

1. CMS 30 CCW Chronic Conditions – based on CMS' algorithms for the standard chronic condition flags from Chronic Condition Warehouse
    a. Defined according to diagnosis and procedure code algorithms: https://www2.ccwdata.org/web/guest/condition-categories-chronic
2. Other Clinical – includes measures related to prescription drug use and associated payments
    a. Defined using multiple clinical use databases.
3. PQI – Inpatient & OBS > 24 hours
    a. 2019 AHRQ Prevention Quality Indicators for inpatient and observation stays greater than 23 hours
    b. Beneficiaries are flagged for a PQI admission or OBS > 24 hours at **any** hospital, i.e. not limited to the one currently loaded by the user.
4. Quality Reporting Conditions and Medications – includes conditions and medications frequently used when calculating quality measures across a population

Each category is expandable or collapsible using the '+' or '-' symbol on the title bar.

One or more measures can be added to or removed from the roster filter by clicking the checkbox. For each measure, select the value to filter on by clicking on the **Value** dropdown options. Click on **Create Roster** to save the population identified according the measure selection to easily access later. The number to the right of the measure is the count of patients that will remain after applying the filter.

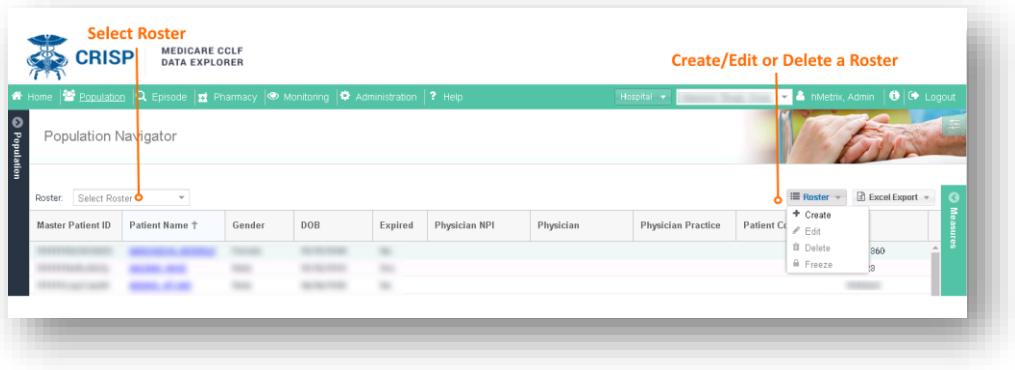


4.1.2 Create/Edit/Delete Roster

You can create, edit and delete a Roster easily from the Population Navigator page.

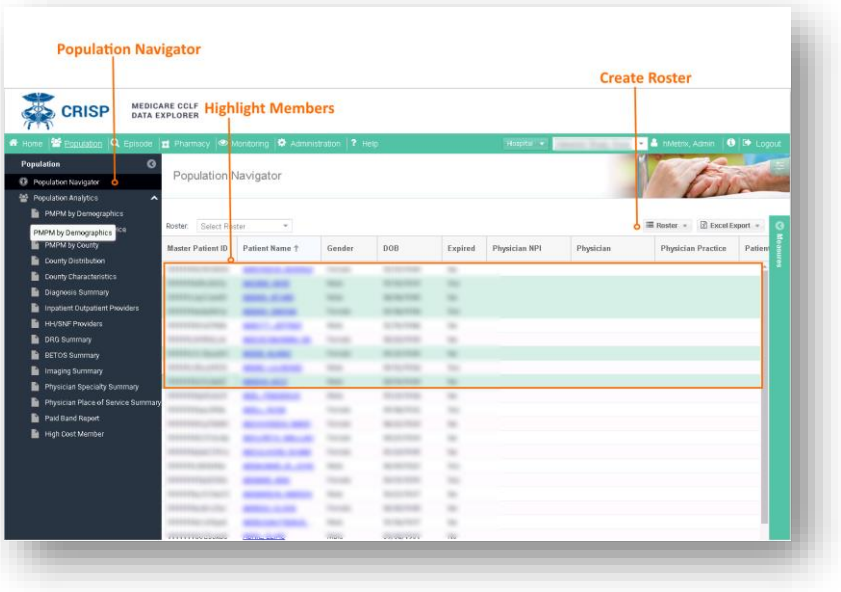
4.1.2.1 Create a Roster

You can create a new roster by clicking on the **Roster >> Create** button.

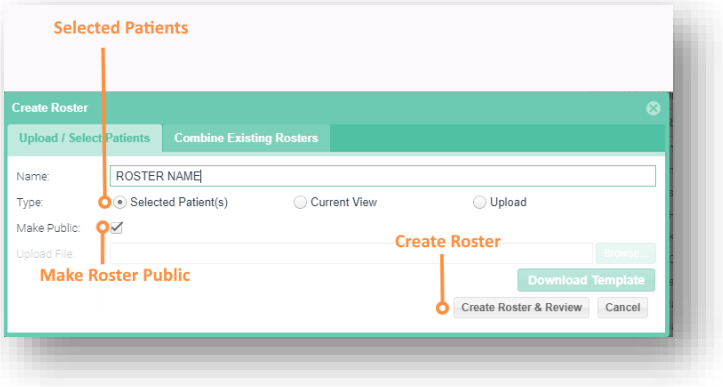


There are four options to create and save a Roster:

1. **Roster based on measures**
    a. Filter the Patient list by selecting your measures
    b. Click on **Roster>> Create Roster**
    c. Create a name for your roster
    d. On the **Type,** select **Current View**
    e. Click on **Create** button
2. **Roster for individual patients from the patient list**
    a. From the patient list, you can select one or more patients at a time. To select a group of patients, click on patients while holding the SHIFT key on a PC (or CMD on MAC). Patients can be selected individually by clicking on them while holding the CTRL key on a PC (or CMD on MAC). The selected patient names will be highlighted in green.

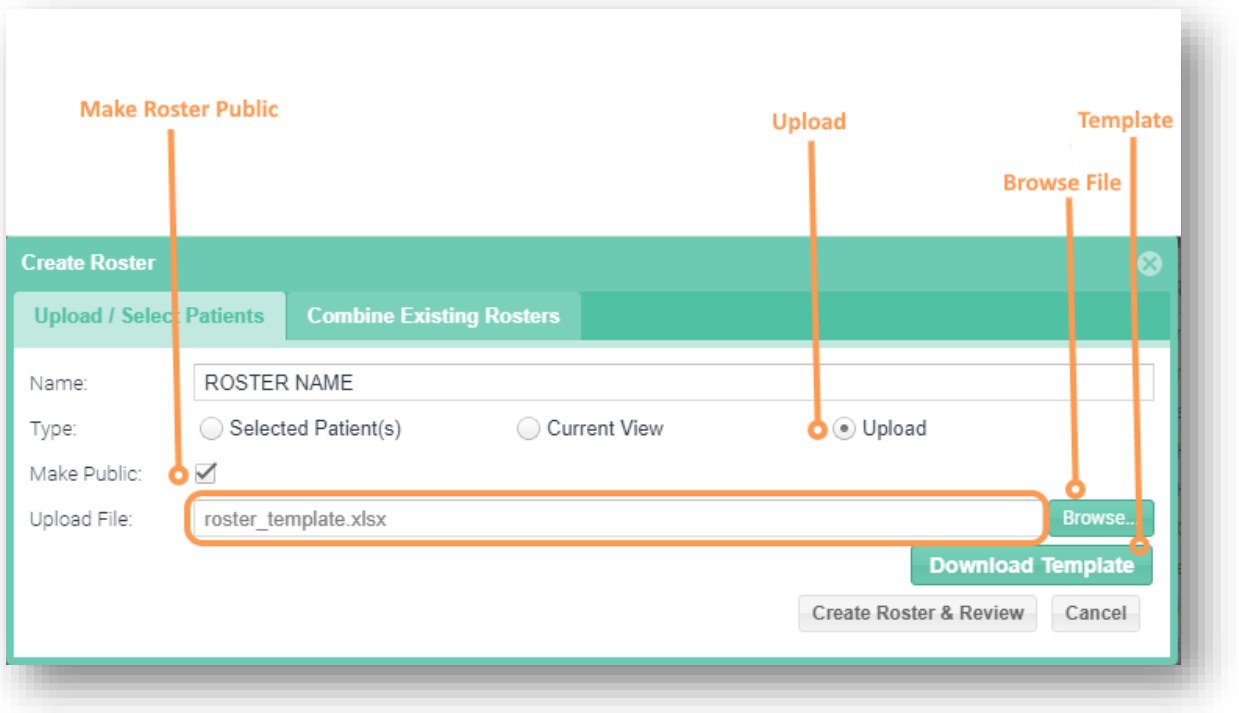


b. Click on **Create Roster**
c. Enter a name for your roster
d. For **Type,** select **Selected Patient(s)**
e. Click on **Create** button

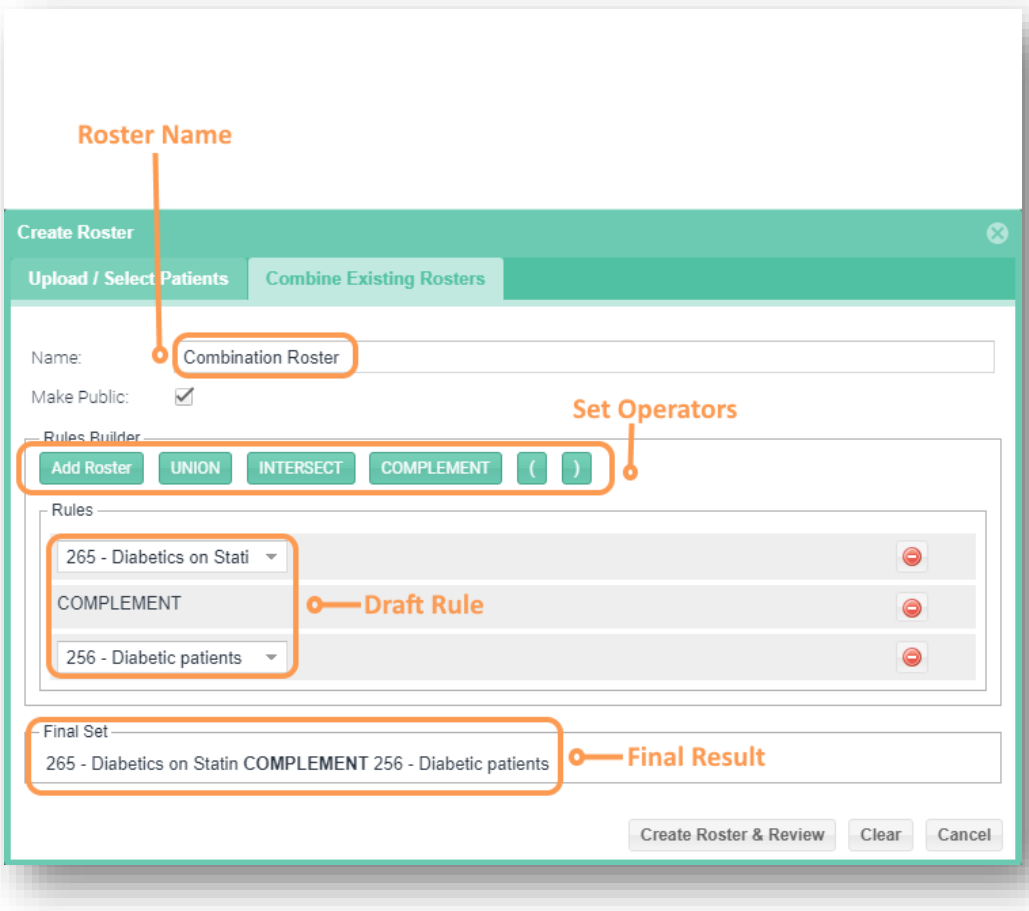


3. Upload a Roster
   a. Click on **Create Roster** button from the Population Navigator window, and the Create Roster window will be displayed.
   b. Enter the Roster name
   c. Select **Upload** from the Type options
   d. Click on **Download the Roster Template**
   e. The file will be saved to your computer
   f. Open the template, enter the required values for First Name, Last Name, DOB, and Gender (written out as “Female” or “Male”), and any other optional fields
   g. In the **Create Roster** dialogue, click on the **Browse** button and select the template file to upload
   h. Click on **Create** to save the roster

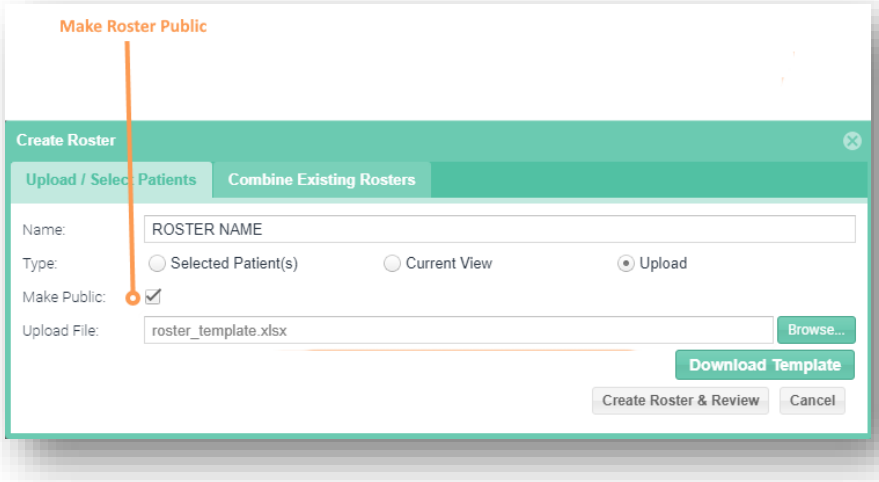
i. The new roster will be displayed in **Population Navigator**



4. **Create a Roster Based on Other Existing Rosters**
   a. Click on the **Combine Existing Rosters** tab from the Population Navigator window and the Create Roster window will be displayed.
   b. Enter the Roster name
   c. Select the Rosters and Set Operations needed from the options. Examples of set operators are:
      i. **Union** – the combination of all patients across both rosters. For example, if Roster A contains patients X & Y and Roster B contains patients Y & Z, then Roster A Union Roster B contains patients X, Y & Z
      ii. **Intersect** – the common patients across both rosters. For example, if Roster A contains patients X & Y and Roster B contains patients Y & Z, then Roster A Intersect Roster B contains patients Y
      iii. **Complement** – the patients in one roster that are not represented in other rosters. For example, if Roster A contains patients X & Y and Roster B contains patients Y & Z, then Roster A Complement Roster B contains patients X. If the algorithm were reversed (Roster B Complement Roster A), the resulting roster would contain patients Z
      iv. Brackets / Parenthesis are used to specify the order of operations
   d. Click on **Create Roster & Review** to view and save the roster
   e. The new roster will be displayed in the **Population Navigator**



5. Making the Roster public
    a. Check the **Make Public** check box when creating a Roster.
    b. The Roster will be available to all other users with access to data for the same hospital.



4.1.2.2 Edit a Roster

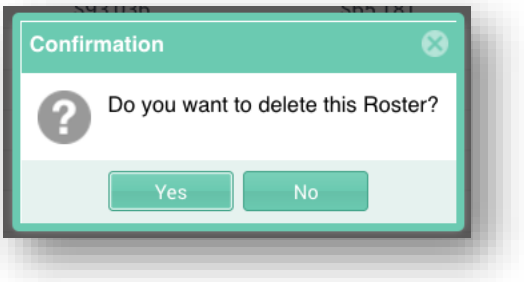
Only the author of a roster may edit it. To edit a roster not created by the present user, create a copy of the roster of interest before editing.

1. On the Population Navigator select the **Roster** name you wish to edit from the dropdown.
2. Click on the **Roster** button and select **Edit** from the options displayed.
3. Edit the name and click **Edit Roster and Review** button to view the patients and save your changes.

4.1.2.3 Delete a Roster

Only the author of a roster may delete it.

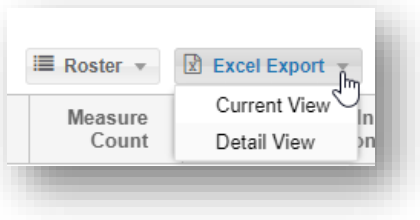
1. On the Population Navigator select the **Roster** name you wish to delete from the dropdown.
2. Click on the Roster button and select **Delete** from the options displayed.
3. **Delete** the name and click Yes button to save your changes.



4.1.2.4 Excel Export

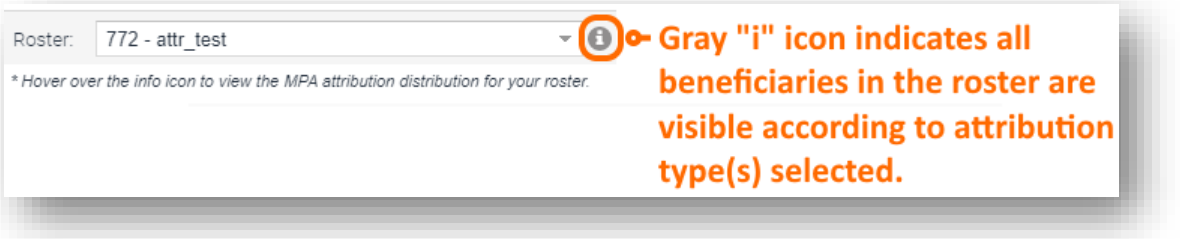
You can create an Excel export of the Population Navigator in two ways:

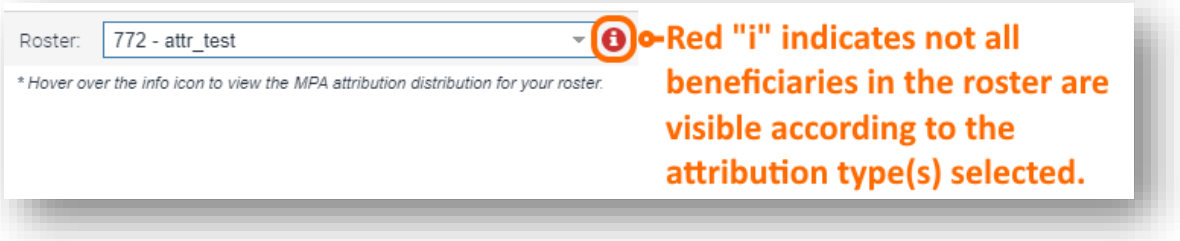
1. **Current View**: This view will create an Excel export for all selected patients identical to the columns seen in the User Interface
2. **Detail View**: This view will create an Excel export for all selected patients with all the available measures included as columns, and all data columns (including those not selected) will be included.

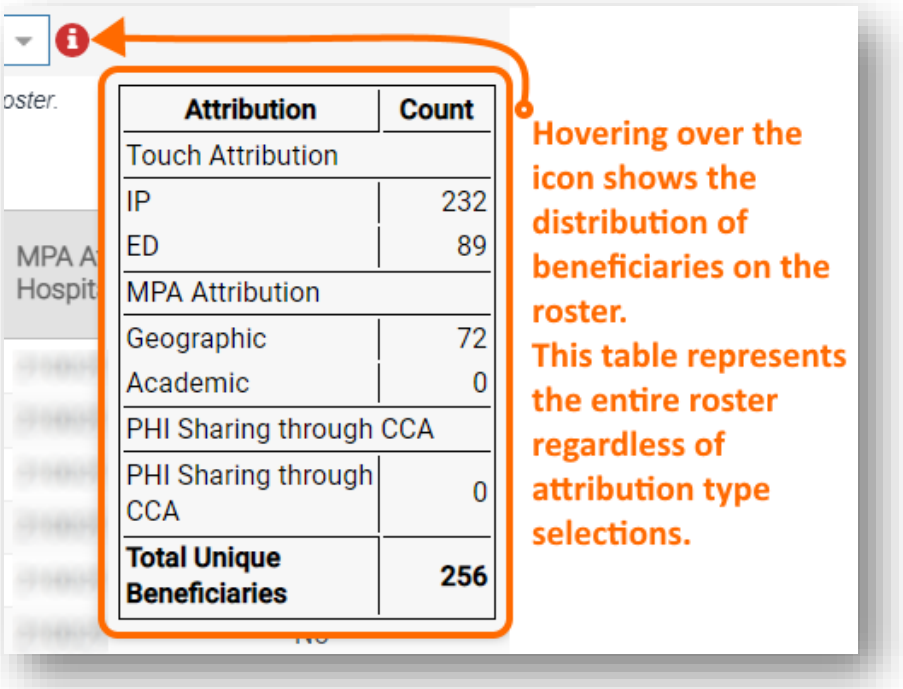


4.1.2.5 Loading a roster and beneficiary availability indicator

To load a roster, use the roster selection menu located in the top left corner of a report within MADE. When a roster is loaded, an icon with an "i" will appear to the right of the roster selection menu. Hover over the icon for attribution information for the beneficiaries on the roster. By default, this icon is grey. However, if the user loads a roster with an attribution type(s) selected that does not include all beneficiaries on the roster, this icon will be red. To ensure all beneficiaries on a roster may be included in reports, select all attribution types (see section 8.2.2 for more information).

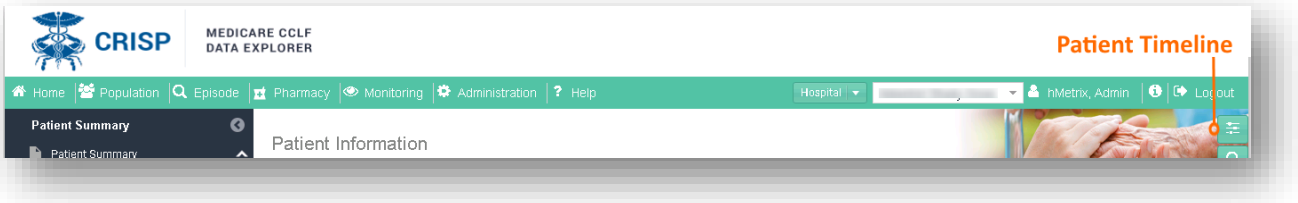






4.2 Patient Timeline

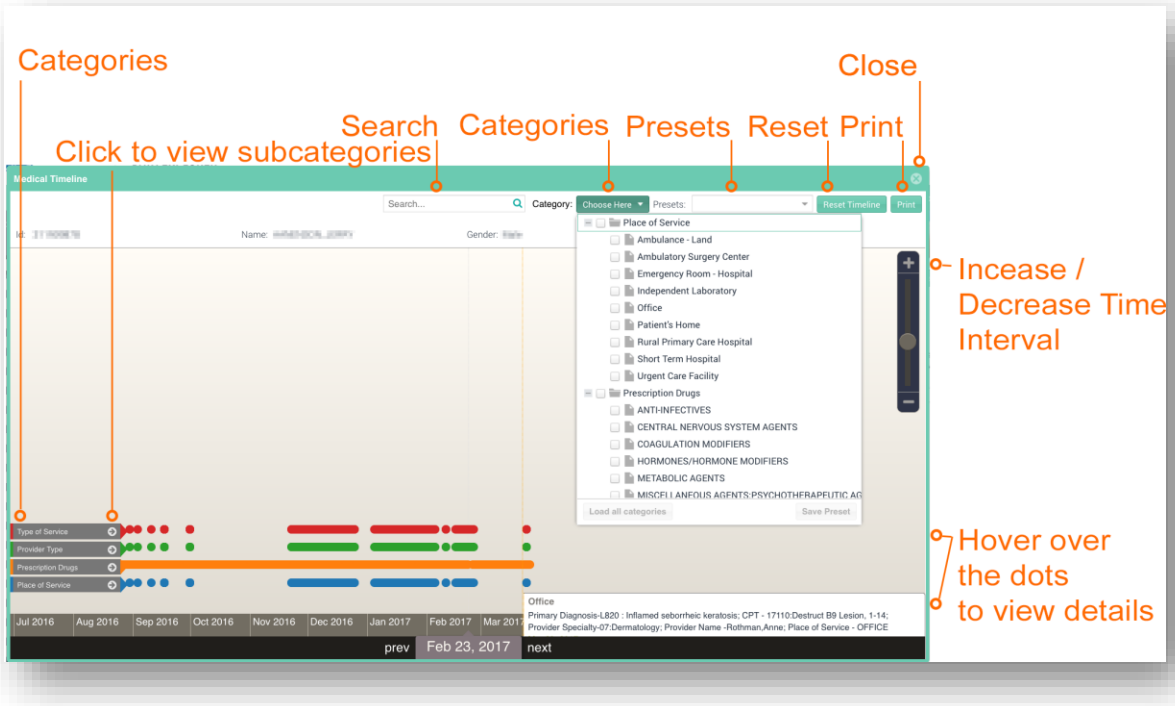
The **Patient Timeline** represents a patient's clinical history chronologically, visually and multi-dimensionally. The patient's clinical history is derived from claims data and other clinical data feeds. The patient timeline is accessible on the top right corner on all **Patient Summary** Reports. Click on the Patient Timeline icon displayed on the top right corner of the patient reports.



Below are some basic functions of the Patient timeline:

- **Drag** the window to any section on the screen
- **Resize** the window by dragging the edges of the window.
- **Increase/Reduce** the time Intervals by clicking on the + or –

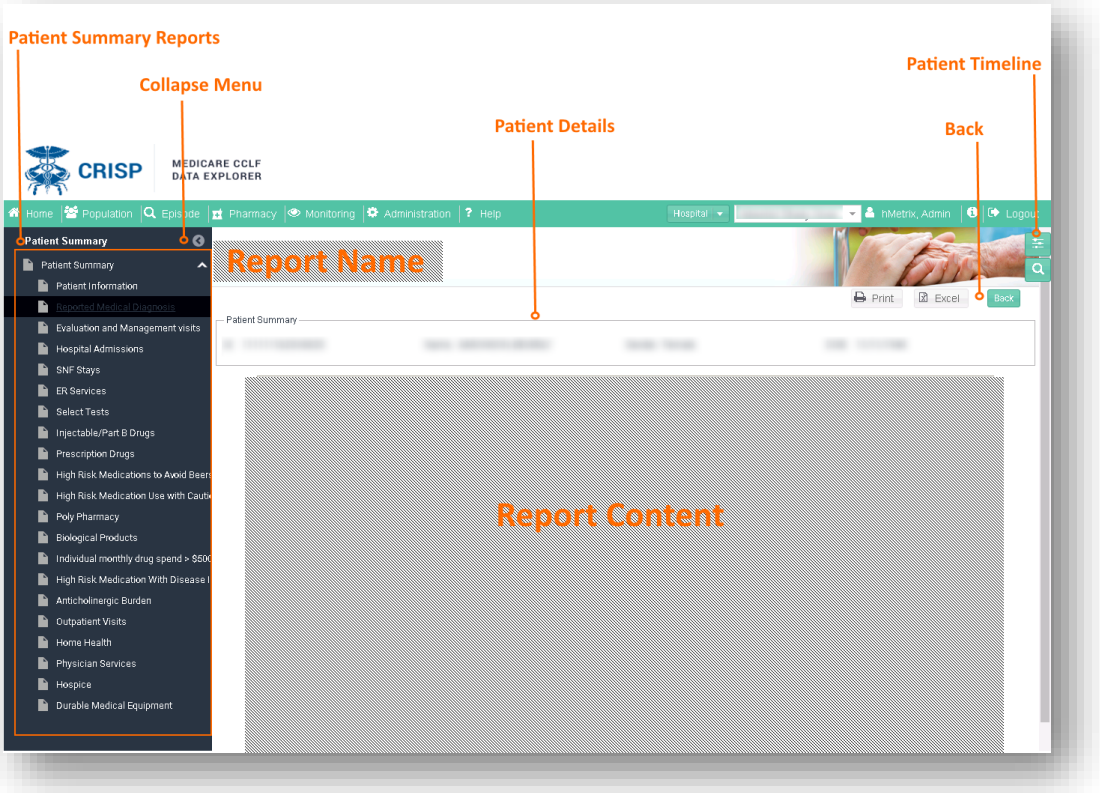
Drill into more detail view by clicking on the **Data Categories**



FEATURES	DESCRIPTION
Event	A record from the Claim or Clinical Data for a patient
Category	Each Event has various attributes such as • Type of Service • Provider Type • Place of Service • Prescription Drugs
Subcategory	Contains further detail about each category • Type of Service: Details by Inpatient, Outpatient, Physician • Provider Type: Provider specialty such as Cardiologist and PCP • Place of Service: Location of care received such as Hospital, SNF, physician office • Prescription Drugs: Categories of common prescription drugs
Search	Search by entering any value in the search box to display search results on the timeline
Presets	Can view pre-determined pre-set views or create new views for easier access. There are two types of presets: • System Defined Presets: views that are predefined and cannot be edited by the user • User Defined Presets: views that can be saved by a User of the System

4.3 Patient Summary Reports

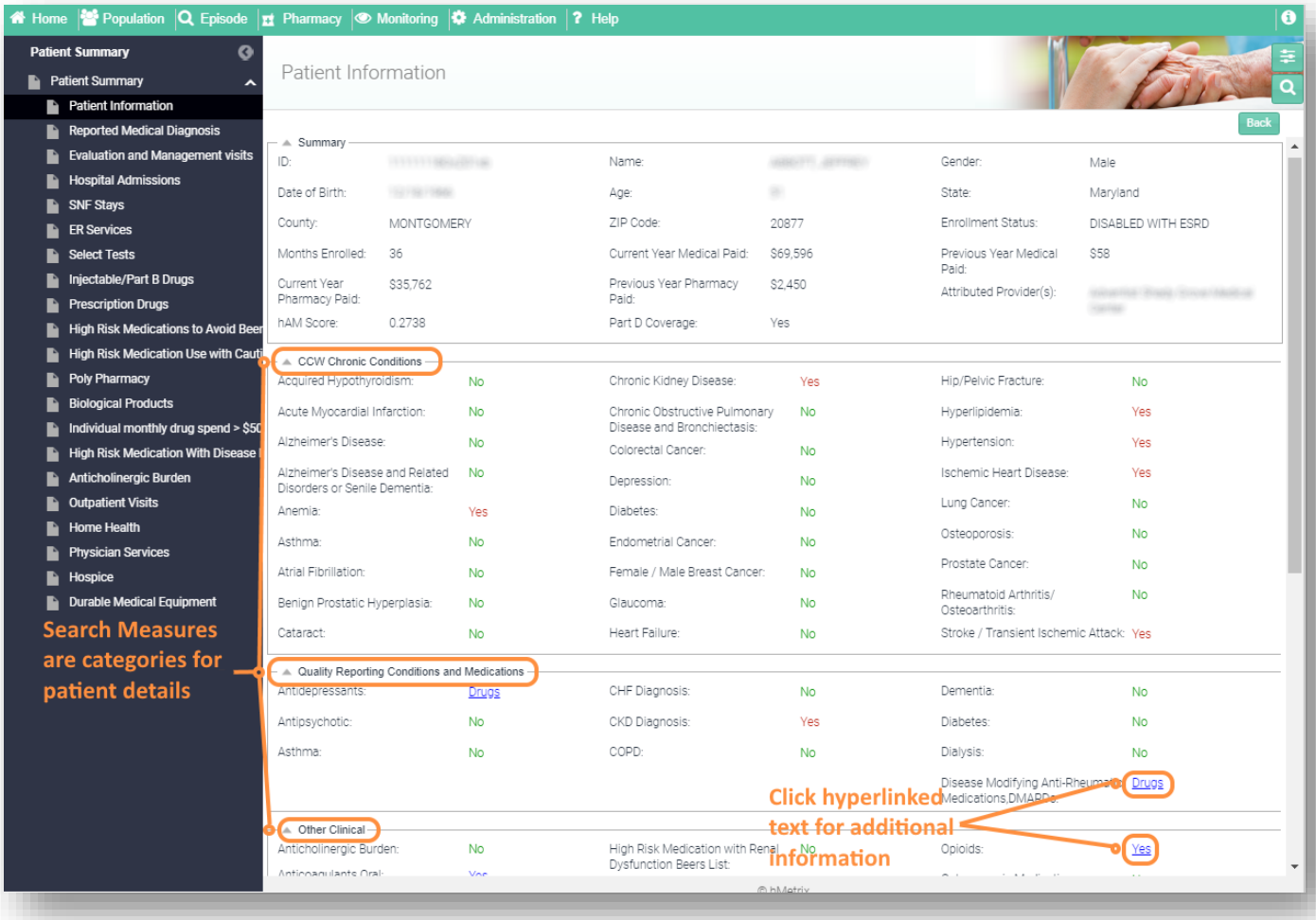
The Patient Summary reports are patient-specific reports that are available once a patient is selected from the Population Navigator.



4.3.1 Patient Summary

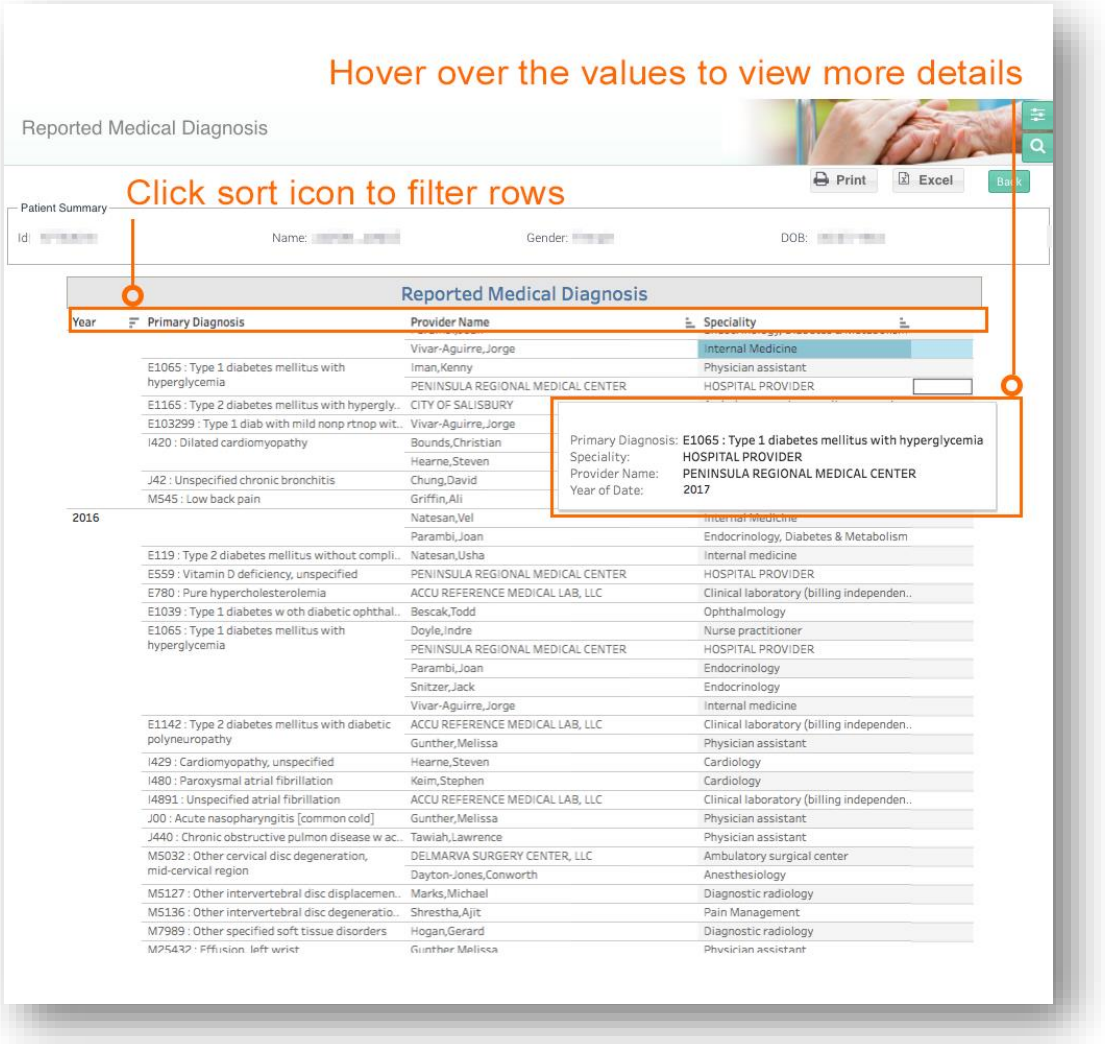
Patient Summary report includes the demographic information and other key details about the selected patient. Click on the values to view additional detail report.

n.b. The 'Attributed Provider(s)' shows your loaded hospital if the beneficiary is attributed under MPA (with or without a touch) and any hospital the beneficiary has had an IP or ED touch within the current CLLF data.



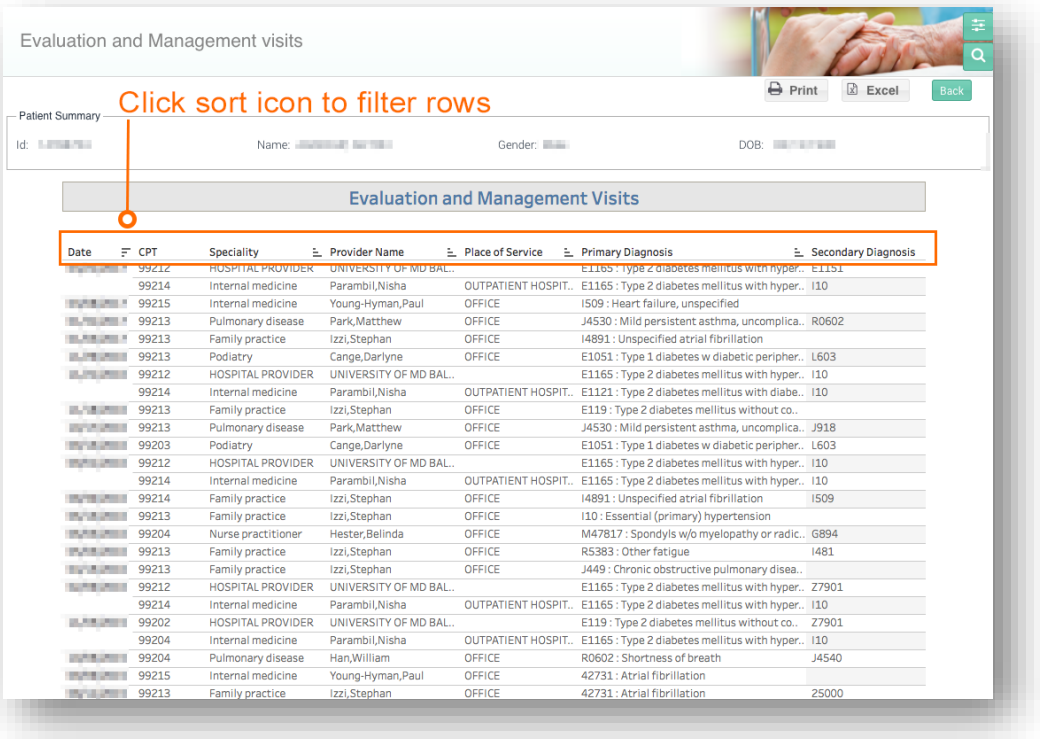
4.3.2 Reported Medical Diagnosis

Reported Medical Diagnosis provides a list of medical diagnosis by year, provider name, and specialty for the selected patient.



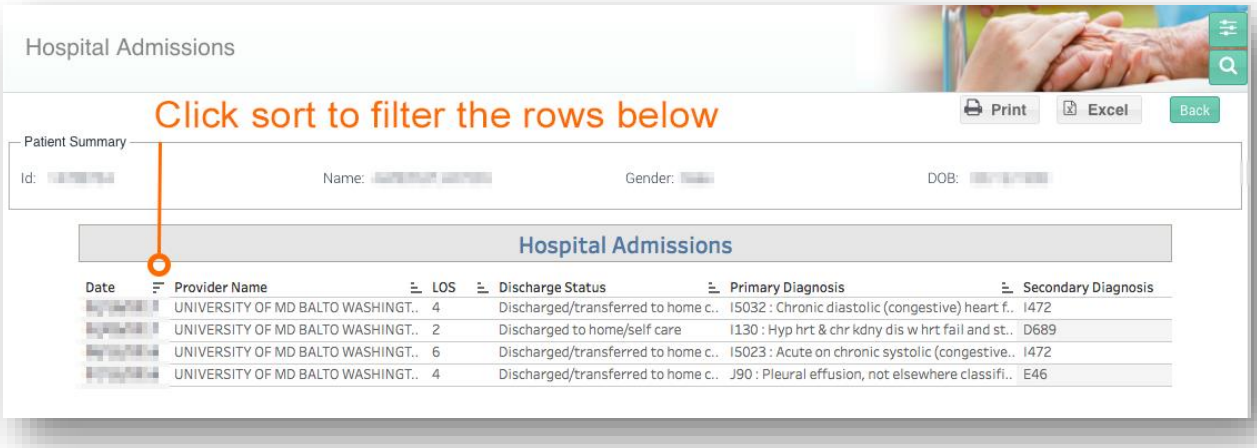
4.3.3 Evaluation and Management visits

Evaluation and Management visits report displays a list of claims for the Evaluation and Management visits by year, specialty, provider name, and primary and secondary diagnoses for the selected patient.



4.3.4 Hospital Admissions

Hospital Admissions report displays a list of claims for hospital admissions by provider name, length of stay (LOS), discharge status and primary and secondary diagnoses for the selected patient.



4.3.5 Admissions with PQI

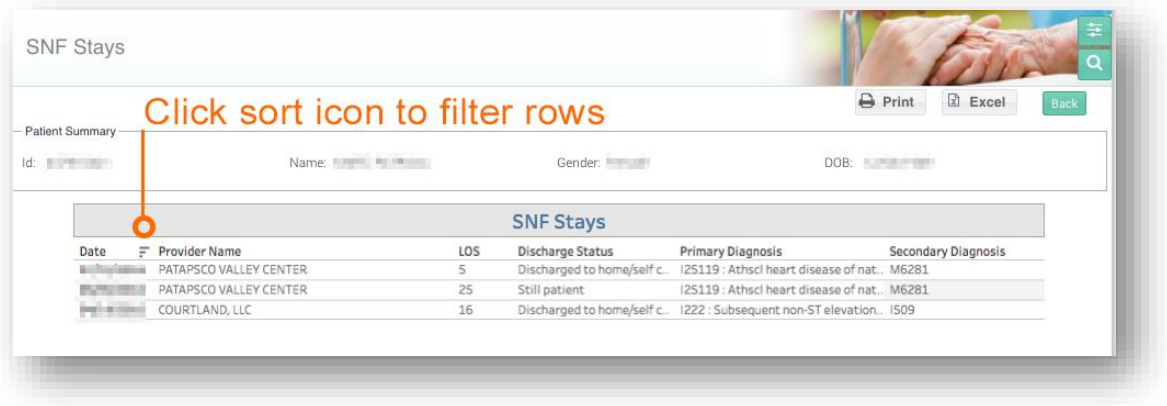
The **Admissions with PQI** report displays all inpatient admissions and observation stays > 23 hours that qualify for one or more PQI measures. The report includes the claim from and through dates, the type of admission (inpatient or OBS > 24), the provider name, LOS, and the PQI measures for each stay.

Admissions with PQI

Claim From Date	Claim Through Date	Admission Type	Provider Name	LOS	PQI Measures
		OBS>24		3	PQI 14 Uncontrolled Diabetes Admission Rate; PQI 90 Prevention Quality Overall Composite; PQI 92 Prevention Quality Chronic Composite; PQI 93 Prevention Quality Diabetes Composite;
		OBS>24		1	PQI 14 Uncontrolled Diabetes Admission Rate; PQI 90 Prevention Quality Overall Composite; PQI 92 Prevention Quality Chronic Composite; PQI 93 Prevention Quality Diabetes Composite;
		OBS>24		2	PQI 01 Diabetes Short-Term Complications Admission Rate; PQI 90 Prevention Quality Overall Composite; PQI 92 Prevention Quality Chronic Composite; PQI 93 Prevention Quality Diabetes Composite;
		IP		4	PQI 08 Heart Failure Admission Rate; PQI 90 Prevention Quality Overall Composite; PQI 92 Prevention Quality Chronic Composite;

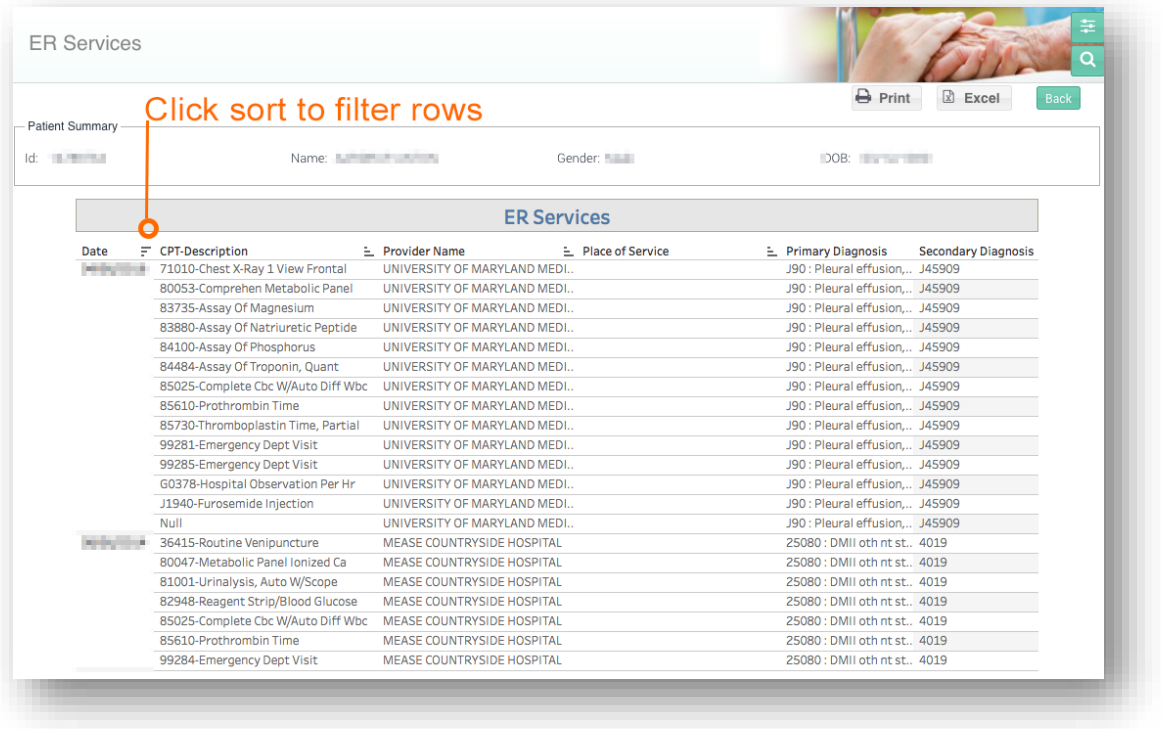
4.3.6 SNF Stays

SNF Stays report displays a list of claims for skilled nursing facility (SNF) admissions by provider name, length of stay (LOS) discharge status and primary and secondary diagnoses for the selected patient.



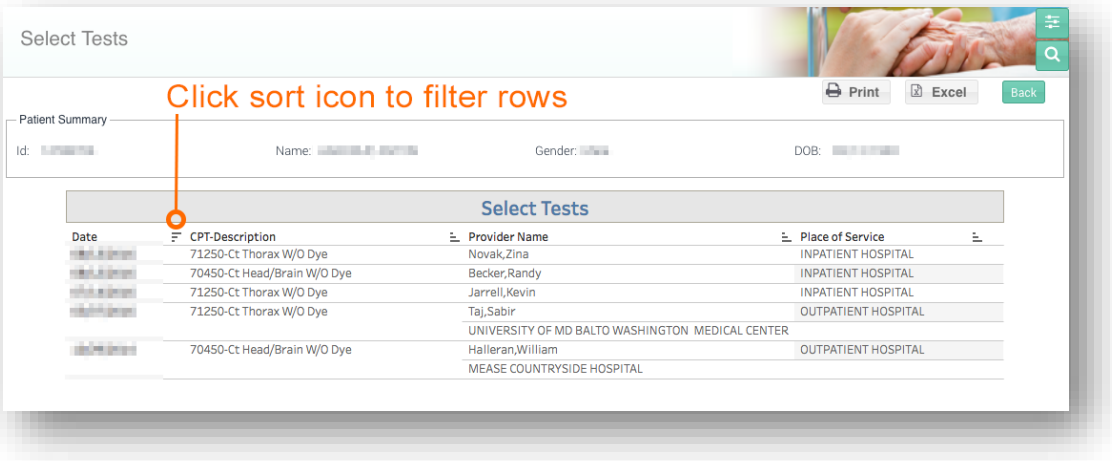
4.3.7 ER Services

ER Services report displays a list of claims for ER visits by CPT codes, provider name, place of service, and primary and secondary diagnoses for the selected patient.



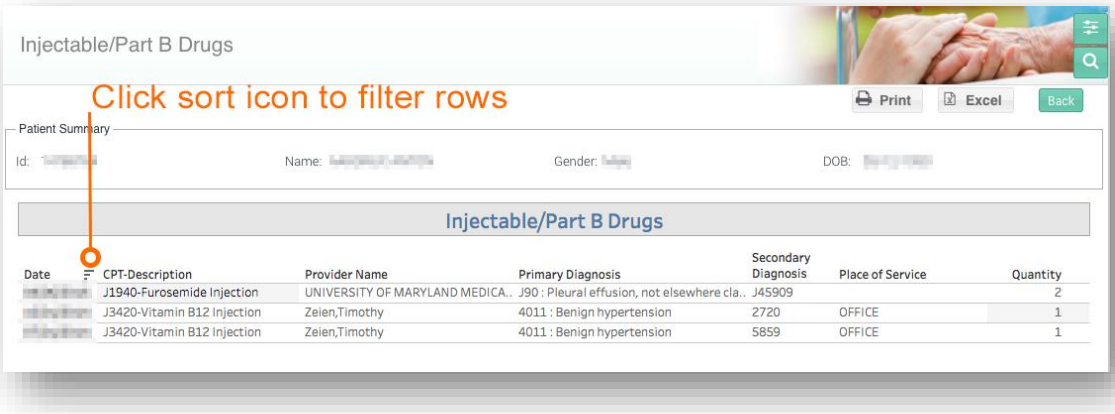
4.3.8 Select Tests

Select Tests report displays a list of claims for select tests by CPT codes, provider name, and place of service for the selected patient.



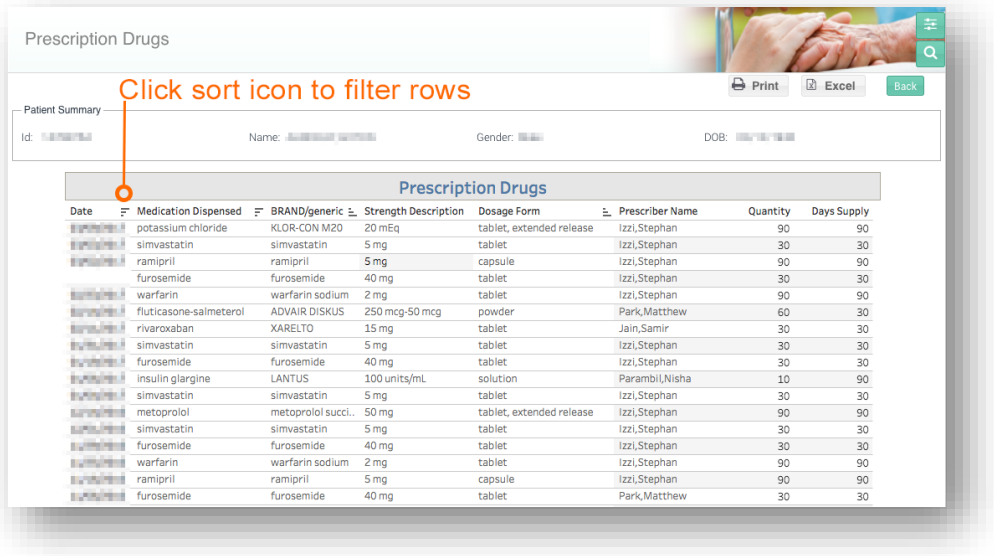
4.3.9 Injectable/Part B Drugs

Injectable/Part B Drugs report displays a list of claims for injectable Part B drugs by CPT codes, provider name, primary and secondary diagnoses, place of service, and quantity for the selected patient.



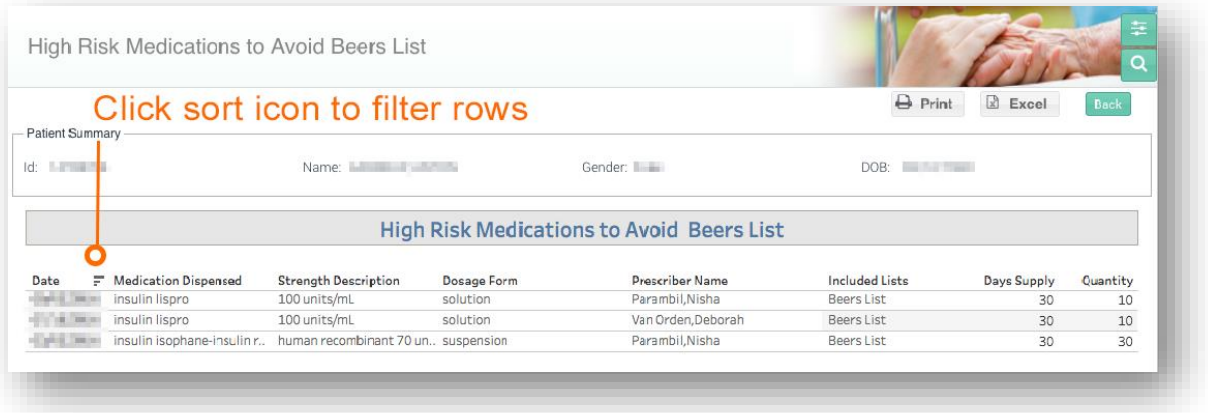
4.3.10 Prescription Drugs

Prescription Drugs report displays a list of prescription drug claims by medication characteristic (name, strength, dosage, quantity and days supply) as well as the provider name, for the selected patient.



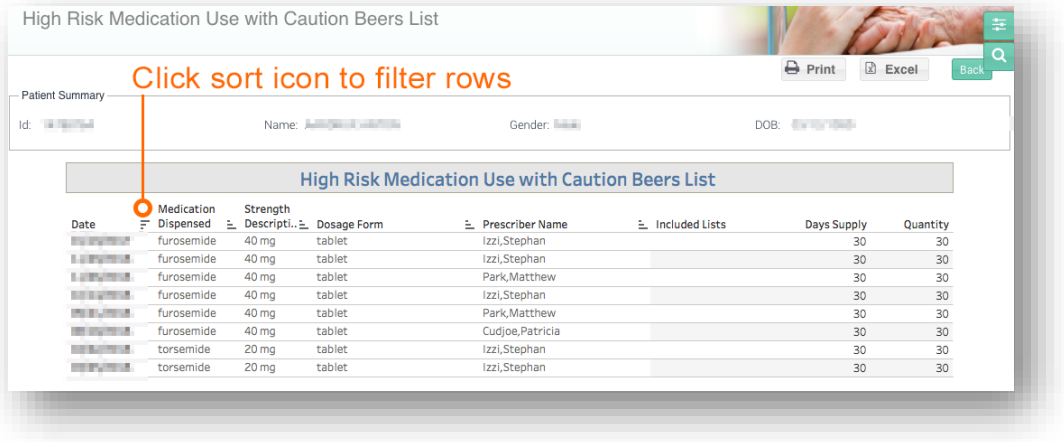
4.3.11 High Risk Medication to Avoid Beers List

High-Risk Medication Avoid report displays a list of claims for high risk medications (according to Beers criteria) by medication characteristic (name, strength, dosage, quantity and days supply) and provider name for the selected patient.



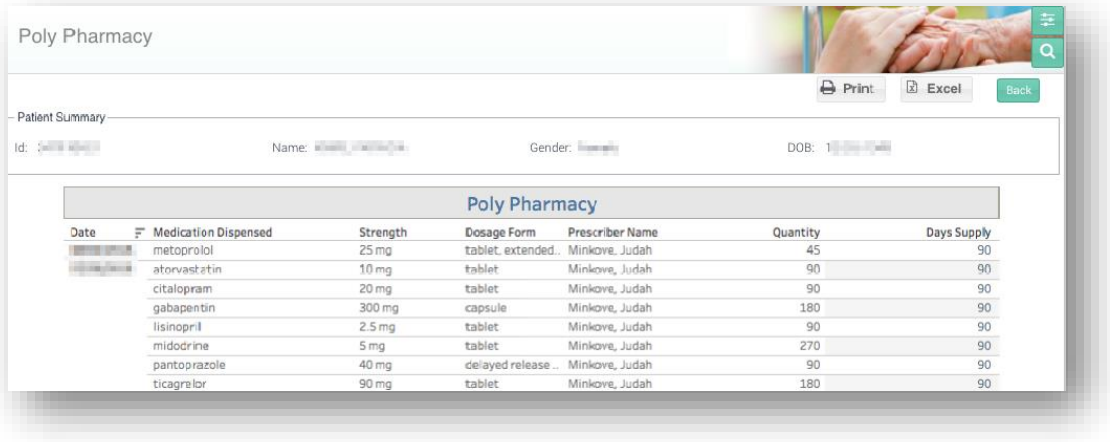
4.3.12 High Risk Medication - Use with Caution Beers List

High Risk Medication - Use with Caution report displays a list of high risk medications to use with caution (according to Beers criteria) by medication characteristic (name, strength, dosage, quantity and days supply) and provider name for the selected patient.



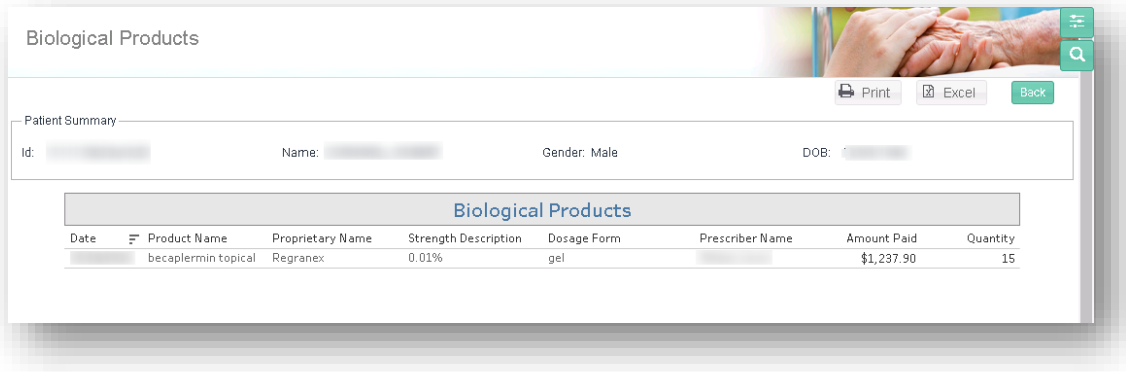
4.3.13 Poly Pharmacy

Poly Pharmacy report displays a list of poly pharmacy (≥ 7 concurrent prescriptions) claims by medication characteristic (name, strength, dosage, quantity and days supply) and provider name for the selected patient.



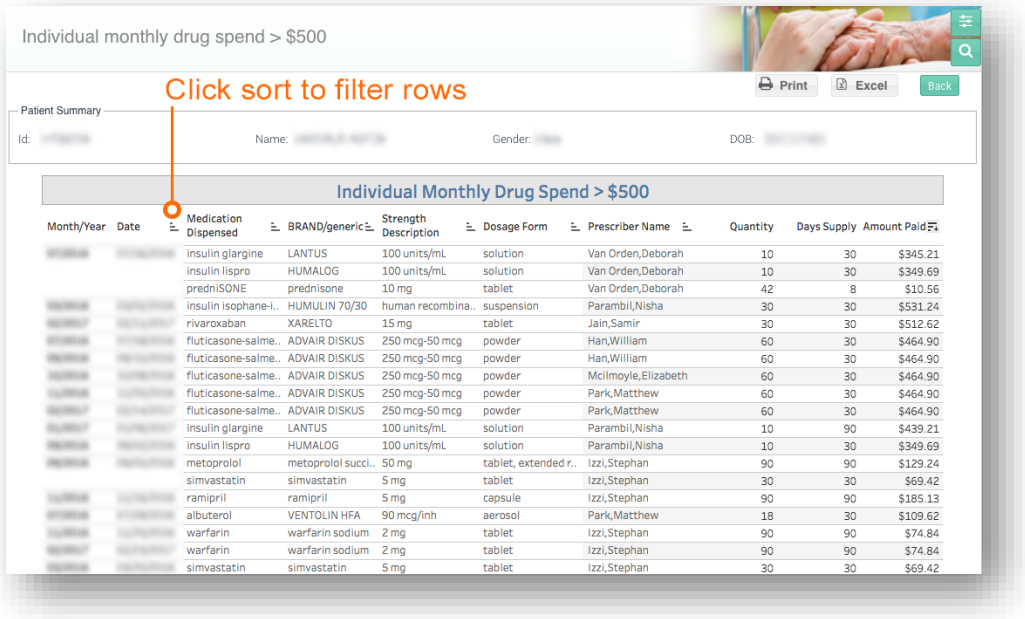
4.3.14 Biological Products

Biological Products report displays a list of claims for biological products by drug characteristic (name, strength, dosage, quantity and days supply) and prescriber provider name for a selected patient.



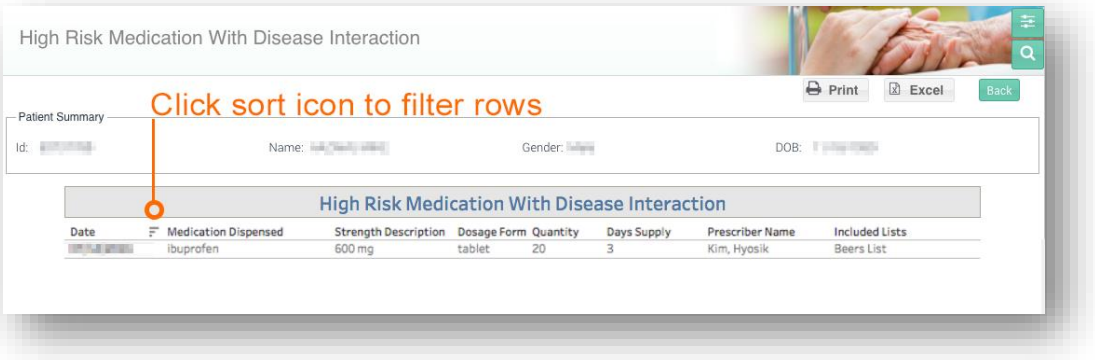
4.3.15 Individual Monthly Drug Spend >$500

The **Individual Monthly Drug Spend >$500** report displays a list of all claims for prescription drugs for selected patients who have an average monthly out of pocket drug spend for prescription drugs that exceeds $500. Variables contained in the report include by medication characteristic (name, strength, dosage, quantity and days supply) and provider name.



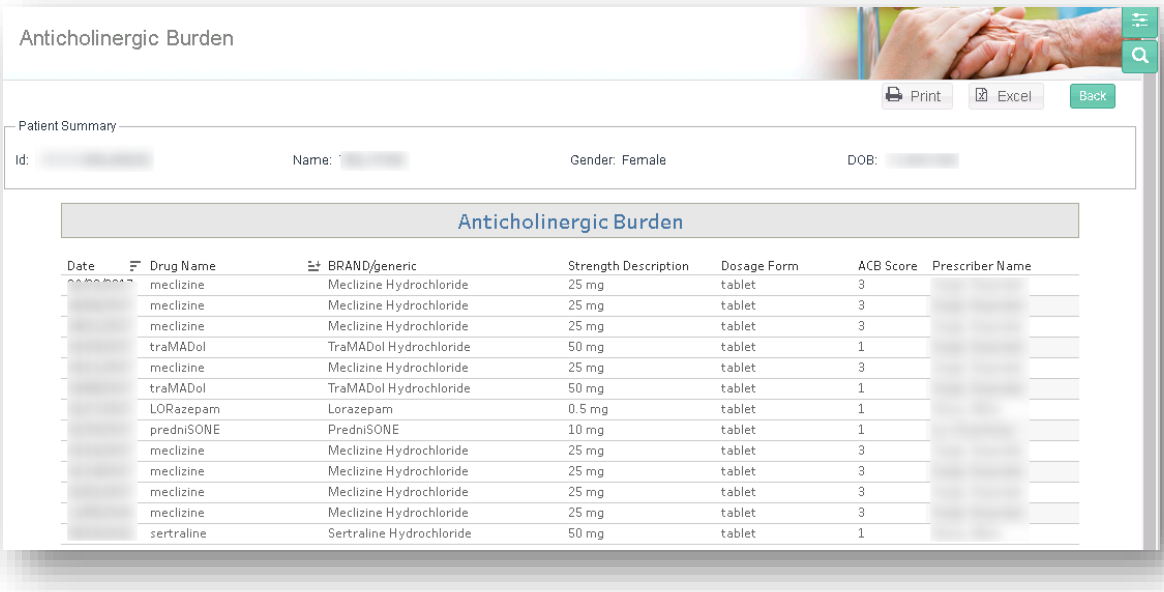
4.3.16 High-Risk Medication with Disease Interaction

High Risk Medication with Disease Interaction report displays a list of claims for medications with a high risk of interaction with the selected patient's disease. Variables contained in the report include by medication characteristic (name, strength, dosage, quantity and days supply) and provider name.



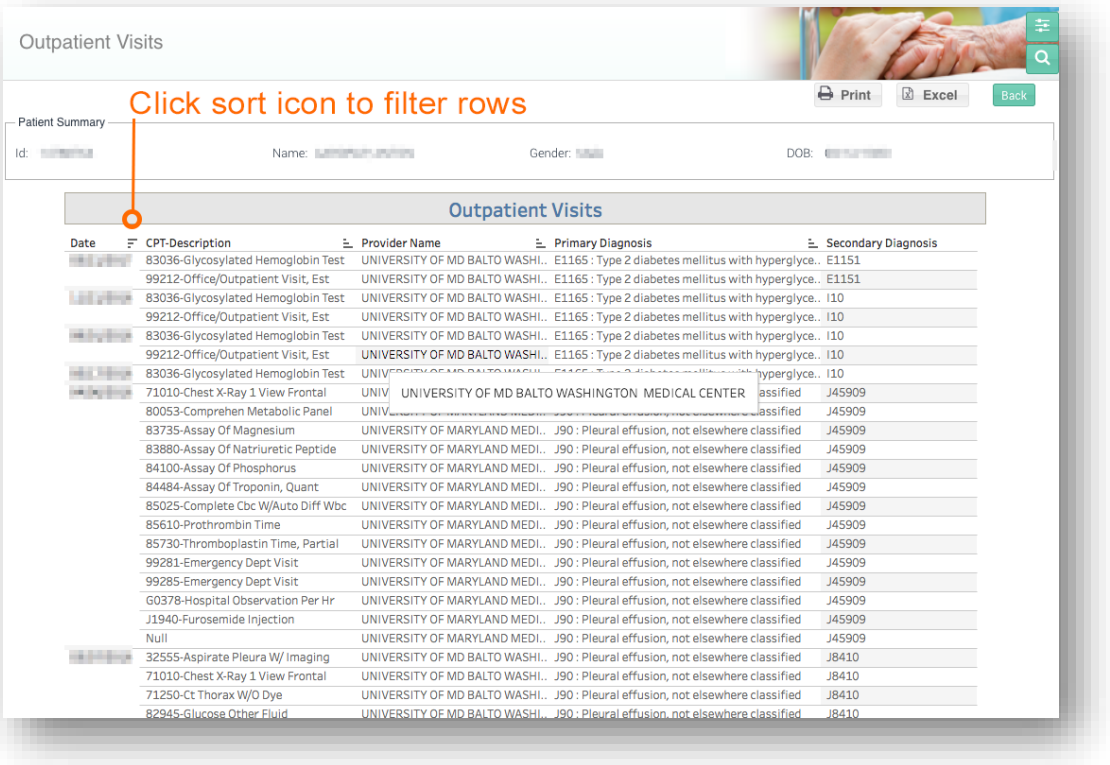
4.3.17 Anticholinergic Burden

Anticholinergic Burden report provides a list of claims for Anticholinergic burden for the selected patient.



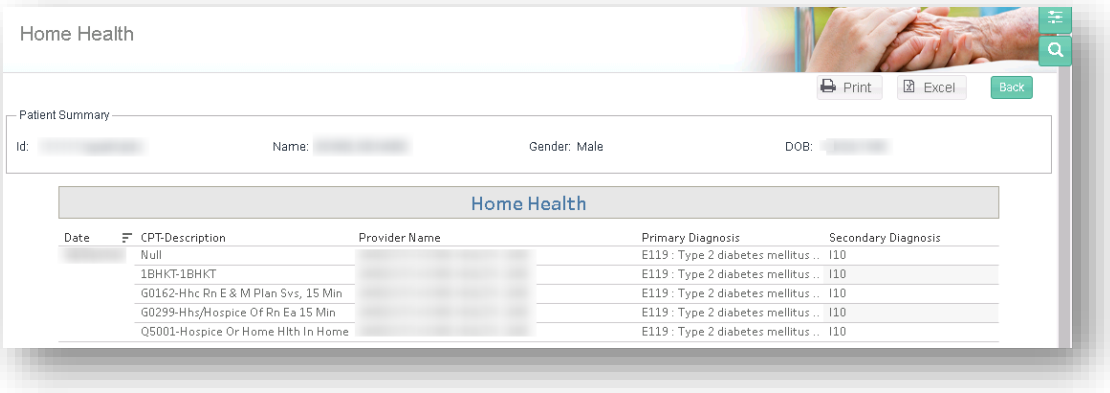
4.3.18 Outpatient Visits

Outpatient Visits report displays a list of claims for services received during an outpatient visit by CPT code, provider name and primary and secondary diagnoses for the selected patient.



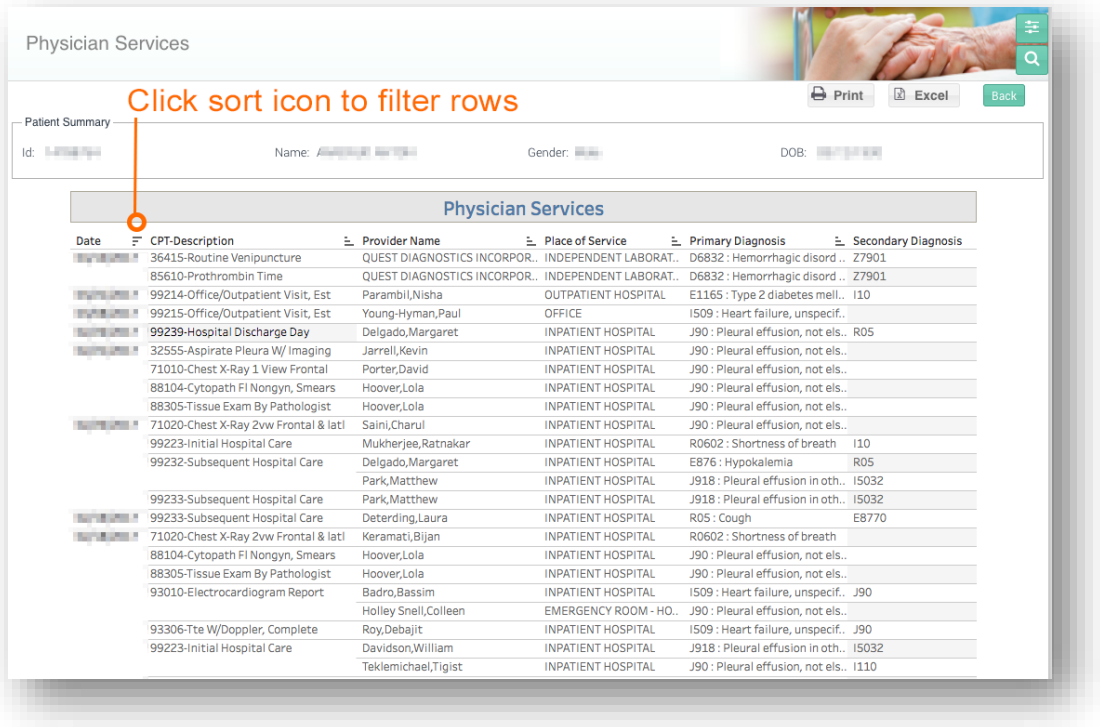
4.3.19 Home Health

Home Health report displays a list of claims for skilled home health episodes of care.



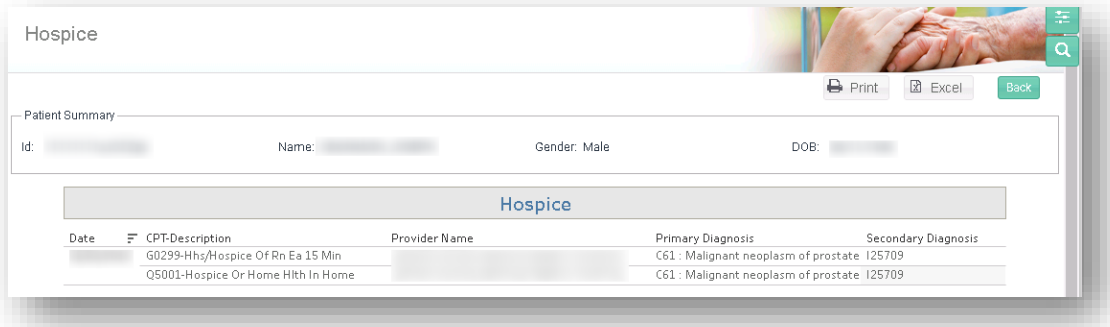
4.3.20 Physician Services

Physician Services report displays a list of physician services by CPT codes, provider name, place of service and primary and secondary diagnoses for the selected patient.



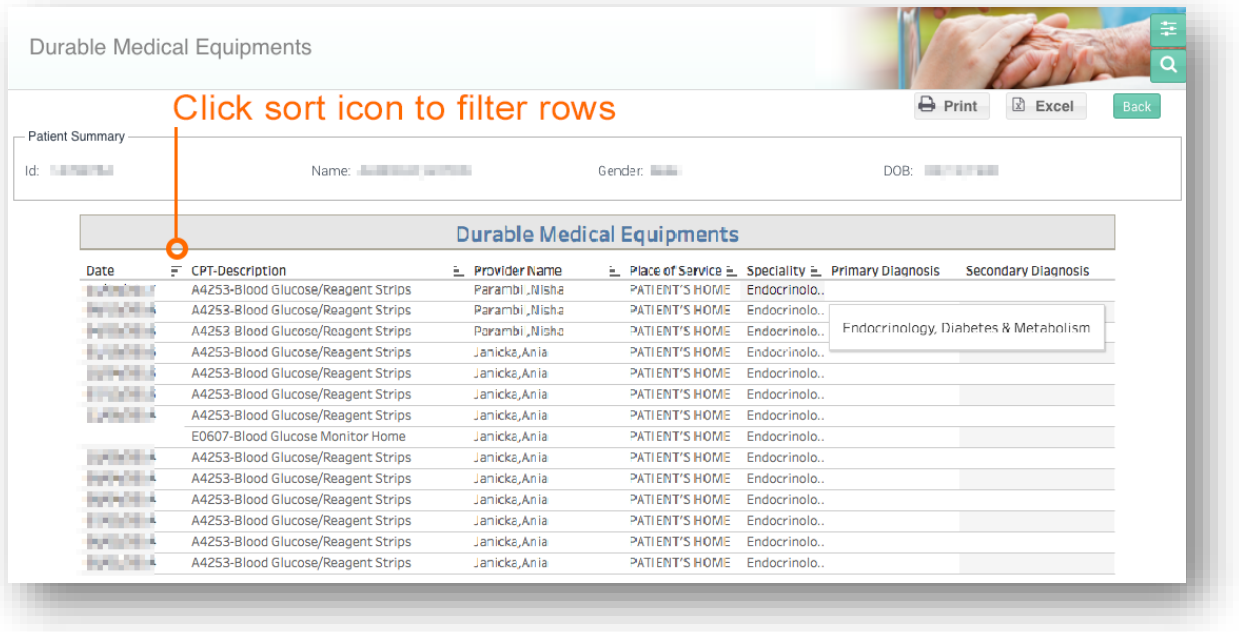
4.3.21 Hospice

Hospice report displays a list of claims for Hospice services for the selected patient.



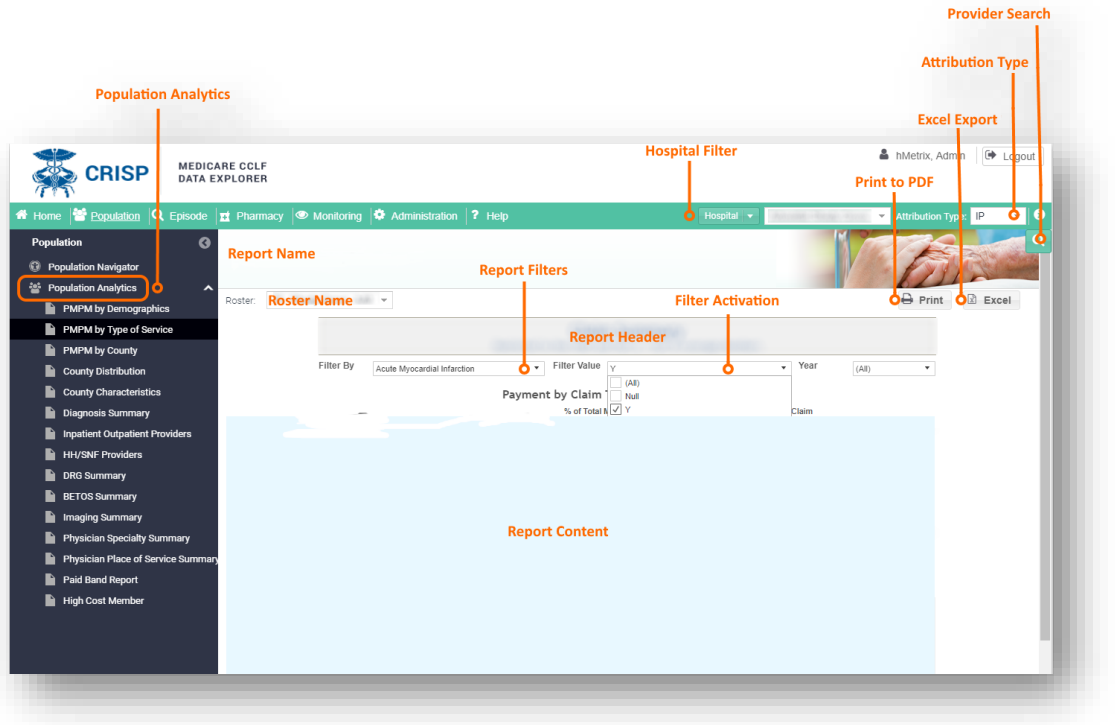
4.3.22 Durable Medical Equipment

Durable Medical Equipment report displays a list of claims for Durable Medical Equipment (DME) by CPT code, provider name, place of service, specialty, and primary and secondary diagnoses for the selected patient.



4.4 Population Analytics

The Population Analytics reports are described in further detail in this section. For detailed information on how the population assignments are determined in MADE, refer to the section in CCLF Data Basics titled "Population Assignment."



REPORT FUNCTIONS	DESCRIPTION
Report Name	The report name is always displayed on the left-hand corner. On the side menu click the report name to navigate across reports.
Report Header (Chart Name)	Each report may contain subset reports. The header contains the report title and a short description of the report.
Report Content	The report content area displays the results for the specific report header.
Report Filters	All reports can be filtered using several criteria and values. Choose from **Filter By** to view reports filtered on criteria such as member county, age, gender, disease type, high-cost indicators, etc. Select the **Value Filter** to further refine the filtered data by specific value (e.g., Male within the Gender filter) Reports can also be filtered by time period (in years)
Filter Activation	Selects which value to include within the Report Filter using the **Filter Value** drop down.
Hospital Filters	The hospital filter displays a list of hospitals to view the population for all corresponding reports.
Print PDF	Click on the PDF button to export the report into a PDF format.
Excel Export	Click on the Excel button to export the report details into Excel workbook.

4.4.1 PMPM by Demographics

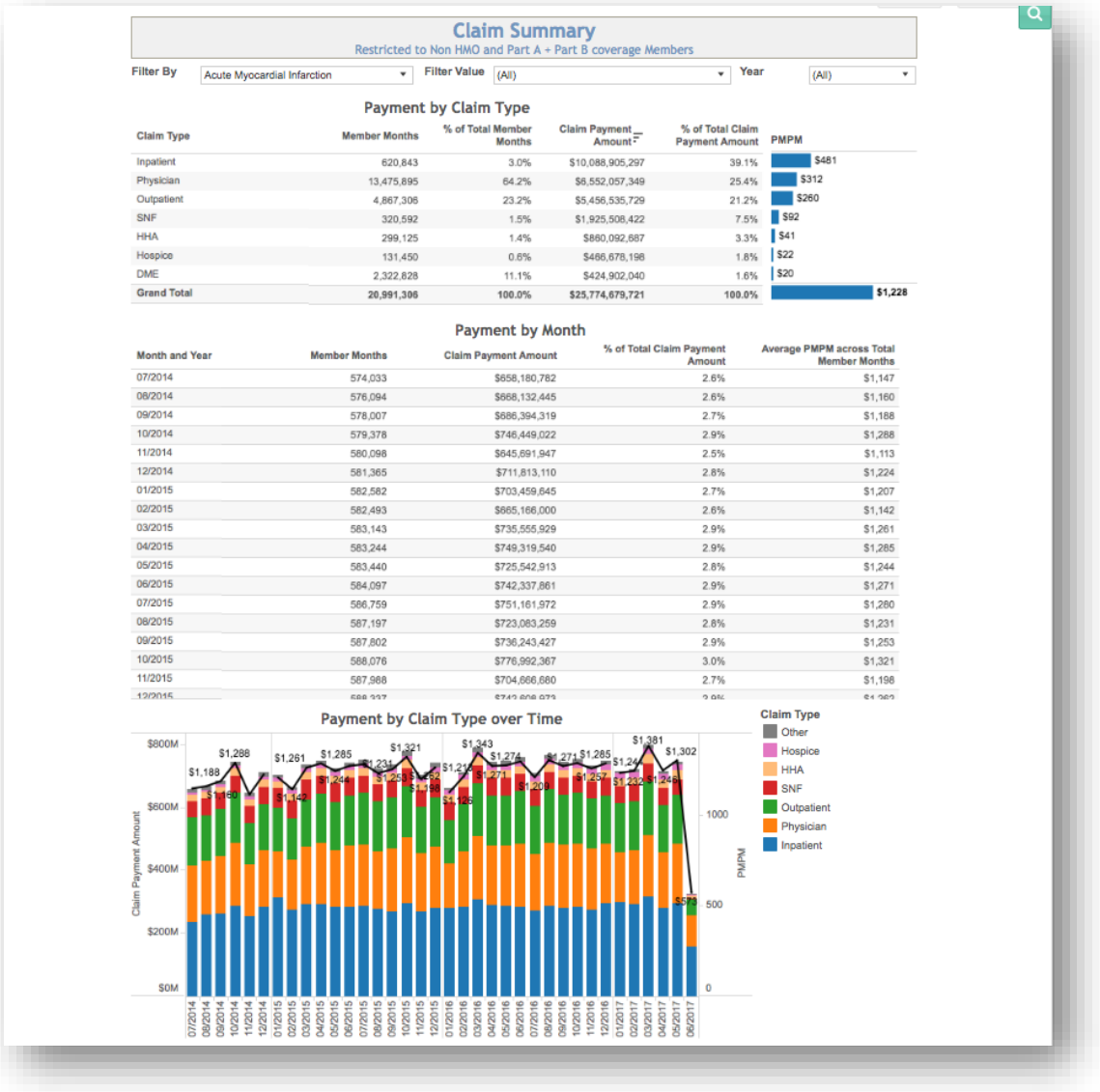
PMPM by Demographics illustrates the member count and payment information based on demographics such as race, gender, and age. This report shows:

Claim Payment by Age / Gender	Presents the member month count, total payment amount and average PMPM by age group and gender.
Total Paid by Age / Gender	Stacked bar charts showing the total claim payment amount by age group. Each bar is also split by gender.

4.4.2 PMPM by Type of Service

PMPM by Type of Service contains details about the population by the type of service received. This report shows:

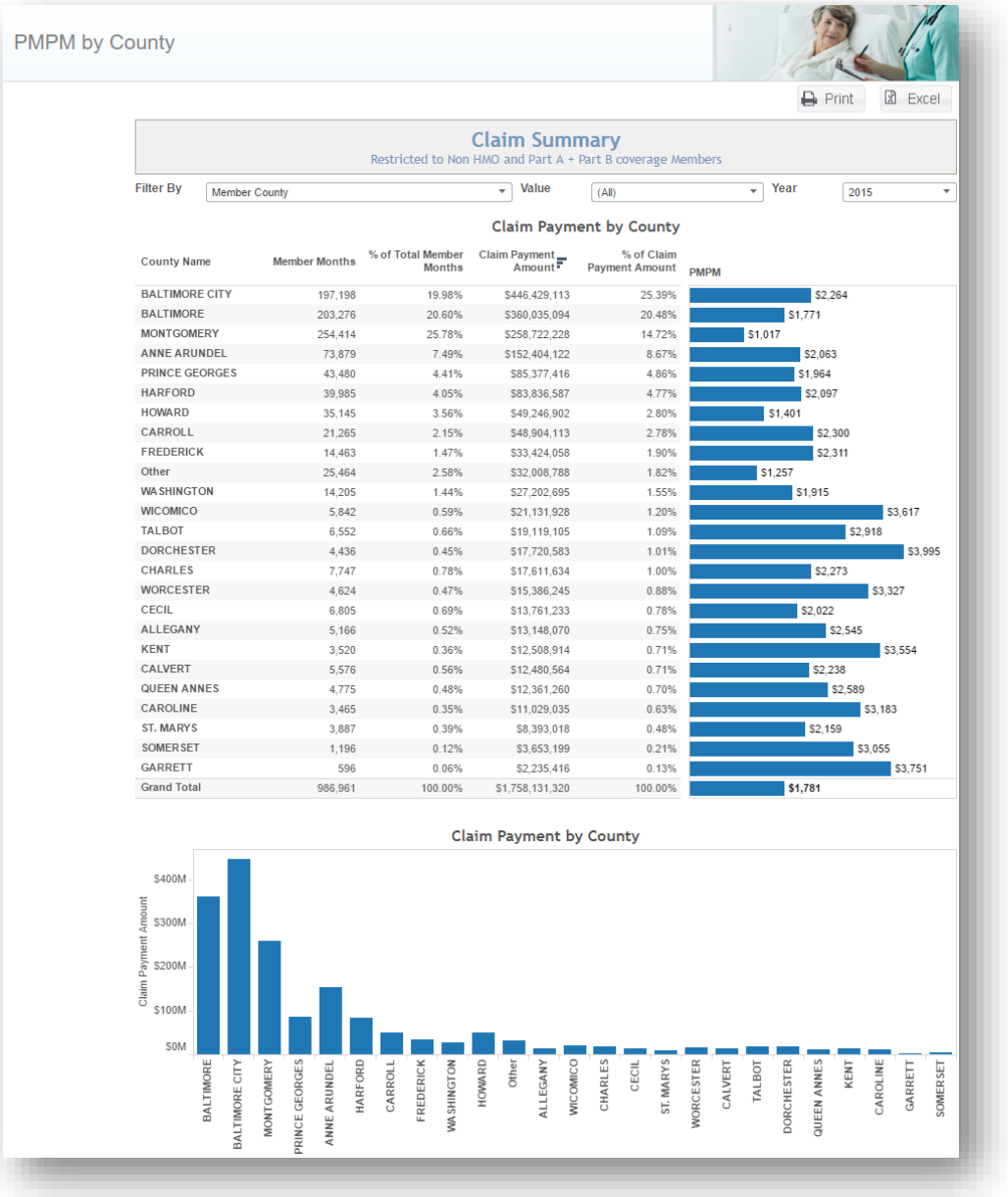
CHART NAME	DESCRIPTION
Payment by Claim Type	Lists the member month count, payment amounts, and average PMPM related to different types of services.
Payment by Month	Member count, payment amount, and average PMPM for each calendar month.
Payment by Claim Type over Time	Stacked bar chart showing the payment amounts for various types of service for each calendar month. The line chart shows the average PMPM for that month.



4.4.3 PMPM by County

PMPM by County illustrates the distribution of member months, payment amount, and PMPM by county of residence. This report shows:

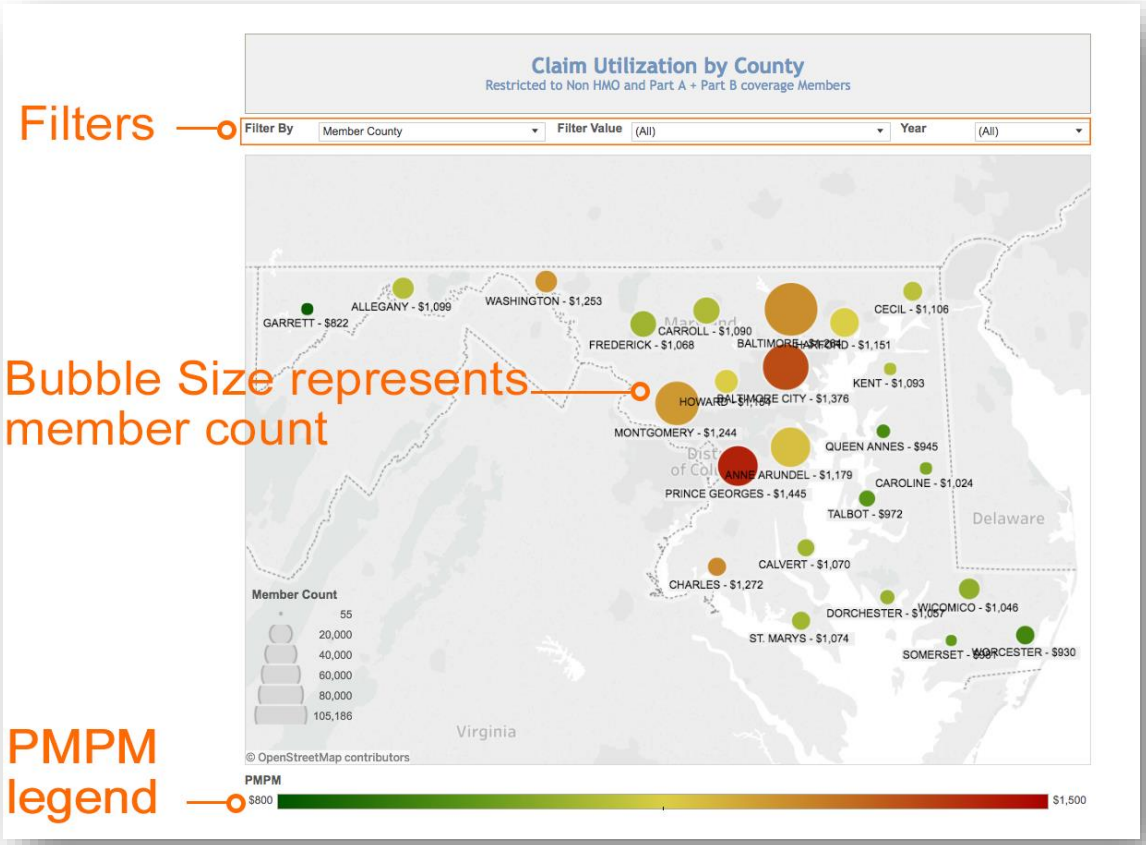
CHART NAME	DESCRIPTION
Claim Payment by County	Member month count, payment amount, and PMPM by county of residence.
Claim Payment by County	Bar chart listing the total claim payment amount by county of residency.



County Name	Member Months	% of Total Member Months	Claim Payment Amount	% of Claim Payment Amount	PMPM
BALTIMORE CITY	197,198	19.98%	$446,429,113	25.39%	$2,264
BALTIMORE	203,276	20.60%	$360,035,094	20.48%	$1,771
MONTGOMERY	254,414	25.78%	$258,722,228	14.72%	$1,017
ANNE ARUNDEL	73,879	7.49%	$152,404,122	8.67%	$2,063
PRINCE GEORGES	43,480	4.41%	$85,377,416	4.86%	$1,964
HARFORD	39,985	4.05%	$83,836,587	4.77%	$2,097
HOWARD	35,145	3.56%	$49,246,902	2.80%	$1,401
CARROLL	21,265	2.15%	$48,904,113	2.78%	$2,300
FREDERICK	14,463	1.47%	$33,424,058	1.90%	$2,311
Other	25,464	2.58%	$32,008,788	1.82%	$1,257
WASHINGTON	14,205	1.44%	$27,202,695	1.55%	$1,915
WICOMICO	5,842	0.59%	$21,131,928	1.20%	$3,617
TALBOT	6,552	0.66%	$19,119,105	1.09%	$2,918
DORCHESTER	4,436	0.45%	$17,720,583	1.01%	$3,995
CHARLES	7,747	0.78%	$17,611,634	1.00%	$2,273
WORCESTER	4,624	0.47%	$15,386,245	0.88%	$3,327
CECIL	6,805	0.69%	$13,761,233	0.78%	$2,022
ALLEGANY	5,166	0.52%	$13,148,070	0.75%	$2,545
KENT	3,520	0.36%	$12,508,914	0.71%	$3,554
CALVERT	5,576	0.56%	$12,480,564	0.71%	$2,238
QUEEN ANNES	4,775	0.48%	$12,361,260	0.70%	$2,589
CAROLINE	3,465	0.35%	$11,029,035	0.63%	$3,183
ST. MARYS	3,887	0.39%	$8,393,018	0.48%	$2,159
SOMERSET	1,196	0.12%	$3,653,199	0.21%	$3,055
GARRETT	596	0.06%	$2,235,416	0.13%	$3,751
Grand Total	986,961	100.00%	$1,758,131,320	100.00%	$1,781

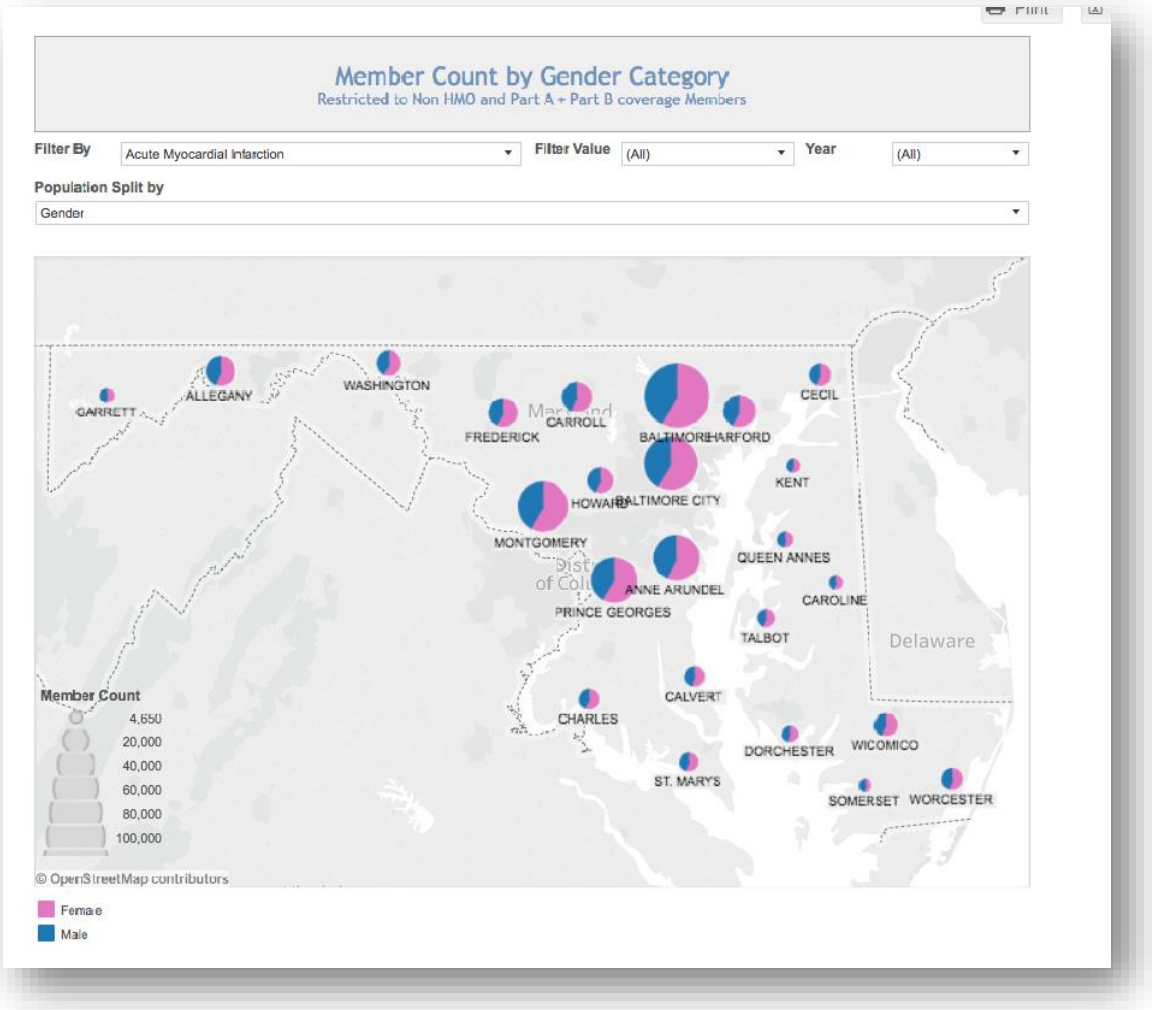
4.4.4 County Distribution

County Distribution displays various details for each county. The color of the circle over each county represents the value (green indicates lower PMPM; red indicates higher PMPM) while the size of the circle represents the member count.



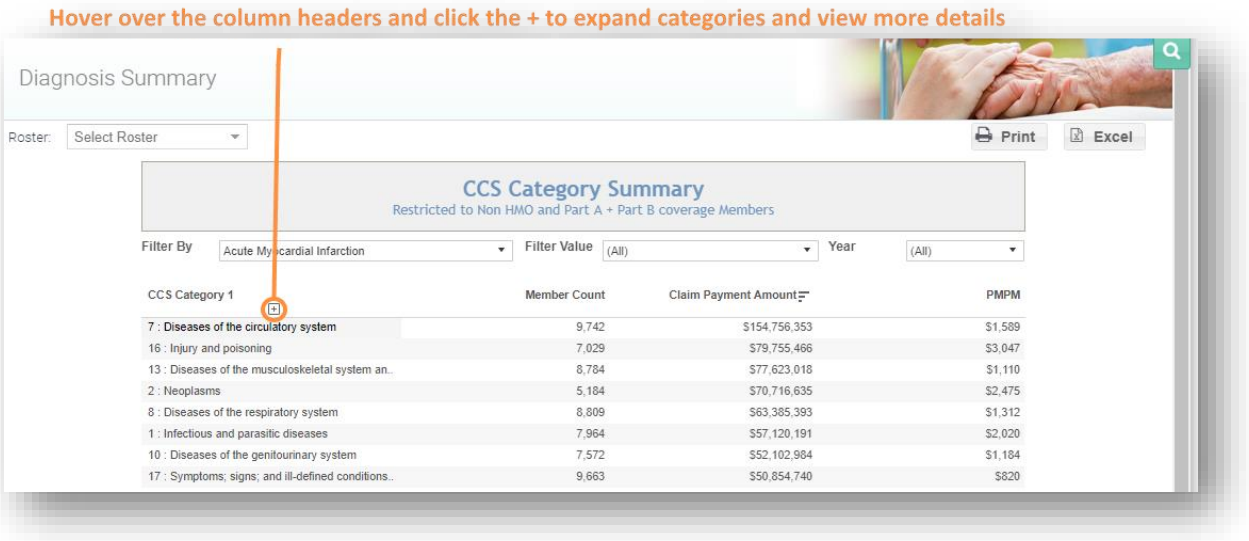
4.4.5 County Characteristics

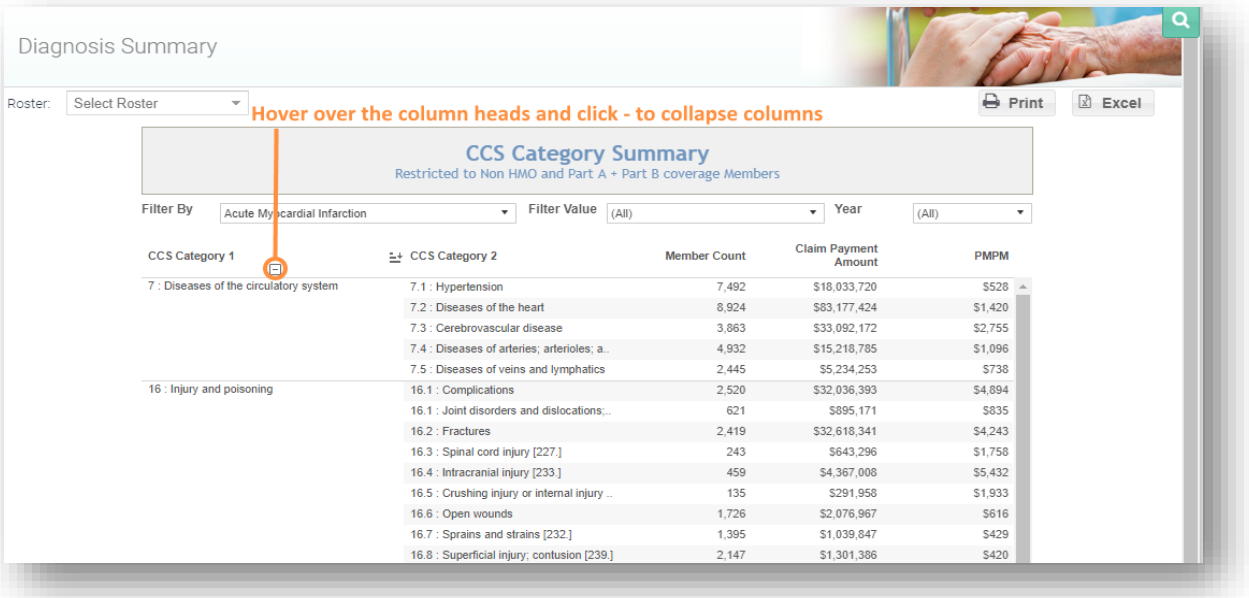
County Characteristics provides details about the population in each county. Measures to split the population, represented as pie charts, by can be selected under the **Population Split by** dropdown. The size of the circles represents the member count.



4.4.6 Diagnosis Summary

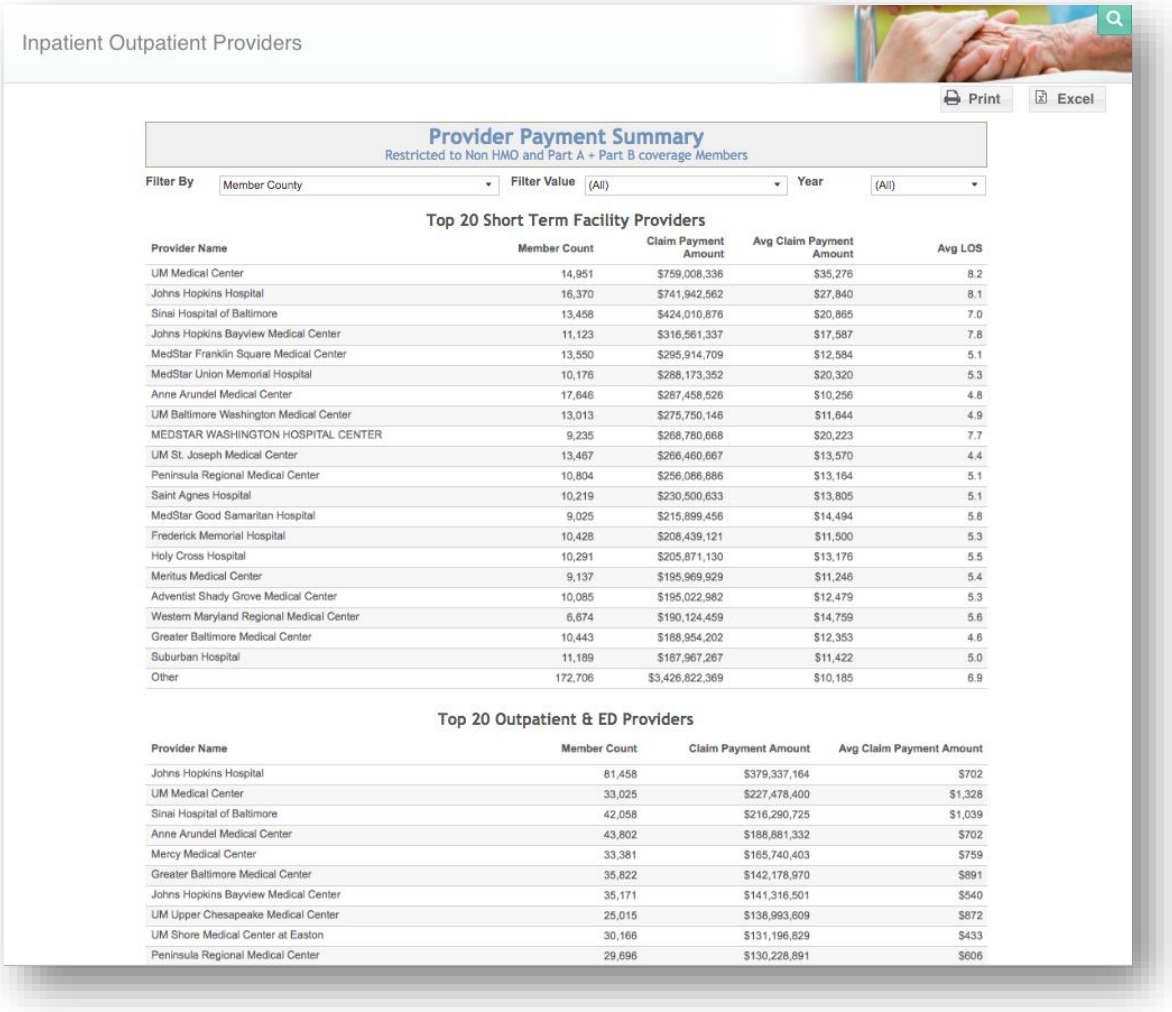
Diagnosis Summary presents the distribution of member count and payment amount for each diagnosis category. CCS Categories can be expanded or collapsed to change the level of detail presented.





4.4.7 Inpatient Outpatient Providers

Inpatient Outpatient Providers displays the top 20 short term facilities and top 20 outpatient/ED providers from which the population received services (based on volume of services for the population selected) during the designated time period. These lists allow the user to identify the other top providers that are treating patients who are also treated at their facility. Outpatient/ED providers are defined by Part B outpatient claims (claim type 40). The report is sorted by claim payment amount and shows the payment amounts and average inpatient length of stay (LOS) for each provider.



Inpatient Outpatient Providers

Print Excel

Provider Payment Summary
Restricted to Non HMO and Part A + Part B coverage Members

Filter By: Member County | Filter Value: (All) | Year: (All)

Top 20 Short Term Facility Providers

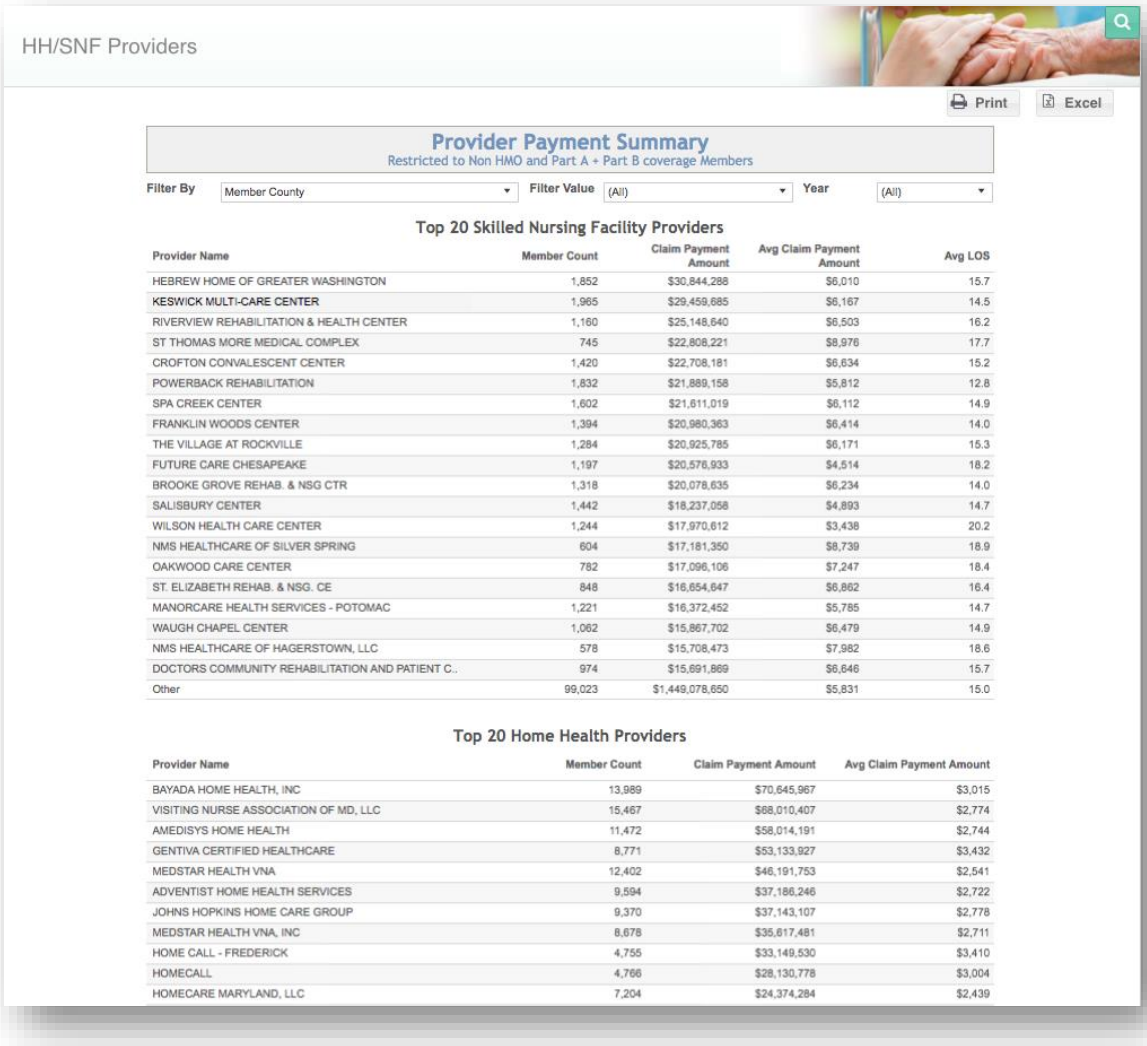
Provider Name	Member Count	Claim Payment Amount	Avg Claim Payment Amount	Avg LOS
UM Medical Center	14,951	$759,008,336	$35,276	8.2
Johns Hopkins Hospital	16,370	$741,942,562	$27,840	8.1
Sinai Hospital of Baltimore	13,458	$424,010,876	$20,865	7.0
Johns Hopkins Bayview Medical Center	11,123	$316,561,337	$17,587	7.8
MedStar Franklin Square Medical Center	13,550	$295,914,709	$12,584	5.1
MedStar Union Memorial Hospital	10,176	$288,173,352	$20,320	5.3
Anne Arundel Medical Center	17,646	$287,458,526	$10,256	4.8
UM Baltimore Washington Medical Center	13,013	$275,750,146	$11,644	4.9
MEDSTAR WASHINGTON HOSPITAL CENTER	9,235	$268,780,668	$20,223	7.7
UM St. Joseph Medical Center	13,467	$266,460,667	$13,570	4.4
Peninsula Regional Medical Center	10,804	$256,086,886	$13,164	5.1
Saint Agnes Hospital	10,219	$230,500,633	$13,805	5.1
MedStar Good Samaritan Hospital	9,025	$215,899,456	$14,494	5.8
Frederick Memorial Hospital	10,428	$208,439,121	$11,500	5.3
Holy Cross Hospital	10,291	$205,871,130	$13,176	5.5
Meritus Medical Center	9,137	$195,969,929	$11,246	5.4
Adventist Shady Grove Medical Center	10,085	$195,022,982	$12,479	5.3
Western Maryland Regional Medical Center	6,674	$190,124,459	$14,759	5.6
Greater Baltimore Medical Center	10,443	$188,954,202	$12,353	4.6
Suburban Hospital	11,189	$187,967,267	$11,422	5.0
Other	172,706	$3,426,822,369	$10,185	6.9

Top 20 Outpatient & ED Providers

Provider Name	Member Count	Claim Payment Amount	Avg Claim Payment Amount
Johns Hopkins Hospital	81,458	$379,337,164	$702
UM Medical Center	33,025	$227,478,400	$1,328
Sinai Hospital of Baltimore	42,058	$216,290,725	$1,039
Anne Arundel Medical Center	43,802	$188,881,332	$702
Mercy Medical Center	33,381	$165,740,403	$759
Greater Baltimore Medical Center	35,822	$142,178,970	$891
Johns Hopkins Bayview Medical Center	35,171	$141,316,501	$540
UM Upper Chesapeake Medical Center	25,015	$138,993,609	$872
UM Shore Medical Center at Easton	30,166	$131,196,829	$433
Peninsula Regional Medical Center	29,696	$130,228,891	$606

4.4.8 HH/SNF Providers

HH/SNF Providers displays the top 20 skilled nursing facilities and top 20 home health agencies from which the filtered population received services (based on volume of services for the population selected). The report is sorted by member count and shows the payment amounts and average skilled nursing facility length of stay (LOS).



HH/SNF Providers

Print Excel

Provider Payment Summary

Restricted to Non HMO and Part A + Part B coverage Members

Filter By: Member County | Filter Value: (All) | Year: (All)

Top 20 Skilled Nursing Facility Providers

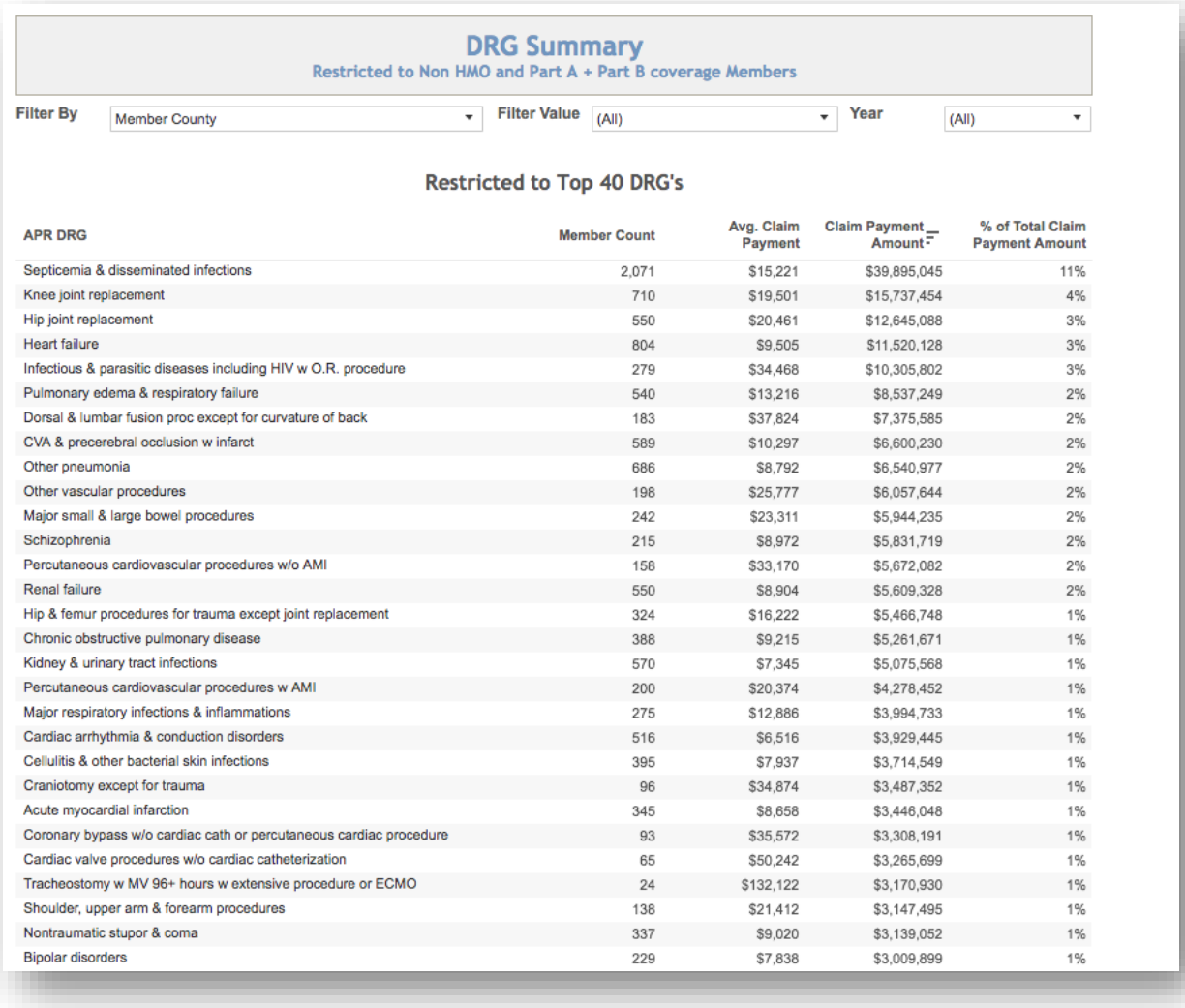
Provider Name	Member Count	Claim Payment Amount	Avg Claim Payment Amount	Avg LOS
HEBREW HOME OF GREATER WASHINGTON	1,852	$30,844,288	$6,010	15.7
KESWICK MULTI-CARE CENTER	1,965	$29,459,685	$6,167	14.5
RIVERVIEW REHABILITATION & HEALTH CENTER	1,160	$25,148,640	$6,503	16.2
ST THOMAS MORE MEDICAL COMPLEX	745	$22,808,221	$8,976	17.7
CROFTON CONVALESCENT CENTER	1,420	$22,708,181	$6,634	15.2
POWERBACK REHABILITATION	1,832	$21,889,158	$5,812	12.8
SPA CREEK CENTER	1,602	$21,611,019	$6,112	14.9
FRANKLIN WOODS CENTER	1,394	$20,980,363	$6,414	14.0
THE VILLAGE AT ROCKVILLE	1,284	$20,925,785	$6,171	15.3
FUTURE CARE CHESAPEAKE	1,197	$20,576,933	$4,514	18.2
BROOKE GROVE REHAB. & NSG CTR	1,318	$20,078,635	$6,234	14.0
SALISBURY CENTER	1,442	$18,237,058	$4,893	14.7
WILSON HEALTH CARE CENTER	1,244	$17,970,612	$3,438	20.2
NMS HEALTHCARE OF SILVER SPRING	604	$17,181,350	$8,739	18.9
OAKWOOD CARE CENTER	782	$17,096,106	$7,247	18.4
ST. ELIZABETH REHAB. & NSG. CE	848	$16,654,647	$6,862	16.4
MANORCARE HEALTH SERVICES - POTOMAC	1,221	$16,372,452	$5,785	14.7
WAUGH CHAPEL CENTER	1,062	$15,867,702	$6,479	14.9
NMS HEALTHCARE OF HAGERSTOWN, LLC	578	$15,708,473	$7,982	18.6
DOCTORS COMMUNITY REHABILITATION AND PATIENT C..	974	$15,691,869	$6,646	15.7
Other	99,023	$1,449,078,650	$5,831	15.0

Top 20 Home Health Providers

Provider Name	Member Count	Claim Payment Amount	Avg Claim Payment Amount
BAYADA HOME HEALTH, INC	13,989	$70,645,967	$3,015
VISITING NURSE ASSOCIATION OF MD, LLC	15,467	$68,010,407	$2,774
AMEDISYS HOME HEALTH	11,472	$58,014,191	$2,744
GENTIVA CERTIFIED HEALTHCARE	8,771	$53,133,927	$3,432
MEDSTAR HEALTH VNA	12,402	$46,191,753	$2,541
ADVENTIST HOME HEALTH SERVICES	9,594	$37,186,246	$2,722
JOHNS HOPKINS HOME CARE GROUP	9,370	$37,143,107	$2,778
MEDSTAR HEALTH VNA, INC	8,678	$35,617,481	$2,711
HOME CALL - FREDERICK	4,755	$33,149,530	$3,410
HOMECALL	4,766	$28,130,778	$3,004
HOMECARE MARYLAND, LLC	7,204	$24,374,284	$2,439

4.4.9 DRG Summary

DRG Summary displays the top 40 APR DRGs by total payment amount. The report also provides the member count and average claim payment amount for each APR DRG.



DRG Summary
Restricted to Non HMO and Part A + Part B coverage Members

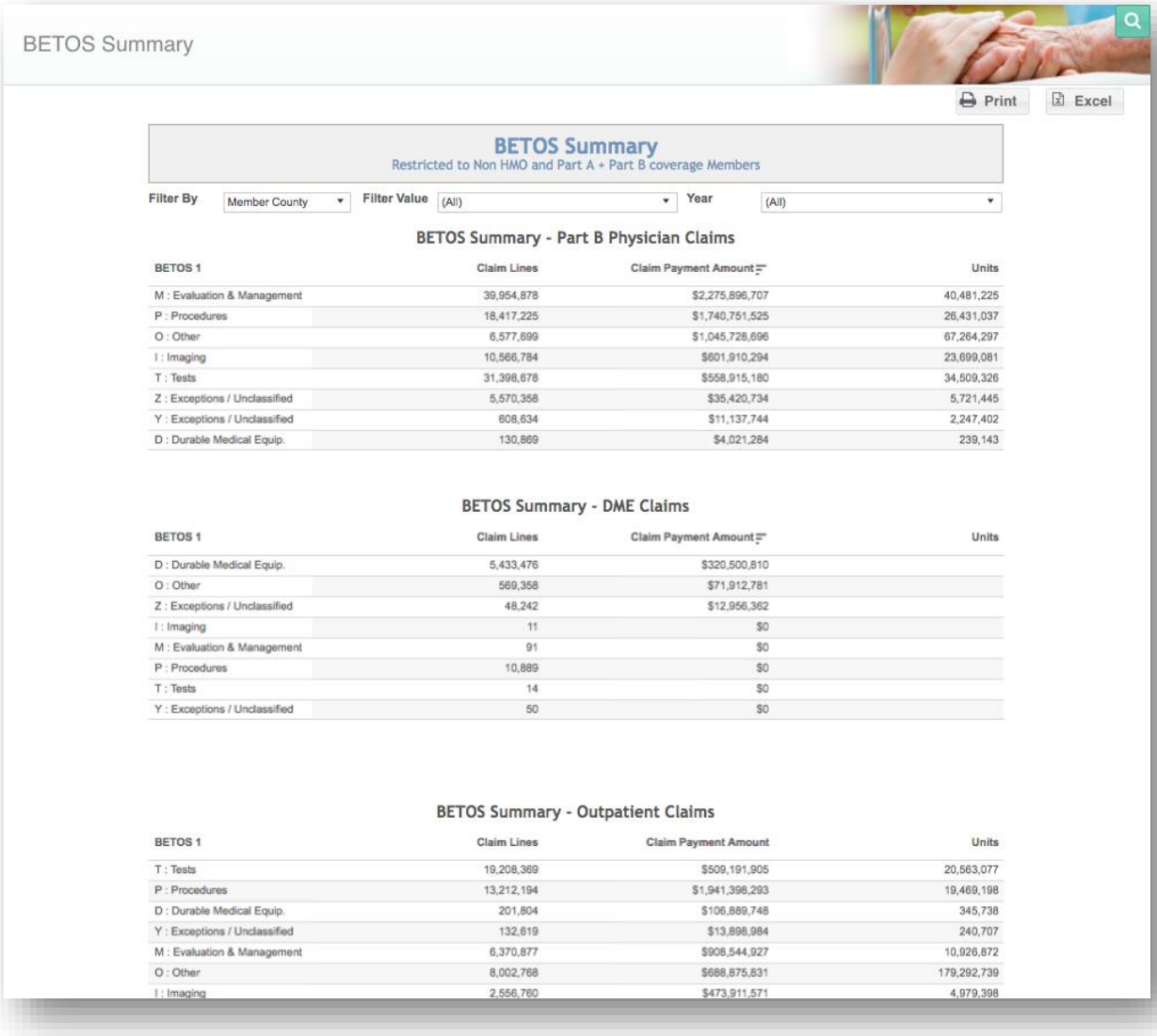
Filter By: Member County | Filter Value: (All) | Year: (All)

Restricted to Top 40 DRG's

APR DRG	Member Count	Avg. Claim Payment	Claim Payment Amount	% of Total Claim Payment Amount
Septicemia & disseminated infections	2,071	$15,221	$39,895,045	11%
Knee joint replacement	710	$19,501	$15,737,454	4%
Hip joint replacement	550	$20,461	$12,645,088	3%
Heart failure	804	$9,505	$11,520,128	3%
Infectious & parasitic diseases including HIV w O.R. procedure	279	$34,468	$10,305,802	3%
Pulmonary edema & respiratory failure	540	$13,216	$8,537,249	2%
Dorsal & lumbar fusion proc except for curvature of back	183	$37,824	$7,375,585	2%
CVA & precerebral occlusion w infarct	589	$10,297	$6,600,230	2%
Other pneumonia	686	$8,792	$6,540,977	2%
Other vascular procedures	198	$25,777	$6,057,644	2%
Major small & large bowel procedures	242	$23,311	$5,944,235	2%
Schizophrenia	215	$8,972	$5,831,719	2%
Percutaneous cardiovascular procedures w/o AMI	158	$33,170	$5,672,082	2%
Renal failure	550	$8,904	$5,609,328	2%
Hip & femur procedures for trauma except joint replacement	324	$16,222	$5,466,748	1%
Chronic obstructive pulmonary disease	388	$9,215	$5,261,671	1%
Kidney & urinary tract infections	570	$7,345	$5,075,568	1%
Percutaneous cardiovascular procedures w AMI	200	$20,374	$4,278,452	1%
Major respiratory infections & inflammations	275	$12,886	$3,994,733	1%
Cardiac arrhythmia & conduction disorders	516	$6,516	$3,929,445	1%
Cellulitis & other bacterial skin infections	395	$7,937	$3,714,549	1%
Craniotomy except for trauma	96	$34,874	$3,487,352	1%
Acute myocardial infarction	345	$8,658	$3,446,048	1%
Coronary bypass w/o cardiac cath or percutaneous cardiac procedure	93	$35,572	$3,308,191	1%
Cardiac valve procedures w/o cardiac catheterization	65	$50,242	$3,265,699	1%
Tracheostomy w MV 96+ hours w extensive procedure or ECMO	24	$132,122	$3,170,930	1%
Shoulder, upper arm & forearm procedures	138	$21,412	$3,147,495	1%
Nontraumatic stupor & coma	337	$9,020	$3,139,052	1%
Bipolar disorders	229	$7,838	$3,009,899	1%

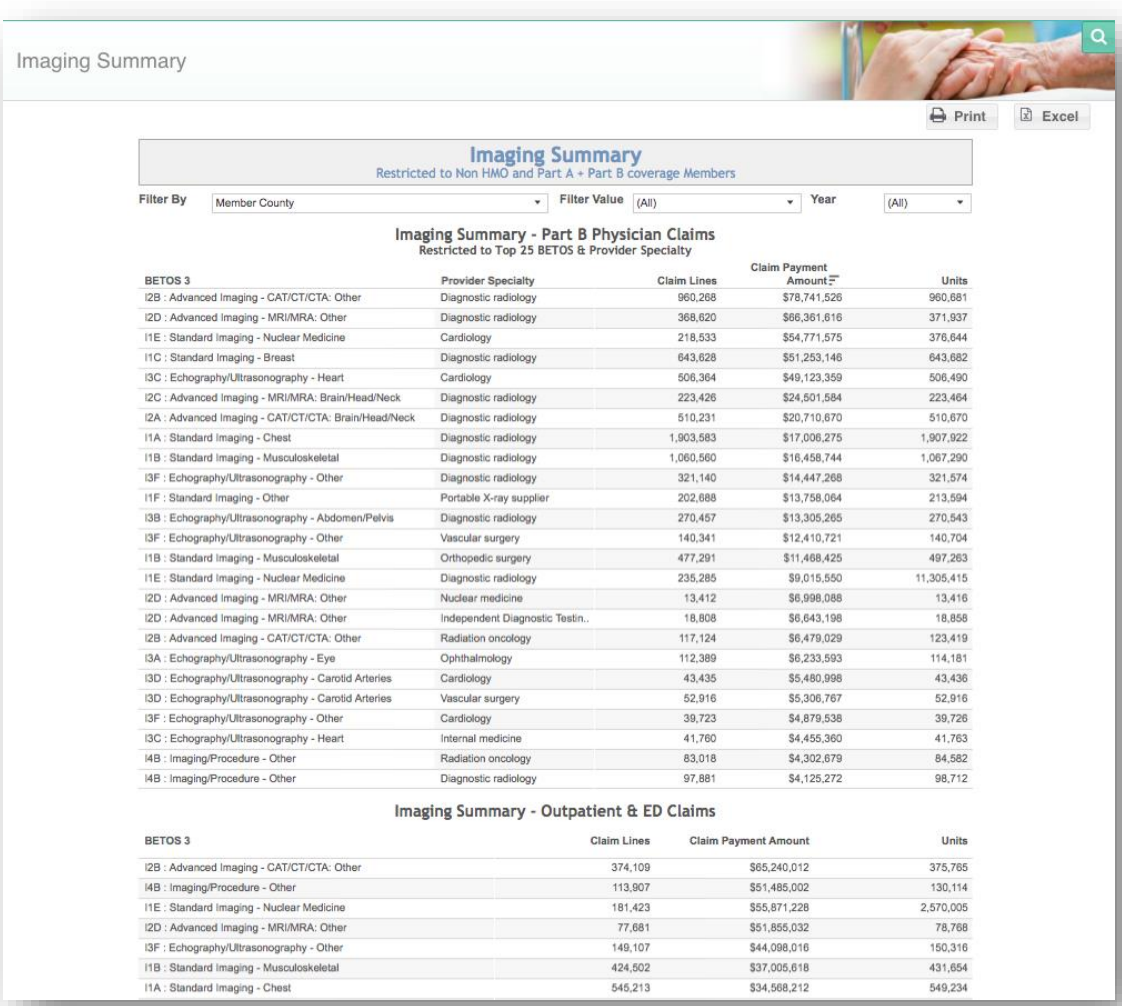
4.4.10 BETOS Summary

BETOS Summary displays the distribution of physician services, durable medical equipment, and outpatient services for the filtered population. These services are categorized using the BETOS classification and contains the claim line count, unit count and total payment amount for each BETOS. For further information on BETOS classification, refer to the Glossary in section 7.



4.4.11 Imaging Summary

Imaging Summary displays the top 25 BETOS category and provider specialty combinations for imaging services performed by physicians or ordered within the outpatient or emergency department setting. Claim line count, unit count, and total payment amount for each BETOS category is presented in the report.



Imaging Summary

Print Excel

Imaging Summary
Restricted to Non HMO and Part A + Part B coverage Members

Filter By: Member County | Filter Value: (All) | Year: (All)

Imaging Summary - Part B Physician Claims
Restricted to Top 25 BETOS & Provider Specialty

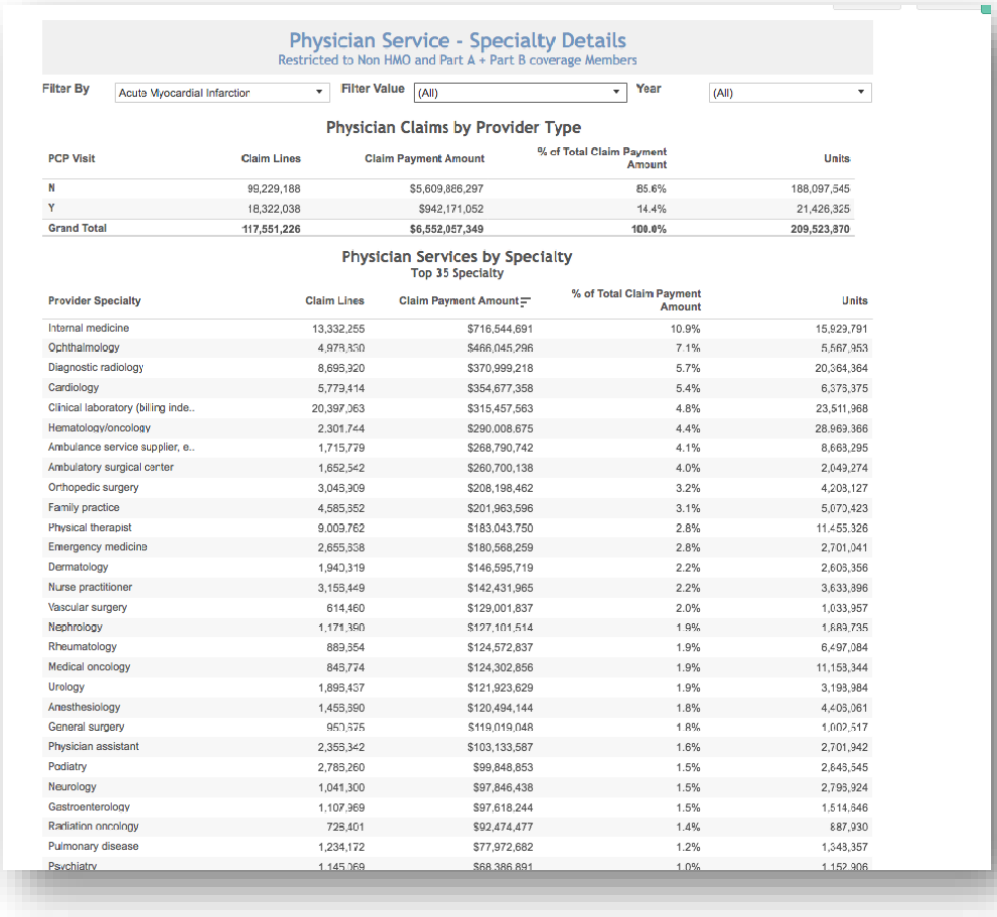
BETOS 3	Provider Specialty	Claim Lines	Claim Payment Amount	Units
I2B : Advanced Imaging - CAT/CT/CTA: Other	Diagnostic radiology	960,268	$78,741,526	960,681
I2D : Advanced Imaging - MRI/MRA: Other	Diagnostic radiology	368,620	$66,361,616	371,937
I1E : Standard Imaging - Nuclear Medicine	Cardiology	218,533	$54,771,575	376,644
I1C : Standard Imaging - Breast	Diagnostic radiology	643,628	$51,253,146	643,682
I3C : Echography/Ultrasonography - Heart	Cardiology	506,364	$49,123,359	506,490
I2C : Advanced Imaging - MRI/MRA: Brain/Head/Neck	Diagnostic radiology	223,426	$24,501,584	223,464
I2A : Advanced Imaging - CAT/CT/CTA: Brain/Head/Neck	Diagnostic radiology	510,231	$20,710,670	510,670
I1A : Standard Imaging - Chest	Diagnostic radiology	1,903,583	$17,006,275	1,907,922
I1B : Standard Imaging - Musculoskeletal	Diagnostic radiology	1,060,560	$16,458,744	1,067,290
I3F : Echography/Ultrasonography - Other	Diagnostic radiology	321,140	$14,447,268	321,574
I1F : Standard Imaging - Other	Portable X-ray supplier	202,688	$13,758,064	213,594
I3B : Echography/Ultrasonography - Abdomen/Pelvis	Diagnostic radiology	270,457	$13,305,265	270,543
I3F : Echography/Ultrasonography - Other	Vascular surgery	140,341	$12,410,721	140,704
I1B : Standard Imaging - Musculoskeletal	Orthopedic surgery	477,291	$11,468,425	497,263
I1E : Standard Imaging - Nuclear Medicine	Diagnostic radiology	235,285	$9,015,550	11,305,415
I2D : Advanced Imaging - MRI/MRA: Other	Nuclear medicine	13,412	$6,998,088	13,416
I2D : Advanced Imaging - MRI/MRA: Other	Independent Diagnostic Testin..	18,808	$6,643,198	18,858
I2B : Advanced Imaging - CAT/CT/CTA: Other	Radiation oncology	117,124	$6,479,029	123,419
I3A : Echography/Ultrasonography - Eye	Ophthalmology	112,389	$6,233,593	114,181
I3D : Echography/Ultrasonography - Carotid Arteries	Cardiology	43,435	$5,480,998	43,436
I3D : Echography/Ultrasonography - Carotid Arteries	Vascular surgery	52,916	$5,306,767	52,916
I3F : Echography/Ultrasonography - Other	Cardiology	39,723	$4,879,538	39,726
I3C : Echography/Ultrasonography - Heart	Internal medicine	41,760	$4,455,360	41,763
I4B : Imaging/Procedure - Other	Radiation oncology	83,018	$4,302,679	84,582
I4B : Imaging/Procedure - Other	Diagnostic radiology	97,881	$4,125,272	98,712

Imaging Summary - Outpatient & ED Claims

BETOS 3	Claim Lines	Claim Payment Amount	Units
I2B : Advanced Imaging - CAT/CT/CTA: Other	374,109	$65,240,012	375,765
I4B : Imaging/Procedure - Other	113,907	$51,485,002	130,114
I1E : Standard Imaging - Nuclear Medicine	181,423	$55,871,228	2,570,005
I2D : Advanced Imaging - MRI/MRA: Other	77,681	$51,855,032	78,768
I3F : Echography/Ultrasonography - Other	149,107	$44,098,016	150,316
I1B : Standard Imaging - Musculoskeletal	424,502	$37,005,618	431,654
I1A : Standard Imaging - Chest	545,213	$34,568,212	549,234

4.4.12 Physician Specialty Summary

Physician Specialty Summary displays the physician claims by provider type and top 35 provider specialties by number of claim lines, payment amount and units. Provider type is categorized by a visit from a Primary Care Provider (PCP). A PCP visit is defined by a physician visit with the specialty of family practice or internal medicine.



Physician Service - Specialty Details

Restricted to Non HMO and Part A + Part B coverage Members

Filter By: Acute Myocardial Infarction | Filter Value: (All) | Year: (All)

Physician Claims by Provider Type

PCP Visit	Claim Lines	Claim Payment Amount	% of Total Claim Payment Amount	Units
N	99,229,188	$5,609,886,297	85.6%	188,097,545
Y	18,322,038	$942,171,052	14.4%	21,426,325
Grand Total	117,551,226	$6,552,057,349	100.0%	209,523,870

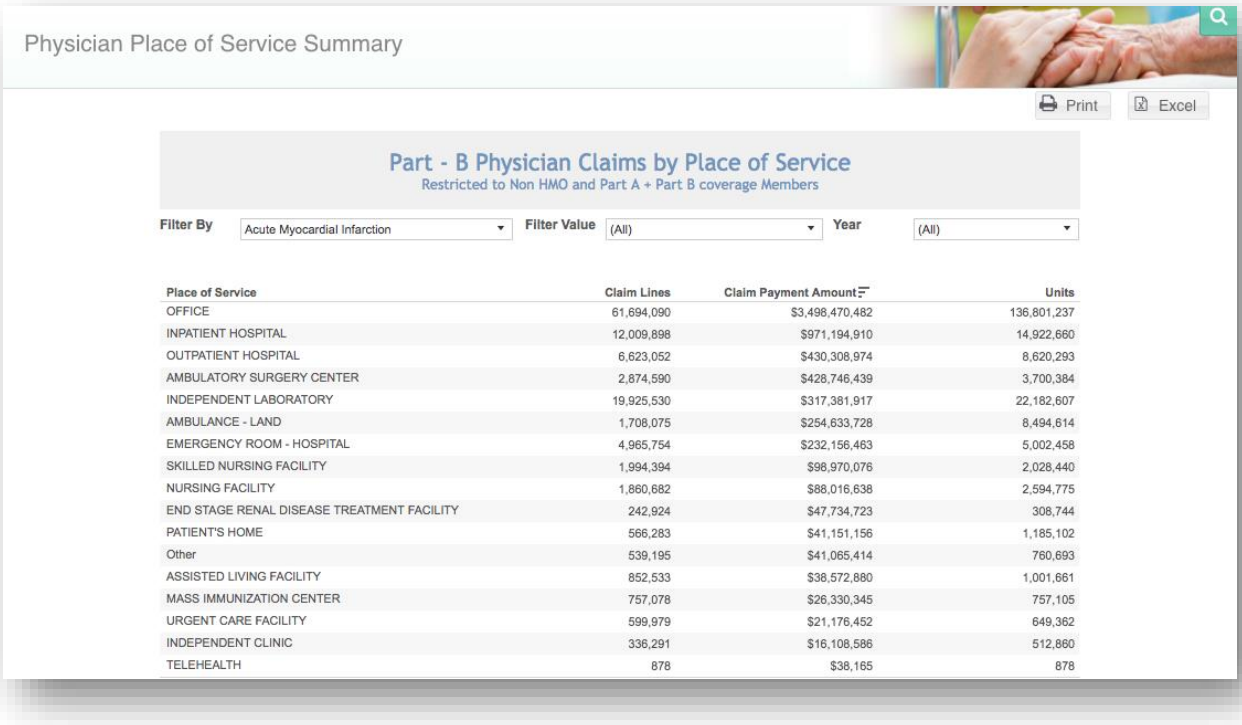
Physician Services by Specialty

Top 35 Specialty

Provider Specialty	Claim Lines	Claim Payment Amount	% of Total Claim Payment Amount	Units
Internal medicine	13,332,255	$716,544,691	10.9%	15,929,791
Ophthalmology	4,978,330	$466,045,296	7.1%	5,567,953
Diagnostic radiology	8,695,320	$370,999,218	5.7%	20,364,364
Cardiology	5,779,414	$354,677,358	5.4%	6,373,375
Clinical laboratory (billing inde..	20,397,063	$315,457,563	4.8%	23,511,368
Hematology/oncology	2,301,744	$290,008,675	4.4%	28,969,366
Ambulance service supplier, e..	1,715,779	$268,790,742	4.1%	8,663,295
Ambulatory surgical center	1,652,542	$260,700,138	4.0%	2,049,274
Orthopedic surgery	3,045,909	$208,198,462	3.2%	4,203,127
Family practice	4,585,552	$201,963,596	3.1%	5,079,423
Physical therapist	9,009,762	$183,043,750	2.8%	11,455,326
Emergency medicine	2,655,538	$180,568,259	2.8%	2,701,041
Dermatology	1,940,319	$146,595,719	2.2%	2,603,356
Nurse practitioner	3,155,449	$142,431,965	2.2%	3,633,396
Vascular surgery	614,460	$129,001,837	2.0%	1,033,957
Nephrology	1,171,390	$127,101,514	1.9%	1,683,735
Rheumatology	889,554	$124,572,837	1.9%	6,497,084
Medical oncology	843,774	$124,302,856	1.9%	11,153,344
Urology	1,895,437	$121,923,629	1.9%	3,193,984
Anesthesiology	1,453,390	$120,494,144	1.8%	4,403,061
General surgery	950,575	$119,019,048	1.8%	1,002,517
Physician assistant	2,355,342	$103,133,587	1.6%	2,701,942
Podiatry	2,785,260	$99,848,853	1.5%	2,845,545
Neurology	1,041,300	$97,846,438	1.5%	2,795,924
Gastroenterology	1,107,369	$97,618,244	1.5%	1,514,546
Radiation oncology	725,401	$92,474,477	1.4%	887,930
Pulmonary disease	1,234,172	$77,972,682	1.2%	1,343,357
Psychiatry	1,145,269	$68,386,891	1.0%	1,152,306

4.4.13 Physician Place of Service Summary

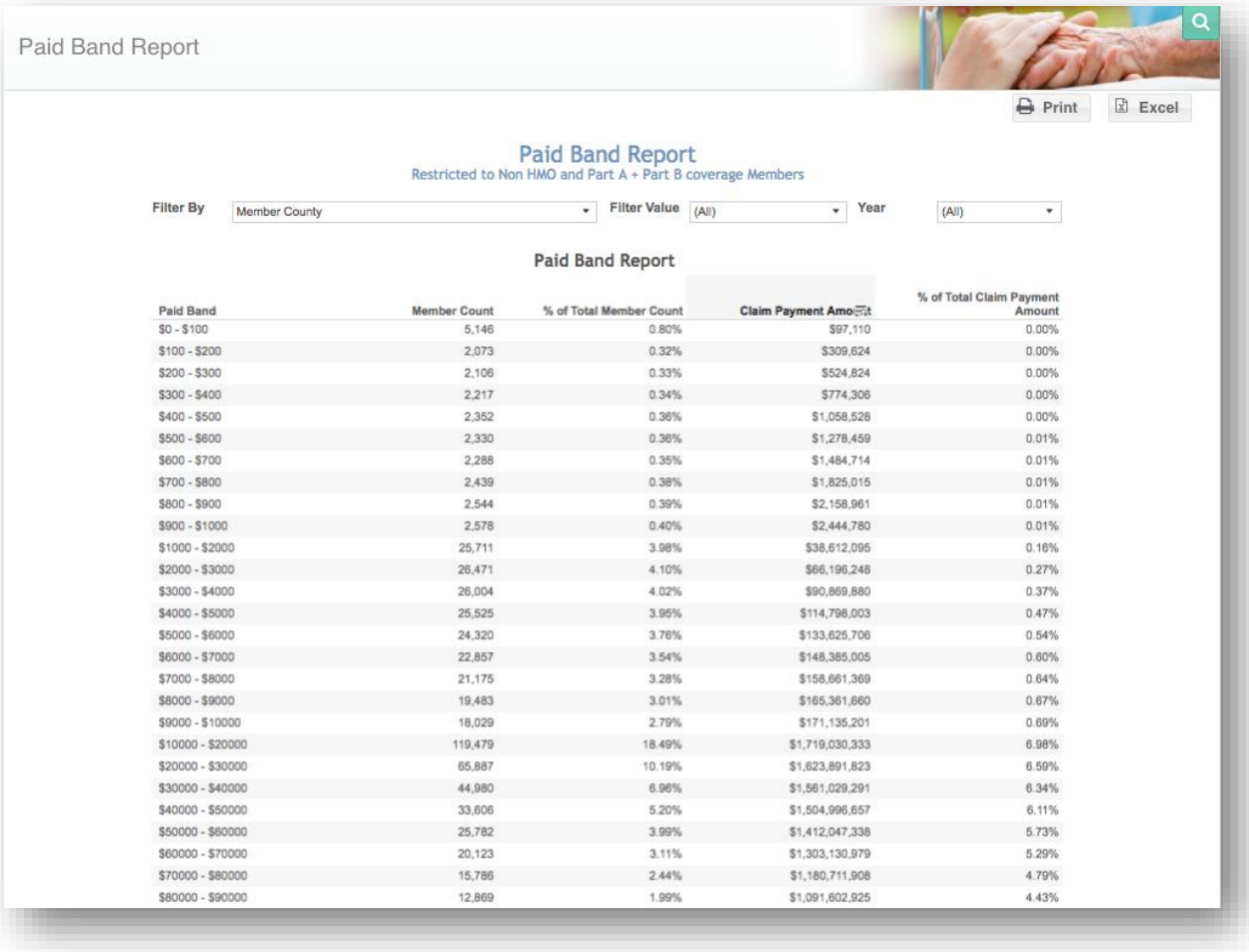
Physician Place of Service Summary displays the place of service for physician claims by claim line count, payment amount, and unit count.



Place of Service	Claim Lines	Claim Payment Amount	Units
OFFICE	61,694,090	$3,498,470,482	136,801,237
INPATIENT HOSPITAL	12,009,898	$971,194,910	14,922,660
OUTPATIENT HOSPITAL	6,623,052	$430,308,974	8,620,293
AMBULATORY SURGERY CENTER	2,874,590	$428,746,439	3,700,384
INDEPENDENT LABORATORY	19,925,530	$317,381,917	22,182,607
AMBULANCE - LAND	1,708,075	$254,633,728	8,494,614
EMERGENCY ROOM - HOSPITAL	4,965,754	$232,156,463	5,002,458
SKILLED NURSING FACILITY	1,994,394	$98,970,076	2,028,440
NURSING FACILITY	1,860,682	$88,016,638	2,594,775
END STAGE RENAL DISEASE TREATMENT FACILITY	242,924	$47,734,723	308,744
PATIENT'S HOME	566,283	$41,151,156	1,185,102
Other	539,195	$41,065,414	760,693
ASSISTED LIVING FACILITY	852,533	$38,572,880	1,001,661
MASS IMMUNIZATION CENTER	757,078	$26,330,345	757,105
URGENT CARE FACILITY	599,979	$21,176,452	649,362
INDEPENDENT CLINIC	336,291	$16,108,586	512,860
TELEHEALTH	878	$38,165	878

4.4.14 Paid Band Report

Paid Band Report displays the filtered population by each member's total payment amount for the year.

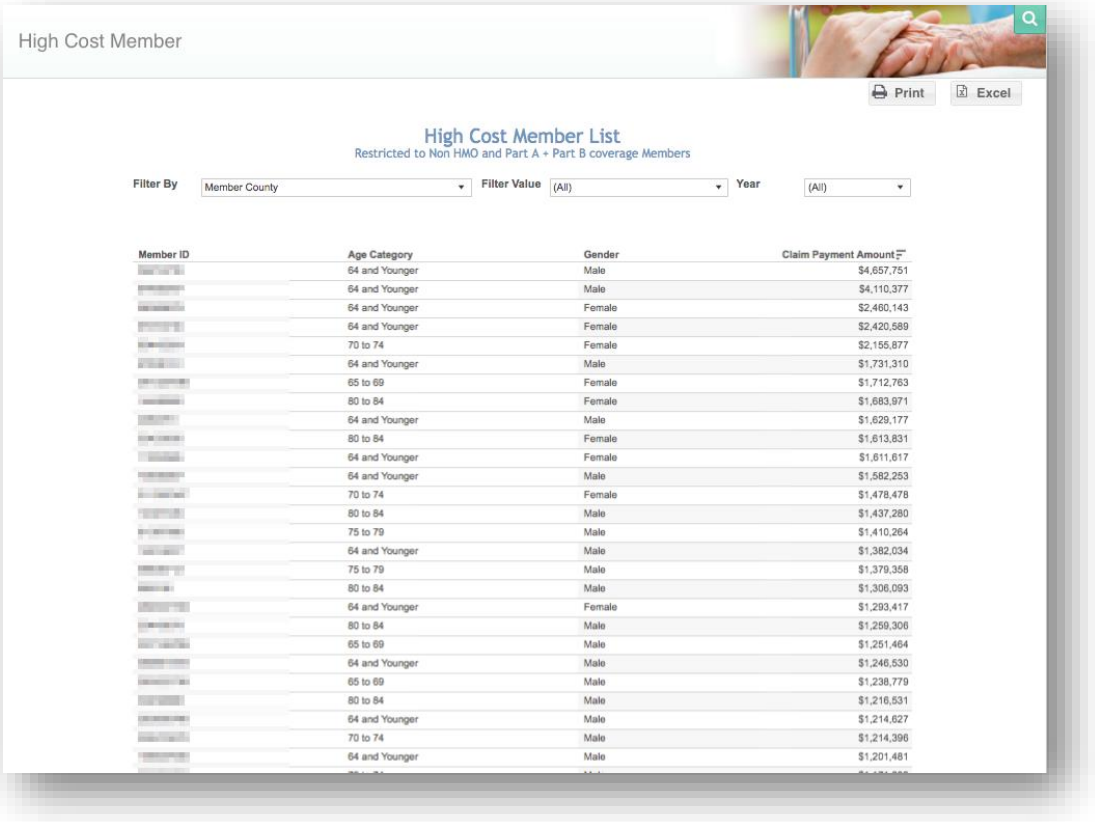


Paid Band Report

Paid Band	Member Count	% of Total Member Count	Claim Payment Amount	% of Total Claim Payment Amount
$0 - $100	5,146	0.80%	$97,110	0.00%
$100 - $200	2,073	0.32%	$309,624	0.00%
$200 - $300	2,106	0.33%	$524,824	0.00%
$300 - $400	2,217	0.34%	$774,306	0.00%
$400 - $500	2,352	0.36%	$1,058,526	0.00%
$500 - $600	2,330	0.36%	$1,278,459	0.01%
$600 - $700	2,288	0.35%	$1,484,714	0.01%
$700 - $800	2,439	0.38%	$1,825,015	0.01%
$800 - $900	2,544	0.39%	$2,158,961	0.01%
$900 - $1000	2,578	0.40%	$2,444,780	0.01%
$1000 - $2000	25,711	3.98%	$38,612,095	0.16%
$2000 - $3000	26,471	4.10%	$66,196,248	0.27%
$3000 - $4000	26,004	4.02%	$90,869,880	0.37%
$4000 - $5000	25,525	3.95%	$114,798,003	0.47%
$5000 - $6000	24,320	3.76%	$133,625,706	0.54%
$6000 - $7000	22,857	3.54%	$148,385,005	0.60%
$7000 - $8000	21,175	3.28%	$158,661,369	0.64%
$8000 - $9000	19,483	3.01%	$165,361,660	0.67%
$9000 - $10000	18,029	2.79%	$171,135,201	0.69%
$10000 - $20000	119,479	18.49%	$1,719,030,333	6.98%
$20000 - $30000	65,887	10.19%	$1,623,891,823	6.59%
$30000 - $40000	44,980	6.96%	$1,561,029,291	6.34%
$40000 - $50000	33,606	5.20%	$1,504,996,657	6.11%
$50000 - $60000	25,782	3.99%	$1,412,047,338	5.73%
$60000 - $70000	20,123	3.11%	$1,303,130,979	5.29%
$70000 - $80000	15,786	2.44%	$1,180,711,908	4.79%
$80000 - $90000	12,869	1.99%	$1,091,602,925	4.43%

4.4.15 High Cost Member

High Cost Member lists the patients with the highest total claim payment amount. Age category and gender characteristics are provided for each member.

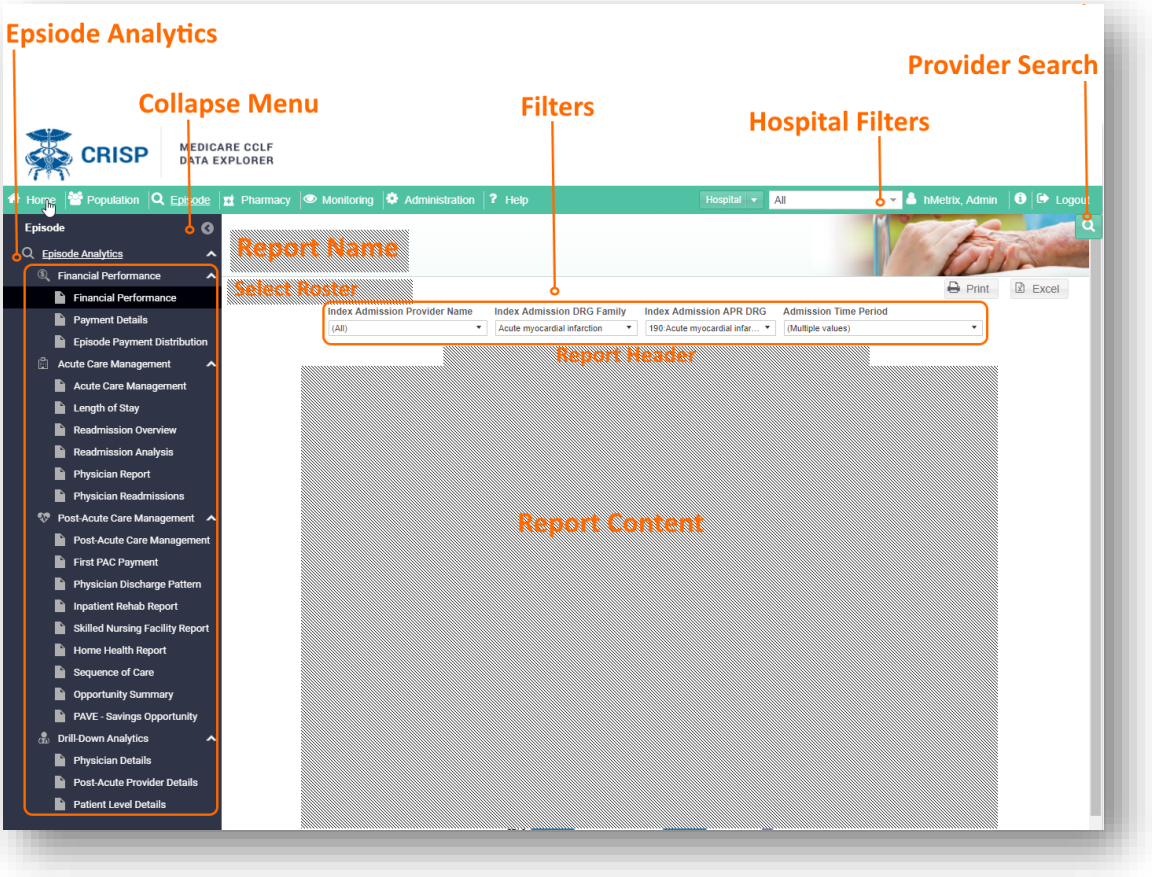


Member ID	Age Category	Gender	Claim Payment Amount
[redacted]	64 and Younger	Male	$4,657,751
[redacted]	64 and Younger	Male	$4,110,377
[redacted]	64 and Younger	Female	$2,460,143
[redacted]	64 and Younger	Female	$2,420,589
[redacted]	70 to 74	Female	$2,155,877
[redacted]	64 and Younger	Male	$1,731,310
[redacted]	65 to 69	Female	$1,712,763
[redacted]	80 to 84	Female	$1,683,971
[redacted]	64 and Younger	Male	$1,629,177
[redacted]	80 to 84	Female	$1,613,831
[redacted]	64 and Younger	Female	$1,611,617
[redacted]	64 and Younger	Male	$1,582,253
[redacted]	70 to 74	Female	$1,478,478
[redacted]	80 to 84	Male	$1,437,280
[redacted]	75 to 79	Male	$1,410,264
[redacted]	64 and Younger	Male	$1,382,034
[redacted]	75 to 79	Male	$1,379,358
[redacted]	80 to 84	Male	$1,306,093
[redacted]	64 and Younger	Female	$1,293,417
[redacted]	80 to 84	Male	$1,259,306
[redacted]	65 to 69	Male	$1,251,464
[redacted]	64 and Younger	Male	$1,246,530
[redacted]	65 to 69	Male	$1,238,779
[redacted]	80 to 84	Male	$1,216,531
[redacted]	64 and Younger	Male	$1,214,627
[redacted]	70 to 74	Male	$1,214,396
[redacted]	64 and Younger	Male	$1,201,481

5 EPISODE ANALYTICS

The Episode Analytics reports are described in further detail in this section. For detailed information on how episodes are constructed in MADE, refer to the topic in CCLF Data Basics titled “Episode.”

Note: There is no attribution selector in Episode Analytics as all episodes must begin with an inpatient admission.



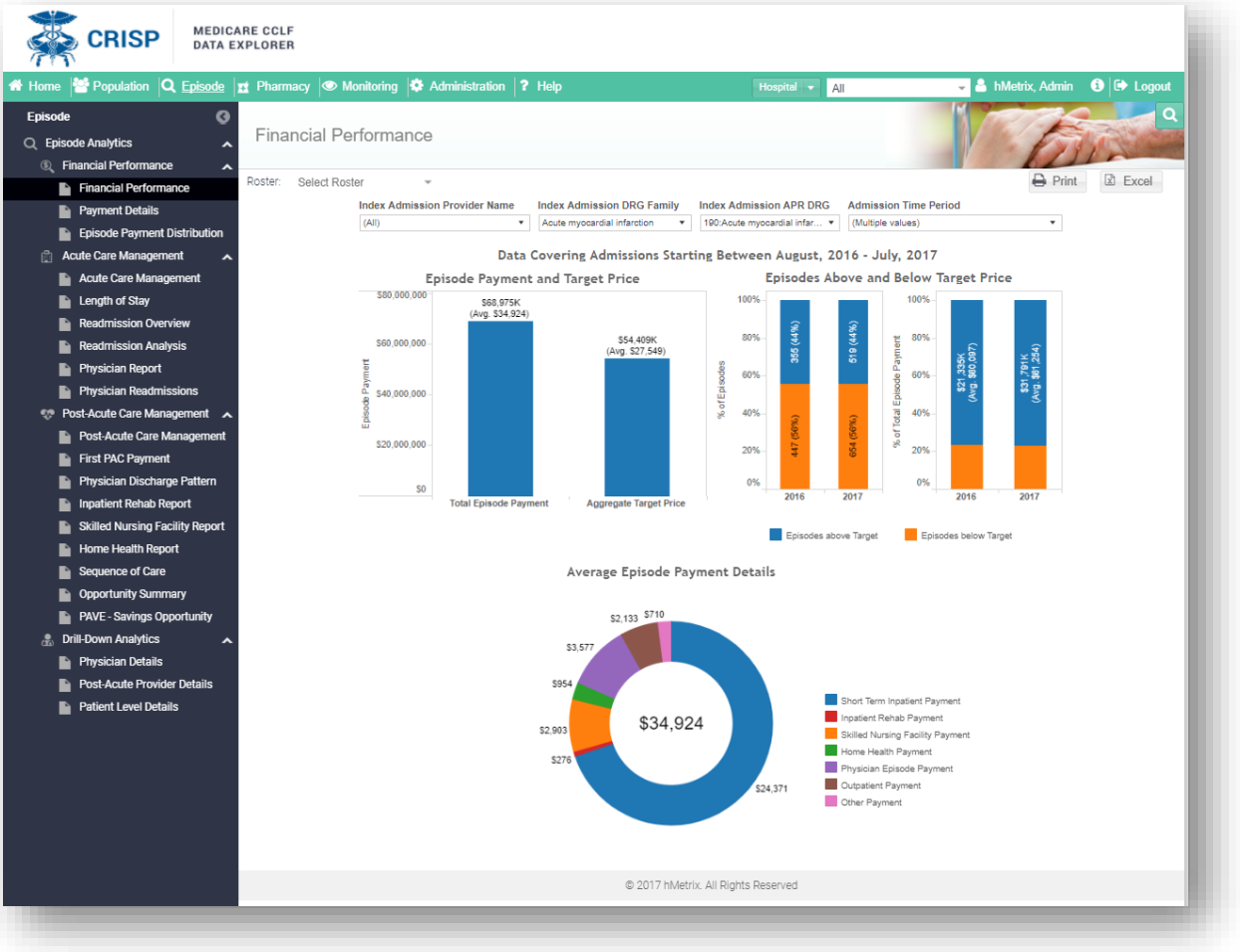
REPORT FUNCTIONS	DESCRIPTION
Report Name	The report name is always displayed on the left-hand corner. On the side menu click the report name to navigate across reports.
Report Header (Chart Name)	Each report may contain subset reports. The header contains the report title and a short description of the report.
Report Content	The report content area displays the results for the specific report header.
Report Filters	All Episode reports can be filtered using several criteria and values. View the Episode reports using the following filters: • Index Admission Provider Name, • Index Admission Index DRG family, • Index Admission APR DRG • Admission Time Period
Print PDF	Click on the PDF button to export the report into a PDF format.

Excel Export	Click on the Excel button to export the report details into Excel workbook.

5.1 Financial Performance

Financial Performance compares the episode payment to the target price for the chosen APR DRG. These reports show:

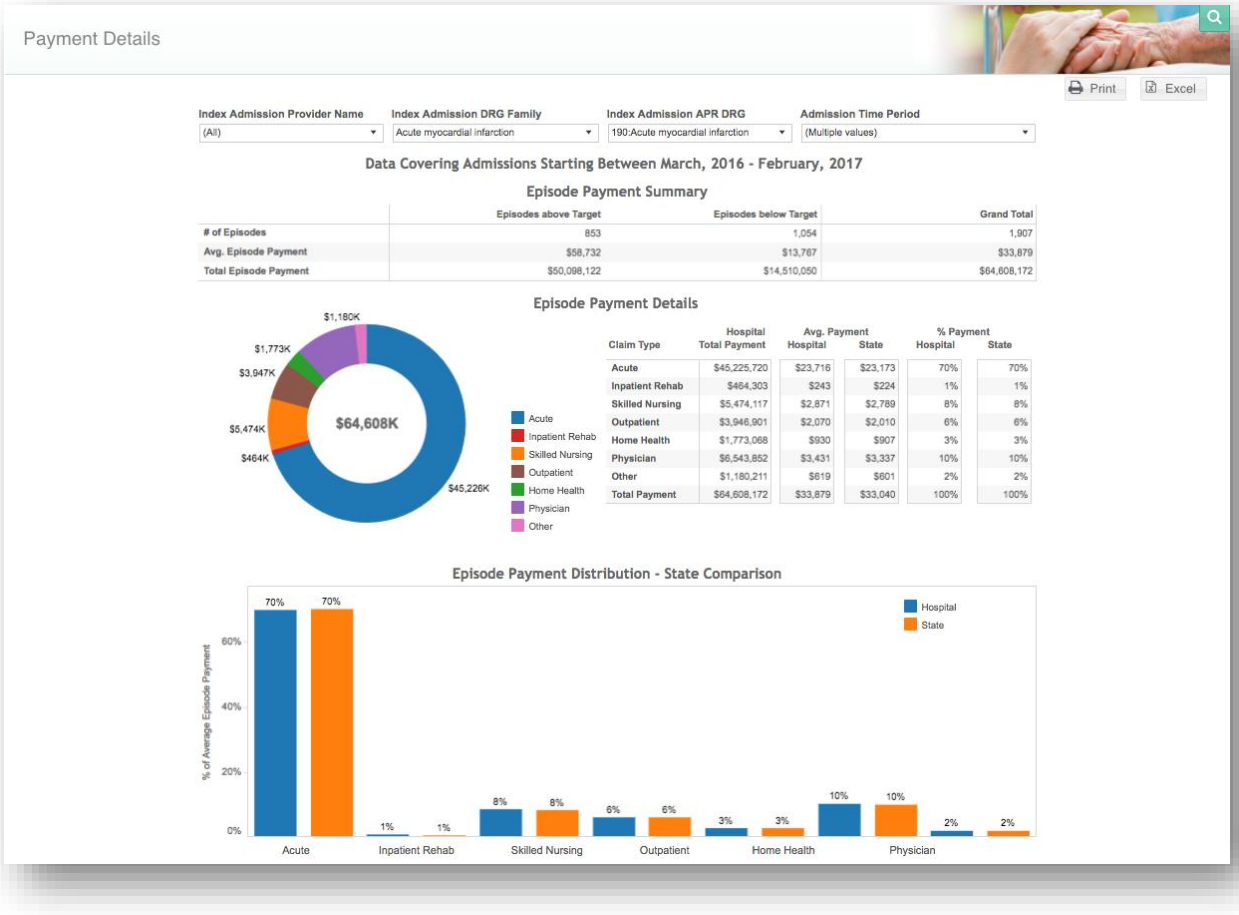
CHART NAME	DESCRIPTION
Episode Payment and Target Price	Total average episode payment compared to the target.
Episodes Above and Below Target Price	The percent of episodes with total episode payments below and above the target price and the distribution of total dollars related to these episodes.
Average Episode Payment Details	The distribution of average payments for the entire episode by provider type.



5.1.1 Payment Details

Payment Details provides greater detail about the episode payment distribution. This report shows:

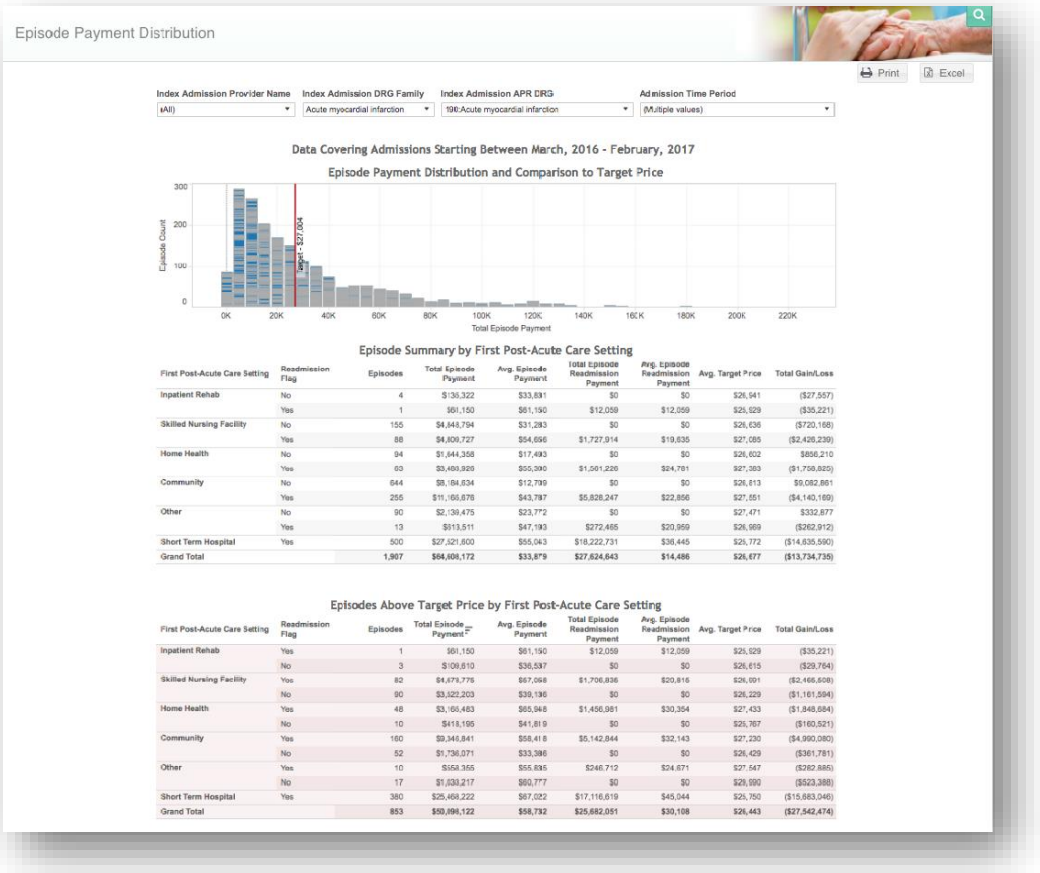
CHART NAME	DESCRIPTION
Episode Payment Summary	Presents the total number of episodes, average episode payment, and total episode payment for episodes above and below the target price.
Episode Payment Details	Compares the total and average episode payment by care setting for the filtered population to the overall state average.
Episode Payment Distribution – State Comparison	Compares the proportion the average episode payment for each care settings for the filtered population to that of the overall state average.



5.1.2 Episode Payment Distribution

Episode Payment Distribution displays the distribution of all episodes below and above the target price. This report shows:

CHART NAME	DESCRIPTION
Episode Payment Distribution and Comparison to Target Price	Shows the distribution of episodes by total episode payment. Benchmark is provided for the Target Price. Each segment within each bar represents an episode.
Episode Summary by First Post-Acute Setting	Provides a summary of total and average episode payments, readmissions rates and the total gain / loss compared to the target price based on the first post-acute care setting following discharge from the acute care hospital.
Episodes Above Target Price by First Post-Acute Setting	For only episodes that exceed the target price, provides a summary of total and average episode payments, readmissions rates and the total gain / loss compared to the target price based on the first post-acute care setting following discharge from the acute care hospital.



5.2 Acute Care Management

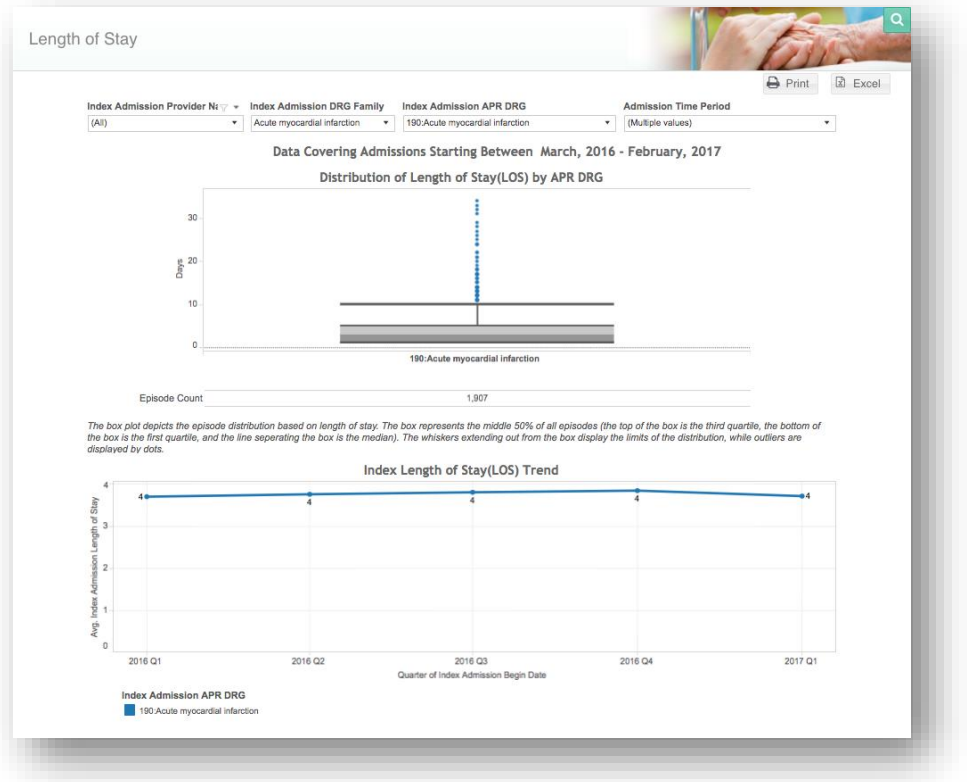
Acute Care Management contains performance measures related to the acute care setting. This report shows:

CHART NAME	DESCRIPTION
DRG Summary	The number of episodes, the average episode payments, number of readmissions, and average readmission payment for each APR DRG of the chosen family.
Index Admission LOS	Quarterly and annual average length of stay of the index admission.
Payment Comparison – Episodes w/ and w/o Readmission	Compares the payments by index admission, post-acute care and readmission components for episodes with and without readmissions.
Readmission Count Comparison	The number of readmissions back to your hospital versus a different hospital.
Readmission Rate Trend	Trends readmissions in total and where the readmission occurred.

5.2.1 Length of Stay

Length of Stay presents the length of stay for the APR DRG of the index admission. This report shows:

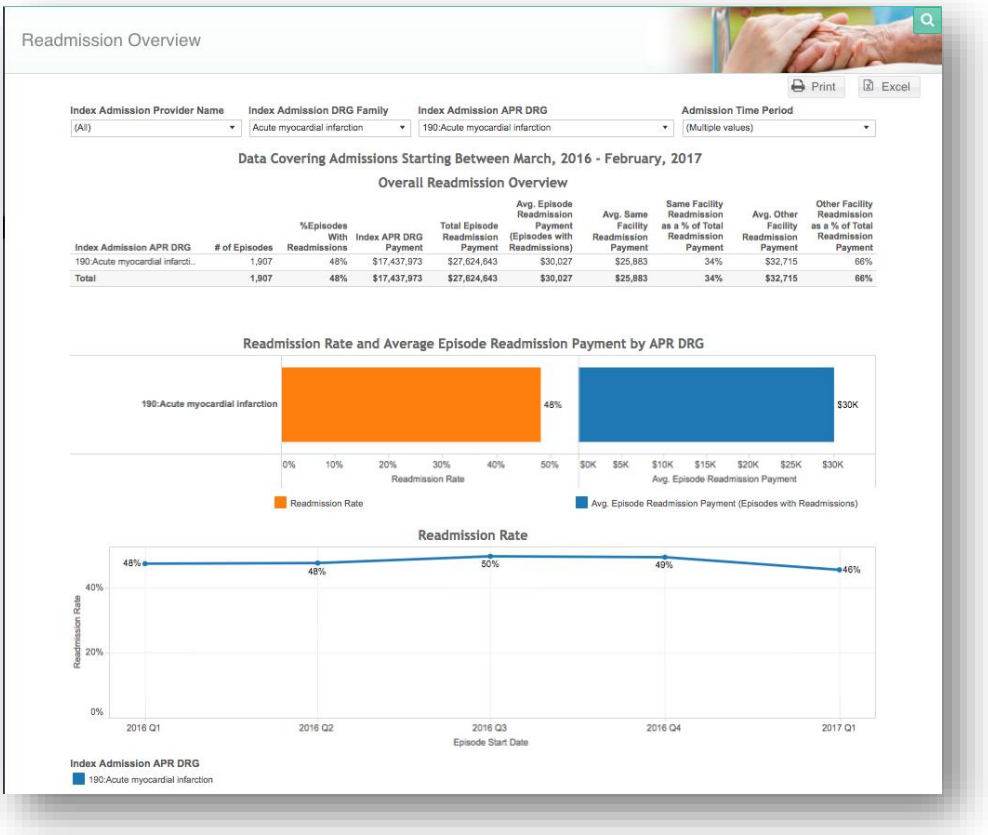
CHART NAME	DESCRIPTION
Distribution of Length of Stay(LOS) by APR DRG	Presents the distribution of the length of stay for the filtered APR DRG. Results are presented as a box and whisker plot.
Index Length of Stay (LOS) Trend	Shows the change in length of stay by quarter for the filtered APR DRG and time period.



5.2.2 Readmission Overview

Readmission Overview provides the all-cause readmission rate by APR DRG and the associated average payment for episodes that contain an acute care hospital readmission. This report shows:

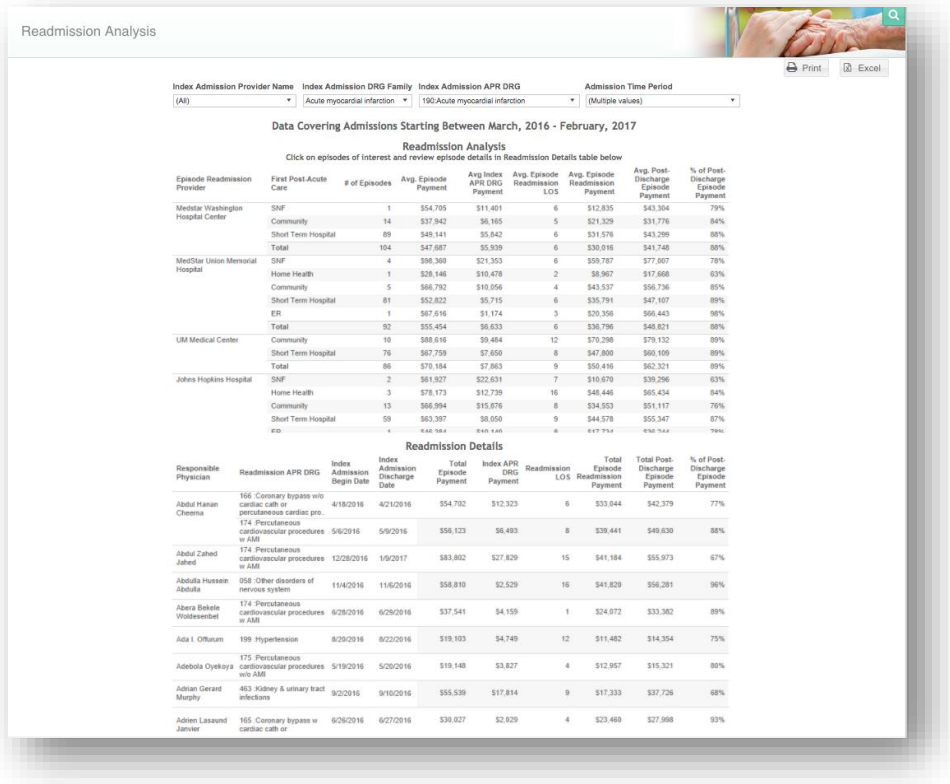
CHART NAME	DESCRIPTION
Overall Readmission Overview	Presents the proportion of episodes that contain an all-cause readmission and the average episode payment for those episodes. Also shows the average episode payment for episodes that are readmitted back to the index APR DRG acute care hospital versus those readmitted to a different hospital.
Readmission Rate and Average Readmission Payment by APR DRG	Presents the readmission rate and average readmission payment for the filtered APR DRG.
Readmission Rate	Shows the change in readmission rate by quarter for the filtered APR DRG and time period.



5.2.3 Readmission Analysis

Readmission Analysis provides the details of readmissions by readmission provider and responsible physician. This report shows:

TABLE NAME	DESCRIPTION
Readmission Analysis	Shows average episode payment, index APR DRG payment, readmission payment, and post-discharge episode payment by the episode readmission provider and the first post-acute care provider following discharge from the index hospitalization. Selecting a row in this table filters the Readmission Details table.
Readmission Details	Individual readmission information by responsible physician and readmission APR DRG.



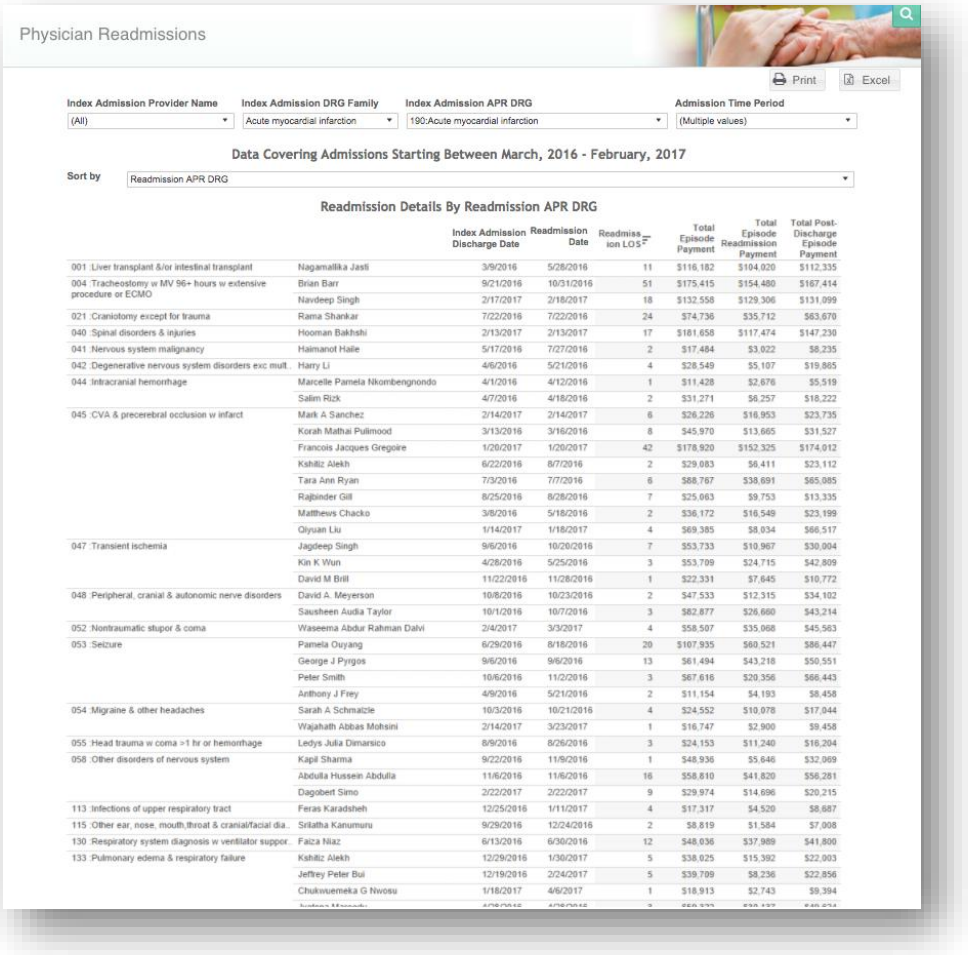
5.2.4 Physician Report

Physician Report compares each of the top volume physicians. The blue bars indicate physicians with average payments/LOS/readmission rates above the overall average (across all physicians) and orange bars indicate physicians with averages below the overall average. This report shows:

CHART NAME	DESCRIPTION
Average LOS by Physician	Compares the average length of stay of the index admission APR DRG across physicians.
Average Payment per Episode by Physician	Compares the average episode payment across physicians.
Readmission Rate by Physician	Compares the episode readmission rate by physicians.
Physician Performance Report	Includes similar data from the above three charts for each physician along with the total number of episodes, the average physician payment, and the average readmission payment for each physician.

5.2.5 Physician Readmissions

Physician Readmissions identifies each readmission by readmission APR DRG and physician. This report provides the date of index admission discharge and readmission date, as well as the total episode payment, readmission payment and total post-discharge payment for each episode with a readmission.



Physician Readmissions

Print | Excel

Index Admission Provider Name	Index Admission DRG Family	Index Admission APR DRG	Admission Time Period
(All)	Acute myocardial infarction	190:Acute myocardial infarction	(Multiple values)

Data Covering Admissions Starting Between March, 2016 - February, 2017

Sort by: Readmission APR DRG

Readmission Details By Readmission APR DRG

		Index Admission Discharge Date	Readmission Date	Readmission LOS	Total Episode Payment	Total Episode Readmission Payment	Total Post-Discharge Episode Payment
001 :Liver transplant &/or intestinal transplant	Nagamallika Jasti	3/9/2016	5/28/2016	11	$116,182	$104,020	$112,335
004 :Tracheostomy w MV 96+ hours w extensive procedure or ECMO	Brian Barr	9/21/2016	10/31/2016	51	$175,415	$154,480	$167,414
	Navdeep Singh	2/17/2017	2/18/2017	18	$132,558	$129,306	$131,099
021 :Craniotomy except for trauma	Rama Shankar	7/22/2016	7/22/2016	24	$74,736	$35,712	$63,670
040 :Spinal disorders & injuries	Hooman Bakhshi	2/13/2017	2/13/2017	17	$181,658	$117,474	$147,230
041 :Nervous system malignancy	Haimanot Halle	5/17/2016	7/27/2016	2	$17,484	$3,022	$8,235
042 :Degenerative nervous system disorders exc mult...	Harry Li	4/6/2016	5/21/2016	4	$28,549	$5,107	$19,865
044 :Intracranial hemorrhage	Marcelle Pamela Nkombengnondo	4/1/2016	4/12/2016	1	$11,428	$2,676	$5,519
	Salim Rizk	4/7/2016	4/18/2016	2	$31,271	$8,257	$18,222
045 :CVA & precerebral occlusion w infarct	Mark A Sanchez	2/14/2017	2/14/2017	6	$26,226	$16,953	$23,735
	Korah Mathai Pulimood	3/13/2016	3/16/2016	8	$45,970	$13,665	$31,527
	Francois Jacques Gregoire	1/20/2017	1/20/2017	42	$178,920	$152,325	$174,012
	Kshitiz Alekh	6/22/2016	8/7/2016	2	$29,083	$6,411	$23,112
	Tara Ann Ryan	7/3/2016	7/7/2016	6	$88,767	$38,691	$85,085
	Rajbinder Gill	8/25/2016	8/28/2016	7	$25,063	$9,753	$13,335
	Matthews Chacko	3/8/2016	5/18/2016	2	$36,172	$16,549	$23,199
	Qiyuan Liu	1/14/2017	1/18/2017	4	$69,385	$8,034	$66,517
047 :Transient ischemia	Jagdeep Singh	9/6/2016	10/20/2016	7	$53,733	$10,967	$30,004
	Kin K Wun	4/28/2016	5/25/2016	3	$53,709	$24,715	$42,809
	David M Brill	11/22/2016	11/28/2016	1	$22,331	$7,645	$10,772
048 :Peripheral, cranial & autonomic nerve disorders	David A. Meyerson	10/8/2016	10/23/2016	2	$47,533	$12,315	$34,102
	Sausheen Audia Taylor	10/1/2016	10/7/2016	3	$82,877	$26,660	$43,214
052 :Nontraumatic stupor & coma	Waseema Abdur Rahman Dalvi	2/4/2017	3/3/2017	4	$58,507	$35,068	$45,563
053 :Seizure	Pamela Ouyang	6/29/2016	8/18/2016	20	$107,935	$60,521	$86,447
	George J Pyrgos	9/6/2016	9/6/2016	13	$61,494	$43,218	$50,551
	Peter Smith	10/6/2016	11/2/2016	3	$67,616	$20,356	$66,443
	Anthony J Frey	4/9/2016	5/21/2016	2	$11,154	$4,193	$8,458
054 :Migraine & other headaches	Sarah A Schmaltz	10/3/2016	10/21/2016	4	$24,552	$10,078	$17,044
	Wajahath Abbas Mohsini	2/14/2017	3/23/2017	1	$16,747	$2,900	$9,458
055 :Head trauma w coma >1 hr or hemorrhage	Ledys Julia Dimarsico	8/9/2016	8/26/2016	3	$24,153	$11,240	$16,204
058 :Other disorders of nervous system	Kapil Sharma	9/22/2016	11/9/2016	1	$48,936	$5,646	$32,069
	Abdulla Hussein Abdulla	11/6/2016	11/6/2016	16	$58,810	$41,820	$56,281
	Dagobert Simo	2/22/2017	2/22/2017	9	$29,974	$14,896	$20,215
113 :Infections of upper respiratory tract	Feras Karadsheh	12/25/2016	1/11/2017	4	$17,317	$4,520	$8,687
115 :Other ear, nose, mouth,throat & cranial/facial dia...	Srilatha Kanumuru	9/29/2016	12/24/2016	2	$8,819	$1,584	$7,008
130 :Respiratory system diagnosis w ventilator suppor...	Faiza Niaz	6/13/2016	6/30/2016	12	$48,036	$37,989	$41,800
133 :Pulmonary edema & respiratory failure	Kshitiz Alekh	12/29/2016	1/30/2017	5	$38,025	$15,392	$22,003
	Jeffrey Peter Bui	12/19/2016	2/24/2017	5	$39,709	$8,236	$22,856
	Chukwuemeka G Nwosu	1/18/2017	4/6/2017	1	$18,913	$2,743	$9,394

5.3 Post-Acute Care Management

Post-Acute Care Management shows high-level information based on the discharge pattern from the index admission. This report shows:

CHART NAME	DESCRIPTION
Discharge Pattern from Index Admission Trend	Shows the index admission discharge pattern trends on a quarterly basis for the chosen time period.
Episode Discharge Pattern by First PAC Setting	Illustrates the percentage of episodes discharged by first post-acute care setting.
Avg. Post Discharge Payment by First PAC Setting	Provides the average post-discharge payment by first post-acute care setting.

5.3.1 First PAC Payment

First PAC Payment contains episode count and payment information based on the first discharge setting following discharge from the acute care hospital. This report shows:

CHART NAME	DESCRIPTION
First Post-Acute Setting Payment Report	Details the episode count, total episode payment, and total post-discharge payment by first post-acute care setting.
Episode Count by First Post-Acute Care Setting	Displays the number of episodes related to the first post-acute care setting.
Avg. Episode Payment by First Post-Acute Care Setting	Provides the average episode payment for each of the first post-acute care settings.

5.3.2 Physician Discharge Pattern

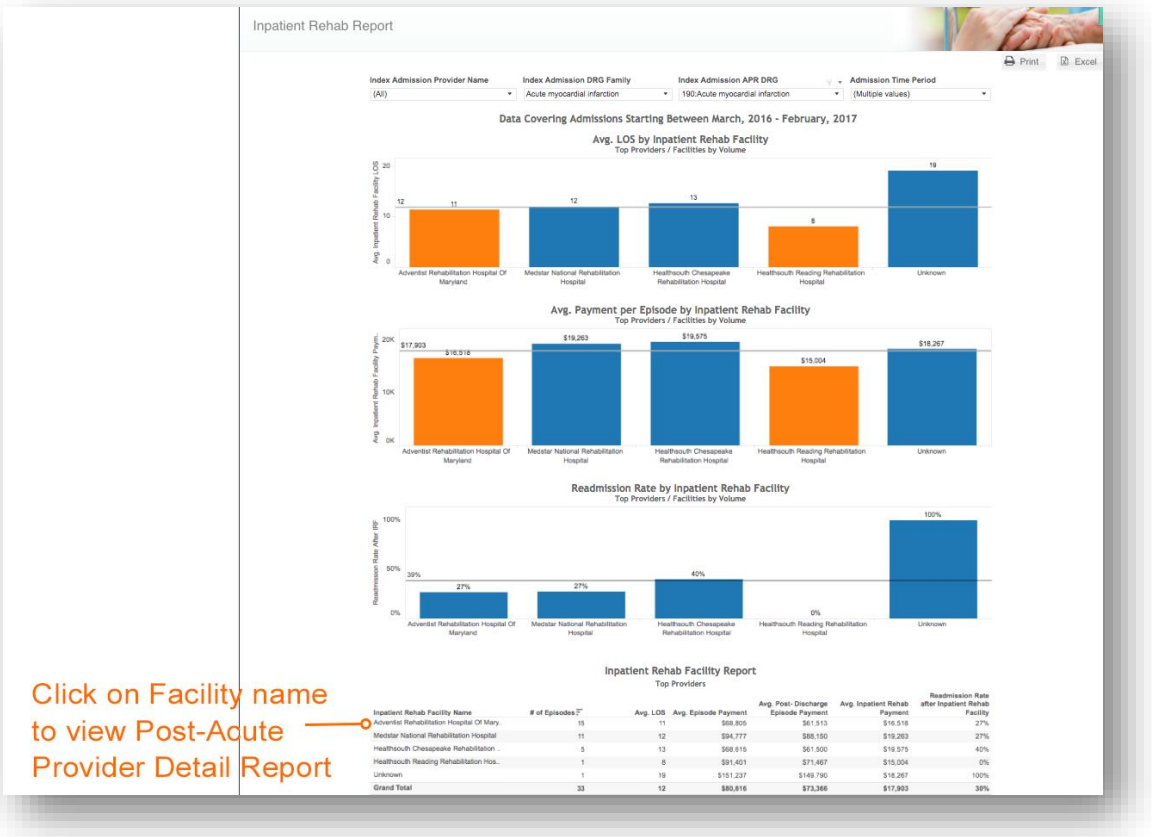
Physician Discharge Pattern compares physicians based on the post-acute care settings to which they discharge. This report shows:

CHART NAME	DESCRIPTION
Average Post-Discharge Payments	Shows the average post-discharge episode payment for each of the top volume physicians and overall. The blue bars indicate physician average post-discharge episode payments above the overall average and orange is below.
Discharge Pattern by Physician	Illustrates the discharge pattern for each of the top volume physicians by the percentage of discharges to each first post-acute care setting.
Post Physician Performance Report	Provides similar detail of the two charts above for each physician, including their episode volume.

5.3.3 Inpatient Rehabilitation Report

Inpatient Rehabilitation Report compares the top volume Inpatient Rehabilitation Facilities (IRF). The blue bars indicate IRFs with an average LOS, payment per episode and readmission rate, above the overall average and orange represents IRFs with averages below the overall. This report shows:

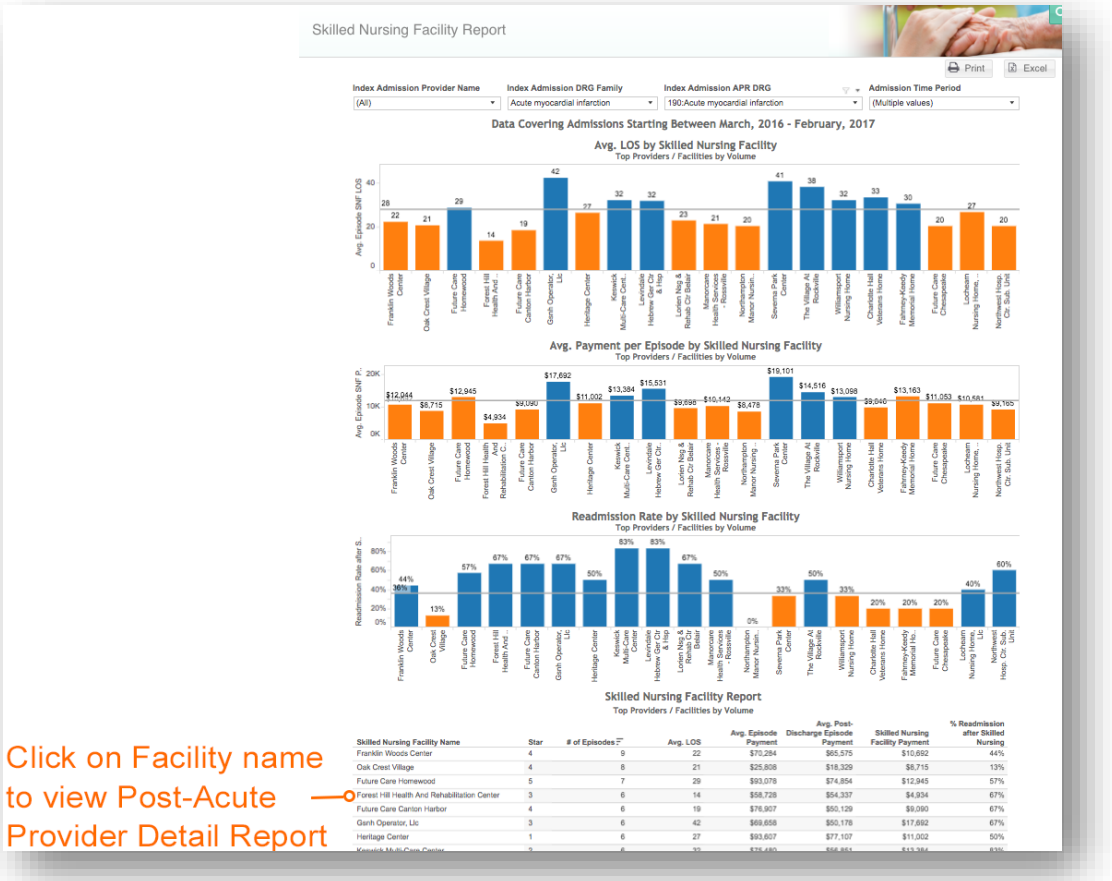
CHART NAME	DESCRIPTION
Avg. LOS by Inpatient Rehab Facility	Shows the average length of stay for the IRF admission for each of the top volume facilities.
Avg. Payment per Episode by Inpatient Rehab Facility	The average episode payment for each of the top volume facilities.
Readmission Rate by Inpatient Rehab Facility	The average readmission rate for each of the top volume facilities. Note that the readmissions are not necessarily from that specified facility; rather, the readmissions are during the 90-day post-discharge episode but are characterized by the first post-acute care setting facility.
Inpatient Rehab Facility Report	For each of the IRFs shown in the above charts, this table shows the number of episodes, average length of stay, and average episode payment.



5.3.4 Skilled Nursing Facility Report

Skilled Nursing Facility Report compares the top volume Skilled Nursing Facilities (SNF). The blue bars indicate SNFs with an average LOS, payment per episode and readmission rate, above the overall average and orange represents SNFs with averages below the overall. This report shows:

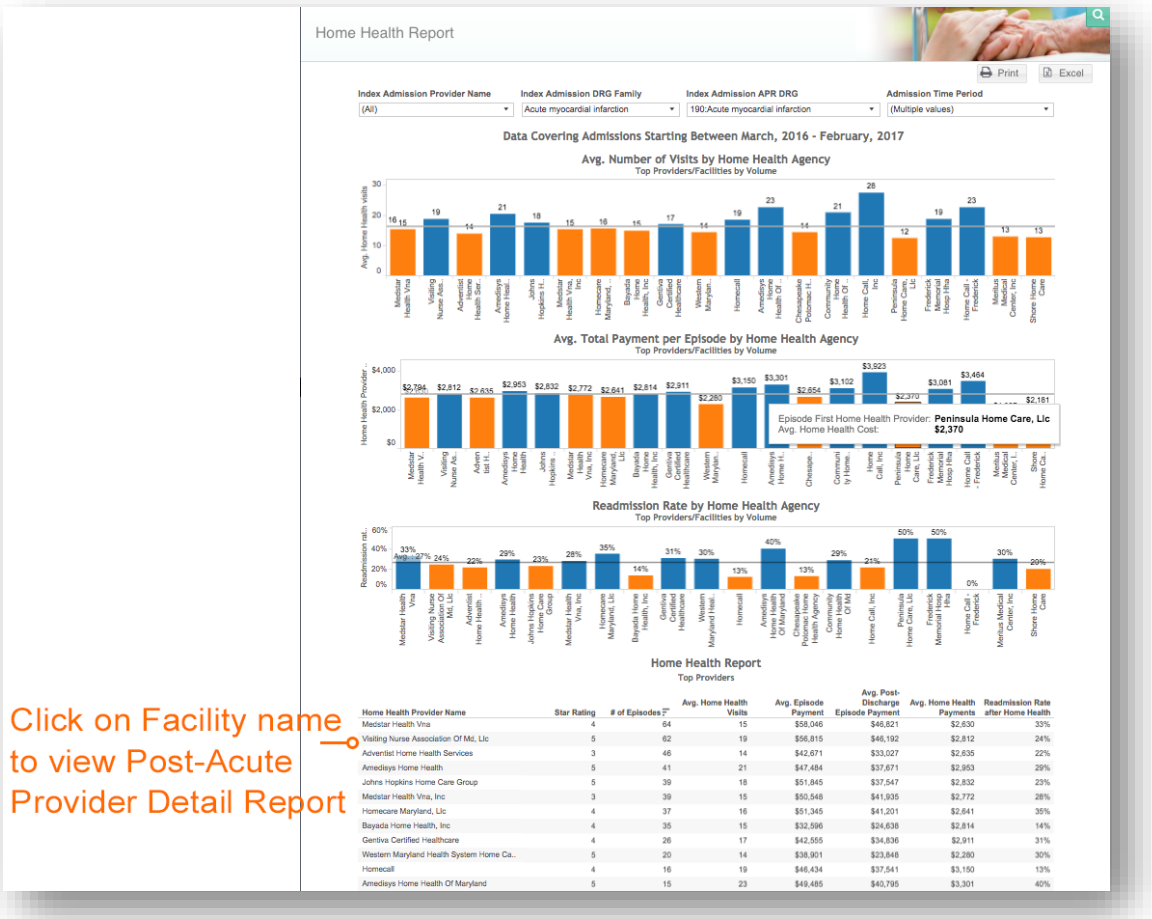
CHART NAME	DESCRIPTION
Avg. LOS by Skilled Nursing Facility	Shows the average length of stay for the IRF admission for each of the top volume facilities.
Avg. Payment per Episode by Skilled Nursing Facility	The average episode payment for each of the top volume facilities.
Readmission Rate by Skilled Nursing Facility	The average readmission rate for each of the top volume facilities. Note that the readmissions are not necessarily from that specified facility; rather, the readmissions are during the 90-day post-discharge episode but are characterized by the first post-acute care setting facility.
Skilled Nursing Facility Report	For each of the providers shown in the above charts, this table gives the number of episodes, average length of stay, and average episode payment.



5.3.5 Home Health Report

Home Health Report compares the top volume Home Health Agencies (HHA). The blue bars indicate Home Health agencies with an average number of home health visits, payment per episode and readmission rate, above the overall average and orange represents HHAs with averages below the overall. This report shows:

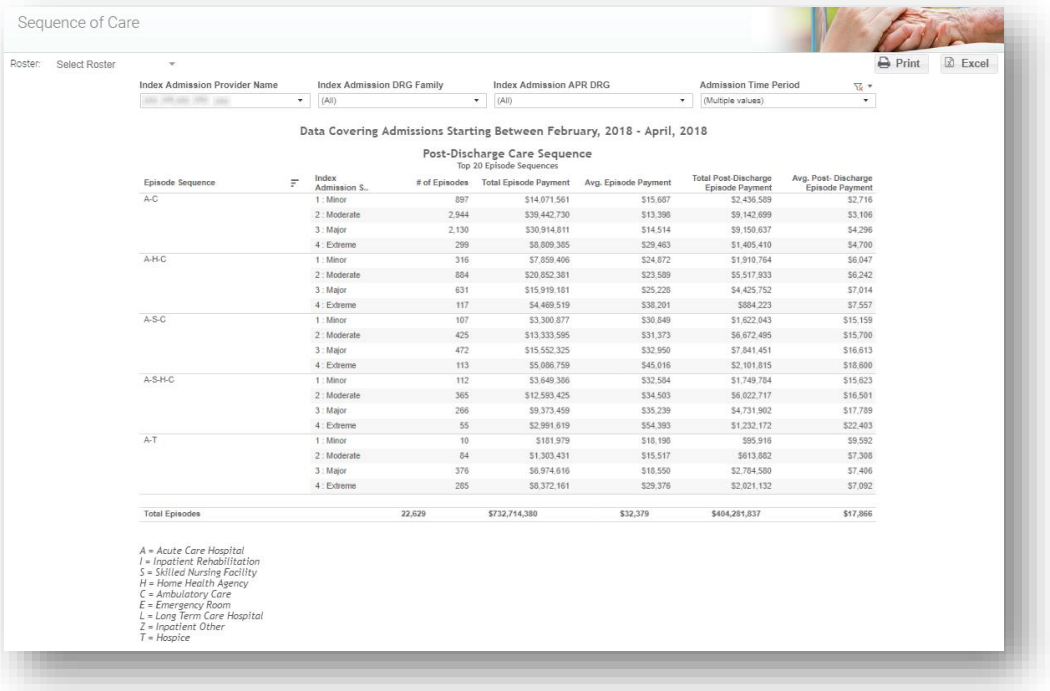
CHART NAME	DESCRIPTION
Avg. Number of Visits by Home Health Agency	Shows the average number of visits for each of the top volume agencies.
Avg. Total Payment per Episode by Home Health Agency	The average episode payment for each of the top volume agencies.
Readmission Rate by Home Health Agency	The average readmission rate for each of the top volume agencies. Note that the readmissions are not necessarily from that specified agency; rather, the readmissions are during the 90-day post-discharge episode but are characterized by the first post-acute care setting agency.
Home Health Report	For each of the providers shown in the above charts, this table gives the number of episodes, average Home Health visits, and average episode payment.



5.3.6 Sequence of Care

Sequence of Care illustrates the top 20 post-acute care sequences by volume. This report provides information regarding episode volume, total and average episode payments, and total and average post-discharge episode payments for each sequence. The provider types mentioned in this report include:

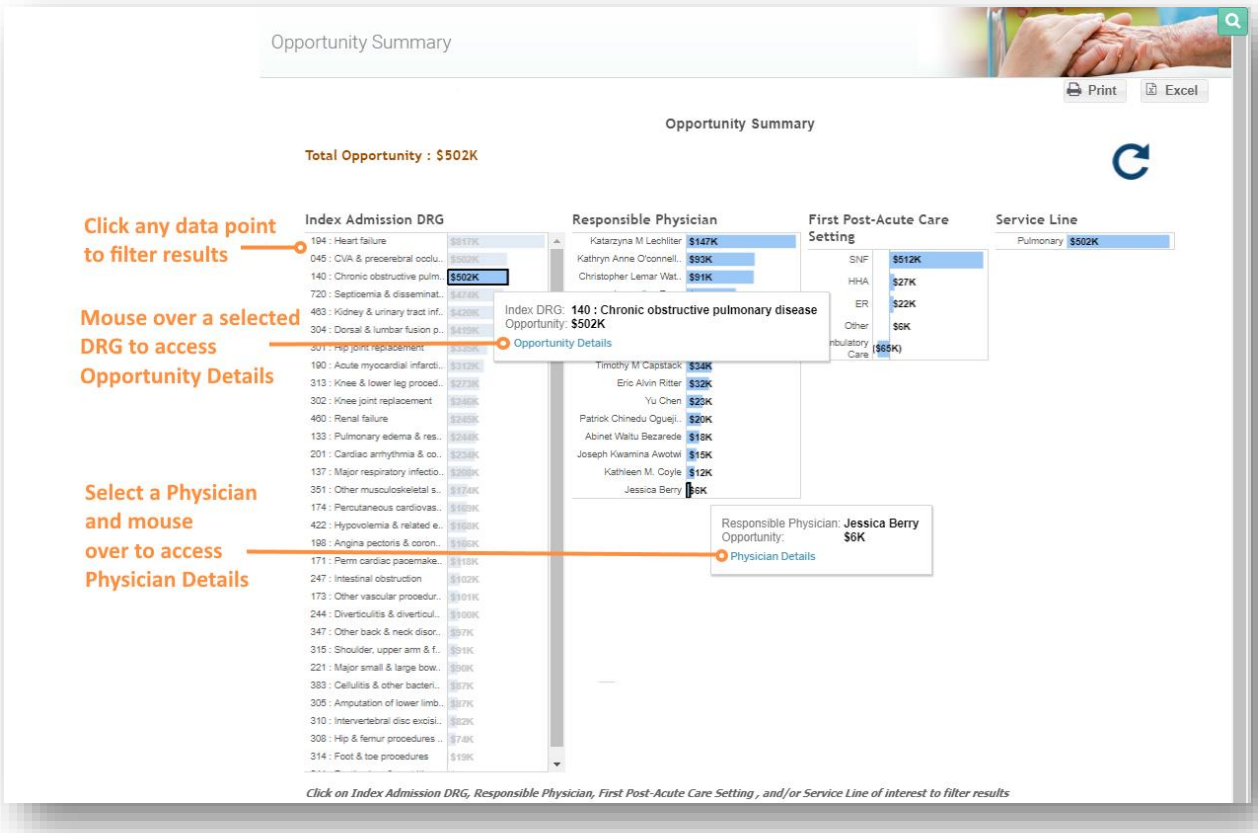
Provider Type	Provider Type Description
A	Short Term Hospital
I	Inpatient Rehabilitation Facility
S	Skilled Nursing Facility
H	Home Health Agency
C	Community
E	Emergency Department Visit
P	Outpatient Therapy
D	DME
L	Acute Long Term Care Hospital
Z	Other Inpatient Hospital
T	Hospice



5.3.7 Opportunity Summary

Opportunity Summary highlights the areas of savings opportunities within the hospital/system. This report does not support roster-specific analyses and will run using a hospital/system's entire attributed population based on a user-selected attribution method with segmentation by DRG, Physician, PAC Setting, and Service Line. Selecting any row will filter the remaining columns. This report includes:

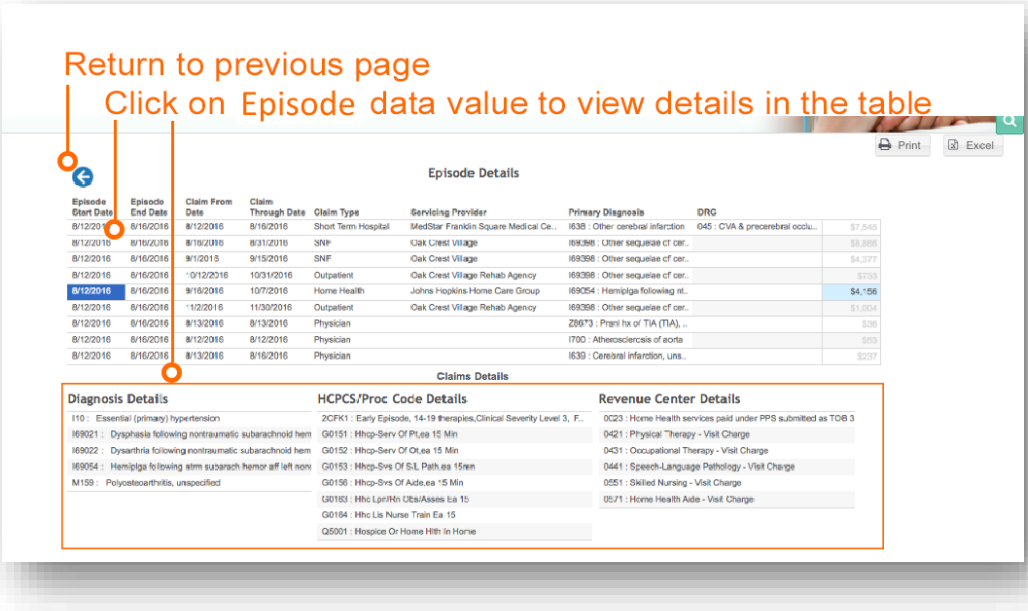
COLUMN NAME	DESCRIPTION
Index Admission DRG	Savings opportunity for each APR DRG of the index hospital admission.
Responsible Physician	Savings opportunities attributed to each responsible physician.
Discharge Provider Type	Savings opportunity attributed to each first post-acute care setting following discharge from the index hospital.
Service Line	Savings opportunity attributed to each Service Line associated with the APR DRG of the index hospital admission.



Selecting a DRG in the Opportunity Summary allows for a drill down to a report for the **Opportunity Details**. This report is the same as 5.3.8 Post-Acute Variance Explorer (PAVE) Savings Opportunity, filtered to the selected DRG. See 5.3.8 for information about this report.

5.3.7.1 Episode Details

Episode Details lists every claim that occurred during the selected episode. Selecting any claim will populate the bottom table with the details of the selected claim.



5.3.8 Post-Acute Variance Explorer (PAVE) Savings Opportunity

PAVE uses hMetrix's proprietary technology to cluster groups of physicians based on similar practice patterns. This report does not support rosters and will run using a hospital's entire attributed population based on a user-selected attribution method for a selected DRG. The heuristics in PAVE that account for low volume may prevent some physicians' data from being clustered, so the volume numbers presented may not match the volume elsewhere in MADE. This is done to ensure savings estimates are robust and reliable. Note that PAVE requires a minimum episode volume to establish robust clusters; DRGs with volume below this threshold are not displayed. This report includes:

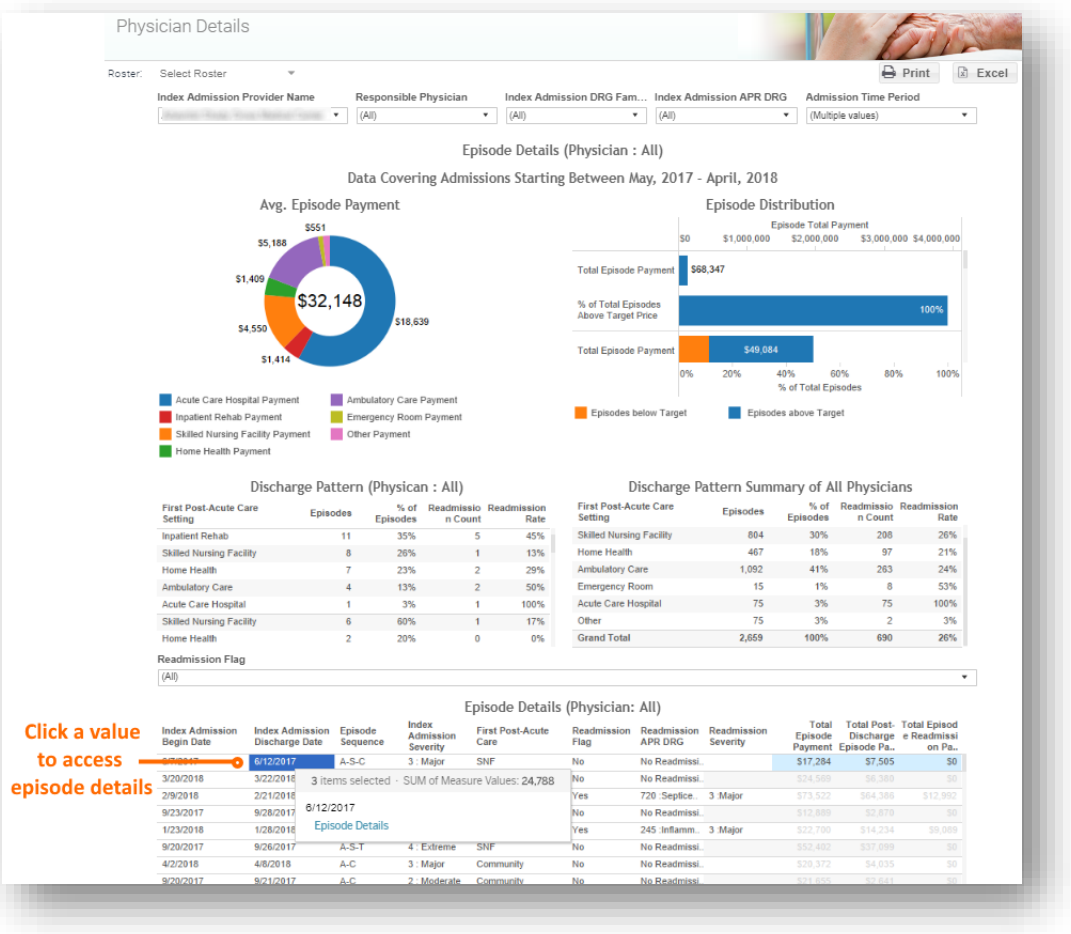
CHART NAME	DESCRIPTION
Post-Acute Savings Opportunity Summary	Shows the savings opportunity for each APR DRG if the average post-discharge payments related to each physician were replaced with the average in the highest performing cluster.
Physician Cluster Summary	Provides a summary of the number of discharges, physicians and the average post-discharge episode payment in each cluster.
Discharge Pattern by Physician	Discharge patterns for each physician by percent of discharges to the first post-acute care setting.
Post-Discharge Payment by Physician	Illustrates the average post-discharge payment for each physician in a cluster and compares it to the average for the other clusters.
Highest Performing Cluster – Discharge Pattern	Represents the high performing cluster's average discharge pattern by percent of distribution.
Highest Performing Cluster – Payment Split	Represents the high performing cluster's average post-discharge payment and its spit between the different post-acute care settings.

5.4 Drill-Down Analytics

5.4.1 Physician Details

Physician Details shows the key episode metrics of a specified physician. This report shows:

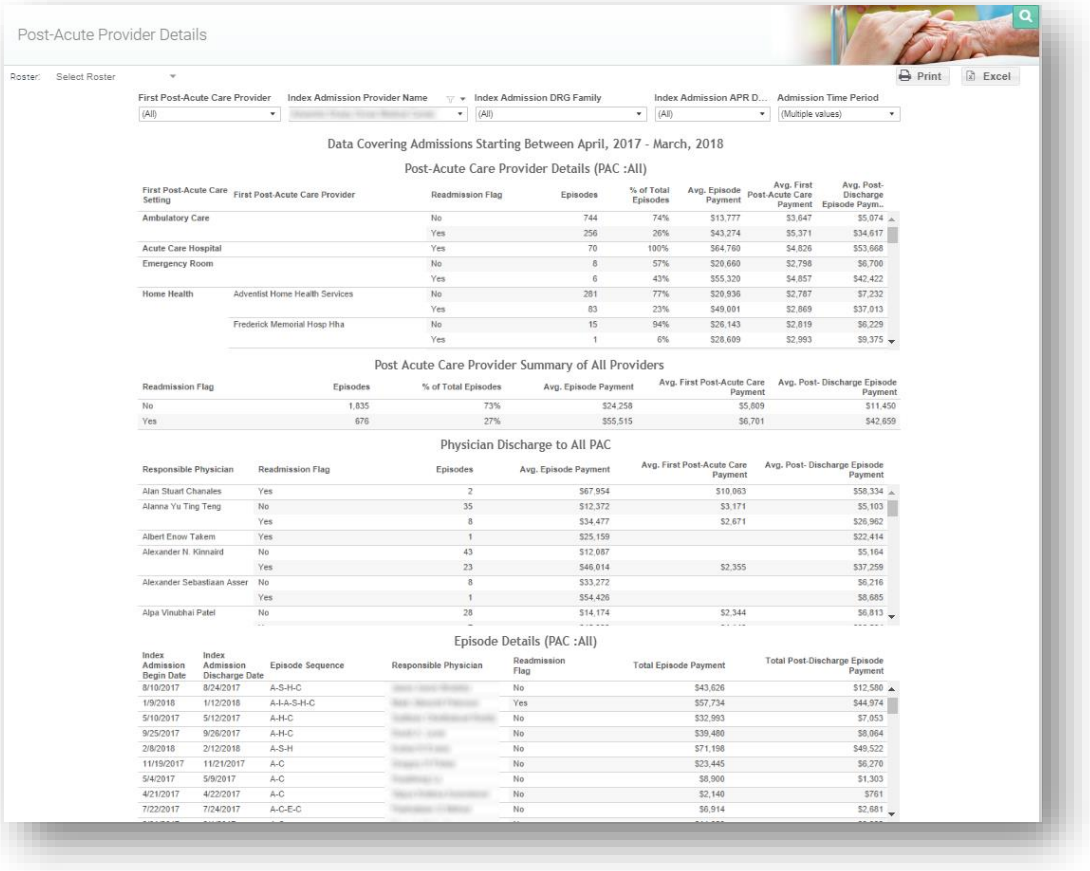
CHART NAME	DESCRIPTION
Avg. Episode Payment	Shows the physician's average episode payments by setting.
Episode Distribution	Provides the distribution of episodes, by percent of total episodes and average episode payment, for those above and below the target price for the selected physician.
Discharge Pattern	Provides the distribution of first post-acute care setting and readmission rates for the selected physician. Selecting a row filters the Episode Details table for that setting.
Discharge Pattern Summary of All Physicians	Provides the distribution of first post-acute care setting and readmission rates for all physicians to allow for comparison.
Episode Details	Provides details on all episodes for the selected physician. Filtering can isolate only those episodes with readmissions.


Physician Details
Roster: Select Roster
Print
Excel
Index Admission Provider Name
Responsible Physician
Index Admission DRG Fam...
Index Admission APR DRG
Admission Time Period
(All)
(All)
(All)
(Multiple values)
Episode Details (Physician : All)
Data Covering Admissions Starting Between May, 2017 - April, 2018
Avg. Episode Payment
$551
$5,188
$1,409
$32,148
$18,639
$4,550
$1,414
Acute Care Hospital Payment
Ambulatory Care Payment
Inpatient Rehab Payment
Emergency Room Payment
Skilled Nursing Facility Payment
Other Payment
Home Health Payment
Episode Distribution
Episode Total Payment
$0
$1,000,000
$2,000,000
$3,000,000
$4,000,000
Total Episode Payment
$68,347
% of Total Episodes Above Target Price
100%
Total Episode Payment
$49,084
0%
20%
40%
60%
80%
100%
% of Total Episodes
Episodes below Target
Episodes above Target
Discharge Pattern (Physican : All)
First Post-Acute Care Setting
Episodes
% of Episodes
Readmission Count
Readmission Rate
Inpatient Rehab 11 35% 5 45%
Skilled Nursing Facility 8 26% 1 13%
Home Health 7 23% 2 29%
Ambulatory Care 4 13% 2 50%
Acute Care Hospital 1 3% 1 100%
Skilled Nursing Facility 6 60% 1 17%
Home Health 2 20% 0 0%
Discharge Pattern Summary of All Physicians
First Post-Acute Care Setting
Episodes
% of Episodes
Readmission Count
Readmission Rate
Skilled Nursing Facility 804 30% 208 26%
Home Health 467 18% 97 21%
Ambulatory Care 1,092 41% 263 24%
Emergency Room 15 1% 8 53%
Acute Care Hospital 75 3% 75 100%
Other 75 3% 2 3%
Grand Total 2,659 100% 690 26%
Readmission Flag
(All)
Episode Details (Physician: All)
Click a value to access episode details
Index Admission Begin Date
Index Admission Discharge Date
Episode Sequence
Index Admission Severity
First Post-Acute Care
Readmission Flag
Readmission APR DRG
Readmission Severity
Total Episode Payment
Total Post-Discharge Episode Pa..
Total Episode Readmission Pa..
6/12/2017 A-S-C 3 : Major SNF No No Readmissi.. $17,284 $7,505 $0
3/20/2018 3/22/2018 A-C 3 : Major Community No No Readmissi.. $24,569 $6,388 $0
2/9/2018 2/21/2018 A-C 3 : Major Community Yes 720 :Septice... 3 :Major $73,522 $64,386 $12,992
9/23/2017 9/28/2017 A-C 3 : Major Community No No Readmissi.. $12,889 $2,879 $0
1/23/2018 1/28/2018 A-C 3 : Major Community Yes 245 :Inflamm... 3 :Major $22,700 $14,234 $9,089
9/20/2017 9/26/2017 A-S-T 4 : Extreme SNF No No Readmissi.. $52,402 $37,099 $0
4/2/2018 4/8/2018 A-C 3 : Major Community No No Readmissi.. $20,372 $4,035 $0
9/20/2017 9/21/2017 A-C 2 : Moderate Community No No Readmissi.. $21,655 $2,641 $0
3 items selected · SUM of Measure Values: 24,788
6/12/2017
Episode Details

5.4.2 Post-Acute Provider Details

Post-Acute Provider Details shows the key episode metrics of a particular post-acute care provider. When accessed directly via the menu, this report will show all first PAC settings including settings that will not include provider information (Ambulatory Care, Acute Care Hospital, Emergency Room). This report shows:

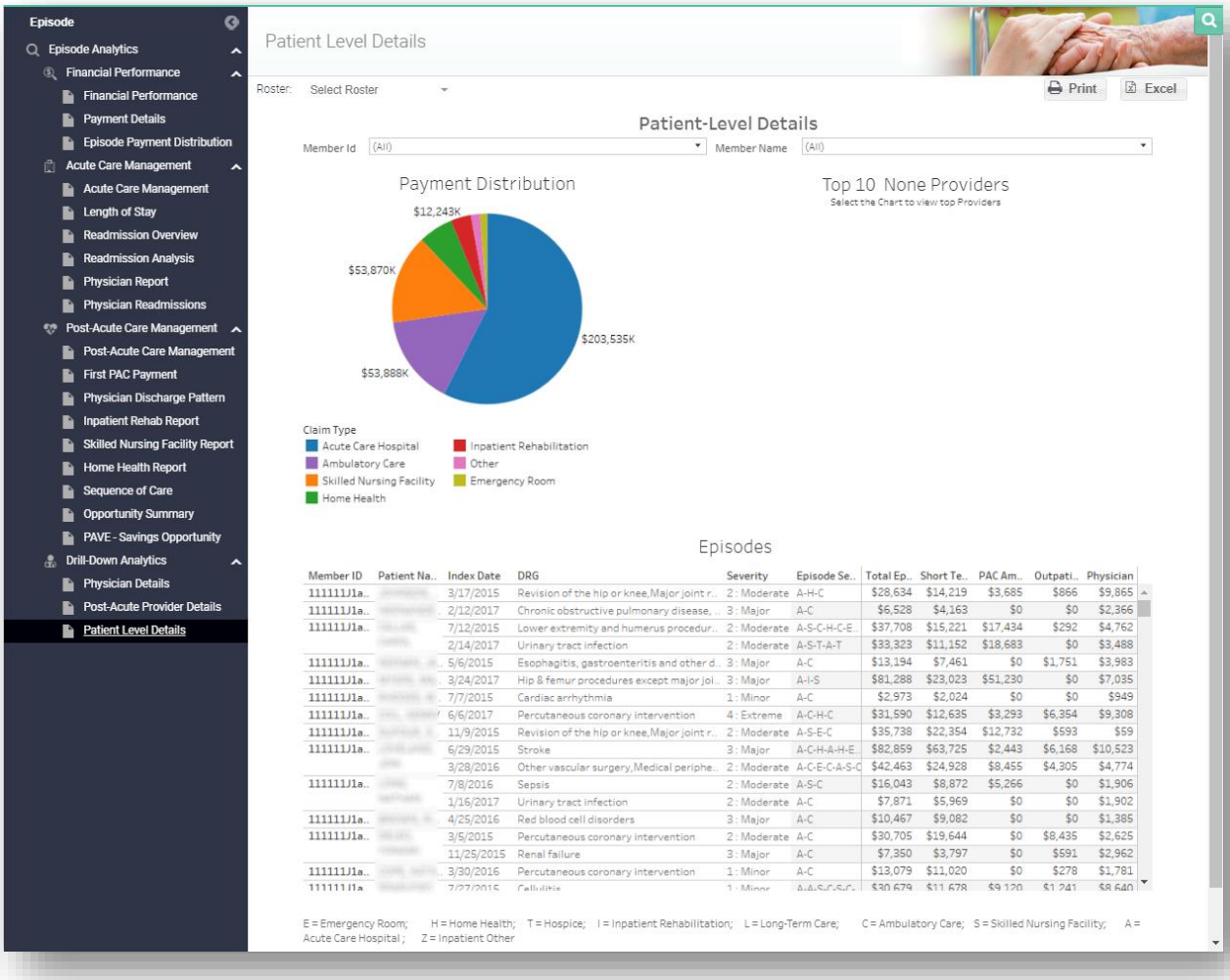
CHART NAME	DESCRIPTION
Post-Acute Provider Details	Details the number of episodes, readmissions, and episode payments related to the selected post-acute provider.
Post-Acute Provider Summary of All Providers	Details the number of episodes and episode payments related to all post-acute providers categorized by presence of a readmission.
Physician Discharge to All PAC	Identifies the physicians who discharged to the selected post-acute provider, along with the volume of episodes and episode payments.
Episode Details	Lists all episodes for the Post-Acute Provider when it was the first PAC setting.



5.4.3 Patient-Level Details

Patient-Level Details shows the key episode metrics of a particular patient. This report shows:

CHART NAME	DESCRIPTION
Payment Distribution	Provides the distribution of episode payment, for a patient or roster of patients by care setting.
Top 10 Providers	Provides the claim count and paid amount across episodes for the patient or roster of patients for the top 10 providers across all care settings.
Episodes	Provides details on all episodes for the selected patient or roster of patient including index APR DRG severity. Drill through accesses all patient claims during the episode



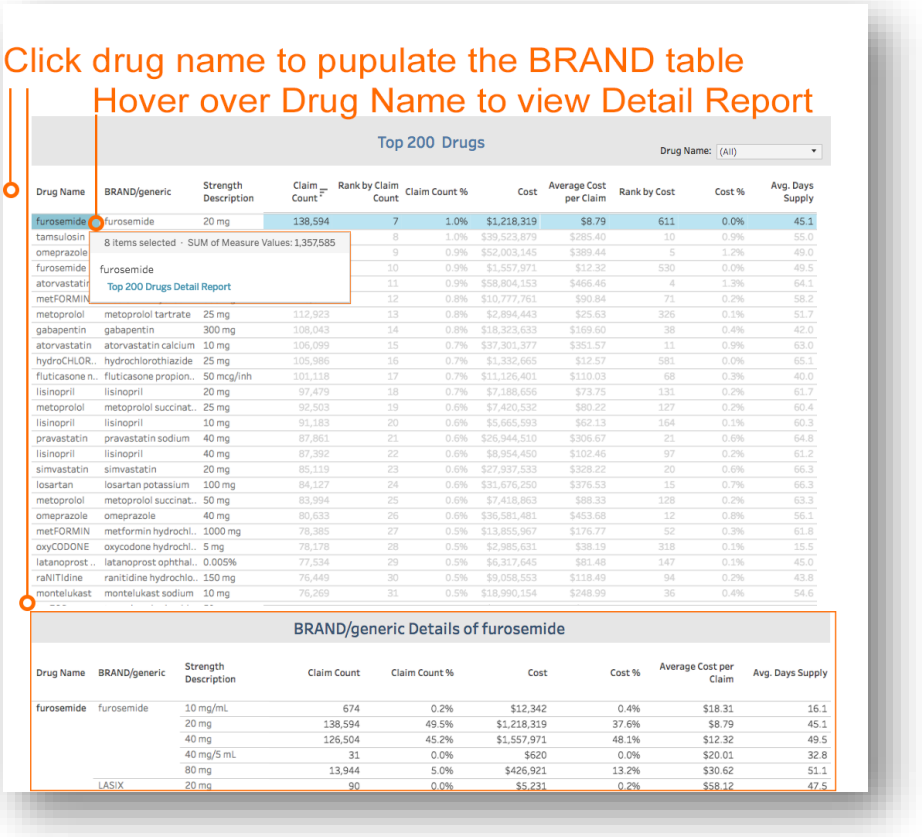
6 PHARMACY ANALYTICS

The Pharmacy module contains several reports that provide prescription drug utilization by volume, payment, high-risk medications, and top therapeutic category, among others. This module contains both detailed reports that allow for drill-through down to patient-level claims data, as well as summary reports. Pharmacy Analytics includes pharmacy utilization for Part B and D prescription drugs. For detailed information about the data sources used in this module, refer to the topic in CCLF Data Basics titled "CCLF".

Part D pharmacy payments are estimated using the published average wholesale price (AWP) for the respective medication.

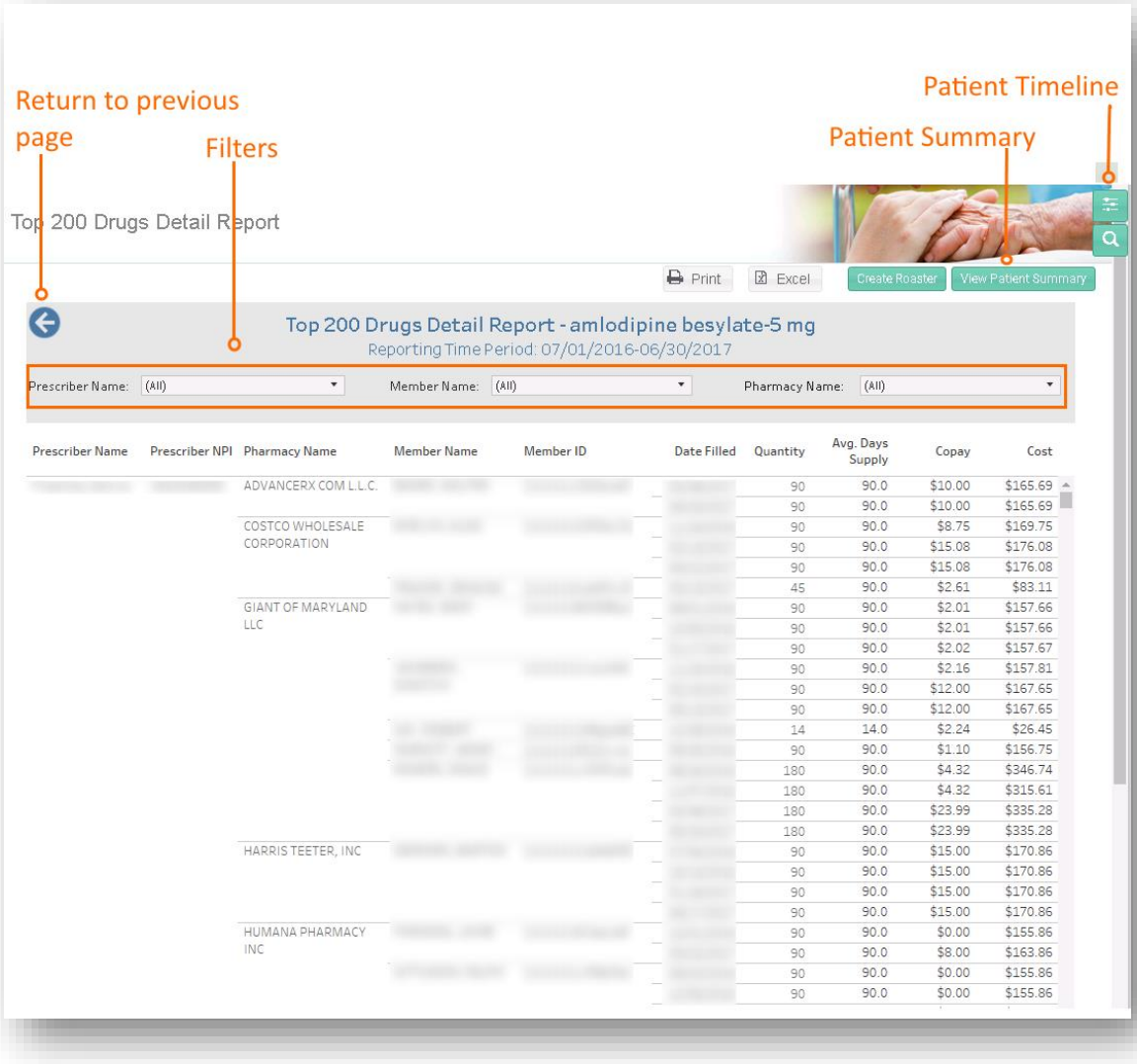
6.1 Top 200 Drugs

Top 200 Drugs report outlines drugs (by drug name and brand/generic formulation) by claim count, ingredient cost, cost per claim, and average day supply. Click the drug name or BRAND/generic to populate the **BRAND/generic Detail report.** Hover over the Drug Name or Brand/generic to access the **Top 200 Drugs Detail Report**.



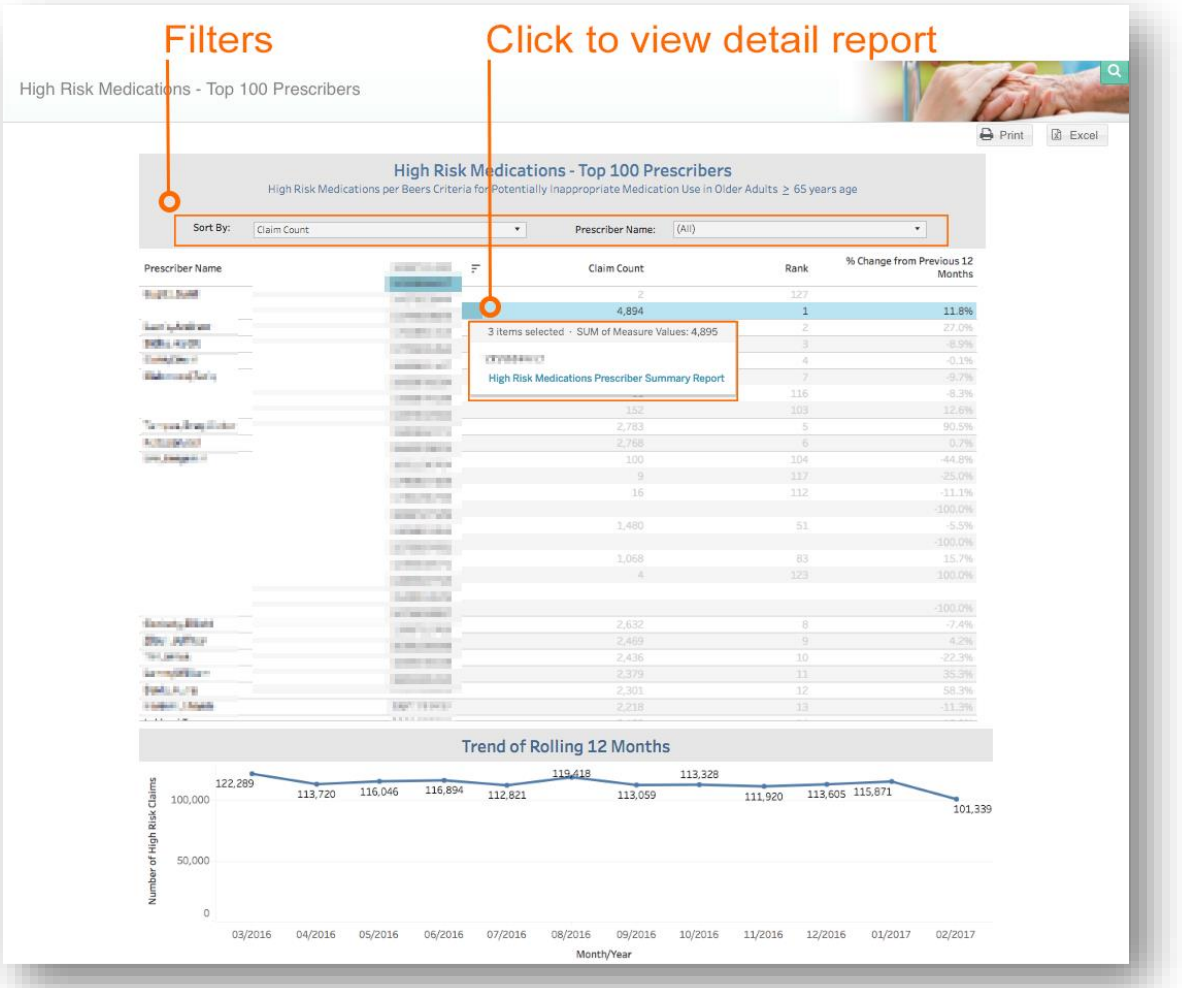
6.1.1 Top 200 Drugs Detail Report

Top 200 Drug Detail report lists all claims for the selected drug. You can filter the report by prescriber name, member name, and pharmacy name. Click on Patient Summary or Patient Timeline to see more information on the patient or click on the back button to return to previous page.



6.2 High Risk Medications – Top 100 Prescribers

High Risk Medications Top 100 Prescribers identifies the top 100 prescribers that are prescribing medications identified as potentially high-risk according to Beers criteria for potentially inappropriate medication use in older adults (> 65 years of age or older). The report displays the number of high risk medication claims by prescriber and the change from the previous 12 months. Click on Prescriber Name or Prescriber NPI to view detailed reports.



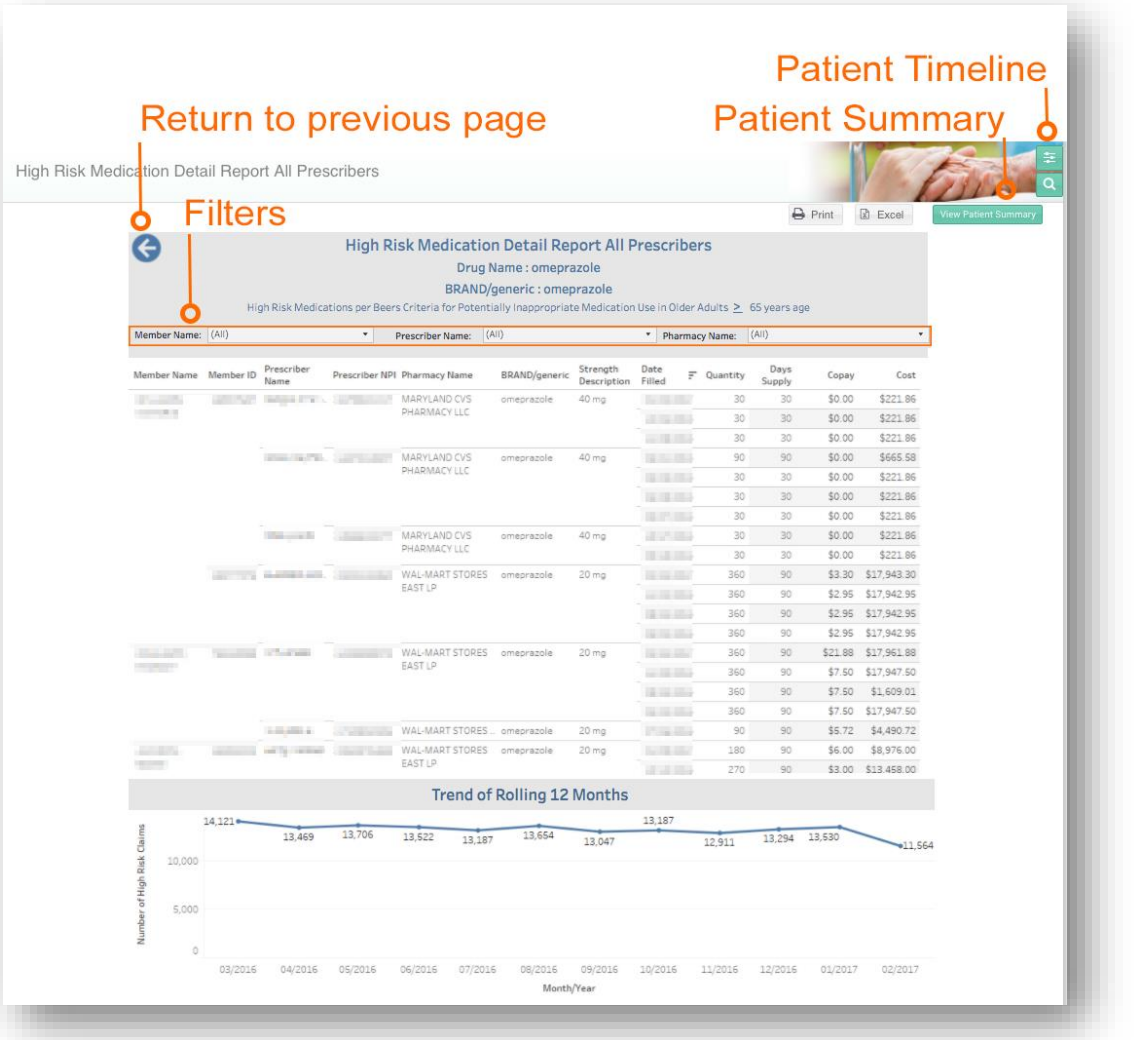
6.2.1 High Risk Medications Prescriber Summary

High Risk Medication Prescriber Summary lists the medications identified as potentially high risk according to Beers criteria for potentially inappropriate medication use in older adults (> 65 years of age or older) by selected Prescriber. The report lists the medication prescribed and corresponding claim count. To access this report, select the **High Risk Medication Top 100 Prescribers** and click on the Provider Name. Click on the Drug Name or BRAND/generic to view the **High Risk Medication Detail Report by Prescriber** and **High Risk Medication Detail Claims Report**. Patient-level claims information is available by clicking on Patient Summary and Patient Timeline.

6.2.2 High Risk Medication Detail Report All Prescribers

High Risk Medication Detail Report All Prescribers report provides detailed claims information for all prescribers for the selected high-risk medication. The report can be sorted by member name, prescriber name, pharmacy name, among other fields. The trend graph illustrates the number of claims for specified drug across all prescribers by month.

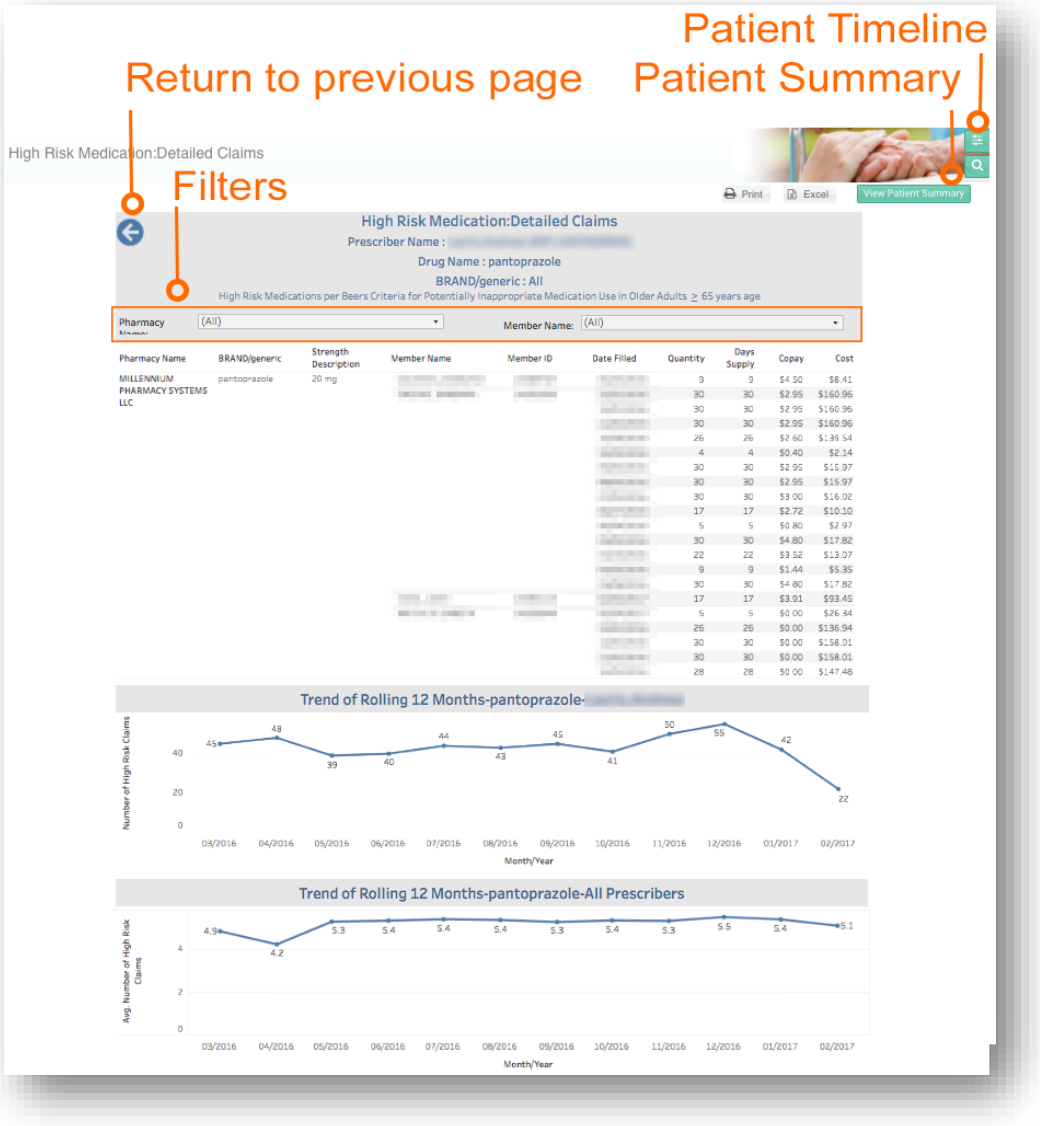
To access this report, select a drug name from the **High-Risk Medications Prescriber Summary** report and click on the **High Risk Medication Detail Report All Prescribers**. Patient-level claims information is available by clicking on Patient Summary and Patient Timeline. Click the back button to return the previous report.



6.2.3 High Risk Medication Detailed Claim by Prescriber

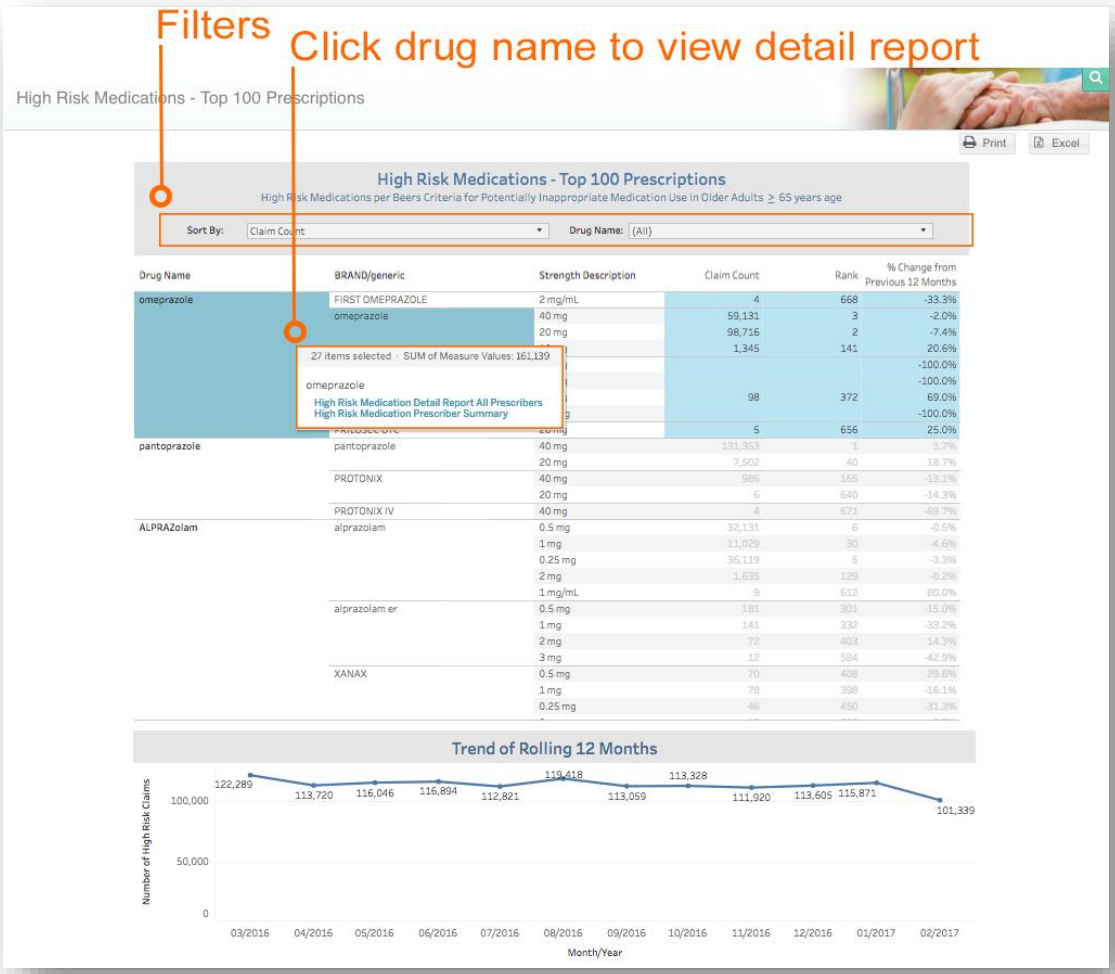
High Risk Medication Detailed Claim by Prescriber report provides detail claims information for a specific high-risk medication and prescriber including the Pharmacy name, Member Name, date filled, ingredient cost, and patient copayment. The first trend graph illustrates the number of claims for specified drug prescribed by the selected prescriber for the last 12 months. The second trend graph illustrates the average number of claims for the same drug across all prescribers by month.

To access this report, select a drug from the **High-Risk Medications Prescriber Summary** report click on the **High Risk Medications Detailed Claim by Prescriber** report. Patient-level claims information is available by clicking on Patient Summary and Patient Timeline. Click on the back button to return to the previous report.

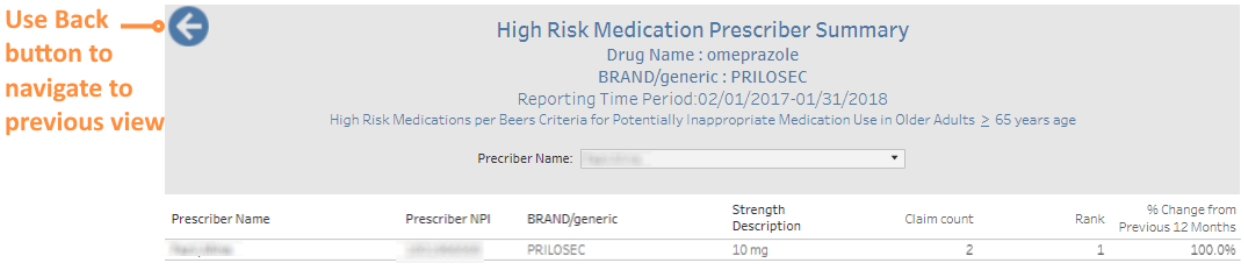


6.3 High-Risk Medications – Top 100 Prescriptions

High-Risk Medications – Top 100 Prescriptions report displays top 100 high-risk medications identified as potentially high-risk according to Beers criteria for potentially inappropriate medication use in older adults (> 65 years of age or older). This report contains the drug name, brand/generic formulation, strength, claim count and percent change in claim count from previous 12 months. The trend graph illustrates the number of claims across the top 100 high-risk medications by month.

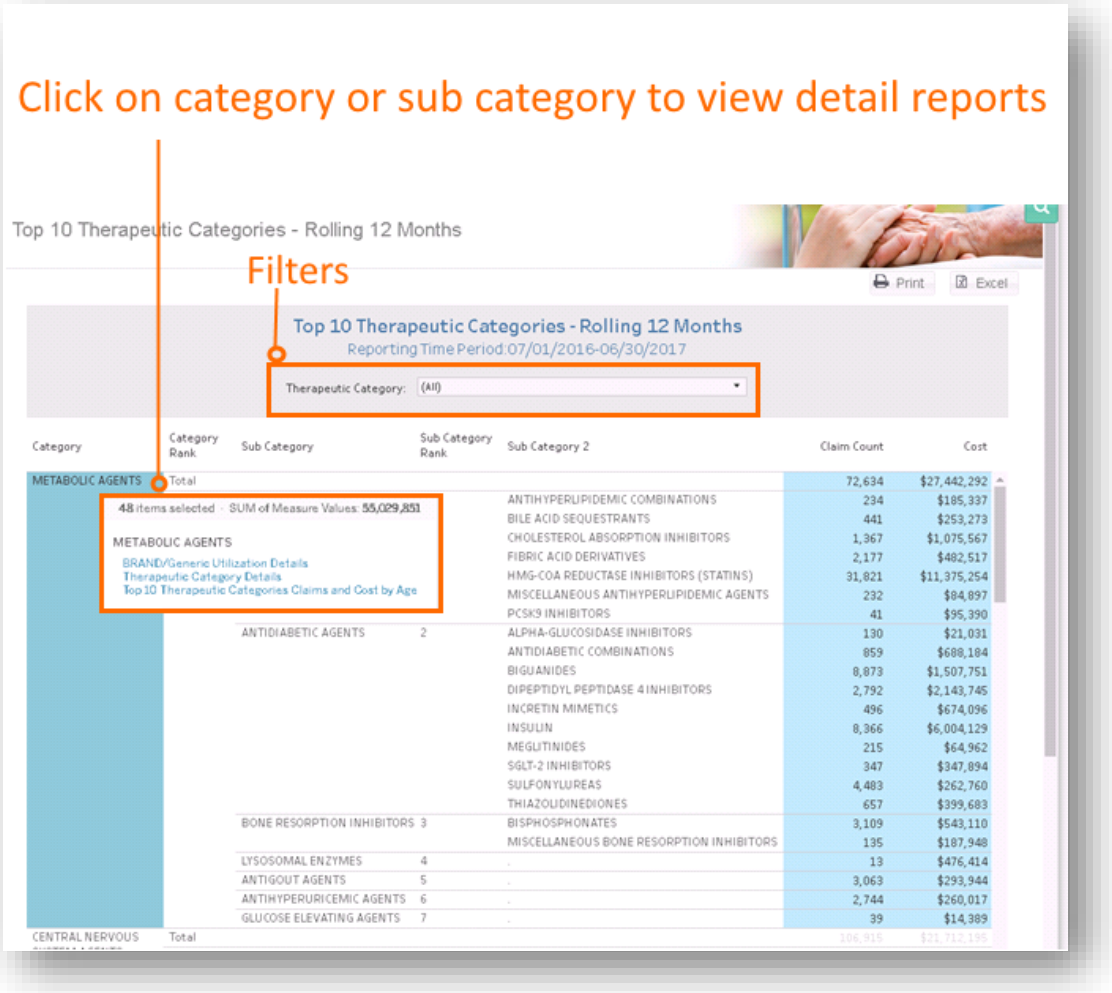


From this report, select a drug to access the **High Risk Medications Prescriber Summary** report. From this Summary Report, additional information can be access in the **High Risk Medications Detail Report All Prescribers** and **High Risk Medication Detailed Claim by Prescriber** reports. Click on the back button to return to the previous report.



6.4 Top 10 Therapeutic Categories: Rolling 12 Months

Top 10 Therapeutic Categories report provides a list of therapeutic categories and subcategories with corresponding claim count and cost. Click on the therapeutic category to view more detailed reports.



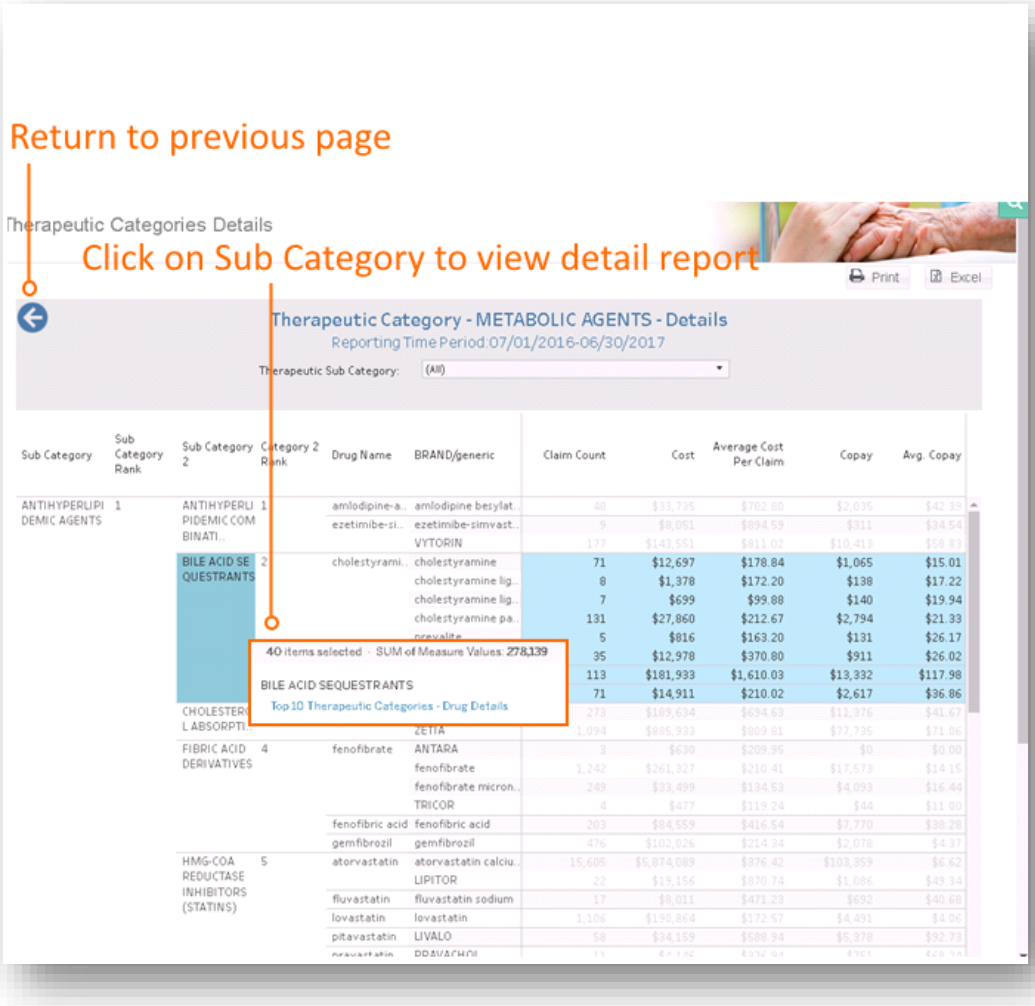
Category	Category Rank	Sub Category	Sub Category Rank	Sub Category 2	Claim Count	Cost
METABOLIC AGENTS	Total				72,634	$27,442,292
				ANTIHYPERLIPIDEMIC COMBINATIONS	234	$185,337
				BILE ACID SEQUESTRANTS	441	$253,273
				CHOLESTEROL ABSORPTION INHIBITORS	1,367	$1,075,567
				FIBRIC ACID DERIVATIVES	2,177	$482,517
				HMG-COA REDUCTASE INHIBITORS (STATINS)	31,921	$11,375,254
				MISCELLANEOUS ANTIHYPERLIPIDEMIC AGENTS	232	$84,897
				PCSK9 INHIBITORS	41	$95,390
		ANTIDIABETIC AGENTS	2	ALPHA-GLUCOSIDASE INHIBITORS	130	$21,031
				ANTIDIABETIC COMBINATIONS	859	$688,184
				BIGUANIDES	8,873	$1,507,751
				DIPEPTIDYL PEPTIDASE 4 INHIBITORS	2,792	$2,143,745
				INCRETIN MIMETICS	496	$674,096
				INSULIN	8,366	$6,004,129
				MEGLITINIDES	215	$64,962
				SGLT-2 INHIBITORS	347	$347,894
				SULFONYLUREAS	4,483	$262,760
				THIAZOLIDINEDIONES	657	$399,683
		BONE RESORPTION INHIBITORS	3	BISPHOSPHONATES	3,109	$543,110
				MISCELLANEOUS BONE RESORPTION INHIBITORS	135	$187,948
		LYSOSOMAL ENZYMES	4	.	13	$476,414
		ANTIGOUT AGENTS	5	.	3,063	$293,944
		ANTIHYPERURICEMIC AGENTS	6	.	2,744	$260,017
		GLUCOSE ELEVATING AGENTS	7	.	39	$14,389
CENTRAL NERVOUS	Total				106,915	$21,712,196

6.4.1 Top Ten Therapeutic Categories: BRAND/Generic Utilization

Top Ten Therapeutic Categories: BRAND/Generic Utilization report presents the claim counts and cost information for each of the top 10 therapeutic categories, divided by brand and generic formulations. The proportion of all drugs prescribed within a therapeutic category by brand and generic formulation is presented in the chart. This report contains sub-reports that provide detail at the drug Category, Sub Category, Sub Category 2, and Drug Name level. To access this report, select the category or subcategory from **Top Ten Categories Rolling 12 Month report.** Additional drill-throughs are available until the Drug Name level. At that point, click on Patient Summary or Timeline to view patient-level information.

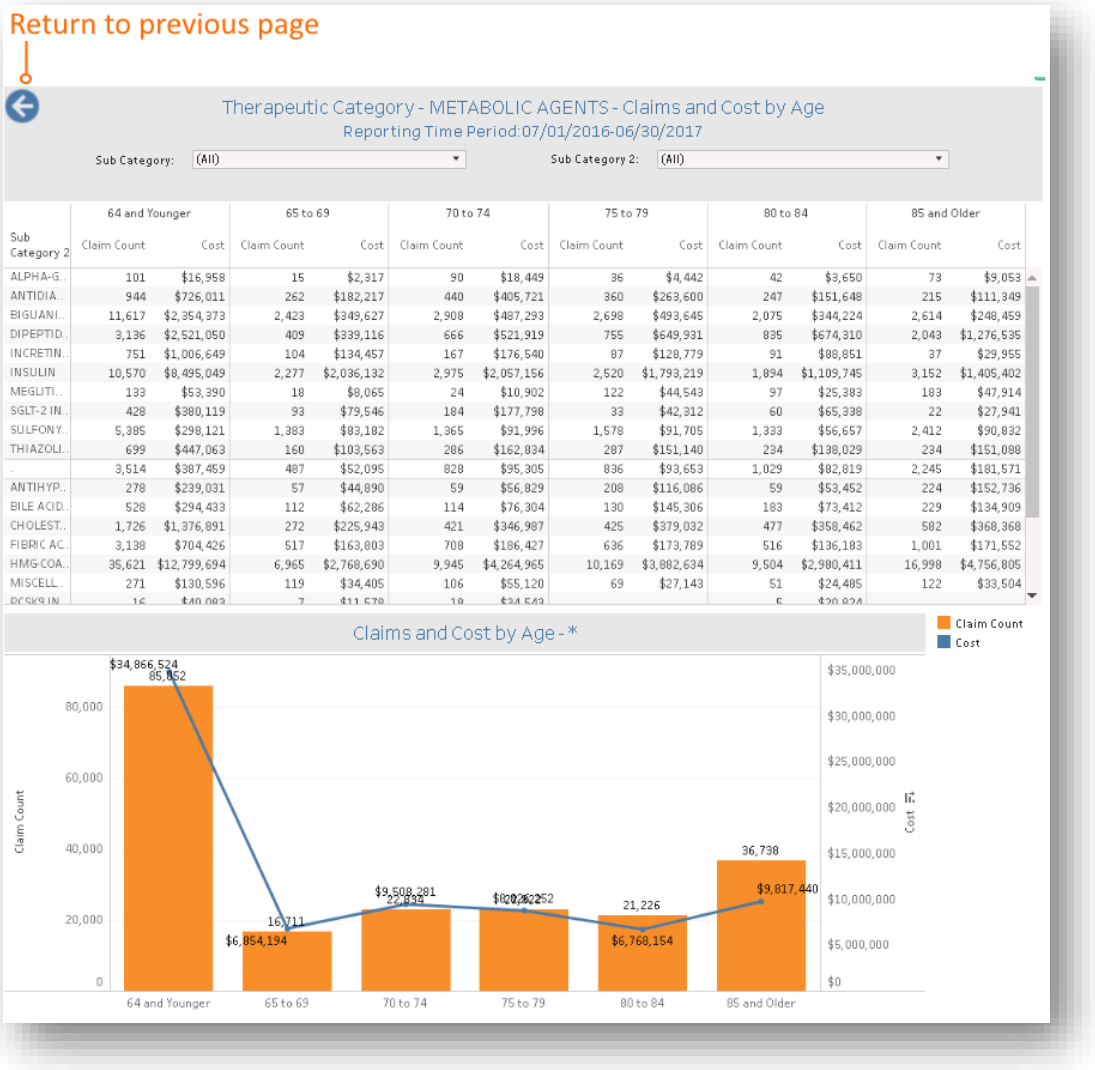
6.4.2 Top Ten Therapeutic Category: [Drug Name] Details

Therapeutic Category Details report presents detailed claim information for the selected therapeutic category including cost, claim count, and copay information. To access this report, select the category or subcategory from **Top Ten Categories Rolling 12 Month** report.



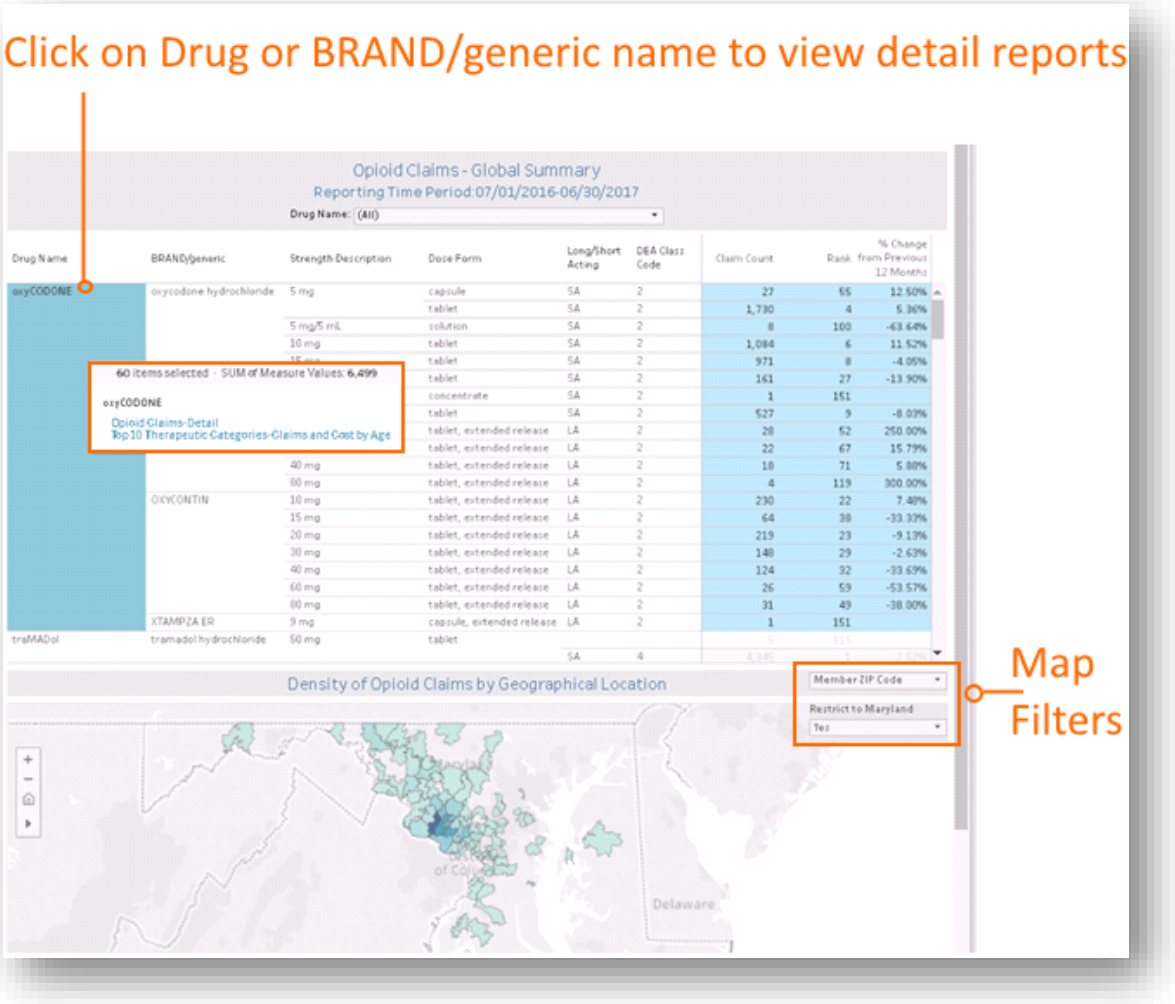
6.4.3 Top Ten Therapeutic Categories: Claims and Cost by Age

Top Ten Therapeutic Categories: Claims and Cost Age report presents the claim counts and cost for each therapeutic category, divided by patient age category. The claim count and cost of the drug by age category is shown in the chart. To access this report, select the category or subcategory from **Top Ten Categories Rolling 12 Month report.**



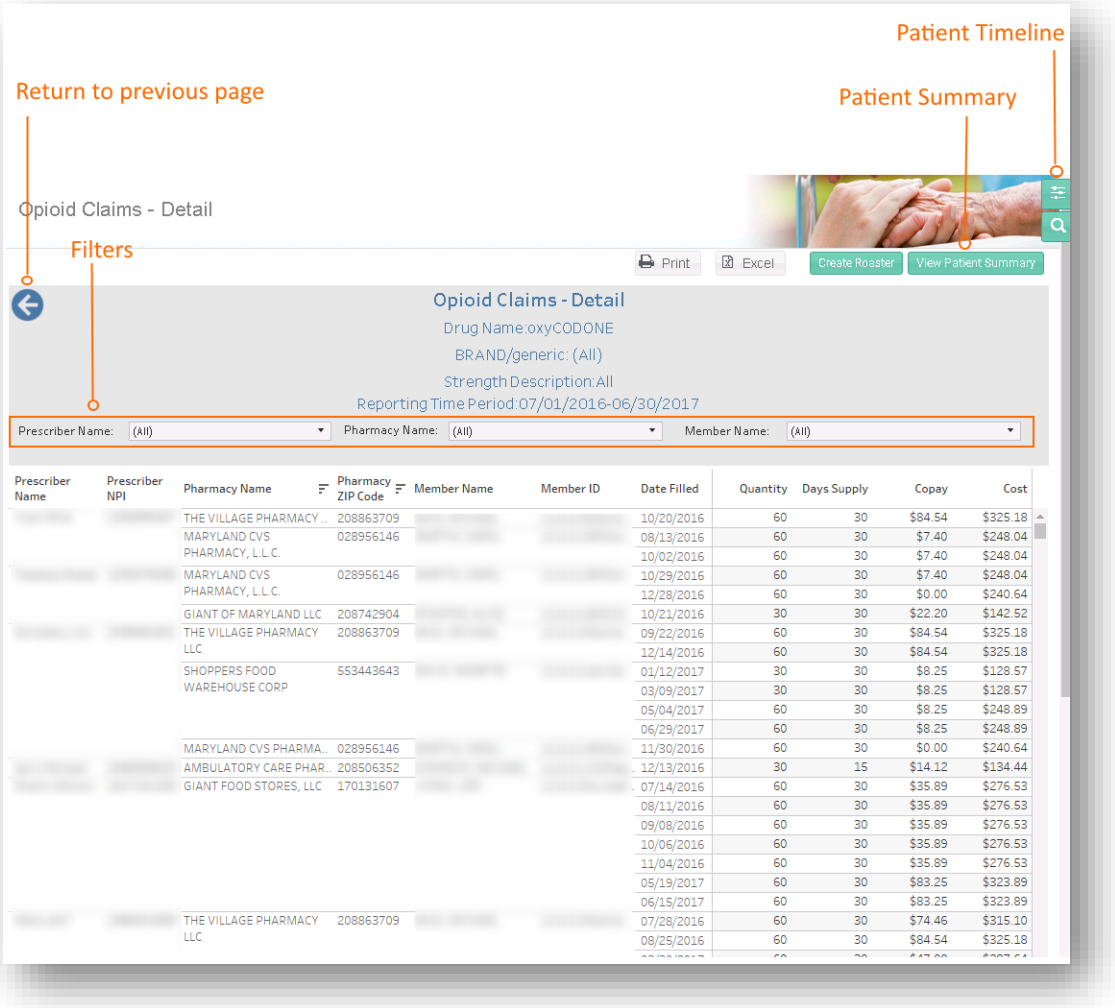
6.5 Opioid Claims-Global Summary

Opioid Claims-Global Summary provides the utilization of opioids by claim count. A map of the density/frequency of opioid claims by geographical location is displayed by member, prescriber and pharmacy zip codes. The density map can be restricted to the State of Maryland or nationally. Click on drug name or BRAND/Generic formulation to view detailed reports.



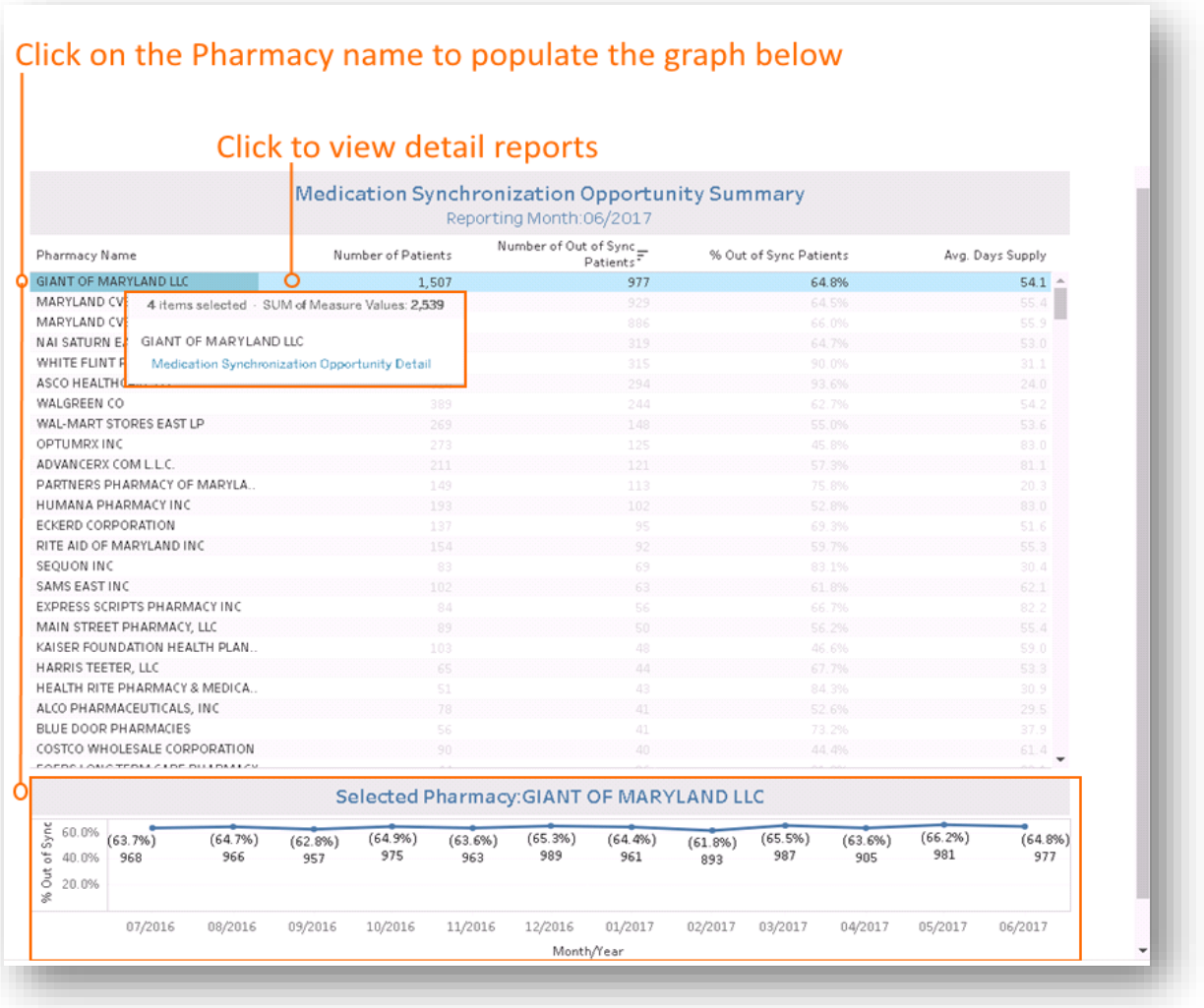
6.5.1 Opioid Claims Detail

Opioid Claims Detail report provides detailed claim information for the selected drug and allows for filtering prescriber, pharmacy and member name. To access this report, click on the drug name or BRAND/generic from **Opioid Claims Global** report.



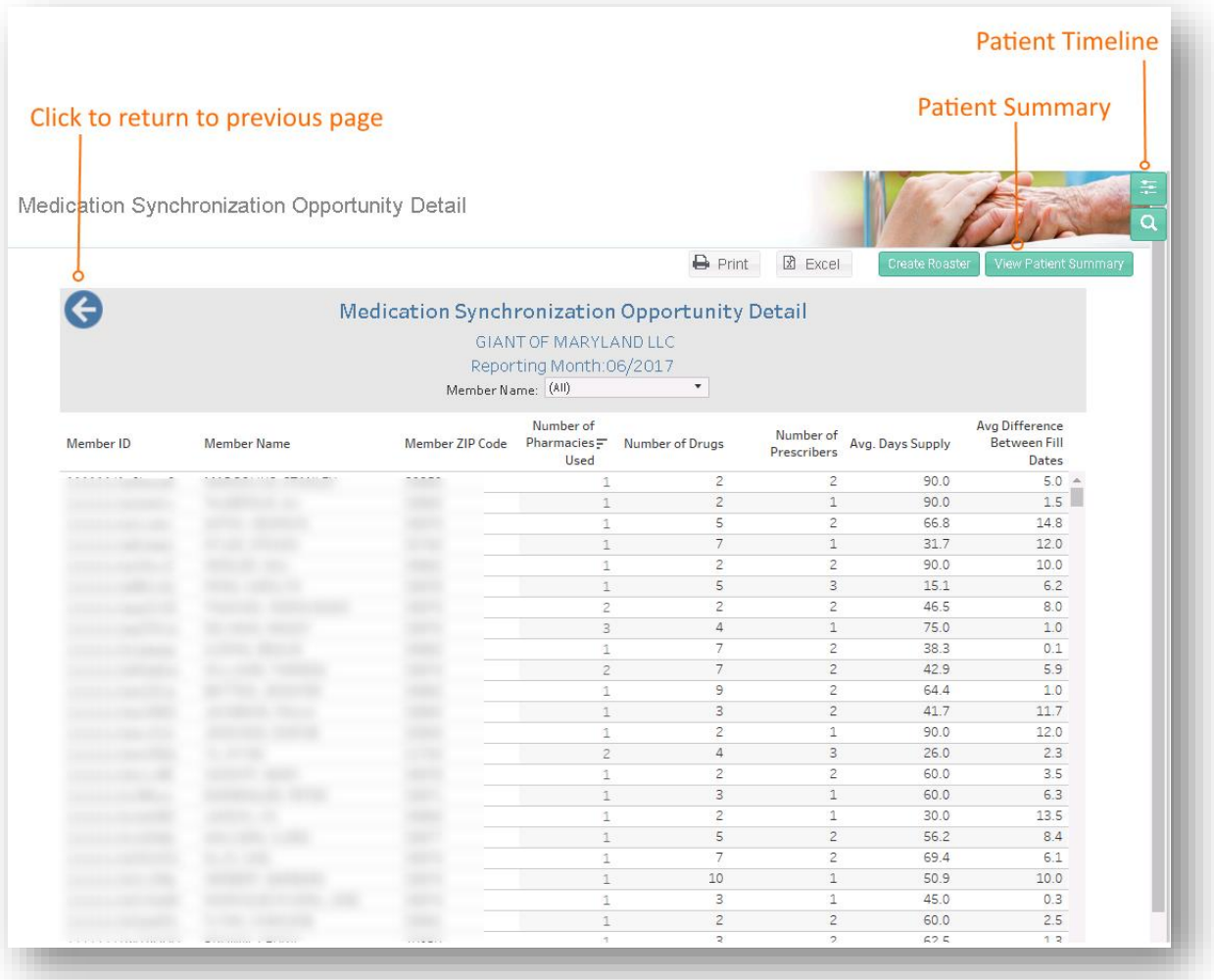
6.6 Medication Synchronization Opportunity Summary

Medication Synchronization Opportunity Summary ranks the pharmacies by number and proportion of patients who did not receive medication reconciliation. Click on **Medication Synchronization Opportunity Detail** to access patient-level details.



6.6.1 Medication Synchronization Opportunity Detail

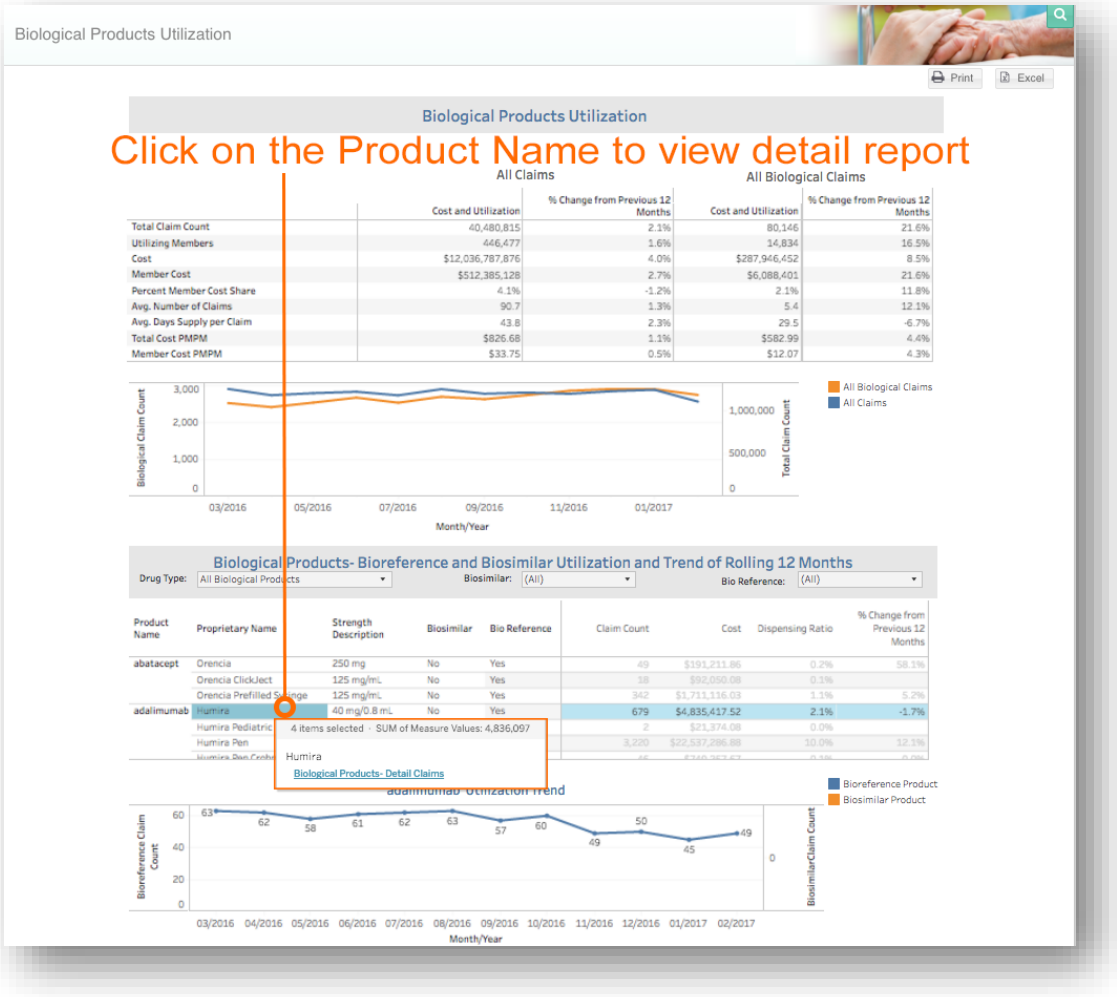
Medication Synchronization Opportunity Detail report lists patients who have not received medication synchronization, or have their prescriptions filled on multiple dates each month or every three months using multiple pharmacies. To access this report, click on the Pharmacy Name from the **Medication Synchronization Opportunity Summary**. Click on **Patient Summary** and **Patient Timeline** to access patient-level detail.



Member ID	Member Name	Member ZIP Code	Number of Pharmacies Used	Number of Drugs	Number of Prescribers	Avg. Days Supply	Avg Difference Between Fill Dates
[redacted]	[redacted]	[redacted]	1	2	2	90.0	5.0
[redacted]	[redacted]	[redacted]	1	2	1	90.0	1.5
[redacted]	[redacted]	[redacted]	1	5	2	66.8	14.8
[redacted]	[redacted]	[redacted]	1	7	1	31.7	12.0
[redacted]	[redacted]	[redacted]	1	2	2	90.0	10.0
[redacted]	[redacted]	[redacted]	1	5	3	15.1	6.2
[redacted]	[redacted]	[redacted]	2	2	2	46.5	8.0
[redacted]	[redacted]	[redacted]	3	4	1	75.0	1.0
[redacted]	[redacted]	[redacted]	1	7	2	38.3	0.1
[redacted]	[redacted]	[redacted]	2	7	2	42.9	5.9
[redacted]	[redacted]	[redacted]	1	9	2	64.4	1.0
[redacted]	[redacted]	[redacted]	1	3	2	41.7	11.7
[redacted]	[redacted]	[redacted]	1	2	1	90.0	12.0
[redacted]	[redacted]	[redacted]	2	4	3	26.0	2.3
[redacted]	[redacted]	[redacted]	1	2	2	60.0	3.5
[redacted]	[redacted]	[redacted]	1	3	1	60.0	6.3
[redacted]	[redacted]	[redacted]	1	2	1	30.0	13.5
[redacted]	[redacted]	[redacted]	1	5	2	56.2	8.4
[redacted]	[redacted]	[redacted]	1	7	2	69.4	6.1
[redacted]	[redacted]	[redacted]	1	10	1	50.9	10.0
[redacted]	[redacted]	[redacted]	1	3	1	45.0	0.3
[redacted]	[redacted]	[redacted]	1	2	2	60.0	2.5
[redacted]	[redacted]	[redacted]	1	3	2	62.5	1.3

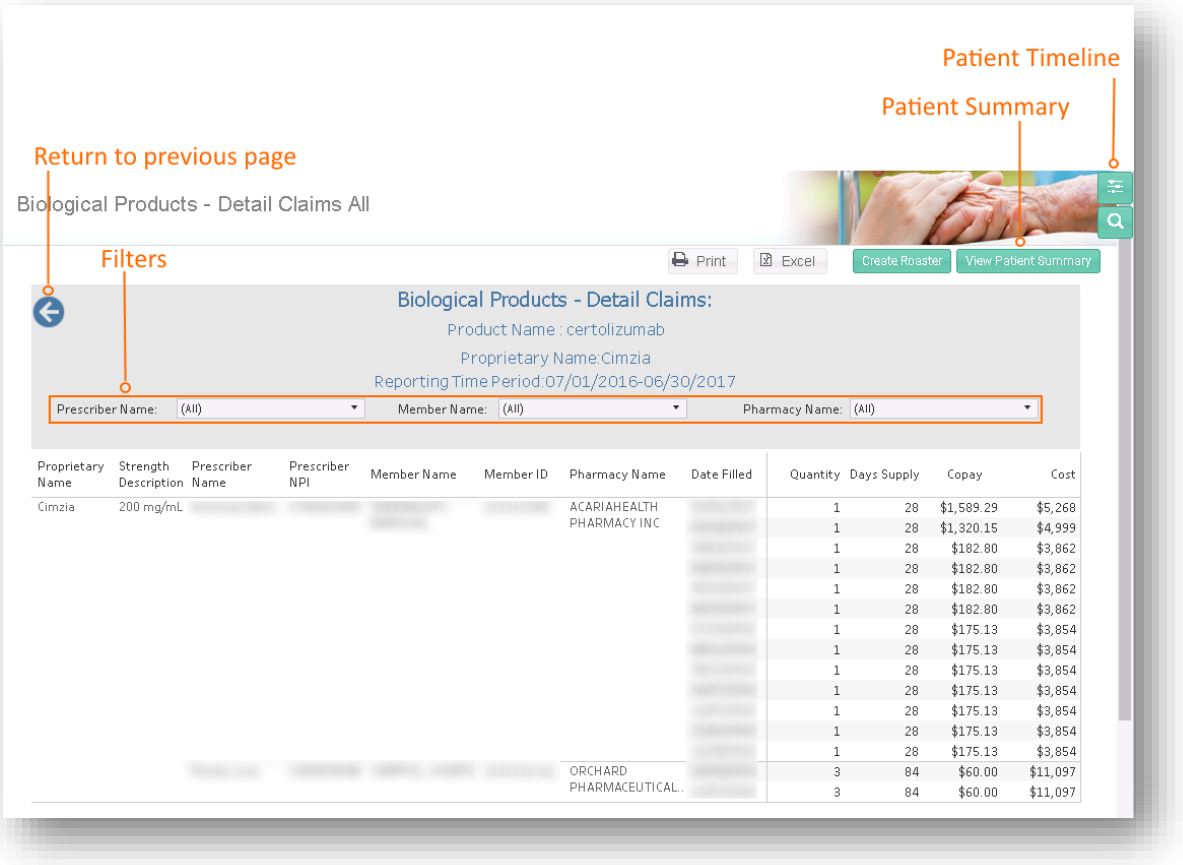
6.7 Biological Products Utilization

Biological Products Utilization provides cost and utilization information for all biological products. In the chart, utilization is compared for all claims (blue) and biological claims (orange). Click on Proprietary Name or Strength Description to access patient-level detailed reports.



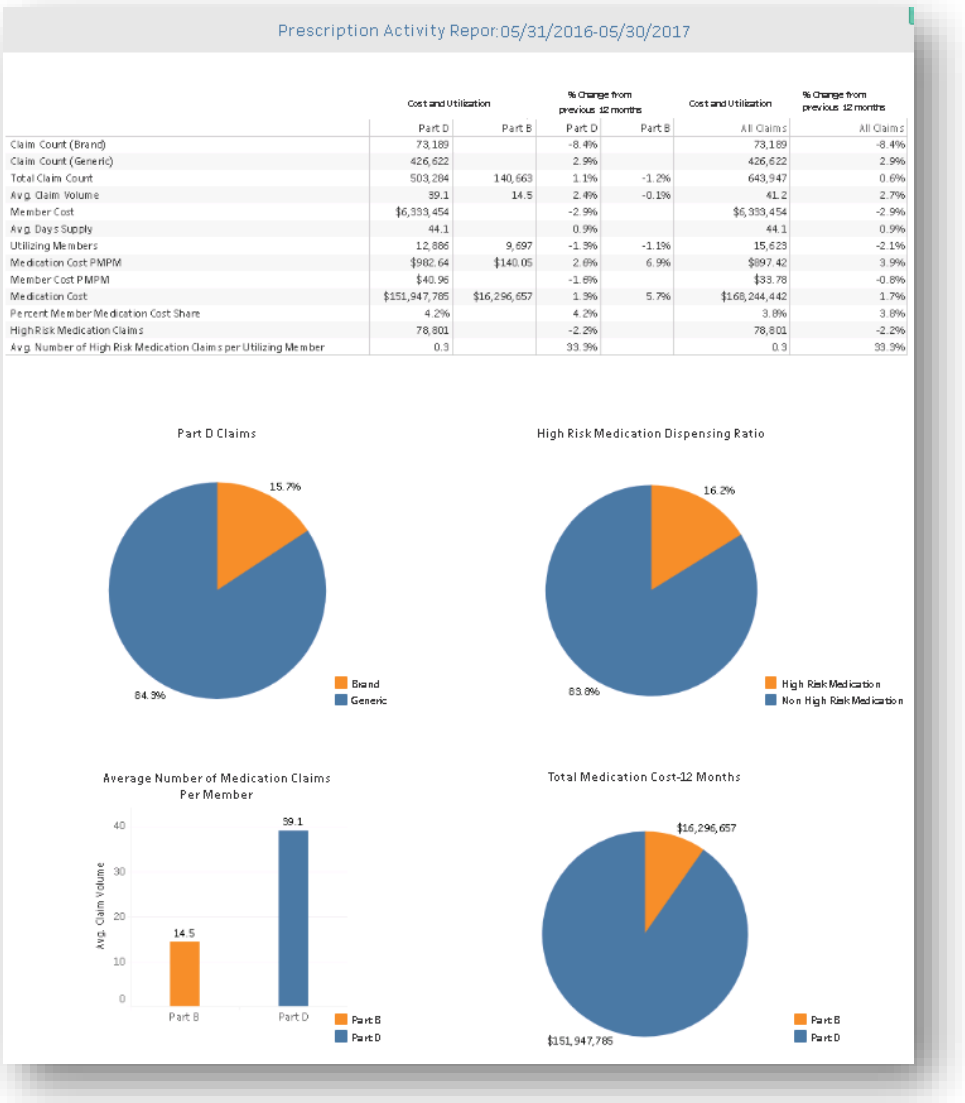
6.7.1 Biological Products Detail Claims All

Biological Products Detail Claims All report lists all claims for the biological products selected from the **Biological Product Utilization** report. The report can be sorted by cost, prescriber name, member name, and pharmacy name.



6.8 Prescription Activity Report

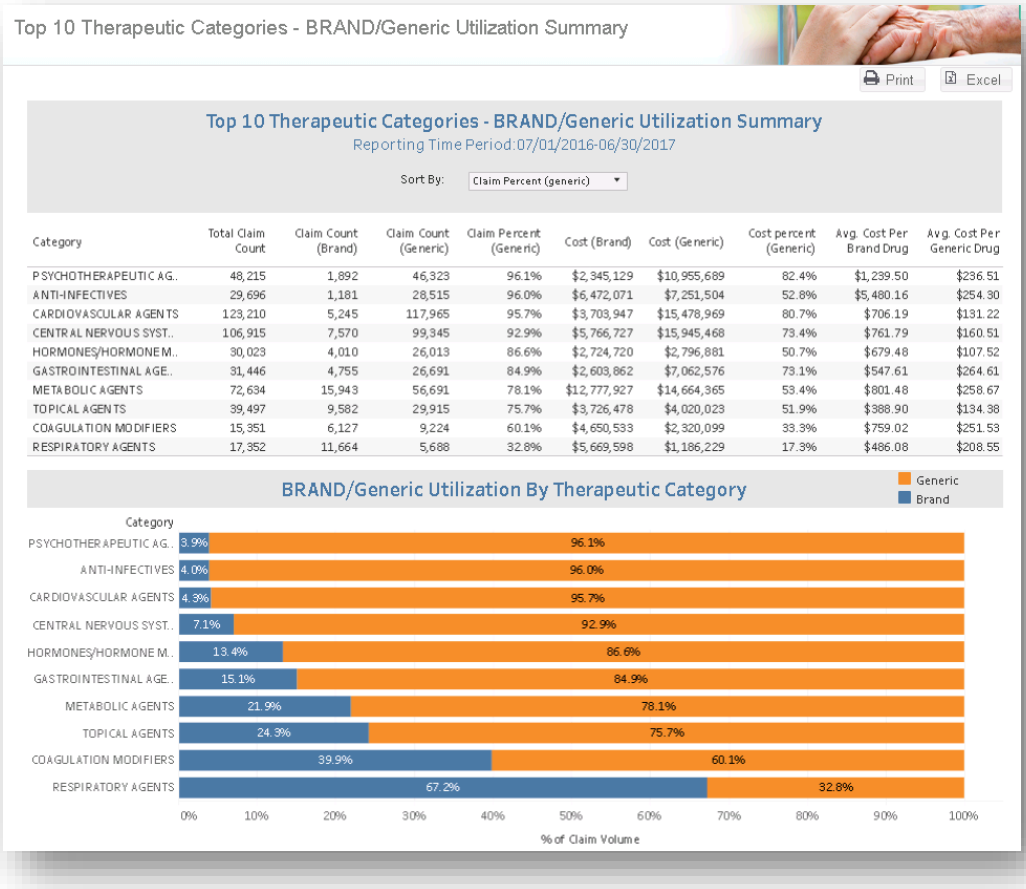
Prescription Activity Report provides a summary of cost and utilization for all claims categorized by Part D and Part B. Variables of interest include the count of brand and generic drugs (for Part D), utilization measures such as average volume and day supply, and cost measures such as average PMPM for ingredient cost and patient copayment. The pie charts show the distribution of claims and medication cost by Part B and Part D drug, as well as number of Part D claims by brand and generic formulation, and proportion of high-risk and non-high-risk drugs dispensed.



	Cost and Utilization		% Change from previous 12 months		Cost and Utilization	% Change from previous 12 months
	Part D	Part B	Part D	Part B	All Claims	All Claims
Claim Count (Brand)	73,189		-8.4%		73,189	-8.4%
Claim Count (Generic)	426,622		2.9%		426,622	2.9%
Total Claim Count	503,284	140,663	1.1%	-1.2%	643,947	0.6%
Avg. Claim Volume	39.1	14.5	2.4%	-0.1%	41.2	2.7%
Member Cost	$6,333,454		-2.9%		$6,333,454	-2.9%
Avg. Days Supply	44.1		0.9%		44.1	0.9%
Utilizing Members	12,886	9,697	-1.3%	-1.1%	15,623	-2.1%
Medication Cost PMPM	$982.64	$140.05	2.6%	6.9%	$897.42	3.9%
Member Cost PMPM	$40.96		-1.6%		$33.78	-0.8%
Medication Cost	$151,947,785	$16,296,657	1.3%	5.7%	$168,244,442	1.7%
Percent Member Medication Cost Share	4.2%		4.2%		3.8%	3.8%
High Risk Medication Claims	78,801		-2.2%		78,801	-2.2%
Avg. Number of High Risk Medication Claims per Utilizing Member	0.3		33.3%		0.3	33.3%

6.9 Top Ten Therapeutic Categories - BRAND/Generic Utilization Summary

Top Ten Therapeutic Categories – BRAND/ Generic Utilization Summary report presents the claim counts and cost information for each of the top 10 therapeutic categories, divided by brand and generic formulations. The proportion of all drugs prescribed within a therapeutic category by brand and generic formulation is presented in the chart.

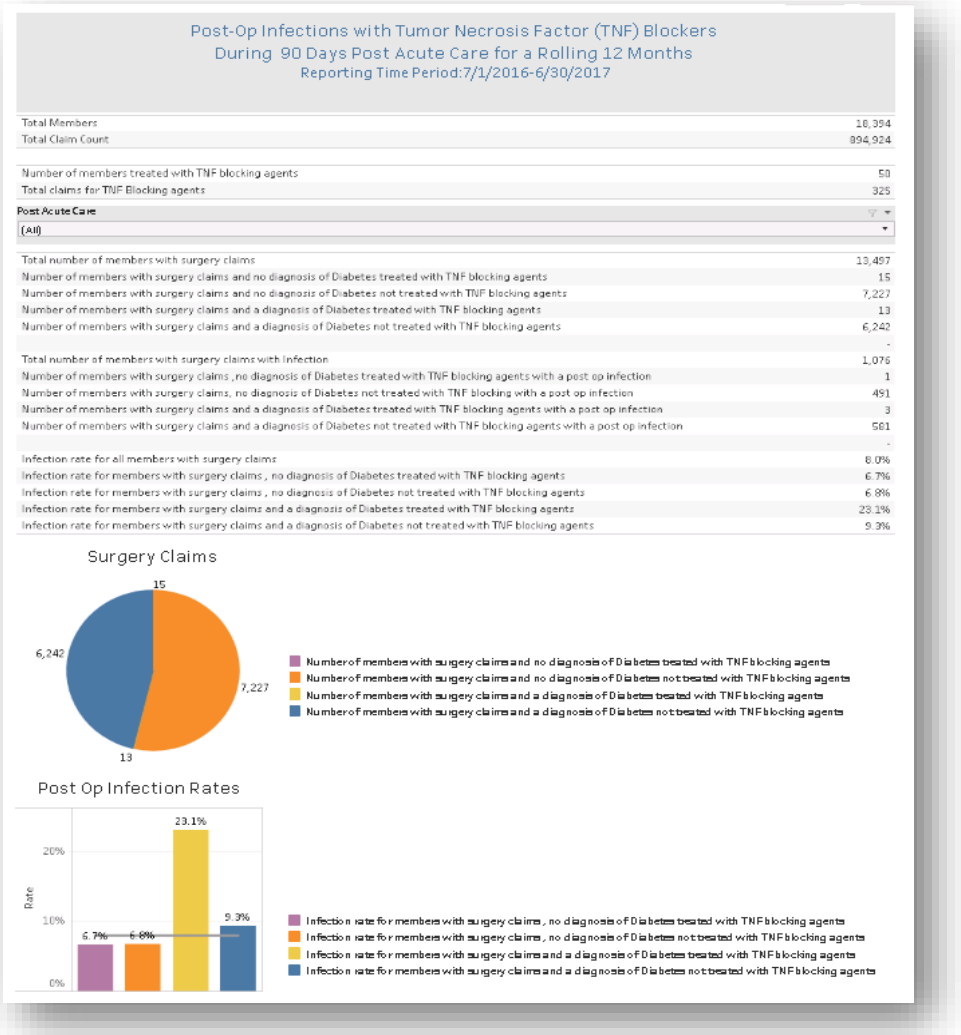


Category	Total Claim Count	Claim Count (Brand)	Claim Count (Generic)	Claim Percent (Generic)	Cost (Brand)	Cost (Generic)	Cost percent (Generic)	Avg. Cost Per Brand Drug	Avg. Cost Per Generic Drug
PSYCHOTHERAPEUTIC AG..	48,215	1,892	46,323	96.1%	$2,345,129	$10,955,689	82.4%	$1,239.50	$236.51
ANTI-INFECTIVES	29,696	1,181	28,515	96.0%	$6,472,071	$7,251,504	52.8%	$5,480.16	$254.30
CARDIOVASCULAR AGENTS	123,210	5,245	117,965	95.7%	$3,703,947	$15,478,969	80.7%	$706.19	$131.22
CENTRAL NERVOUS SYST..	106,915	7,570	99,345	92.9%	$5,766,727	$15,945,468	73.4%	$761.79	$160.51
HORMONES/HORMONE M..	30,023	4,010	26,013	86.6%	$2,724,720	$2,796,881	50.7%	$679.48	$107.52
GASTROINTESTINAL AGE..	31,446	4,755	26,691	84.9%	$2,603,862	$7,062,576	73.1%	$547.61	$264.61
METABOLIC AGENTS	72,634	15,943	56,691	78.1%	$12,777,927	$14,664,365	53.4%	$801.48	$258.67
TOPICAL AGENTS	39,497	9,582	29,915	75.7%	$3,726,478	$4,020,023	51.9%	$388.90	$134.38
COAGULATION MODIFIERS	15,351	6,127	9,224	60.1%	$4,650,533	$2,320,099	33.3%	$759.02	$251.53
RESPIRATORY AGENTS	17,352	11,664	5,688	32.8%	$5,669,598	$1,186,229	17.3%	$486.08	$208.55

6.10 Post-Op Infections and Surgery Rates with Tumor Necrosis Factor (TNF) Blockers

Post –Op Infections with TNF Blockers is a summary report of the post-operative infection rate and surgery claims during the 90-day post-discharge episode period. The report compares patients treated (and not treated) with TNF blockers; patients treated with TNF blocker with also a diagnosis (or no diagnosis) of diabetes; and patients with a diagnosis of diabetes who have not been treated with TNF blockers. For the population groups the following information is reported:

- Total number of Members with surgery claims
- Total number of Members with surgery claims with infection
- Infection rates for all Members with surgery claims

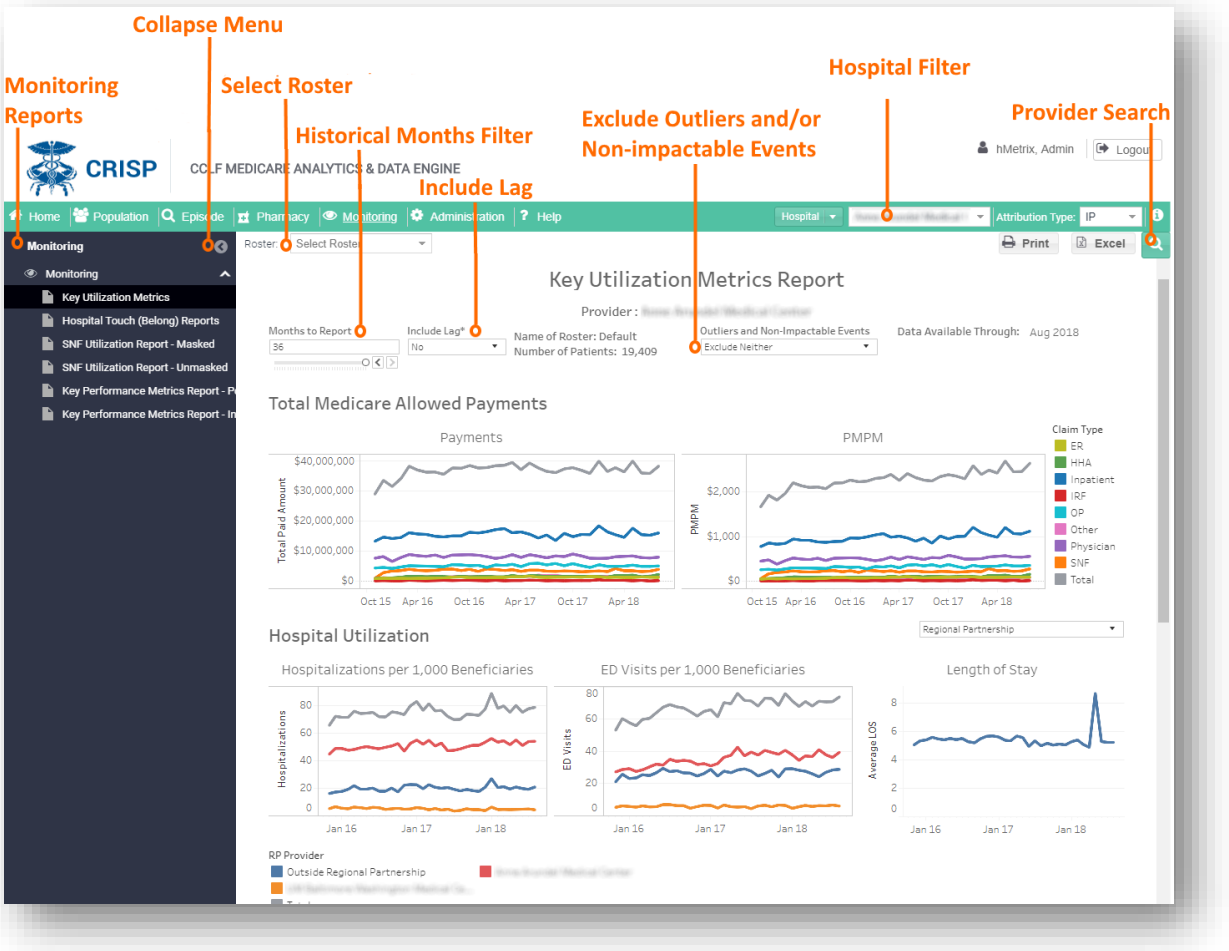


7 MONITORING REPORTS

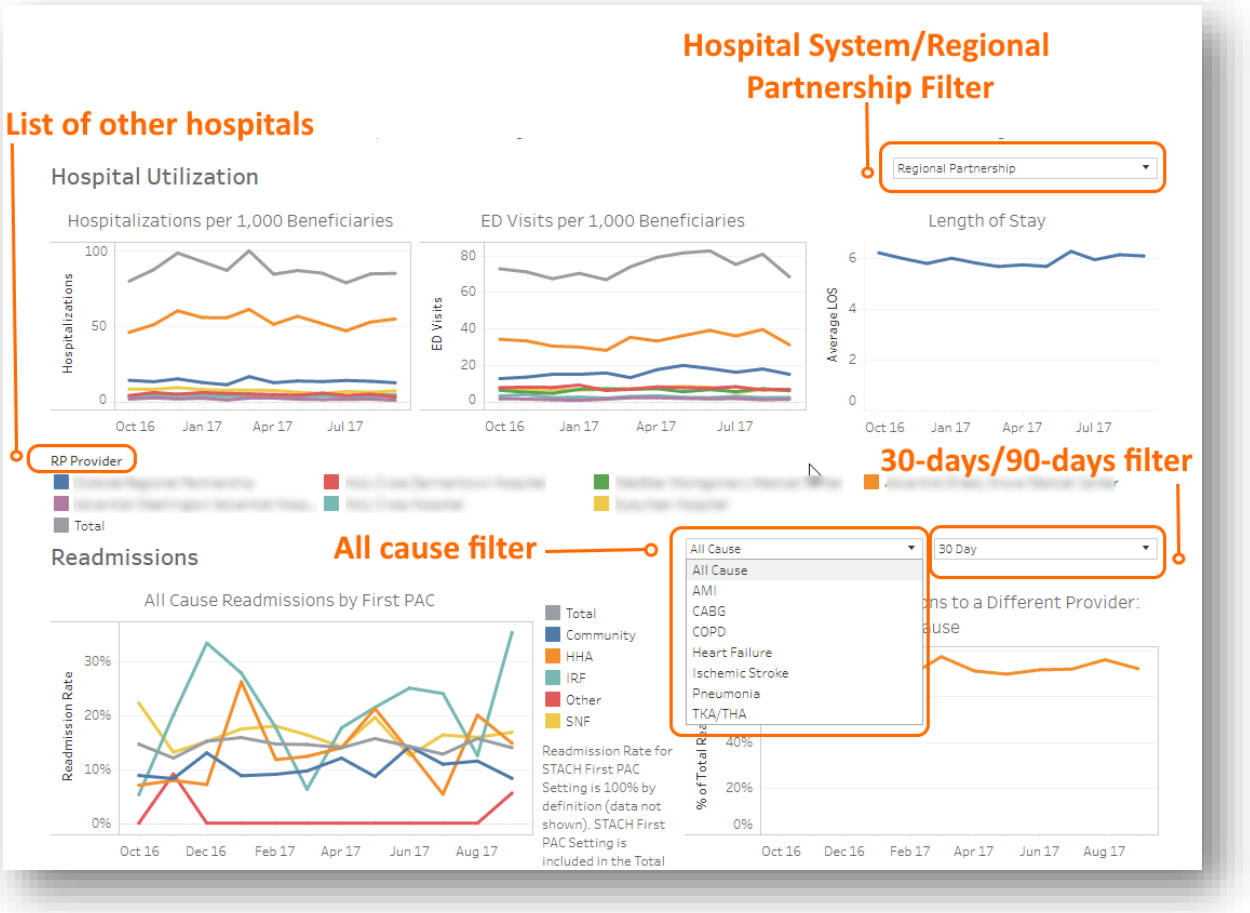
The Monitoring Report module contains two reports to enable hospital users to track overall utilization and spending trends across patient rosters and to more accurately identify patients under the care of their hospital.

7.1 Key Utilization Metrics Report

Key Utilization Metrics Report presents the historical trends in key utilization metrics including Medicare allowed payments (total and per-member-per-month), hospital utilization (admissions and ER visits per 1,000 beneficiaries and LOS) hospital readmissions, and care management. This report can be customized by selecting the roster of patients to analyze, the number of historical months to report (up to 36 months) and whether the report includes the last three months of claims where incomplete data may be presented (due to claim processing lag).

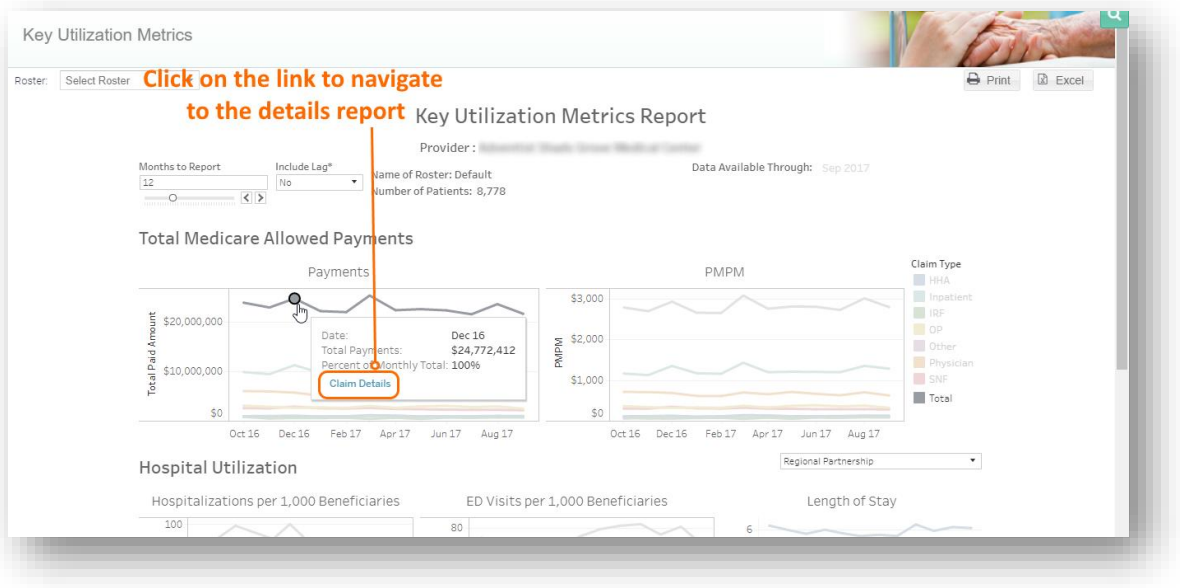


For the attributed patients in a selected roster, the readmissions section shows the hospitalization rates at the other hospitals within the Regional Partnership or the Hospital System. The readmission section also shows all-cause readmissions, or according to the seven conditions included in the readmissions reduction incentive program (RRIP) for either 30-days or 90-days.



Patient-level details are available within the payment, utilization, or readmission panels:

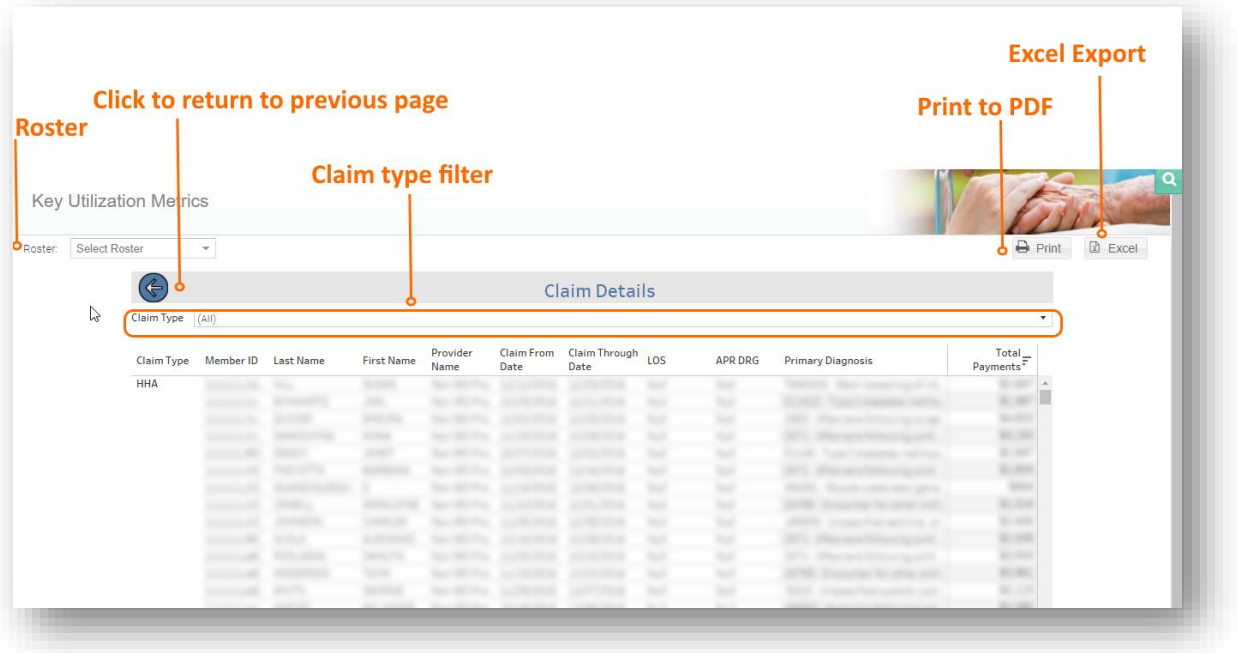
- Click a data point on any line of the Payments or PMPM graphs to display **Claim Details** for the care setting of interest.
- Click a data point on any line of the Hospitalizations per 1,000 Beneficiaries or ED Visits per 1,000 Beneficiaries graphs to display **Admission Details** for the hospital of interest.
- Click a data point on any line of the Readmissions by First PAC graph to display **Admissions with Readmissions** for the first PAC setting of interest.



Within the Medication Synchronization Opportunity graph, clicking on a data point and selecting **Medication Sync Details** will direct the user to the **Medication Synchronization Opportunity Summary,** also available through the Pharmacy module.

7.1.1 Claim Details and Admission Details

Claim Details provides claim-level details by care setting. Click on the Claim Type drop down to select the care setting of interest. This report shows every claim, including claim from and through dates, primary diagnosis, total payments, and LOS and APR DRG (if relevant) for the selected care setting and patient roster. Report can be downloaded to Excel or printed to PDF.

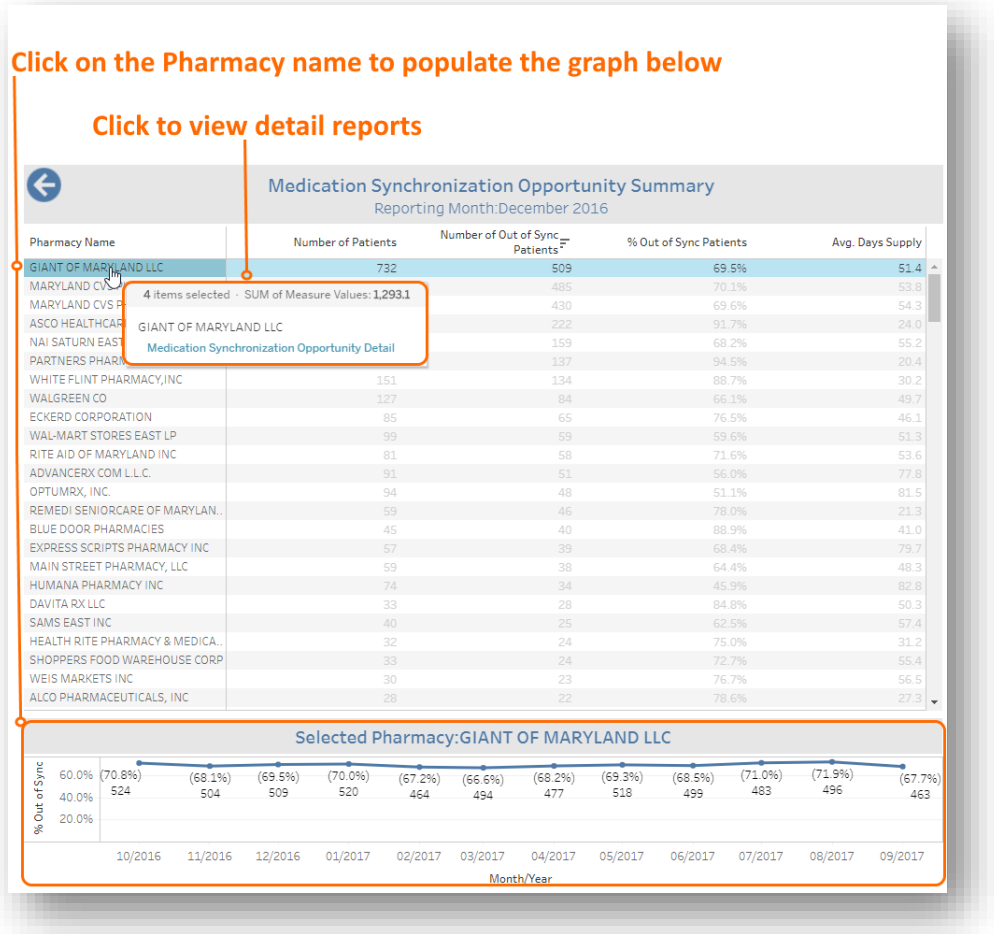


7.1.2 Admissions with Readmission

Admission with Readmission provides claim-level details for acute care hospitalizations that preceded readmissions within 30 or 90 days (as selected in the base report). This report shows every admission, including index acute care hospitals, APR DRG, claim from and through dates, LOS, primary diagnosis, and total payments for the selected patient roster. Report can be downloaded to Excel or printed to PDF.

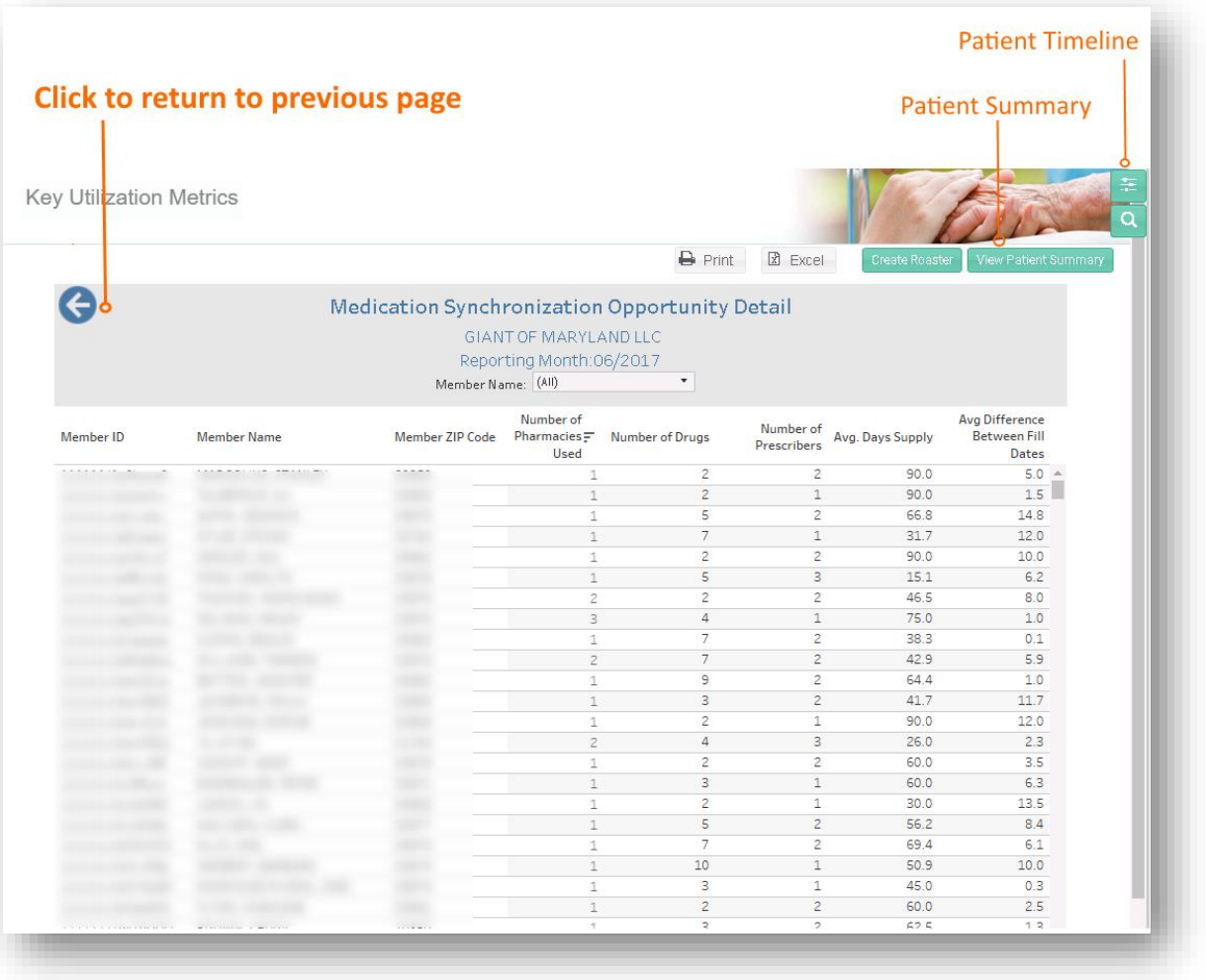
7.1.3 Medication Synchronization Details

Medication Synchronization Details, mirrors the full report contained in the Pharmacy Module, the pharmacies by number and proportion of patients who did not receive medication reconciliation. Click on **Medication Synchronization Opportunity Detail** to access patient-level details.



7.1.3.1 Medication Synchronization Opportunity Detail

Medication Synchronization Opportunity Detail report lists patients who have not received medication synchronization, or have their prescriptions filled on multiple dates each month or every three months using multiple pharmacies. To access this report, click on the Pharmacy Name from the **Medication Synchronization Opportunity Summary**. Click on **Patient Summary** and **Patient Timeline** to access patient-level detail.



Member ID	Member Name	Member ZIP Code	Number of Pharmacies Used	Number of Drugs	Number of Prescribers	Avg. Days Supply	Avg Difference Between Fill Dates
			1	2	2	90.0	5.0
			1	2	1	90.0	1.5
			1	5	2	66.8	14.8
			1	7	1	31.7	12.0
			1	2	2	90.0	10.0
			1	5	3	15.1	6.2
			2	2	2	46.5	8.0
			3	4	1	75.0	1.0
			1	7	2	38.3	0.1
			2	7	2	42.9	5.9
			1	9	2	64.4	1.0
			1	3	2	41.7	11.7
			1	2	1	90.0	12.0
			2	4	3	26.0	2.3
			1	2	2	60.0	3.5
			1	3	1	60.0	6.3
			1	2	1	30.0	13.5
			1	5	2	56.2	8.4
			1	7	2	69.4	6.1
			1	10	1	50.9	10.0
			1	3	1	45.0	0.3
			1	2	2	60.0	2.5
			1	3	2	62.5	1.3

7.2 Key Performance Metrics Report – Population Health

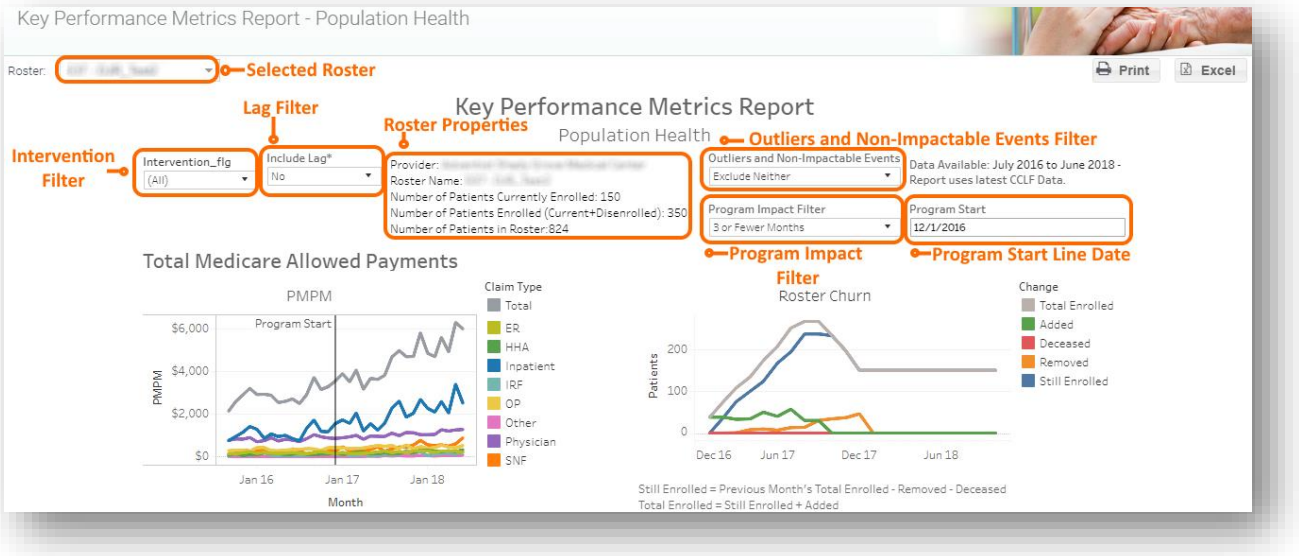
ADVISORY: The **Key Performance Metrics Report – Population Health** can only be generated for a roster that has the user editable field 'Date of Consent' populated for patients. Patients without a date populated are assumed to not yet be receiving the program intervention. The 'Date of Consent' field is used as a proxy for the start of a patient receiving the intervention. 'Disenrollment Date' is used as a proxy for the end of a patient receiving the intervention.

Key Performance Metrics Report – Population Health (KPMR-PH) shows trends for a population that includes both patients who are enrolled (assumed to be actively receiving a program intervention) and patients who are eligible but not yet receiving (enrolled in) the intervention. While the population is presented overall, the tool tip within each chart shows the utilization for each sub-population separately.

CHART NAME	DESCRIPTION	DRILL DOWN CAPABILITY
PMPM	Average per member per month payments by Claim Type	Drill down to **Claim Details**
Roster Churn	The influx and outflux of patients receiving intervention in the roster over time	No Drill Down reporting
Hospitalizations per 1,000 Beneficiaries	Admissions to Short-term Acute Care Hospitals either within the Hospital System or Regional Partnership, according to chart filter selection	Drill down to **Claim Details**
Length of Stay	Per month average length of stay at the index hospital	No Drill Down reporting
ED visits per 1,0000 Beneficiaries	ED admissions to Short-term Acute Care Hospitals either within the Hospital System or Regional Partnership according to chart filter selection	Drill down to **Claim Details**
All Cause Readmissions by First PAC	Readmission rates by month for patients discharged from your STACH grouped by their first PAC setting	Drill down to **Admissions with Readmission**
Percent of Total Readmissions to a Different Provider: (All Cause)	The percent of patients readmitted to a hospital different from the index hospital. Readmissions can be identified using either an All Cause definition or filtered by conditions included in the Readmission Reduction Incentive Program (RRIP). A filter for 30 or 90-day readmissions can also be applied.	No Drill Down reporting
Physician Visits per 1,000 Beneficiaries	Counts of physician visits per 1,000 beneficiaries	No Drill Down reporting
Medication Synchronization Opportunity	The percent of patients per month who are eligible for medication synchronization. Asynchronization is identified as patients who fill prescriptions on multiple days in a month and/or at multiple pharmacies	Drill down to **Medication Synchronization Opportunity Summary**

7.2.1 Report Filters

Several Report filters are available to customize the report.



Selected Roster: KPMR-PH will not load without selecting a roster. This roster should include all patients that fit enrollment criteria for an intervention, i.e. both those that are enrolled, as well as any that are eligible to be enrolled in the future.

Intervention Filter: Filters the report to limit the utilization data to patients either enrolled in the program or not enrolled in the program. The selection of "Intervention" will limit the data displayed to claims that occurred after patients' dates of consent and before patients' dates of disenrollment, if present. If a patient has a date of consent but not disenrollment date, all claims after the patient's date of consent are displayed. The selection of "No Intervention" will only include the claims prior to the date of consent or after the disenrollment date.

Lag Filter: Include or exclude the most recent two calendar months' claims, which are considered incomplete due to lags in claim payment and processing.

Roster Properties: Provides summary information regarding the selected roster.

1. Provider: Hospital Name
2. Roster Name: Label of the selected roster.
3. Number of Patients Currently Enrolled: The number of patients with dates of consent and no disenrollment date present within the selected roster.
4. Number of Patients Enrolled: The count of patients in the roster that have a date of consent with no exclusion for disenrollment.
5. Number of Patients in Roster: The total count of patients in the roster, including expired and disenrolled patients.

Outliers and Non-Impactable Events Filter: This filter allows exclusion of patients with claims outside the 95th percentile of claims (Outliers) and/or for claims for conditions that are not likely to be affected by care management (Non-Impactable).

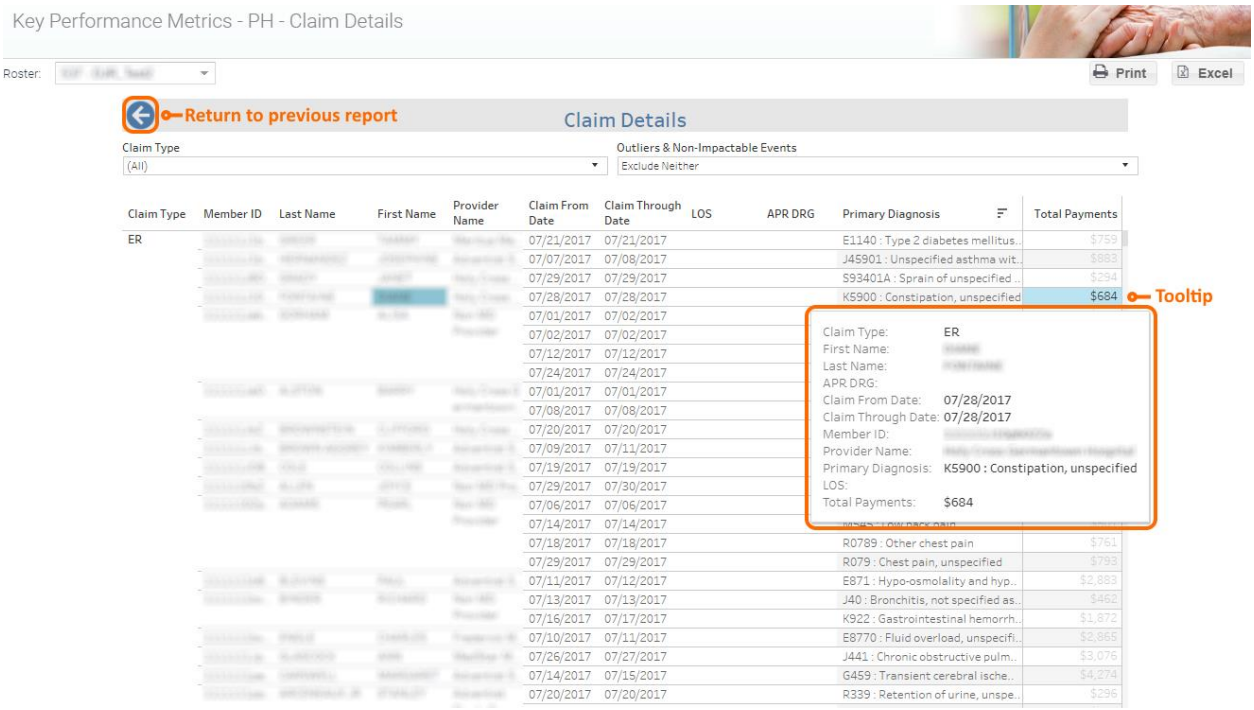
Program Impact Filter: To limit the report to utilization trends directly attributed to the program intervention, utilization data for patients enrolled in the program for fewer than 3 months are excluded by default. This exclusion aims to address regression to the mean concerns and the typical ramp-up for impacting care through program interventions. Users may elect to show all available data or extend the exclusion to 6 months.

Program Start Line Date: This manually entered date will present in charts as a labeled vertical line to indicate the start of an intervention or program. It does not affect how utilization trends are calculated.

7.2.2 Claim Details

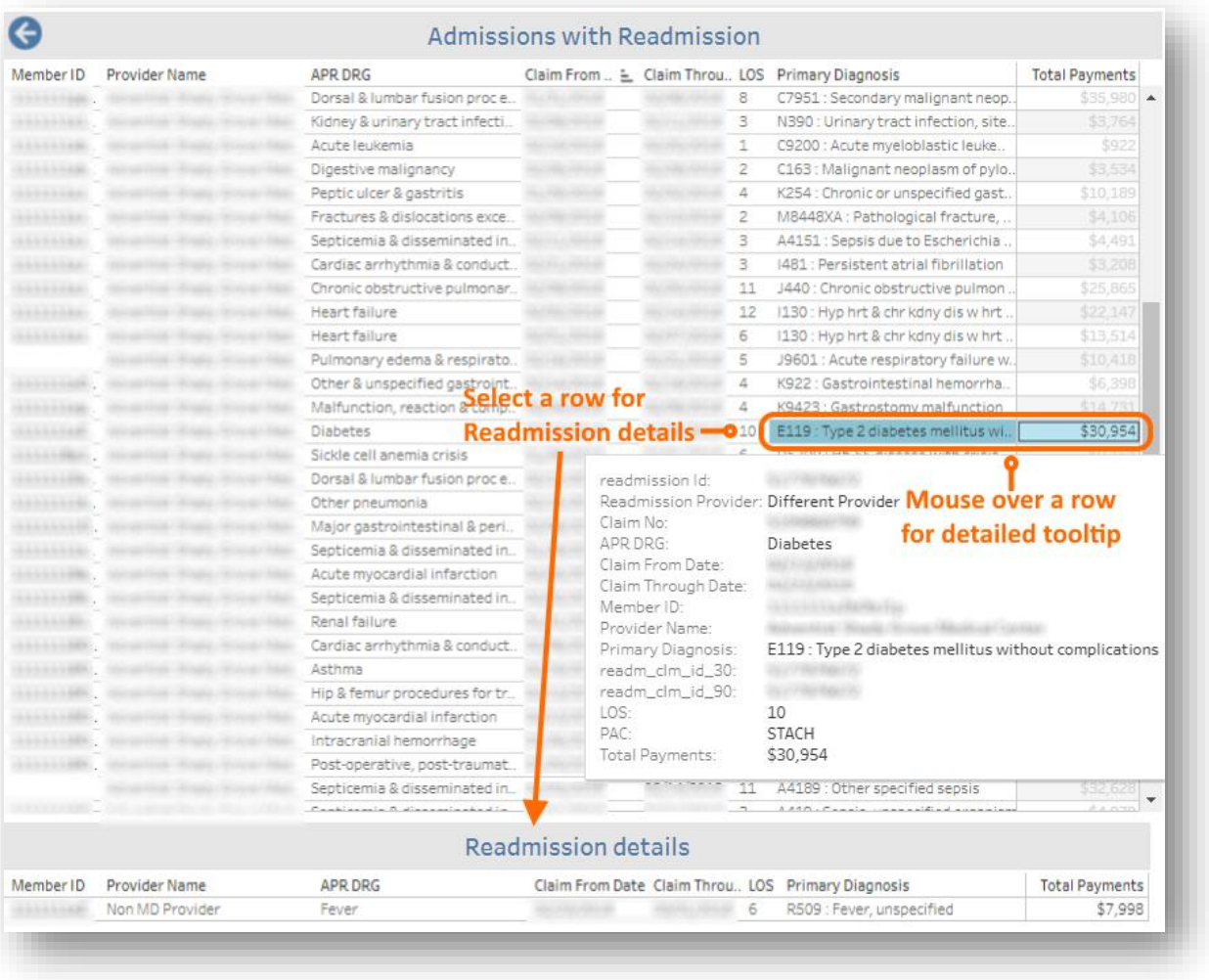
The **Claim Details** drill down is accessible through the Total Medicare Allowed Payments, Hospitalizations or ED Visits per 1,000 Beneficiaries, and All Cause Readmissions by First PAC charts. It shows individual claims at the patient level with columns indicating the Claim Type, Member ID, Last Name, First Name, Provider Name, Claim From Date, Claim Through Date, Length of Stay (LOS), APR DRG, Primary Diagnosis, and Total Payments. Additionally, there is a filter to exclude Outliers, Non-Impactable Events, or both. Mouse over any row for additional information via a tooltip.

When navigating the **Claim Details** drill down, use the blue arrow to return to KPMR-PH. Your browser's back button will not bring you the previously viewed report.



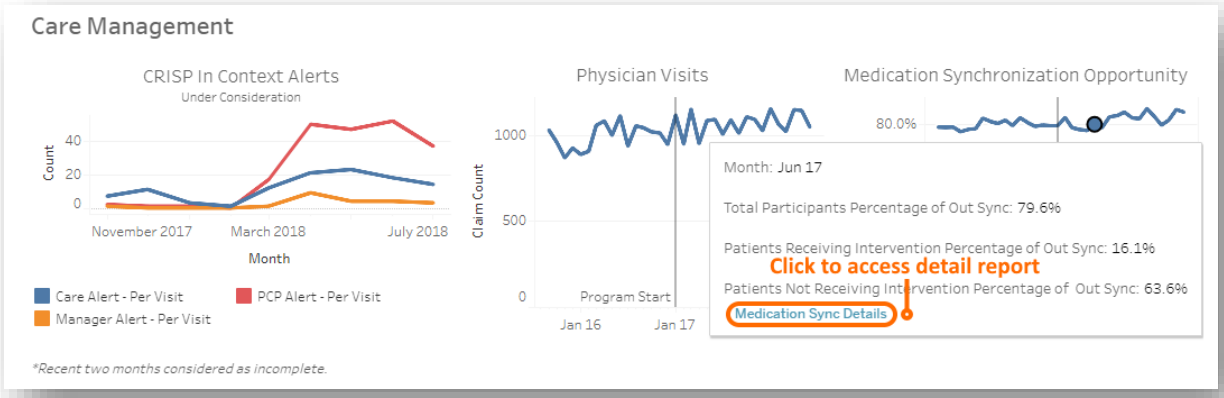
7.2.3 Admissions with Readmission

Having selected a point in the **All Cause Readmissions by First PAC** report, and mousing over that data point, a link labeled, **Admissions With Readmission,** will direct to a report with claims data regarding patients' readmissions to all settings with a filter to limit readmissions by care setting. The **Admissions with Readmission** detail report shows total payments per patient per readmission including the primary diagnosis and related APR DRG. Mousing over a specific row in this report will yield a tooltip with information regarding the claim.

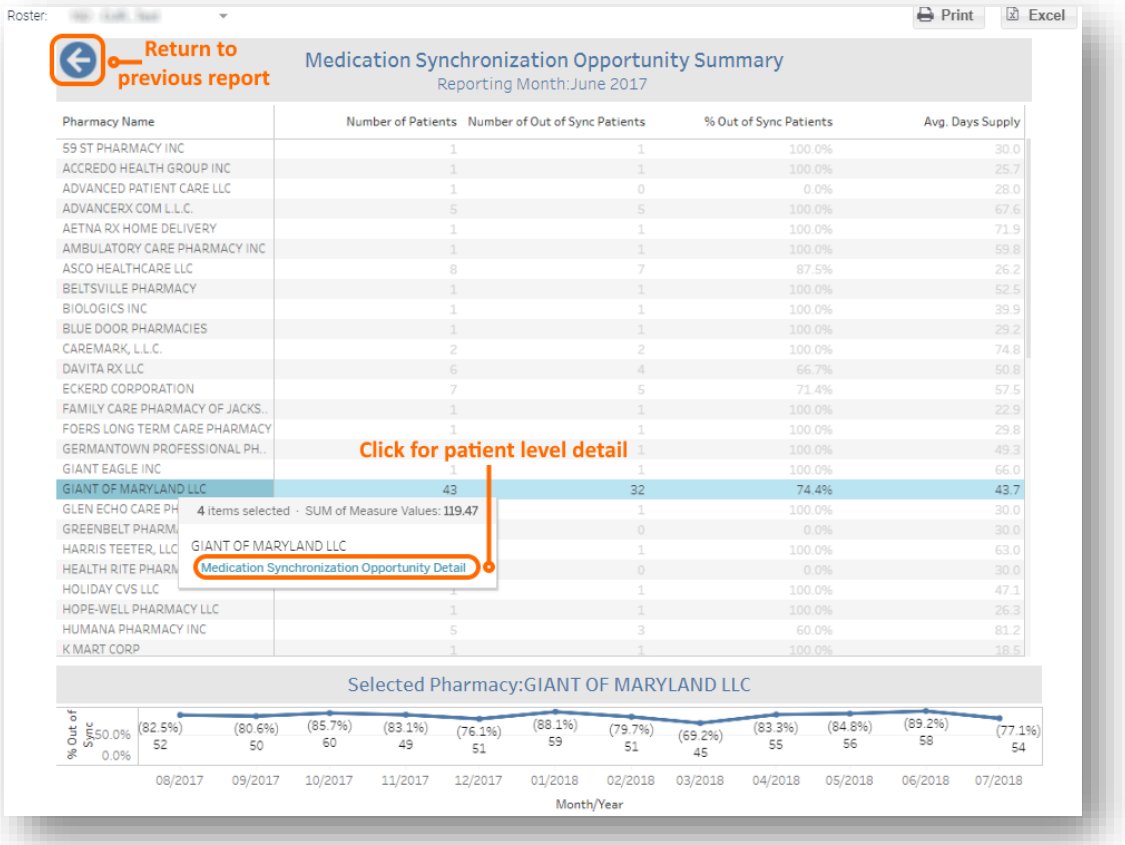


Admissions with Readmission provides claim-level details for acute care hospitalizations that preceded readmissions within 30 or 90 days (as selected in the base report). This report shows every readmission, including index acute care hospital, APR DRG, claim from and through dates, LOS, primary diagnosis, and total payments for the selected patient roster.

7.2.4 Medication Synchronization Opportunity Summary

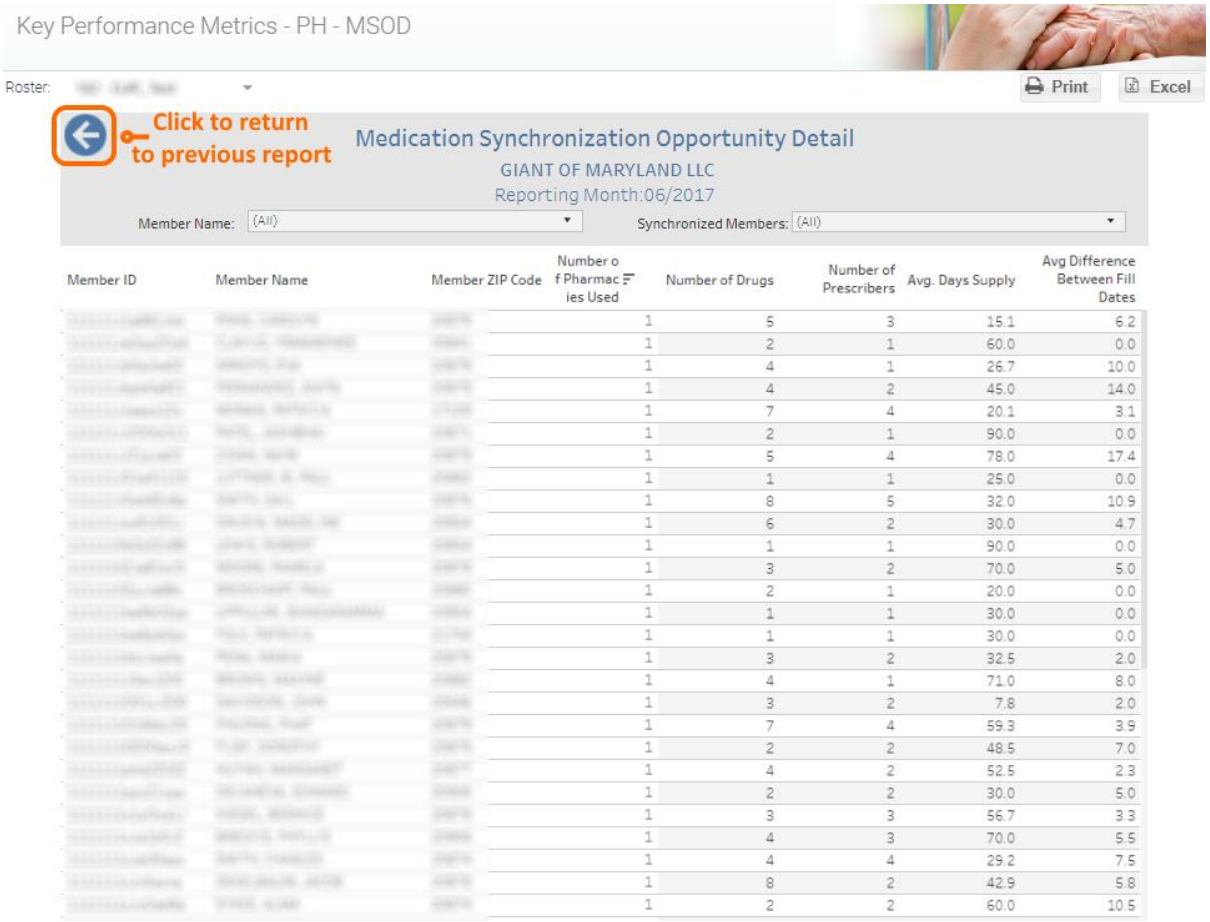


Medication Synchronization Opportunity Summary ranks the pharmacies by number and proportion of patients who did not receive medication reconciliation. Click on **Medication Synchronization Opportunity Detail** to access patient-level details.



The **Medication Synchronization Opportunity Summary** report lists pharmacies with the number of patients that fill prescriptions there, the number of those patients that are out of sync, the percentage of out of sync patients, and the average supply in days of filled prescriptions. Selecting a pharmacy will populate a graph at the bottom of the report that depicts the percentage of out of sync patients for the previous 12-months of claims. Mousing over a selected pharmacy will yield a tooltip with a link to the **Medication Synchronization Opportunity Detail** report.

7.2.5 Medication Synchronization Opportunity Detail



Member ID	Member Name	Member ZIP Code	Number of Pharmacies Used	Number of Drugs	Number of Prescribers	Avg. Days Supply	Avg Difference Between Fill Dates
[redacted]	[redacted]	[redacted]	1	5	3	15.1	6.2
[redacted]	[redacted]	[redacted]	1	2	1	60.0	0.0
[redacted]	[redacted]	[redacted]	1	4	1	26.7	10.0
[redacted]	[redacted]	[redacted]	1	4	2	45.0	14.0
[redacted]	[redacted]	[redacted]	1	7	4	20.1	3.1
[redacted]	[redacted]	[redacted]	1	2	1	90.0	0.0
[redacted]	[redacted]	[redacted]	1	5	4	78.0	17.4
[redacted]	[redacted]	[redacted]	1	1	1	25.0	0.0
[redacted]	[redacted]	[redacted]	1	8	5	32.0	10.9
[redacted]	[redacted]	[redacted]	1	6	2	30.0	4.7
[redacted]	[redacted]	[redacted]	1	1	1	90.0	0.0
[redacted]	[redacted]	[redacted]	1	3	2	70.0	5.0
[redacted]	[redacted]	[redacted]	1	2	1	20.0	0.0
[redacted]	[redacted]	[redacted]	1	1	1	30.0	0.0
[redacted]	[redacted]	[redacted]	1	1	1	30.0	0.0
[redacted]	[redacted]	[redacted]	1	3	2	32.5	2.0
[redacted]	[redacted]	[redacted]	1	4	1	71.0	8.0
[redacted]	[redacted]	[redacted]	1	3	2	7.8	2.0
[redacted]	[redacted]	[redacted]	1	7	4	59.3	3.9
[redacted]	[redacted]	[redacted]	1	2	2	48.5	7.0
[redacted]	[redacted]	[redacted]	1	4	2	52.5	2.3
[redacted]	[redacted]	[redacted]	1	2	2	30.0	5.0
[redacted]	[redacted]	[redacted]	1	3	3	56.7	3.3
[redacted]	[redacted]	[redacted]	1	4	3	70.0	5.5
[redacted]	[redacted]	[redacted]	1	4	4	29.2	7.5
[redacted]	[redacted]	[redacted]	1	8	2	42.9	5.8
[redacted]	[redacted]	[redacted]	1	2	2	60.0	10.5

The **Medication Synchronization Opportunity Detail** report (KPMR – PH – MSOD) lists patients who have not received medication synchronization, or have their prescriptions filled on multiple dates each month or every three months using multiple pharmacies. To access this report, click on the Pharmacy Name from the **Medication Synchronization Opportunity Summary**.

7.3 Key Performance Metrics Report – Indexed Enrollment

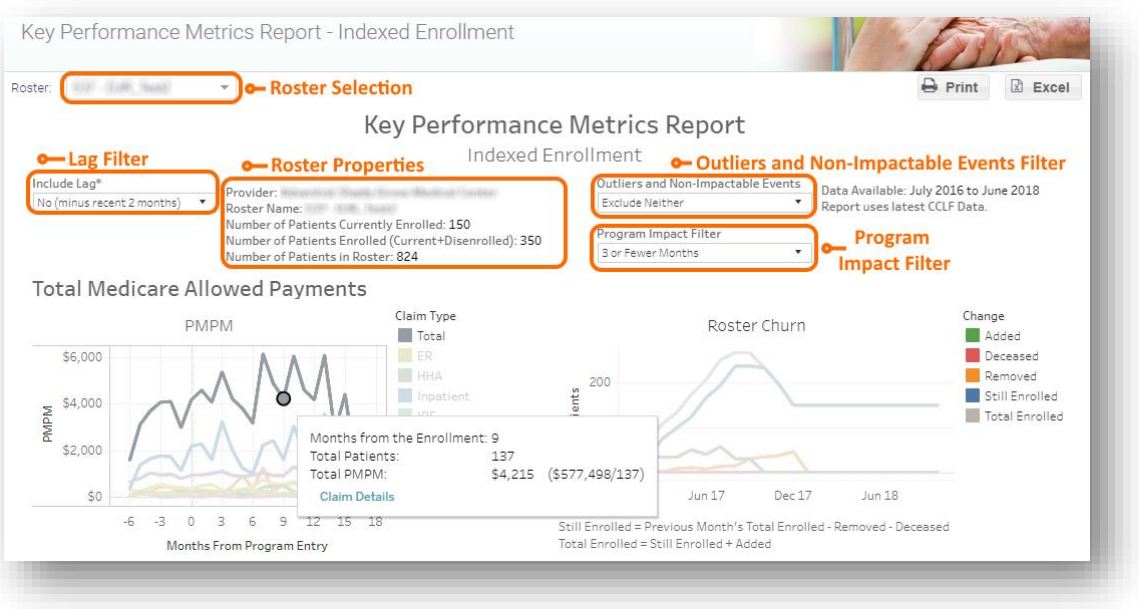
ADVISORY: The **Key Performance Metrics Report – Indexed Enrollment** can only be generated for a roster that has the user editable field 'Date of Consent' populated for patients. Patients without a date populated are assumed to not yet be receiving the program intervention. The 'Date of Consent' field is used as a proxy for the start of a patient receiving the intervention.

Key Performance Metrics Report – Indexed Enrollment (KPMR-IE) shows utilization trends for patients once they are enrolled to receive a program intervention. Unlike in KPMR-PH, *only patients with a corresponding 'Date of Consent' are depicted*, and all "Dates of Consent" are all indexed to month "0." Indexing all enrolled patients to month "0" allows for a direct review of an intervention's impact on a population receiving an intervention.

CHART NAME	DESCRIPTION	DRILL DOWN CAPABILITY
PMPM	Average per member per month payments by Claim Type	Drill down to **Claim Details**
Roster Churn	The influx and outflux of patients receiving intervention in the roster over time (Non-indexed)	No Drill Down reporting
Hospitalizations per 1,000 Beneficiaries	Admissions to Short-term Acute Care Hospitals either within the Hospital System or Regional Partnership, according to chart filter selection	Drill down to **Claim Details**
Length of Stay	Per month average length of stay at the index hospital	No Drill Down reporting
ED visits per 1,0000 Beneficiaries	ED admissions to Short-term Acute Care Hospitals either within the Hospital System or Regional Partnership according to chart filter selection	Drill down to **Claim Details**
All Cause Readmissions by First PAC	Readmission rates by month for patients discharged from your STACH grouped by their first PAC setting	Drill down to **Admissions with Readmission**
Percent of Total Readmissions to a Different Provider: (All Cause)	The percent of patients readmitted to a hospital different from the index hospital. Readmissions can be identified using either as All Cause definition or filtered by conditions included in the Readmission Reduction Incentive Program (RRIP). A filter for 30 or 90-day readmissions can also be applied.	No Drill Down reporting
Physician Visits per 1,000 Beneficiaries	Counts of physician visits per 1,000 beneficiaries	No Drill Down reporting
Medication Synchronization Opportunity	The percent of patients per month who are eligible for medication synchronization. Asynchronization is identified as patients who fill prescriptions on multiple days in a month and/or at multiple pharmacies	Drill down to **Medication Synchronization Opportunity Summary**

7.3.1 Report Filters

Several Report filters are available to customize the report.



Selected Roster: KPMR-IE will not load without selecting a roster. This roster may include all patients that fit enrollment criteria for an intervention, i.e. both those that are enrolled, as well as any that are eligible to be enrolled in the future. However, only patients with "Date of Consent" populated will be depicted in KPMR-IE.

Lag Filter: Include or exclude the most recent two calendar months' claims, which are considered incomplete due to lags in claim payment.

Roster Properties: Provides summary information regarding the selected roster.

1. Provider: Hospital Name
2. Roster Name: Label of the selected roster.
3. Number of Patients Currently Enrolled: The number of patients with dates of consent and no date of disenrollment present within the selected roster.
4. Number of Patients Enrolled: The count of patients in the roster that have a date of consent with no exclusion for disenrollment.
5. Number of Patients in Roster: The total count of patients in the roster, including expired and disenrolled patients.

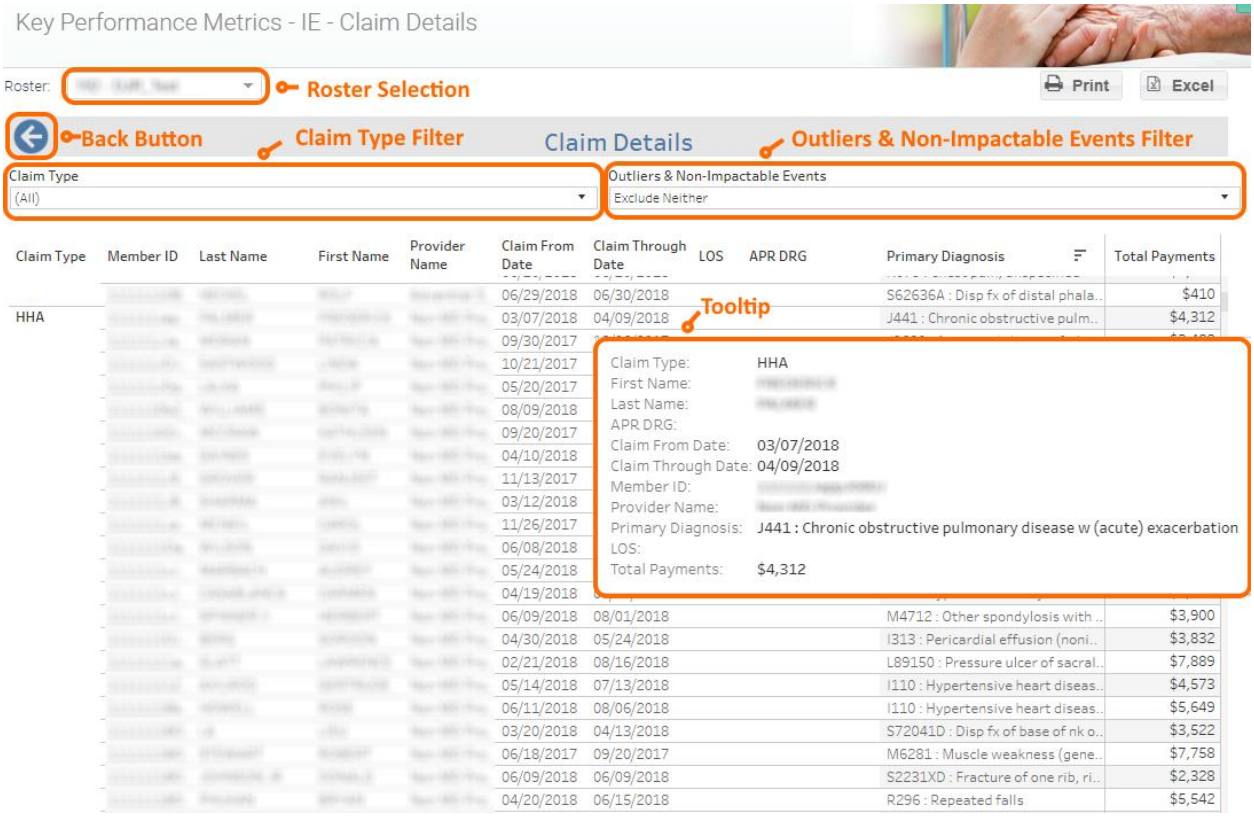
Outliers and Non-Impactable Events Filter: This filter allows exclusion of patients with claims outside the 95th percentile of claims (Outliers) and/or for claims for conditions that are not likely to be affected by care management (Non-Impactable).

Program Impact Filter: To limit the report to utilization trends directly attributed to the program intervention, utilization data for patients enrolled in the program for fewer than 3 months are excluded by default. This exclusion aims to address regression to the mean concerns and the typical ramp-up for impacting care through program interventions. Users may elect to show all available data or extend the exclusion to 6 months.

7.3.2 Claim Details

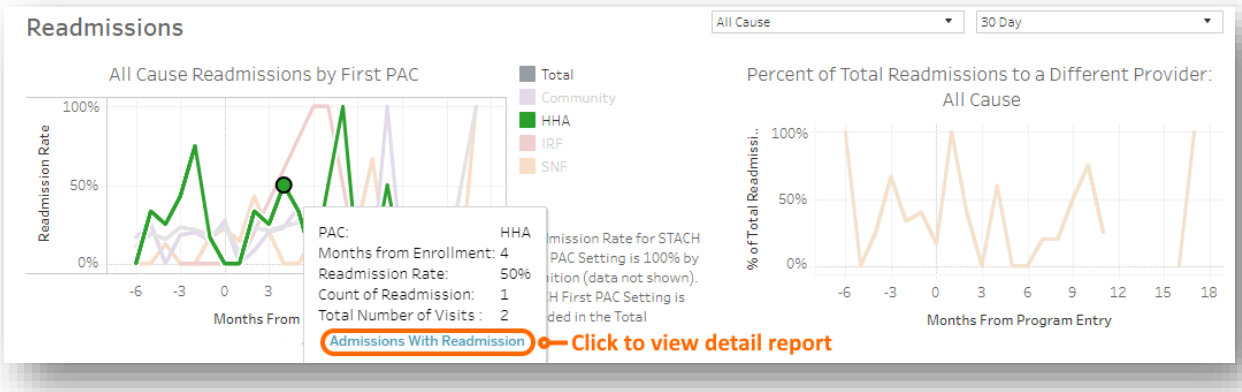
The **Claim Details** drill down is accessible through the Total Medicare Allowed Payments, Hospitalizations or ED Visits per 1,000 Beneficiaries, and All Cause Readmissions by First PAC charts, and it shows individual claims at the patient level with columns indicating the Claim Type, Member ID, Last Name, First Name, Provider Name, Claim From Date, Claim Through Date, Length of Stay (LOS), APR DRG, Primary Diagnosis, and Total Payments. Additionally, there is a filter to exclude Outliers, Non-Impactable Events, or both. Mouse over any row for additional information via a tooltip. The **Claim Details** drill down maintains the indexing from the previous view. In the screenshot below, each claim occurred the same number of months following a patient's indicated 'Date of Consent' in the roster. Mouse over a Total Payments value to view the **Tooltip**.

When navigating the **Claims Details** drill down, use the blue arrow to return to KPMR-IE. Your browser's back button will not bring you the previously viewed report.

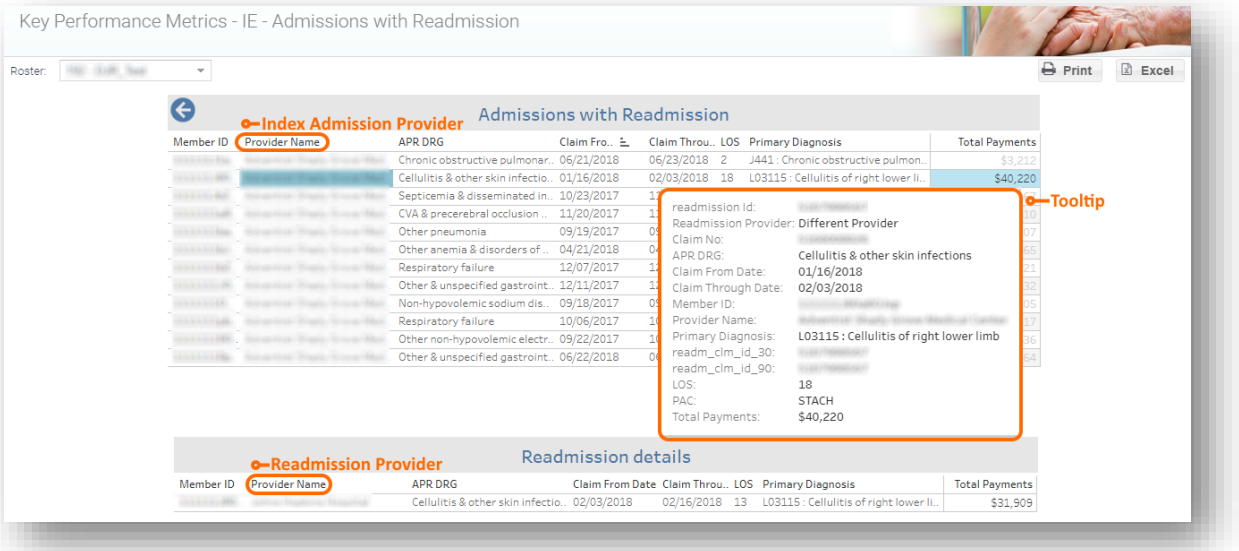


Claim Type	Member ID	Last Name	First Name	Provider Name	Claim From Date	Claim Through Date	LOS	APR DRG	Primary Diagnosis	Total Payments
					06/29/2018	06/30/2018			S62636A : Disp fx of distal phala..	$410
HHA					03/07/2018	04/09/2018			J441 : Chronic obstructive pulm..	$4,312
					09/30/2017					
					10/21/2017					
					05/20/2017					
					08/09/2018					
					09/20/2017					
					04/10/2018					
					11/13/2017					
					03/12/2018					
					11/26/2017					
					06/08/2018					
					05/24/2018					
					04/19/2018					
					06/09/2018	08/01/2018			M4712 : Other spondylosis with ..	$3,900
					04/30/2018	05/24/2018			I313 : Pericardial effusion (noni..	$3,832
					02/21/2018	08/16/2018			L89150 : Pressure ulcer of sacral..	$7,889
					05/14/2018	07/13/2018			I110 : Hypertensive heart diseas..	$4,573
					06/11/2018	08/06/2018			I110 : Hypertensive heart diseas..	$5,649
					03/20/2018	04/13/2018			S72041D : Disp fx of base of nk o..	$3,522
					06/18/2017	09/20/2017			M6281 : Muscle weakness (gene..	$7,758
					06/09/2018	06/09/2018			S2231XD : Fracture of one rib, ri..	$2,328
					04/20/2018	06/15/2018			R296 : Repeated falls	$5,542

7.3.3 Admissions with Readmission

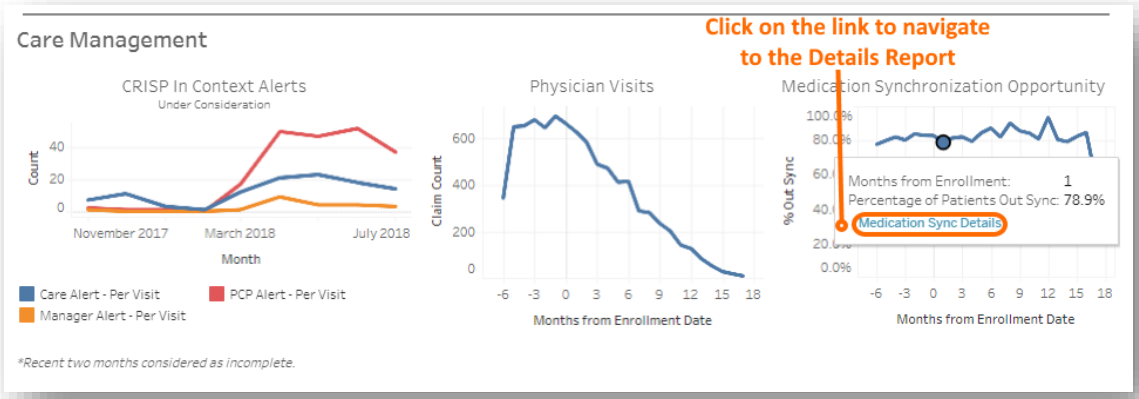


Having selected a point in the **All Cause Readmissions by First PAC** chart, and mousing over that data point, a link labeled **Admissions With Readmission** will direct to a report with claims data regarding patients' readmissions to all settings with a filter to limit readmissions by care setting. The **Admissions with Readmission** detail report shows total payments per patient per readmission including the primary diagnosis and related APR DRG. Mousing over a specific row in this report will yield a tooltip with information regarding the claim.

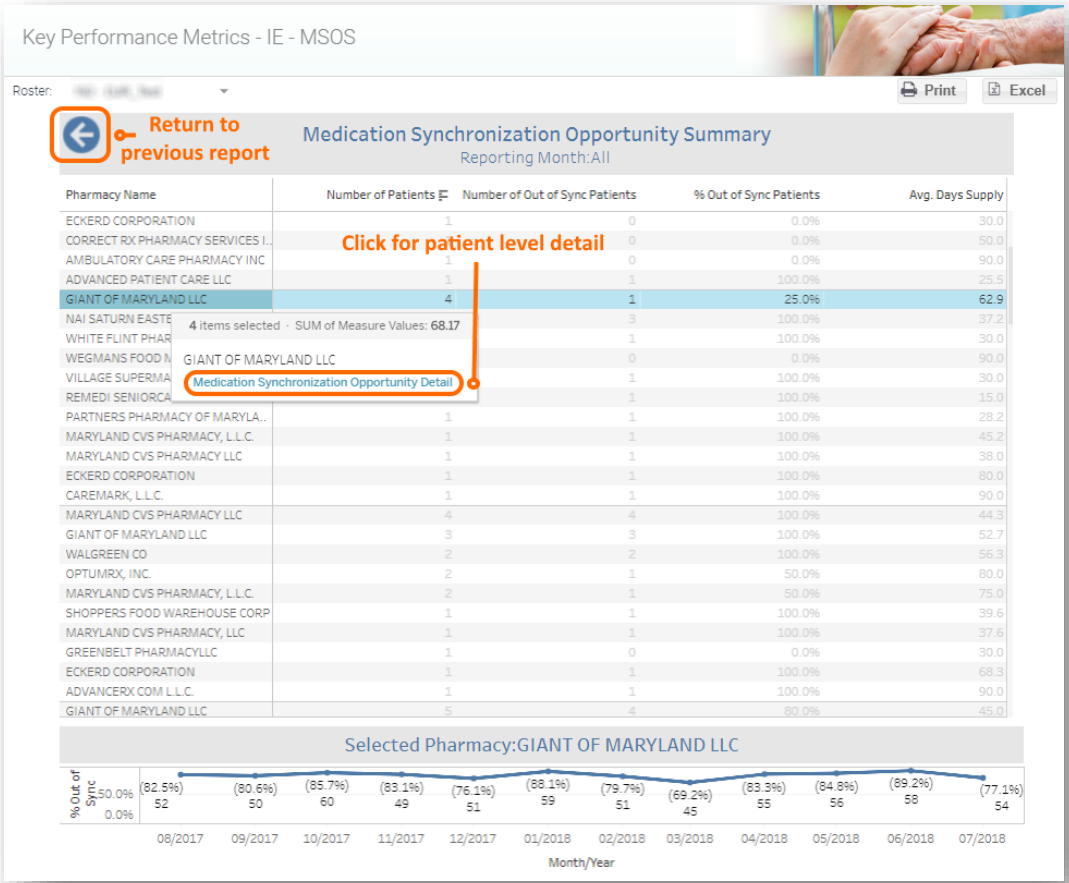


Admission with Readmission provides claim-level details for acute care hospitalizations that preceded readmissions within 30 or 90 days (as selected in the base report). This report shows every readmission, including index acute care hospital, APR DRG, claim from and through dates, LOS, primary diagnosis, and total payments for the selected patient roster. Report can be downloaded to Excel or printed.

7.3.4 Medication Synchronization Opportunity Summary

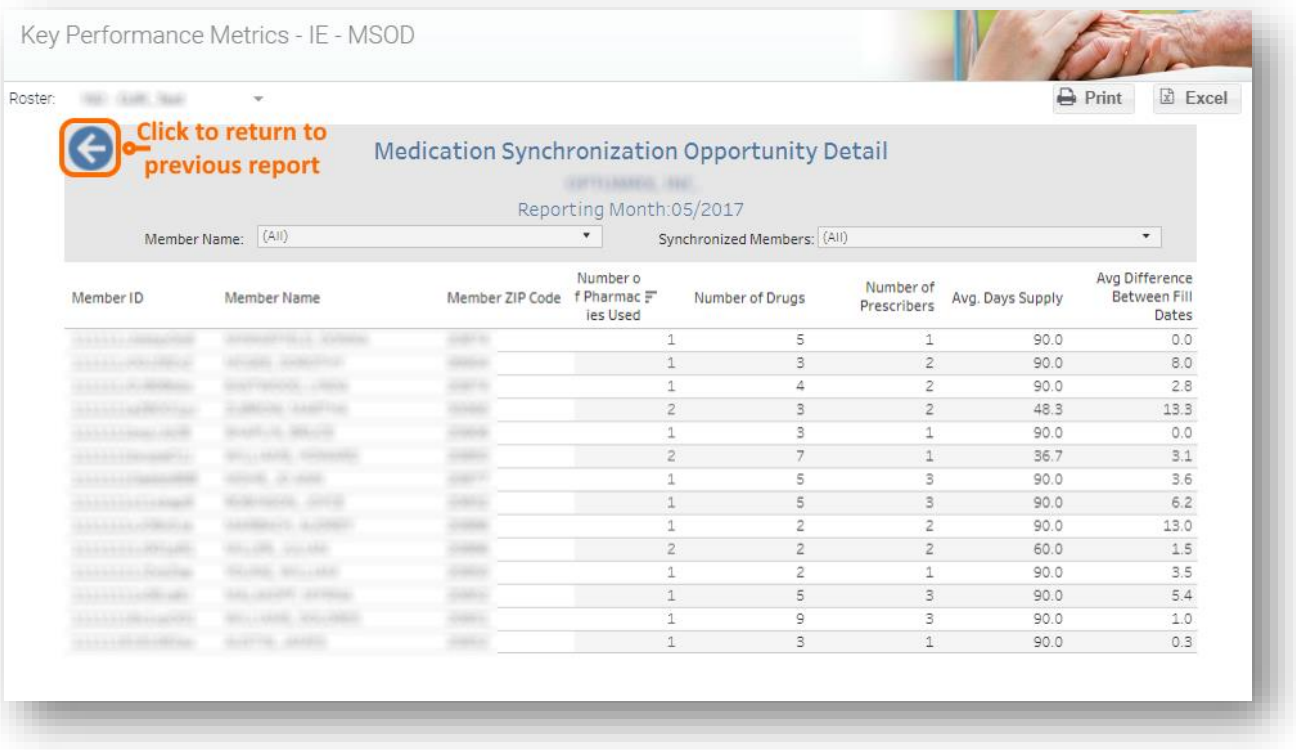


Medication Synchronization Opportunity Summary ranks the pharmacies by number and proportion of patients who did not receive medication reconciliation. Click on **Medication Synchronization Opportunity Detail** to access patient-level details.



The **Medication Synchronization Opportunity Summary** report lists pharmacies with the number of patients who fill prescriptions there, the number of those patients who are out of sync, the percentage of patients who are out of sync, and the average supply in days of filled prescriptions. Selecting a pharmacy will populate a graph at the bottom of the report that depicts the percentage of out of sync patients for the previous 12-months of claims. Mousing over a selected pharmacy will yield a tooltip with a link to the **Medication Synchronization Opportunity Detail** report.

7.3.5 Medication Synchronization Opportunity Detail



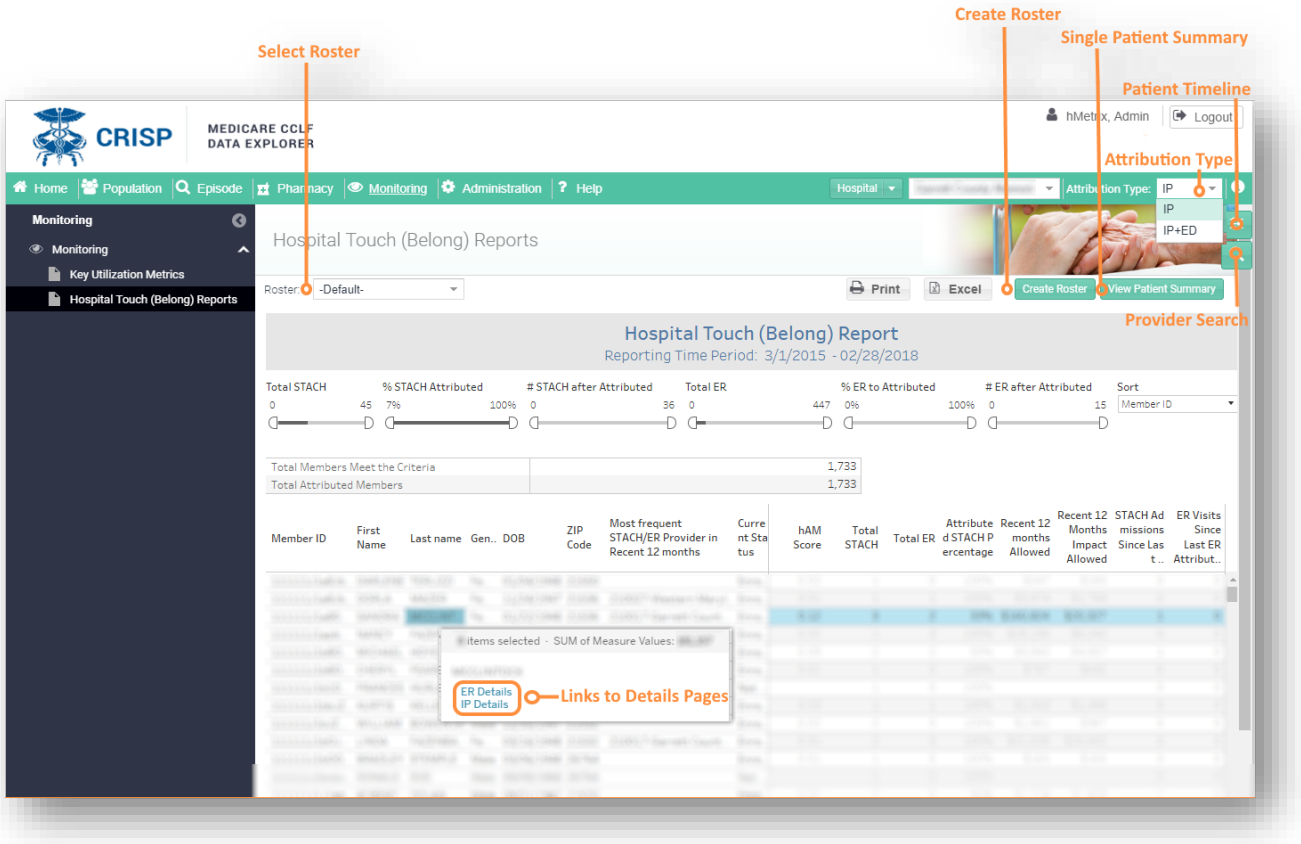
Member ID	Member Name	Member ZIP Code	Number of Pharmacies Used	Number of Drugs	Number of Prescribers	Avg. Days Supply	Avg Difference Between Fill Dates
[redacted]	[redacted]	[redacted]	1	5	1	90.0	0.0
[redacted]	[redacted]	[redacted]	1	3	2	90.0	8.0
[redacted]	[redacted]	[redacted]	1	4	2	90.0	2.8
[redacted]	[redacted]	[redacted]	2	3	2	48.3	13.3
[redacted]	[redacted]	[redacted]	1	3	1	90.0	0.0
[redacted]	[redacted]	[redacted]	2	7	1	36.7	3.1
[redacted]	[redacted]	[redacted]	1	5	3	90.0	3.6
[redacted]	[redacted]	[redacted]	1	5	3	90.0	6.2
[redacted]	[redacted]	[redacted]	1	2	2	90.0	13.0
[redacted]	[redacted]	[redacted]	2	2	2	60.0	1.5
[redacted]	[redacted]	[redacted]	1	2	1	90.0	3.5
[redacted]	[redacted]	[redacted]	1	5	3	90.0	5.4
[redacted]	[redacted]	[redacted]	1	9	3	90.0	1.0
[redacted]	[redacted]	[redacted]	1	3	1	90.0	0.3

The **Medication Synchronization Opportunity Detail** report (KPMR – IE – MSOD) lists patients who have not received medication synchronization, or have their prescriptions filled on multiple dates each month or every three months using multiple pharmacies. To access this report, click on the Pharmacy Name from the **Medication Synchronization Opportunity Summary**.

7.4 Hospital Touch (Belong) Report

Hospital Touch (Belong) Report presents the number and location of historical short-term acute care hospital (STACH) admissions and ER visits for a roster of interest. The goal of the report is to help hospitals identify patients who "belong" to the attributed hospital, based on historical admission patterns. That is, while a patient is attributed to every hospital to which he/she is admitted, that hospital may not be the predominate provider of care. This report helps hospital users identify which patients may be most suitable for care management, as the patient heavily relies on their services. Additionally, users can change the attribution method from '**IP**' to '**IP+ED**' to capture patients that were attributed by use of a hospital's emergency department.

Using sliding scales, the user can isolate patients who have above a threshold percentage of their STACH or ER visits at the hospital of interest. Users can then download the list to Excel, print to PDF **or save the patient list as a roster for further reporting**. Click on a data point and hover briefly over a given patient to access **IP Details** and **ER Details** for each admission/visit.



7.5 SNF Utilization Reports

The SNF Utilization Reports present reported and risk adjusted SNF utilization metrics for attributed Medicare FFS beneficiaries discharged from an acute care hospital and immediately (within 3 days) admitted to a SNF. The goal of the report is to present select quality indicators for the SNF including the 30-day readmission rate back to an acute care hospital (within 30-days from discharge from the initial acute care hospital), length of stay in the SNF, and SNF payment. The SNF admissions reflected in this report can be either from the attributed hospital, or from any other preceding hospital. That is, some of the SNF admissions represented in the report may not have been initiated from an admission at the attributed hospital.

Comparing reported values are misleading as the complexity and severity of patients differ across SNFs. This report risk-adjusts key measures to account for differences in underlying conditions, and the resulting expected readmission rates, allowing for comparison across SNFs or the specific DRG family or Service Line of the preceding hospital stay based on APR DRGs.

This report can be used to identify high performing SNFs along any combination of the risk-adjusted metrics. The three risk adjusted metrics included in the report feature color coding to distinguish data points as notably higher (Red), lower (Green) or similar (Grey) to the weighted average for that metric, which are presented on the top row of the report.

The risk adjustments for average LOS and average SNF paid are calculated using the normalized average Patient Driven Payment Model (PDPM) rate of the SNFs and Service Lines selected. In Service Line Details, the risk adjustments use only the respective figures for the same Service Line(s) across the selected SNFs. The overall average PDPM rate is 1.0 in the 'Grand Total' row for the selected SNFs and Service Line(s) because the risk adjustment calculations divide by the overall Avg. PDPM rate (it is divided by itself). The formulas for calculating the normalized average PDPM rate and the risk adjusted LOS and SNF paid values are presented below.

1. $$Normalized\ Avg.\ PDPM\ Rate = \frac{SNF\ Provider\ Avg.\ PDPM\ rate\ (\mathbf{or}\ SNF\ Provider\ Avg.PDPM\ Rate\ by\ Service\ Line)}{Overall\ Avg.\ PDPM\ rate\ (\mathbf{or}\ Overall\ Avg.\ Service\ Line\ PDPM\ Rate)}$$

2. $$Risk\ Adj.\ Avg.\ SNF\ Paid = \frac{Avg.\ SNF\ Paid\ (\mathbf{or}\ Avg.\ SNF\ Paid\ by\ Service\ Line)}{Risk\ Adj.\ Avg.\ PDPM\ Rate\ (\mathbf{or}\ Risk\ Adj.\ Avg.\ Service\ Line\ PDPM\ Rate)}$$

3. $$Risk\ Adj.\ Avg.\ LOS = \frac{Avg.\ SNF\ LOS\ (\mathbf{or}\ Avg.\ Service\ Line\ SNF\ LOS)}{Risk\ Adj.\ Avg.\ PDPM\ Rate\ (\mathbf{or}\ Risk\ Adj.\ Avg.\ Service\ Line\ PDPM\ Rate)}$$

Risk adjustment for readmissions are based on the HEDIS® Plan All-Cause Readmission (PCR) rate for each SNF and Service Line presented. This measure is used to calculate an expected readmission rate for each beneficiary following an inpatient stay based on the presence of surgeries during the inpatient stay, discharge condition, comorbidity, age, and gender. These PCR expected readmission rates are then aggregated at the SNF and Service Line levels. The readmission rate risk adjustments are calculated according to the formulas below:

4. *Risk Adj. Readm. Rate through SNF*

   a. $$SNF\ level = \frac{Overall\ Avg.\ PCR\ Discharged\ to\ SNFs}{SNF\ Specific\ Avg.\ PCR\ Discharged\ to\ SNF} * Readmission\ Rate\ through\ SNF$$

   b. $$Service\ Line\ level = \frac{Overall\ Avg.\ PCR\ Discharged\ to\ SNFs\ by\ Service\ Line}{SNF\ Specific\ Avg.\ PCR\ Discharged\ to\ SNF\ by\ Service\ Line} *$$

$$Service\ Line\ Readm.\ Rate\ through\ SNF$$

FILTER NAME	DESCRIPTION
SNF Provider	Select one, multiple, or all available SNFs on which to view metrics.
Discharging Hospital(s)	Select one, multiple, or all hospitals that discharged beneficiaries to SNFs.
DRG Family	Select one APR DRG grouping of the hospitalization preceding the SNF admission.
Service Line	Select one, multiple, or all available Service Lines. Service Lines are directly based on the APR DRG of the preceding hospitalization • Masked Report: This filter can only be applied to the Service Line Details view. The default compressed view will represent all Service Lines in aggregate. • Unmasked Report: This filter can be applied to the default compressed view in aggregate or to the Service Line Details view.
Date of Discharge from Acute Care Hospital	Select months during which beneficiaries were discharged to a SNF
Discharged to SNF	Total count of beneficiaries discharged from an acute care hospital to the given SNF
30-day Readmission Count - SNF	Total count of readmissions to an acute care hospital following discharge to SNF according to HEDIS® unplanned readmission algorithm.
Avg SNF Paid	Average Medicare payment to the SNF
Avg LOS	Average length of stay for Medicare beneficiaries admitted to the SNF
Normalized Avg RUG/PDPM Rate	Average blended RUG and PDPM rates for the hospital attributed beneficiaries discharged to the SNF, normalized to 1.0 for the overall population of attributed beneficiaries or specific Service Line admitted to any SNF presented in the report (SNF-specific RUG/PDPM Rate divided by the Overall RUG/PDPM Rate; input data not shown)

Risk Adjusted – Avg SNF Paid	Average Medicare payment to the SNF, adjusted by the Normalized Avg PDPM rate (Avg SNF Paid / Normalized Avg PDPM Rate). This is recalculated using the Normalized Avg PDPM rate per Service Line across selected SNFs in Service Line detail view.
Risk Adjusted – Avg LOS	Average length of stay for Medicare beneficiaries, adjusted by the Normalized PDPM rate. (Avg LOS / Normalized Avg PDPM Rate). This is recalculated using the Normalized Avg PDPM rate per Service Line across selected SNFs.
Readmission rate through SNF	Average readmission rate to an acute care hospital within 30 days (30-day Readmission Count – SNF / Discharged to SNF).
Avg PCR – Discharged to SNF	Expected average readmissions rate for patients discharged to a SNF according to HEDIS® Plan All-Cause Readmission (PCR) methodology. PCR captures only unplanned readmissions.
Risk Adjusted Readmission Rate Through SNF	Readmission rate adjusted by expected readmission risk (PCR) relative to the overall population or specific Service Line [(Overall or Service Line Avg PCR / SNF Avg or SNF Service Line PCR) * Overall or Service Line Readmission Rate through SNF]

These reports can be printed to PDF (based only on the current view of the screen) and exported to Excel. Users will need to add conditional formatting to the Excel version of the report, as that functionality is not available in the download.

The details of the Masked and Unmasked view are presented below.

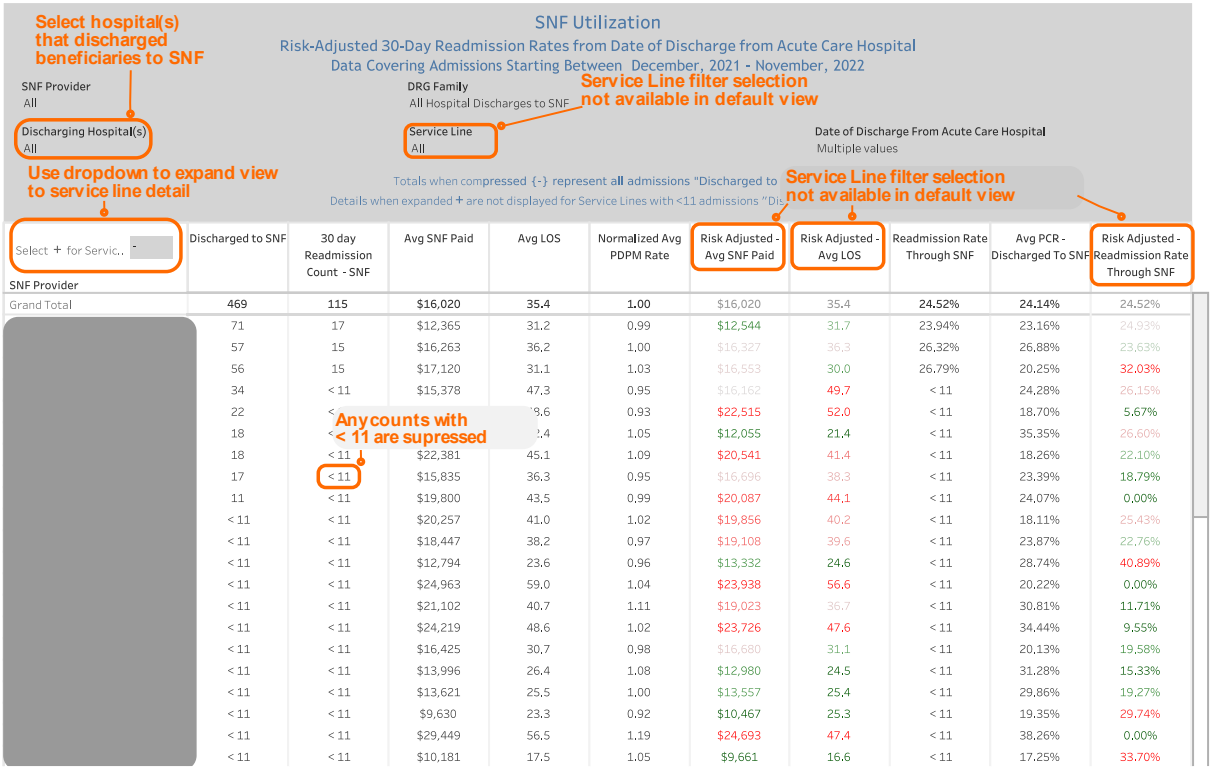
7.5.1 SNF Utilization Report Masked

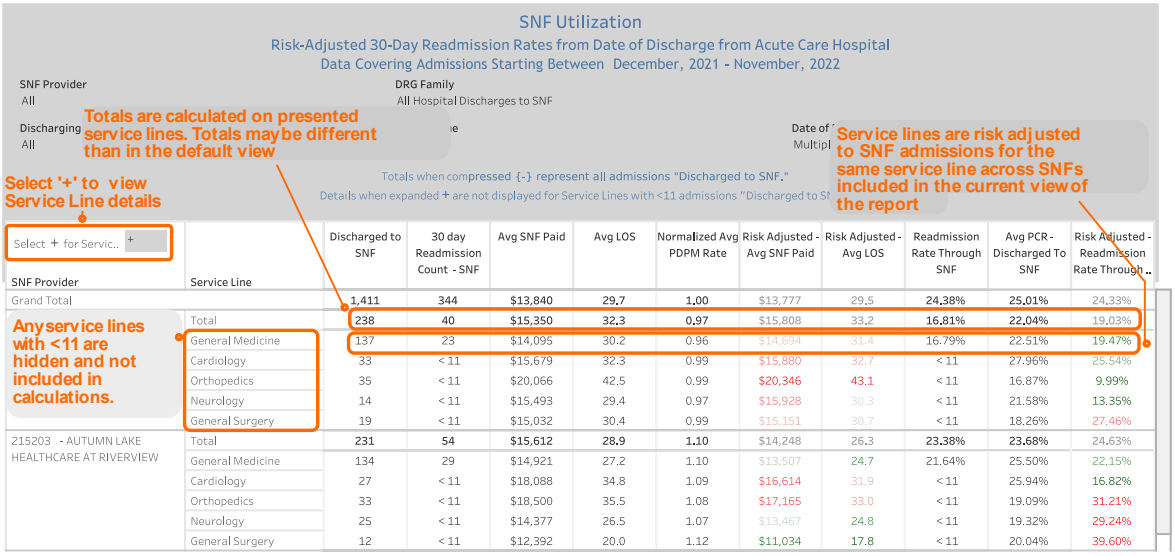
The masked version of this report suppresses cells with fewer than 11 observations, as those data are considered PHI. All users – those with and without PHI access will have access to this report. Because it does not contain PHI, the report may be distributed to any relevant hospital or SNF staff.

The default view of the report shows all discharges to SNFs that have greater than 10 admissions among beneficiaries attributed to the hospital. Any SNF with fewer than 11 admissions in total across all Service Lines is omitted. In this view, Service Lines cannot be filtered or selected. When expanding to view Service Line Details, Service Lines with fewer than 11 observations will also be omitted. Therefore, the total number of admissions displayed in the default view will often differ from the Subtotal displayed in the Service Line Details view.

When viewing all SNFs, the results can be interpreted relative to the overall performance of the SNF across all discharges, within the presented time period for the attributed beneficiaries. However, when narrowing the selection using the SNF Provider filter, the risk adjustments will then be conducted among the population included in each presented Service Line.

The screenshots below display the default view of the Masked report, as well as the Service Line Details view.





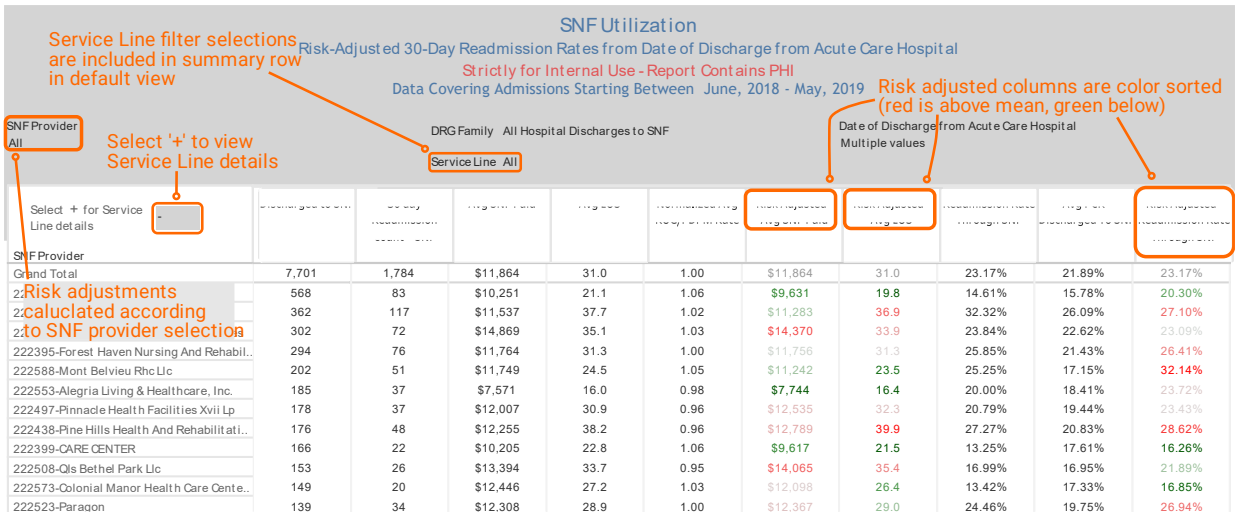
7.5.2 SNF Utilization Report Unmasked

The unmasked version of the report presents all available data, including those with fewer than 11 admissions. Only users authorized to see PHI data will have access to this report. Distribution of this report outside of MADE should be limited to individuals authorized to see PHI. The default view of the unmasked report is similar to the masked version with the exception that all SNFs are shown and Service Lines are able to be filtered in the default/compressed view.

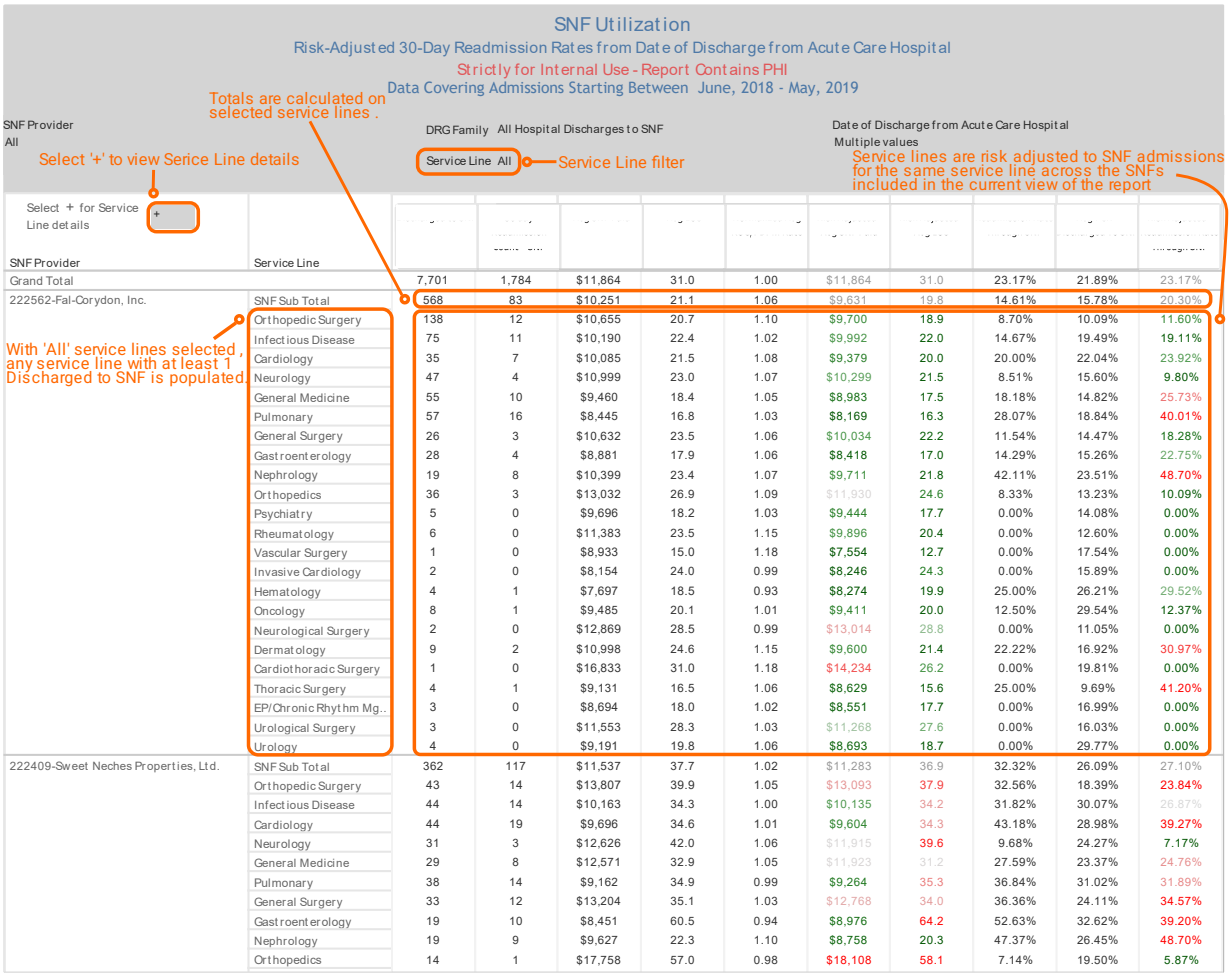
In the default view of the Unmasked report, individual Service Lines can be selected and deselected without expanding the view of the report. When doing so, selected Service Lines are presented in aggregate, and the risk adjustments are conducted on the overall aggregate 'Normalized Avg RUG/PDPM Rate' and 'Avg PCR – Discharged to SNF' for any selected Service Line(s) among selected SNFs. Care should be taken when interpreting the results with limited Service Lines selected in this view.

When viewing all SNFs, the results can be interpreted relative to the overall performance of the SNF across all discharges, within the presented time period for the attributed beneficiaries. However, when narrowing the selection using the SNF Provider filter, the risk adjustments will then be conducted among the population included in that view.

The below screenshot shows the default view of the Unmasked report.



When expanding to Service Line Details in this report, each of the selected Service Lines is presented for each SNF. The risk adjusted LOS and SNF Paid amounts are calculated using the 'Normalized Avg RUG/PDPM Rate' across individual Service Line(s) for the SNFs selected. Similarly, the 'Risk Adjusted – Readmission Rate Through SNF' is calculated using the 'Avg PCR – Discharged to SNF' for the respective individual Service Line(s) of the selected SNFs with that admissions in that Service Line.

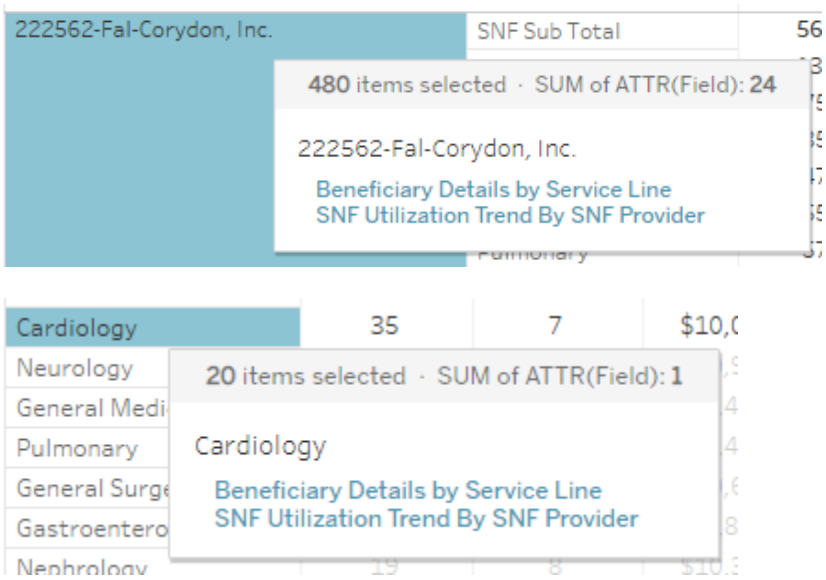


Select + for Service Line details											
SNF Provider	Service Line										
Grand Total		7,701	1,784	$11,864	31.0	1.00	$11,864	31.0	23.17%	21.89%	23.17%
222562-Fal-Corydon, Inc.	SNF Sub Total	568	83	$10,251	21.1	1.06	$9,631	19.8	14.61%	15.78%	20.30%
	Orthopedic Surgery	138	12	$10,655	20.7	1.10	$9,700	18.9	8.70%	10.09%	11.60%
	Infectious Disease	75	11	$10,190	22.4	1.02	$9,992	22.0	14.67%	19.49%	19.11%
	Cardiology	35	7	$10,085	21.5	1.08	$9,379	20.0	20.00%	22.04%	23.92%
	Neurology	47	4	$10,999	23.0	1.07	$10,299	21.5	8.51%	15.60%	9.80%
	General Medicine	55	10	$9,460	18.4	1.05	$8,983	17.5	18.18%	14.82%	25.73%
	Pulmonary	57	16	$8,445	16.8	1.03	$8,169	16.3	28.07%	18.84%	40.01%
	General Surgery	26	3	$10,632	23.5	1.06	$10,034	22.2	11.54%	14.47%	18.28%
	Gastroenterology	28	4	$8,881	17.9	1.06	$8,418	17.0	14.29%	15.26%	22.75%
	Nephrology	19	8	$10,399	23.4	1.07	$9,711	21.8	42.11%	23.51%	48.70%
	Orthopedics	36	3	$13,032	26.9	1.09	$11,930	24.6	8.33%	13.23%	10.09%
	Psychiatry	5	0	$9,696	18.2	1.03	$9,444	17.7	0.00%	14.08%	0.00%
	Rheumatology	6	0	$11,383	23.5	1.15	$9,896	20.4	0.00%	12.60%	0.00%
	Vascular Surgery	1	0	$8,933	15.0	1.18	$7,554	12.7	0.00%	17.54%	0.00%
	Invasive Cardiology	2	0	$8,154	24.0	0.99	$8,246	24.3	0.00%	15.89%	0.00%
	Hematology	4	1	$7,697	18.5	0.93	$8,274	19.9	25.00%	26.21%	29.52%
	Oncology	8	1	$9,485	20.1	1.01	$9,411	20.0	12.50%	29.54%	12.37%
	Neurological Surgery	2	0	$12,869	28.5	0.99	$13,014	28.8	0.00%	11.05%	0.00%
	Dermatology	9	2	$10,998	24.6	1.15	$9,600	21.4	22.22%	16.92%	30.97%
	Cardiothoracic Surgery	1	0	$16,833	31.0	1.18	$14,234	26.2	0.00%	19.81%	0.00%
	Thoracic Surgery	4	1	$9,131	16.5	1.06	$8,629	15.6	25.00%	9.69%	41.20%
	EP/Chronic Rhythm Mg..	3	0	$8,694	18.0	1.02	$8,551	17.7	0.00%	16.99%	0.00%
	Urological Surgery	3	0	$11,553	28.3	1.03	$11,268	27.6	0.00%	16.03%	0.00%
	Urology	4	0	$9,191	19.8	1.06	$8,693	18.7	0.00%	29.77%	0.00%
222409-Sweet Neches Properties, Ltd.	SNF Sub Total	362	117	$11,537	37.7	1.02	$11,283	36.9	32.32%	26.09%	27.10%
	Orthopedic Surgery	43	14	$13,807	39.9	1.05	$13,093	37.9	32.56%	18.39%	23.84%
	Infectious Disease	44	14	$10,163	34.3	1.00	$10,135	34.2	31.82%	30.07%	26.87%
	Cardiology	44	19	$9,696	34.6	1.01	$9,604	34.3	43.18%	28.98%	39.27%
	Neurology	31	3	$12,626	42.0	1.06	$11,915	39.6	9.68%	24.27%	7.17%
	General Medicine	29	8	$12,571	32.9	1.05	$11,923	31.2	27.59%	23.37%	24.76%
	Pulmonary	38	14	$9,162	34.9	0.99	$9,264	35.3	36.84%	31.02%	31.89%
	General Surgery	33	12	$13,204	35.1	1.03	$12,768	34.0	36.36%	24.11%	34.57%
	Gastroenterology	19	10	$8,451	60.5	0.94	$8,976	64.2	52.63%	32.62%	39.20%
	Nephrology	19	9	$9,627	22.3	1.10	$8,758	20.3	47.37%	26.45%	48.70%
	Orthopedics	14	1	$17,758	57.0	0.98	$18,108	58.1	7.14%	19.50%	5.87%

The unmasked report includes additional drill through capability to beneficiary details and monthly trend reports described below.

7.5.2.1 SNF Utilization Report: Drill Through Reports

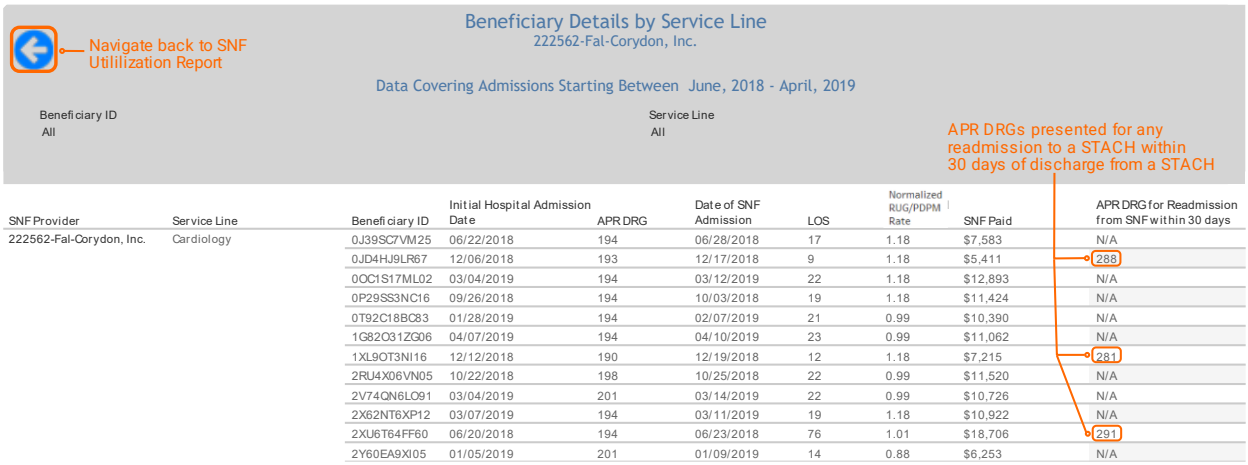
Drill throughs are only available from the Unmasked version of the report. To access the drill throughs, hover over the SNF or Service Line selection, and select either 'Beneficiary Details by Service Line' or 'SNF Utilization Trend By SNF Provider.'



7.5.2.1.1 Beneficiary Details by Service Line

This drill through report identifies each beneficiary that was admitted to the selected SNF with a preceding hospital admission in a given Service Line. The report provides each beneficiary's MBI, initial hospital admission date and APR DRG, date of SNF admission, SNF LOS, beneficiary's normalized RUG/PDPM rate relative to all of the hospital's attributed beneficiaries discharged to SNF within that Service Line, SNF paid amount, and APR DRG for any readmission to a hospital within 30 days of discharge from the hospital.

DRG Family filter selections from the parent report persist into this report such that you need to reset the DRG Family filter selection in the parent report to change Service Line filter selection(s) within Beneficiary Details by Service Line.



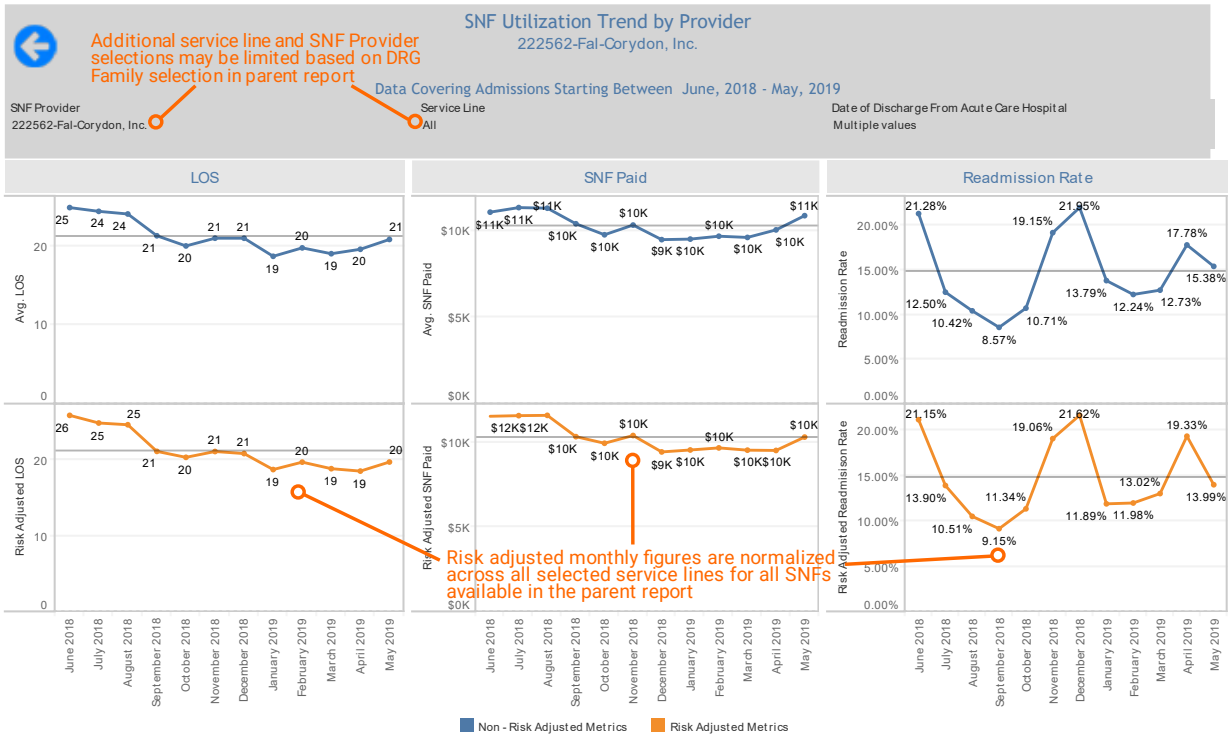
SNF Provider	Service Line	Beneficiary ID	Initial Hospital Admission Date	APR DRG	Date of SNF Admission	LOS	Normalized RUG/PDPM Rate	SNF Paid	APR DRG for Readmission from SNF within 30 days
222562-Fal-Corydon, Inc.	Cardiology	0J39SC7VM25	06/22/2018	194	06/28/2018	17	1.18	$7,583	N/A
		0JD4HJ9LR67	12/06/2018	193	12/17/2018	9	1.18	$5,411	288
		0OC1S17ML02	03/04/2019	194	03/12/2019	22	1.18	$12,893	N/A
		0P29SS3NC16	09/26/2018	194	10/03/2018	19	1.18	$11,424	N/A
		0T92C18BC83	01/28/2019	194	02/07/2019	21	0.99	$10,390	N/A
		1G82O31ZG06	04/07/2019	194	04/10/2019	23	0.99	$11,062	N/A
		1XL9OT3NI16	12/12/2018	190	12/19/2018	12	1.18	$7,215	281
		2RU4X06VN05	10/22/2018	198	10/25/2018	22	0.99	$11,520	N/A
		2V74QN6LO91	03/04/2019	201	03/14/2019	22	0.99	$10,726	N/A
		2X62NT6XP12	03/07/2019	194	03/11/2019	19	1.18	$10,922	N/A
		2XU6T64FF60	06/20/2018	194	06/23/2018	76	1.01	$18,706	291
		2Y60EA9XI05	01/05/2019	201	01/09/2019	14	0.88	$6,253	N/A

COLUMN NAME	DESCRIPTION
SNF Provider	The SNF provider following the hospital admission; SNF provider through which the user drilled to this report.
Service Line	One or multiple Service Lines from the preceding hospitalization; beneficiaries are nested within the report at the Service Line level.
Beneficiary ID	Medicare Beneficiary Identifier for each beneficiary discharged to SNF within a selected Service Line.
Initial Hospital Admission Date	Date of admission to the preceding hospital admission
APR DRG	The APR DRG of the preceding hospital admission
Date of SNF Admission	Date of admission to the SNF following the Initial hospital admission
LOS	Length of stay at the SNF
Normalized RUG/PDPM Rate	Per beneficiary RUG/PDPM rate for the SNF stay normalized to 1.0.
SNF Paid	Total CMS payment to the SNF for the stay.
APR DRG for Readmission from SNF within 30 days	The APR DRG for any readmission to an acute care hospital within 30 days of discharge from the initial hospital stay. If no readmission occurred, "N/A" is shown.

7.5.2.1.2 SNF Utilization Trend by Provider

This drill through report shows LOS, SNF payment, and readmission rates by SNF and Service Line by month. This report allows the user to filter on specific Service Lines, to select another or additional SNFs, and to adjust the time period displayed. By default, all Service Lines are displayed.

Results are presented by both observed (not risk-adjusted) and risk-adjusted metrics. The risk adjusted metrics in this report are based on all SNF utilization or by Service Line(s) among the hospital's selected attributed population.



8 HELP

8.1 Glossary

Glossary provides quick reference to the terms used in the CRISP CCLF application:

Term	Definition
BETOS	Berenson-Eggers Type of Service (BETOS) codes are a classification of CPT and HCPCS codes into broad categories of like services that allow for easy review and analysis of data.
CCS Category	The Clinical Classifications Software (CCS) is a diagnosis and procedure categorization system developed by AHRQ' HCUP project to aggregate diagnosis and procedure codes into a smaller number of clinically meaningful categories.
Cluster	Physicians are grouped into discrete groups based on similarity of practice patterns. Physicians with similar post-acute discharge patterns will appear in the same cluster, while physicians with dissimilar patterns will appear in different clusters. The comparison of utilization across these clusters allows for the calculation of potential savings opportunity.
Community	First post-acute setting defined by non-facility-based physician services.
Copay	The amount the patient pays for the prescription.
DME	Durable medical equipment; type of service
Episode	All health care services that occurred between the admission to the short term acute care hospital (index admission) and 90 days after discharge. Medicare payments for all services within this period are included in episode payments.
ESRD	End-Stage Renal Disease (ESRD). Patients with ESRD are eligible for Medicare coverage regardless of age.
First Setting / First PAC / First Post-Acute Care	The first facility or setting that the patient was discharged to and received care following the index admission. The post-discharge period could include visits/admissions to multiple acute and post-acute settings. The first PAC setting refers to the first setting.
hAM	hMetrix Advance Model; predictive model to identify high-needs patients based on historical care patterns and clinical characteristics
HHA / HH	Home Health Agency; first post-acute care setting and type of service
High-Risk Medication	Prescription drug identified on the American Geriatrics Society (AGS) Beers Criteria for Potentially Inappropriate Medication Use in Older Adults list. This list contains drugs that are best avoided in older adults and those with certain diseases or syndromes. Patients on these medications should be prescribed reduced doses or prescribed with caution and carefully monitored, as these medications have been found to be associated with poor health outcomes, including confusion, falls, and mortality.
Hospice	First post-acute care setting and type of service
Index Admission	The initiating admission at the short term acute care hospital. This is the event that begins the episode, also known as the anchor stay.

Inpatient Hospital	First post-acute care setting and type of service. Includes short term acute care hospital admissions.
IRF	Inpatient Rehabilitation Facility; first post-acute care setting and type of service
LOS	Length of stay, measured in days.
LTCH	Long-Term Care Hospital
Master Patient ID	Unique patient identifier internal to MADE. This ID does not correspond to internal hospital patient identifiers.
Medical Paid (Current and Previous Year)	Total Medicare payment for all Part A and B services, including payments for inpatient hospital, outpatient hospital, skilled nursing facilities, home health agencies, inpatient rehabilitation facilities, long term care hospitals, hospice, physician services, and durable medical equipment. Also includes a proxy for beneficiary cost-sharing for all sites of service. Prescription drug payments covered on Medicare Part D are excluded. Current year indicator refers to the most recent 12 months of completed data. Previous year indicator refers to the prior 12 months of completed data
Medication Synchronization	Process of a pharmacist coordinating the refill of a patient's prescriptions to allow for pick up on a single day each month. This process is can increase patient compliance in taking their prescribed medications.
Member Months	The number of beneficiaries enrolled in Medicare Part A and Part B each month.
Non-HMO	Medicare beneficiaries enrolled in Part A and Part B. These are the non-Part C, or non-Medicare Advantage members.
Observation Stay (>23 hours)	Outpatient claim with an NCH claim type code of 40 that occurred at a loaded hospital with HCPCP codes G0378, G0379, or with revenue center code 0760 or 0762. Additionally, within these claims, an indicator of hours (units) is used to determine those greater than 23 hours.
OP Therapy	Therapy services performed in the hospital outpatient setting.
Other (Setting)	As a first post-acute care setting, represents care provided in long-term care hospitals, other inpatient facilities such as psychiatric hospitals, DME, and hospice care.
Other Facility Readmission	A readmission to a short-term acute care hospital that is different from the index admission hospital.
Outpatient	Type of service; includes all Part B services provided in an outpatient hospital setting, including dialysis center.
PAC	Post-Acute Care including Home Health, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, Long-Term Care Hospital, and Hospice; as well as non-facility physician and hospital outpatient care, as well as DME, during the post-discharge period.
Pharmacy Paid (Current and Previous Year)	Total Medicare payment and proxy for beneficiary cost-sharing for Part D prescription drugs. Current year indicator refers to the most recent 12 months of completed data. Previous year indicator refers to the prior 12 months of completed data.
Part A + Part B Members	Traditional/Original Medicare beneficiaries. These beneficiaries are also known as fee-for-service (FFS) beneficiaries. This tool only reports on these Part A and Part B members.

PAVE	Post-Acute Variance Explorer (PAVE) Savings Opportunity. hMetrix's proprietary technology to cluster groups of physicians based on similar practice patterns. PAVE identifies the savings opportunity for each APR DRG if the average post-discharge payments related to each physician were replaced with the average in the highest performing cluster.
PCR	HEDIS® Plan All-Cause Readmission. The expected readmission rate component of this measure based on presence of surgery during the inpatient stay, discharge condition, and demographics is used in the risk adjustment calculations in the SNF Utilization Reports.
PDC	Proportion of Days Covered
PDPM	Patient Driven Payment Model; reflects the medical and therapeutic needs of a SNF patient. Used to risk-adjust LOS and SNF payment across SNFs and Service Lines.
Physician	Type of service; includes all physician Part B services regardless of site of service
PMPM	Per Member Per Month (PMPM) is a common measure for analyzing a population. This measure factors in the number of members as well as the time each member was enrolled (i.e., member months). The most common usage is for payments, where the PMPM measure is the average payments for a member over one month.
Post-Discharge Episode	The portion of the total episode immediately following the discharge from the index admission. This period lasts 90-days and includes all Medicare Part A and B services related to the episode.
Proration	Episodes are prorated; meaning any stay that spans the end date of the episode is prorated based on how many days of the stay are within the 90-day post-discharge period.
RUG	Resource Utilization Group; reflects the intensity of services provided in the SNF. Used to risk-adjust LOS and SNF payment across SNFs and Service Lines.
Run Out	Due to the way Home Health episodes are paid (60-day episodes), not all claims will necessarily be adjudicated by the end of the post-discharge period. For this reason, the application includes all episodes, regardless of whether data for all claims have been provided. The application then allows the user to select whether to include these incomplete episodes, or to exclude them from the analysis.
Same Facility Readmission	A readmission to a short-term acute care hospital that is the same as the index admission hospital.
SNF	Skilled Nursing Facility; first post-acute care setting and type of service
STACH	Short-Term Acute Care Hospital; first post-acute care setting. Represents a hospital readmission immediately following discharge from the index admission prior to the patient receiving any other health care services.
Target Price	This is the pre-determined benchmark amount that will be compared to your hospital's episode payment. The target price is calculated by averaging the top 25th percentile of providers.
Total Medication Cost / Cost	The published Average Wholesale Price (AWP), a proxy for the price paid for the prescription by a third-party payor.
Winsorization	Winsorization is the statistical process of replacing extreme data values or potential outliers with less extreme values to limit the impact of these

	values on analysis. For example, winsorization of paid amounts removes the impact of extremely expensive episodes and the potential skew it may introduce on a performance metric. The less extreme values or trim points or upper and lower bounds are set to the mean -/+ 3 standard deviations of the normalized paid amount by DRG. Each episode's costs are truncated at the upper and lower bounds.

8.2 CCLF Data Basics

8.2.1 CCLF

The CCLF (Claim and Claim Line Feed) data files are a set of Medicare claims files incorporating all Medicare Part A and B claims from Inpatient Facility, Outpatient Facility, Skilled Nursing Facility, Home Health Agency, Hospice, Professional, Durable Medical Equipment, and Prescription Drug services. These files contain beneficiary claim level data including Medicare payment amounts, diagnoses, procedures, dates of service, provider identifiers, and beneficiary copayment amounts. Provider cost information is not included in the data. Drugs paid for under Part A or Part B (such as drugs administered in the hospital) are included in MADE. Part D drugs are only available for the Population Navigator and Pharmacy Analytics module.

The CCLF also includes information regarding beneficiary's Medicare eligibility, such as the reason for Medicare eligibility (aged, disabled, ESRD), entitlement status, and months of eligibility for all Medicare beneficiaries enrolled during the year of the data set. These data sets contain a unique identifier for each beneficiary, allowing the linkage of beneficiary claims across the various claims files.

The CCLF data files only contain Medicare fee-for-service (FFS) claims (Part A and Part B) and does not contain any claims for beneficiaries enrolled in Medicare Advantage (Part C) or non-Medicare (private) insurance plans.

MADE is powered by the latest 36 months of data for 100% of the Maryland Medicare fee for service beneficiaries.[1] The CCLF includes any beneficiary with a Part A or Part B claim from a Maryland provider, regardless of the beneficiary's residency at the time of the claim. Additionally, recent enhancements now result in the Beneficiary Denominator file containing all beneficiaries who have lived in Maryland for at least one month and have at least one month without HMO during the 36-month period. This allows CCLF to represent the universe of Medicare fee for service beneficiaries, regardless of health care usage.

Use of this data is governed by a Data Use Agreement (DUA) from the Centers for Medicare & Medicaid Services (CMS) between CMS and CRISP. Using the beneficiary's unique identifier, all health care information is tracked across the available data. This allows for the analysis of episodes of care at the beneficiary level as well as analysis across the entire population.

[1] Due to CMS lags in claim processing, the latest three months of the data are incomplete.

8.2.2 Population Assignment

MADE contains approaches for attributing beneficiaries to Maryland hospitals: Hospital "Touch" Attribution, MPA Performance Year 7 Attribution, and through attested CCAs with providers that have a treatment relationship with a beneficiary. These approaches can be used separately or together to further filter the attributed beneficiaries.

8.2.2.1 Hospital "Touch" Attribution

Each beneficiary in the Population Analytics module implemented for CRISP is assigned to one or more hospitals. Non-Maryland residents who receive care in a Maryland hospital are included in the "touch" attribution logic. The following is a brief description of the method used to assign beneficiaries:

1. The hospitals to which beneficiaries are assigned are limited to the 47 CRISP hospitals.
2. Beneficiaries must be enrolled in Part A and Part B (no Medicare Advantage beneficiaries).
3. All beneficiaries with a **touch (either inpatient claim – IP or inpatient claim or emergency department visit - IP+ED)** will be assigned to every hospital with a touch.

Users can select which attribution type to apply to reports in the top right of the Population, Episode, Pharmacy, and Monitoring tabs.

8.2.2.2 MPA Year 7 Attribution

Beneficiaries attributed to a hospital under the Medicare Performance Adjustment (MPA) policy are available in MADE.

1. Geographic – Beneficiary is attributed to a hospital based on the hospital's Primary Service Area (PSA) or by the PSA Plus (PSAP) methodology when PSAs overlap for multiple hospitals. Only beneficiaries attributed under MPA by geography with a "touch" at the hospital are visible in the application.
2. Academic – Beneficiary is attributed to an AMC via a touch and a CMI ≥ 1.5.

In addition to the MPA Attribution Types being selectable in the top right of MADE, additional MPA information is presented at the beneficiary level in the following Population Navigator columns:

- "MPA Attribution" indicates the MPA attribution category in which the beneficiary is attributed to the hospital. This field is only populated for MPA attributed beneficiaries to the selected hospital. Blank cells indicate that the beneficiary is ***not*** MPA attributed to the selected hospital. Blank cells will occur for beneficiaries who have touched the selected hospital or are available through an attested CCA but are not MPA attributed there.
- "MPA Attributed Hospital" indicates the hospital to which the beneficiary is attributed. The MPA attributed hospital is identified for all MPA-attributed beneficiaries, regardless of the hospital selected. Beneficiaries may be attributed to more than one hospital. In these instances, the field will show "multiple" hospitals. As not all beneficiaries in MADE are attributed to a hospital, this field may remain blank for some "touch" attributed beneficiaries.

MPA "NEUTRALIZED" CLAIM PAYMENT AMOUNTS

Hospital Inpatient and outpatient claim payments in 2022,2023, and 2024 (i.e. claims with through dates in CY2022,CY2023, and CY2024) have been adjusted, by hospital, to remove the effective MPA reward or penalty percentage that has been applied by CMS for the specific claim. This neutralized payment is presented for all claims data presented in MADE as well as all other CCLF-based reports in CRISP Reporting Services.

8.2.3 Physician Assignment in Episodes

Each episode in the Episode Analytics module implemented for CRISP is assigned to a physician. The assigned physician is the physician most responsible for the index hospitalization that initiates the episode. The assignment is based on two physicians identified on each inpatient hospital claims: the attending physician and the operating physician.

If the index hospitalization is a surgical discharge, the episode is assigned to the **operating physician** or surgeon. If the operating physician is not recorded on the claim, the **attending physician** is assigned.

All remaining episodes (i.e., a medical discharge) are assigned to the attending physician.

8.2.4 Episode

Episodes are clustered into APR DRG "families" using a two-step process. First, according to Maryland's Care Redesign Program for Episode Care Improvement Program (ECIP), clinical episode categories were developed based on CMS' Center for Medicare and Medicaid Innovation (CMMI) Bundled Payment for Care Improvement (BPCI) Advanced initiative. These clinical episode categories are equivalent to a subset of the APR DRG families presented in MADE. Next, an expanded set of APR DRG families are created based on the clinical episode categories from the initial Bundled Payment for Care Improvement (BPCI) initiative. Clinical conditions that are associated with neither BPCI nor BPCI Advanced are not included in MADE. The source definitions for all clinical episodes are based on MS-DRG. MS-DRGs are converted into APR DRG version 35. In doing so, some distinct episode categories in BPCI or BPCI Advanced are consolidated. See APR DRG Family for a complete list.

Individual episodes are initiated by the inpatient admission of an eligible Medicare FFS beneficiary to an acute care hospital for one of the included APR DRGs. The episode includes a Medicare beneficiary's inpatient stay in the acute care hospital, post-acute care, and all related services during the episode of care, which ends 90 days after hospital discharge. Episodes include all related Parts A and B services provided during the duration of an episode including hospital care, physician care, readmissions, post-acute care and durable medical equipment. Episodes exclude Part B services that CMS has determined are unrelated to the index admission including transplantation, trauma services, acute surgical procedures and cancer care.

The episode consists of two main segments:

- Index admission – The period of time between the admission date and the discharge date of an episode-initiating inpatient hospital stay for a participant

- Post-Discharge Episode Period – The period of time covering 90 days from the discharge date of an index admission, as defined by the participant for a given episode type (beginning the same day as the index admission's discharge date).

Note that any APR DRG Families described in **APR DRG Family** that have no data for a user's hospital will not appear in the selection menus.

APR DRG FAMILY	APR DRGS
ECIP Clinical Episode Categories	
Acute myocardial infarction	190
Back and neck except spinal fusion	310
Cardiac arrhythmia	201
Cardiac Valve	160, 162, 163
Cellulitis	383
Cervical spinal fusion &Combined anterior posterior spinal fusion & Spinal fusion (non-Cervical)	304, 321
Chronic obstructive pulmonary disease, bronchitis/asthma	140, 141, 145
Congestive heart failure	194
Coronary artery bypass graft surgery	165, 166
Double joint replacement of the lower extremity & Major joint replacement of the lower extremity	301, 302
Fractures femur and hip/pelvis	340, 341
Gastrointestinal hemorrhage	241, 244, 253, 254
Gastrointestinal obstruction	247
Hip and femur procedures except major joint	308, 309
Lower extremity and humerus procedure except hip, foot, femur & Major joint replacement of upper extremity	313, 315, 322
Major bowel procedure	230, 231
Pacemaker	170, 171
Percutaneous coronary intervention	174, 175
Renal failure	469, 470
Sepsis	720, 724
Simple pneumonia and respiratory infections	131, 137, 139
Stroke	044, 045
Urinary tract infection	463
Other Clinical Episode Categories	
AICD generator or lead & Pacemaker device replacement or revision	176, 177
Atherosclerosis & Chest pain	198, 203
Amputation	305,314
Cardiac defibrillator	161
Diabetes	420

Disorders of liver except malignancy, cirrhosis or alcoholic hepatitis	279
Medical non-infectious orthopedic	342, 347, 349, 351
Nutritional and metabolic disorders	421, 422, 425, 426
Other vascular surgery, Medical peripheral vascular disorders	181,182,197
Red Blood Cell Disorder	662, 663
Syncope & Collapse	204
Transient Ischemia	047

8.2.5 Readmission and Transfer

A readmission is defined as an admission to a short-term acute care facility that occurs shortly after a discharge from the same or a different short-term acute care facility. Most often, it is measured as within 30 days after the initial discharge, but it could be shorter or longer. Such readmissions are often, but not always, related to a problem inadequately resolved in the prior hospitalization.

Readmissions in MADE can only occur following a discharge from an acute care hospital with a subsequent admission to the same or other acute care hospital within the measured period. The logic to identify a readmission within MADE does not vary other than the time period during which they are counted (30 or 90 days, depending on the report).

In order to be counted as a readmission, the readmission must not be planned. Generally, planned readmissions are limited to:

1. Specific types of care that are always considered planned (transplant surgery, maintenance chemotherapy/immunotherapy, rehabilitation);
2. A non-acute readmission for a scheduled procedure.

In order for a hospitalization to be eligible for a readmission, the index admission must:

1. Not be for rehabilitation;
2. Not be for a number of psychiatric disorders, according to CCS Diagnosis category.

In the often cited 30-day readmission rate, transfers from one short-term acute care facility directly to another short-term acute care facility are excluded. In MADE, transfers are defined according to the CRISP Standard Acute-to-Acute Transfer logic as an admission to an acute care hospital on either the same or next day following discharge from an acute care hospital. Of note, in the event of a transfer, the admission at the hospital to which the beneficiary is transferred is eligible for a readmission but not the admission at the transferring hospital.

In the Episode Module, it is also important to note that readmissions are being reported throughout the entire 90-day episode but are presented in the context of the first post-acute care settings. Therefore, a readmission that occurs after discharge from the first post-acute care setting is still attributed to that first setting.

8.2.6 Care Setting Abbreviations

CARE SETTING	LONG DESCRIPTION	SHORT DESCRIPTION	ABBREVIATIONS	PAC SEQUENCE OF CARE	PATIENT DETAILS - SEQUENCE	PATIENT DETAILS – PIE
STACH	Acute Care Hospital	ACH	A	X	X	X
IRF	Inpatient Rehab Facility	IRF	I	X	X	X
SNF	Skilled Nursing Facility	SNF	S	X	X	X
HH	Home Health Agency	HHA	H	X	X	X
Physician	Ambulatory Care	Ambulatory Care	C	X	X	X
Outpatient	Ambulatory Care	Ambulatory Care	C	X	X	X
OP Therapy	Ambulatory Care	Ambulatory Care	C	X	X	X
ER	Emergency Room	ER	E	X	X	X
DME	Durable Medical Equipment	DME	---------- (Not Presented) ----------			"Other"
LTCH	Long Term Care Hospital	LTCH	L	X	X	"Other"
Other IP	Inpatient Other	Inpatient Other	Z	X	X	"Other"
Hospice	Hospice	Hospice	T	X	X	"Other"

"Ambulatory" includes care received while the patient resides in the community; including physicians, outpatient hospitals, clinics, ASC, IDTF, dialysis centers, chemotherapy treatment centers, occupational therapy, physician therapy, and speech therapy. DME will not appear as a sequence and is grouped in "Other" in the Details report Pie chart.

8.2.7 Cost Adjustment Factors

Relative costs are used to normalize the data before computing the target price and to convert the target price back for each hospital. The following steps describe the method used to calculate the cost adjustment factors that are used to determine relative costs:

1. Compute the average payment per discharge for each hospital (and in total) based on the CCLF data for each hospital.
2. Calculate the case mix index (CMI) for each hospital (and in total). The case mix index is the average APR DRG weight per discharge. hMetrix is using APR DRG version 35.
3. Divide the average payment per discharge by the case mix index.
4. This CMI adjusted average payment per discharge for each hospital is divided by the CMI adjusted average payment per discharge for all hospitals. This calculation gives the relative cost for each hospital.

To ensure that these relative costs are reasonable estimates, they were compared to the Resumption of Care (ROC) numbers. These costs are based on the Maryland data and, hence, implicitly include variation in cost due to factors other than unit cost at hospitals. It will not reduce variances in index hospitalization costs which is what is required for this adjustment. It highlights the post-acute care variances.

8.2.8 Target Price

Each episode in the Episode Analytics module is based on an APR DRG. The episodes are defined using the method developed under the CMS CMMI BPCI program. The following is a brief description of the method used to calculate the benchmark for each APR DRG.

Each APR DRG episode will have a single benchmark for each year. The benchmark will be adjusted using hospital specific cost adjustment factors to come up with hospital specific benchmark.

Steps:

1. Restrict episodes to the ones initiated (index admission) by the 47 CRISP providers.
2. The allowed payment amount from the claims data will be normalized as follows:
    a. Inpatient and outpatient claims are adjusted using the hospital specific cost adjustment factor.
    b. For all other claim types, the wage factors for the Index admission provider will be used to normalize the allowed amount from the claims data.
3. The normalized amounts will be summarized by episode to compute the episode amount.
4. Outliers will be winsorized at the 5th and 95th percentile values of the normalized episode amount for each APR DRG.
5. APR DRGs will be grouped into APR DRG Families using the logic used by the CMS CMMI BPCI program.
6. The provider level average normalized episode amount for each APR DRG family is then calculated using the winsorized data.
7. Low volume providers with fewer than five episodes in each APR DRG family will be removed from each APR DRG Family.
8. After removing the low volume providers, the 25th percentile of the provider level average, normalized episode amount is then calculated. This is used to identify the top 25% of providers in each APR DRG family.
9. The APR DRG family benchmark is the mean of the top 25% of providers in each APR DRG family.
10. The hospital benchmark will be computed from the state-wide benchmark by adjusting the normalized benchmark using the cost adjustment factor and wage adjustment factor in the proportion of inpatient and outpatient amounts vs all other amounts for each APR DRG family.
11. The annual trend on case mix adjusted overall average normalized dollars will be used to compute the benchmark for each year.

8.2.9 hMetrix Advanced Model (hAM)

CCIP incentive opportunity development relies on a predictive modeling tool. The predictive model, the hMetrix Advanced Model (hAM), was custom built by CRISP's data vendor partner, hMetrix. The model was built using state-of-the-art modeling techniques based upon a machine learning ensemble algorithm. Ensemble algorithms create multiple models and evaluate the results ('learning' from the results of each). The ensemble algorithm then combines the methods to produce more accurate solutions.

The model predicts the impactable utilization for the next 12 months for each Medicare Part A and Part B member in Maryland.

Data for Machine Learning Ensemble Algorithm

The model was built based on Maryland Medicare CCLF data 2014-2016.

Predictive Variables

The model incorporates data available in Medicare Part A and Part B claims as predictive variables to develop utilization flags and identify impactable costs and total costs. By design, machine learning ensemble algorithms create, test, and learn by employing the range of variables available to the model. hAM found that the predictive variables with the greatest influence include both clinical and utilization values such as:

- Diagnoses
- Procedures
- Revenue centers
- Places of service
- Physician specialties
- Inpatient admission count
- Inpatient length of stay
- Emergency department visit counts
- Clinical severity measures derived from HCCs

Model Training

The model was tested using standard industry methods for training predictive models. To greatly reduce the chance of overfitting the model, the members were randomly assigned to be in either the test group (20%) or the training group (80%). The training group was used in the formation of the model, while the test group was used to test the performance of the model. Put another way, the performance of this model would be computed using members who were not used in the formation of the model. This means the performance of the model cannot be attributed to an overfit model.

Model Evaluation

Model results were compared to the Medicare HCC, Elixhauser, LACE, and “3 or more bedded visits” models on the same population. hAM outperformed the existing models’ positive predicted value by nearly 50%.

hAM in MADE

The model’s risk score is presented in Population Navigator as a selectable column. Of note is that the risk score is only calculated for beneficiaries that have not expired and are enrolled in Medicare FFS as of the most recent monthly data refresh. Otherwise stated, expired beneficiaries or those not enrolled in Medicare will not display a hAM score.