

# Patient Total Hospitalization (PaTH) User Guide

By CRISP, last updated 8/17/2021

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## Patient Total Hospitalization Dashboard (PaTH)

### Background

The Patient Total Hospitalization Report (PaTH) was developed to provide hospital and ambulatory users a report to view cross hospital charge data for patients in the last 36 months. PaTH provides an overview of hospital utilization and charges. Users can also drilldown to a specific patient population with the patient condition, demographic, and hospital utilization filters. Users can generate patient lists using the report's filter to view hospital charges with an option to export the data. Users can additionally create programs based on their CEND Panels in PaTH or Case Mix Program Loader, and users will be able to view the programs in PaTH and Pre/Post.

### Use Cases

1. Study your overall population by geographic locations and/or chronic conditions, by age group.
2. Load a panel of patients who have received support from hospital and/or community programs (or combined programs):
  - a. To study how their costs and utilization compare to the overall population in # 1.
  - b. To study the population of patients who have received a program or service(s)
3. Load a panel that represents patients who were referred to a program or service and compare it to those who actually participated in the service (# 2 above).
4. Use the PaTH export to further study and analyze patients in any of the above panels.
5. Remember that panels loaded in PaTH can also be loaded/used in the Pre/Post Report which also has powerful data to show utilization, costs and types of visits before and after a program/service was provided. Pre/Post also has different data in the export, including whether the visits were pre or post enrollment date, PAU, PQI, Readmission Index Visit, Readmission Visit start date and various visit-level diagnoses

### Data Source

The data used in this report includes charges from all Maryland hospitals (referred to as Case Mix data). All Maryland hospitals provide their Case Mix data to the HSCRC which includes all-payer financial and patient-level administrative information for all inpatient and emergency visits, observation visits greater than 24 hours, and outpatient visits that occurred in regulated space. This report does not include out-of-state visits for Maryland residents and does not include charges for outpatient visits that occurred in non-regulated space.

## Measures

Measure	Definition
<i>IP, OBV, ED Visits</i>	Count of all Maryland hospital Inpatient, Observation, and/or ED visits
<i>Patients</i>	Count of unique patients
<i>Charges per Patient</i>	Average charges per patient
<i>Charge per Visit</i>	Average charges per visit
<i>Visits per Patient</i>	Average number of visits per unique patients
<i>ADI</i>	Area Deprivation Index is based on a measure created by the Health Resources & Services Administration (HRSA) over three decades ago, and has since been refined, adapted, and validated to the Census Block Group neighborhood level by Amy Kind, MD, PhD and her research team at the University of Wisconsin-Madison. It is utilized as a proxy measure for socioeconomic status to capture patient-level social risk factors not currently available in clinical information systems
<i>All Hospital Charge</i>	Total all-payer charges for visits
<i>All Hospital Visits</i>	Total number of visits at hospitals
<i>Hospital</i>	Number of unique hospitals visited
<i>PQI</i>	The <a href="#">Prevention Quality Indicators</a> (PQIs) are a set of measures developed by the Agency for Healthcare Research and Quality (AHRQ) that can be used with hospital inpatient discharge data to identify ambulatory care sensitive conditions in adult populations

## User Guide

### Tableau PaTH Access/Card

*Step 1.* To access the All-Payer Population tile, login to the CRISP Reporting Services Portal by visiting <https://reports.crisphealth.org>. Once in the CRS Portal, a dashboard of different blue report “cards” will appear. Availability of reports is based on the access of the user. Clicking the card named “All-Payer Population” will bring up the available reports for this category. The following screenshots represent the user’s workflow.



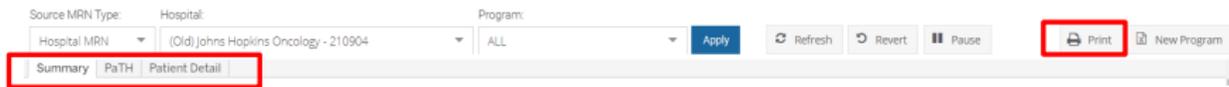
*Step 2.* By clicking the Tableau icons as shown below, you will either access the PaTH Summary or PaTH Details Report. Users with PHI-level access to this report will have the PaTH Details report option. Users who can only see the PaTH Summary report (and not the PaTH Details report) are configured for summary level access (cannot see PHI reports).

The question mark icon will allow you to access documentation such as user guides and data dictionaries where applicable.



## Tableau Features

On each Tableau dashboard, there are menu options for the user to select, which are listed below. Additionally, the Tableau report contains multiple dashboards. The available dashboards are listed at the top.



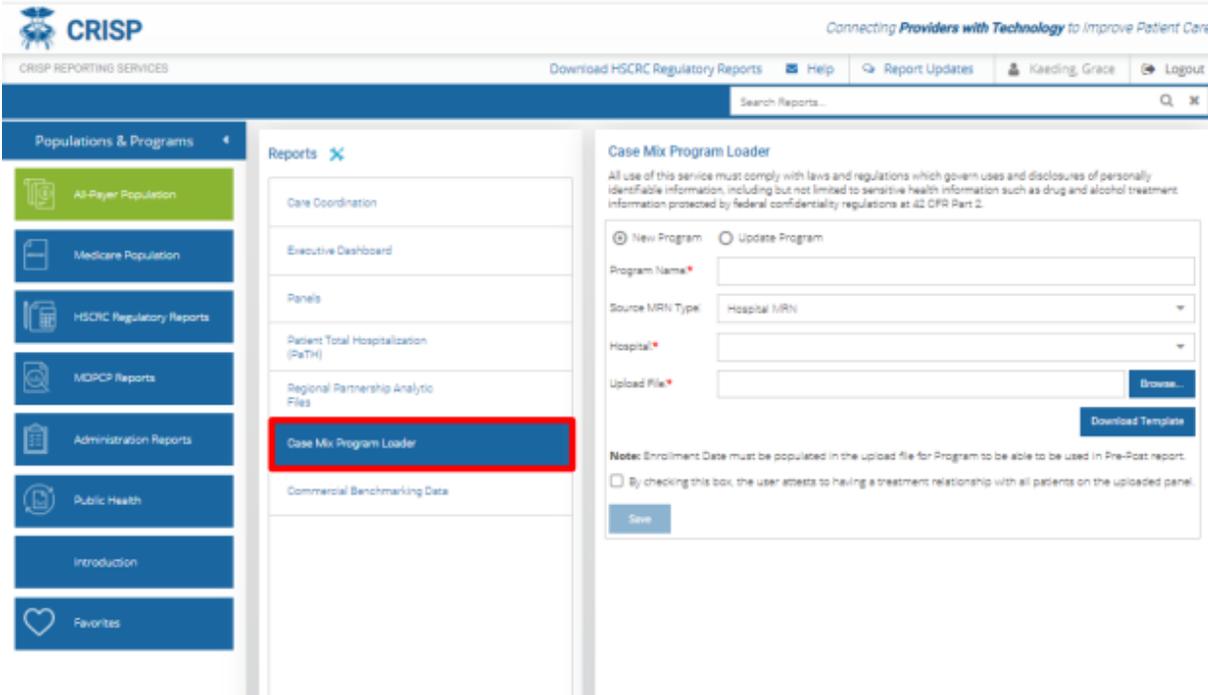
Menu Option	Description
<i>Refresh</i>	The refresh button is used to refresh the data source used by the Tableau report
<i>Revert</i>	The revert button restores the report to its default view, undoing all user selections and/or filtering
<i>Pause/Resume</i>	To save time when setting multiple filters, use the Pause button to suspend the report refresh, select filters, then select Resume, which applies the filters and refreshes the report. By pausing the layout update, the report is not reloaded for <i>each</i> filter change.
<i>Help</i>	This button opens the Tableau user guide
<i>Print</i>	This button generates a PDF from the selected tabs in Tableau. A print menu with various export options is provided. The user can print multiple tabs with the desired filters and has options to adjust the page scaling, paper size, and paper orientation.
<i>Excel/Crosstab</i>	The Excel or crosstab option allows users to export a dataset into an Excel workbook or CSV file. Note that Excel extracts may provide additional columns that may not be present in the Tableau workbook that is displayed on the screen. Excel exports can be done using no filters (to study a population or panel), or the user can set filters and export to excel to study a subset of a population or panel.

## Uploading a Program

### Program Loader

Users can upload a program in two places.

1. The Case Mix Program Loader, located in the All-Payer Population report section, allows users to create programs in one central place. Users can view uploaded programs in both Pre/Post and PaTH reports.



- The 'New Program' button in the PaTH Reports lets users upload programs. Users can view the programs uploaded in PaTH and Pre/Post. Although the same template is used to load PaTH and Pre/Post panels, *PaTH does not use the Program Enrollment date*. It just uses the MRN's and the source code.



## Creating a Panel for PaTH or Pre/Post

Download the Template and keep a copy of the blank template for future panel creation. The template includes three columns: MRN, Source Code and Program Enrollment.

MRN – hospital MRN or CEND Panel MRN

Source Code – select your source code from [Table 1](#). If you do not see your organization in the Source Code table, please contact [support@crisphealth.org](mailto:support@crisphealth.org) and request creation of a source code.

Program Enrollment Date – the date the patient started the program (used by Pre/Post but not used by PaTH).

The patient MRN and Panel Source is based on the CEND Panel. The CEND Panel submitted by the provider is required to have either a hospital MRN or a practice specific MRN in order to provide each patient with a unique identifier.

## Loading a Panel for PaTH or Pre/Post

Enter a Program Name. Since PaTH Summary Report panels will be displayed in the drop-down list alphabetically by name, it is helpful to use a standard naming convention that includes the name of the program and the start and end dates of the panel contents.

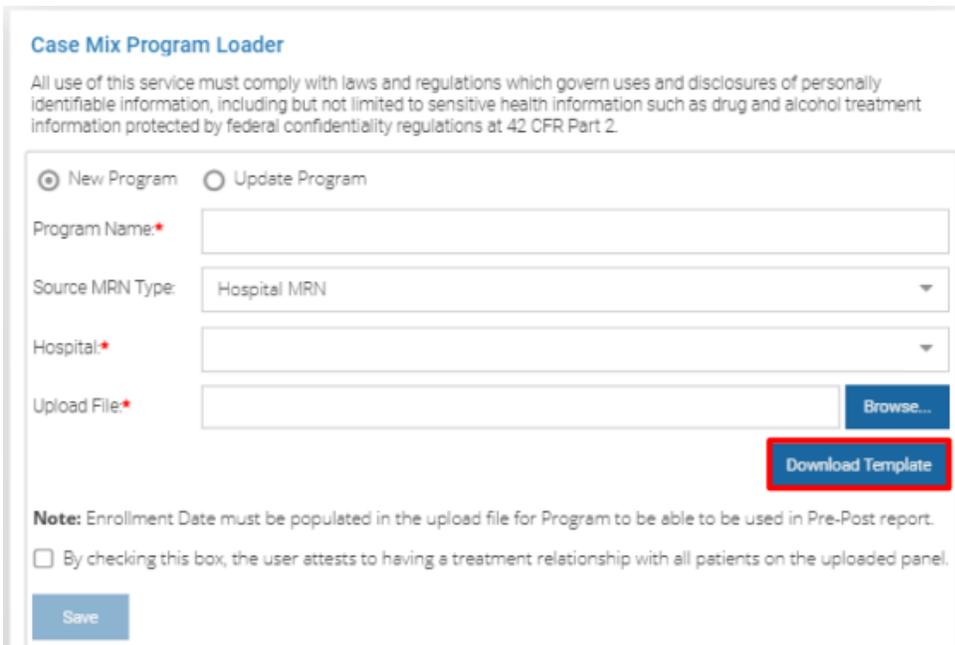
Select the Source MRN Type - Hospital MRN or CEND Panel MRN

Hospital – select the hospital or organization

Upload File – use browse to search for and find your file, select the file so that the name displays in the 'Upload File' box.

Check the attestation box.

Select 'Save' which will upload the panel for use in the PaTH or Pre/Post reports.



**Case Mix Program Loader**

All use of this service must comply with laws and regulations which govern uses and disclosures of personally identifiable information, including but not limited to sensitive health information such as drug and alcohol treatment information protected by federal confidentiality regulations at 42 CFR Part 2.

New Program  Update Program

Program Name:\*

Source MRN Type: Hospital MRN

Hospital:\*

Upload File:\*

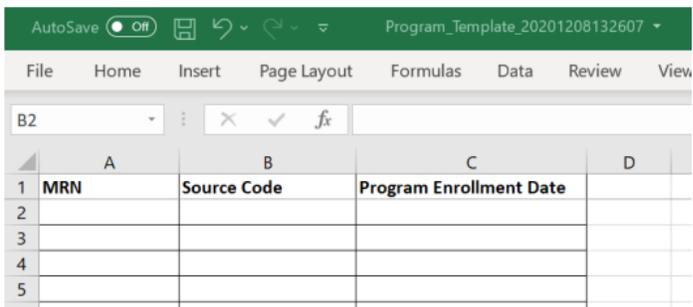
Browse...

**Download Template**

**Note:** Enrollment Date must be populated in the upload file for Program to be able to be used in Pre-Post report.

By checking this box, the user attests to having a treatment relationship with all patients on the uploaded panel.

Save



AutoSave  Off

Program\_Template\_20201208132607

	A	B	C	D
1	MRN	Source Code	Program Enrollment Date	
2				
3				
4				
5				

## Tableau Filters

Users can select filters in the report to focus the analysis on specific areas and populations.

Filter	Description
<i>Service Provided From</i>	Hospital where the visit occurred
<i>Time Period</i>	Visits in the respective period selected
<i>Conditions</i>	Applying filter will restrict dashboard to only patients with the specified chronic condition. Patients are flagged with chronic conditions if they have the appropriate diagnosis codes in Case mix data, using CMS Chronic Condition Warehouse methodology.
<i>High Need</i>	High Need: Patients with 3 or more IP discharges and/or OBS visits of 24+ hours during the last 12 months across all hospitals. Rising Need: Patients with 2 or more ED, IP, or OBS visits greater than 24 hours during the last 12 months across all hospitals. Excludes High Need Patients.
<i>Visit Type</i>	Inpatient (IP), Observation (OBS) visits greater than or equal to 24 hours, Observation visits less than 24 hours, and Emergency Department (ED) visits based on the Case Mix data as reported by hospitals
<i>APR DRG or EAPG</i>	The All Patient Refined Diagnostic Group and Enhanced Ambulatory Patient Group categorized visits based on reason for admission.
<i>Primary Payer</i>	The primary payer as reported by hospitals in the Case Mix data.
<i>Secondary Payer</i>	The secondary payer as reported by hospitals in the Case Mix data.
<i>Age Group</i>	Age grouped together as reported by hospitals in the Case Mix data.
<i>Gender, Race, Ethnicity</i>	Race, Ethnicity, and Gender as reported by hospitals in the Case Mix data.
<i>Expired</i>	Patient has died.

## Report Sections

1. Summary
2. PaTH
3. Patient Details



## Summary

The PaTH Summary Report displays a summary chart of hospital utilization metrics. Users can drilldown to specific populations by applying filters.

A selection bar is located at the top of the PaTH Report. Here, users can select Hospital(s), CEND Panels, and/or Programs they have permissions to view. After selecting, the user must click 'Apply' to load the report accordingly.

Source MRN Type: Hospital: Select Program:  
 Hospital MRN: ALL, 210001 - Meritus Medical Center, . . . ALL, djr\_jhbmhc\_hf\_ipmrx/che Apply

### Patient Total Hospitalizations Dashboard

Inpatient (IP), Observation (OBV), and Emergency Department (ED) Visits

#### Patients by Number of IP, OBV, and ED Visits

Hospital Name	IP, OBV, and ED Visits	Patients	Charges	Charges per Patient	Charges per Visit	Visits per Patient
Grand Total	383,224	271,506	\$2,623,494,516	\$9,663	\$6,846	1.41
Adventist Healthcare Fort W.	4,119	3,351	\$8,888,001	\$2,652	\$2,158	1.23
Adventist Rehab At White O.	159	147	\$5,993,591	\$40,773	\$37,696	1.08
Adventist Rehab Of Maryland	246	231	\$8,176,168	\$35,395	\$33,236	1.06
Adventist White Oak Hospital	6,707	5,605	\$54,049,513	\$9,643	\$8,059	1.20
Anne Arundel Medical Center	17,538	14,204	\$84,975,637	\$5,983	\$4,845	1.23
Atlantic General Hospital	5,332	4,327	\$14,793,893	\$3,419	\$2,775	1.23
Calvert Health Medical Cent.	5,569	4,378	\$20,899,097	\$4,774	\$3,753	1.27
Carroll Hospital Center	7,266	5,749	\$38,236,207	\$6,651	\$5,248	1.27
Christianacare, Union Hospi.	5,837	4,305	\$23,292,642	\$5,397	\$3,980	1.36
Convention Center	75	70	\$1,043,254	\$14,904	\$13,910	1.07
Doctors Community Medical.	8,201	6,692	\$49,516,162	\$8,054	\$4,940	1.23
Encompass Health Rehabil.	311	295	\$9,250,734	\$31,358	\$29,745	1.05
Frederick Health Hospital, Inc	11,936	9,350	\$54,406,801	\$5,819	\$4,558	1.28
Garnett County Memorial Ho.	2,896	2,143	\$5,217,293	\$2,435	\$1,935	1.26
Germantown Emergency Ce.	2,513	2,168	\$2,169,261	\$1,001	\$863	1.16
Grace Medical Center	3,132	2,293	\$6,307,371	\$2,751	\$2,014	1.37
Greater Baltimore Medical C.	9,870	8,606	\$61,534,719	\$7,150	\$6,235	1.15
Holy Cross Hospital	13,445	11,518	\$84,431,232	\$7,330	\$6,280	1.17
Holy Cross Hospital-Germa.	5,140	4,329	\$19,570,933	\$4,521	\$3,808	1.19
Howard County General Ho.	10,819	9,205	\$46,320,361	\$4,909	\$4,281	1.17
Johns Hopkins Bayview Me.	9,405	7,585	\$87,015,098	\$11,472	\$9,252	1.24
Johns Hopkins Hospital	18,507	14,166	\$353,847,871	\$24,979	\$19,120	1.31
Levindale	108	177	\$10,711,948	\$60,519	\$56,876	1.06
Medstar Franklin Square	13,836	10,438	\$84,162,939	\$8,063	\$6,456	1.25
Medstar Good Samaritan	6,982	5,568	\$48,222,416	\$8,661	\$6,907	1.25
Medstar Harbor Hospital Ce.	7,501	5,910	\$32,105,483	\$5,432	\$4,280	1.27

Service Provided From: (All)

Time Period: Last 3 Months

IP, OBV, and ED Utilization: All

IP, OBV, and ED Charges: 50 - \$2,773,836

IP, OBV, and ED Visits: 1 - 234

IP Readmissions: 0 - 7

Bedded Care (IP + OBV >= 24hrs): 0 - 11

Conditions: Select AND/OR

Condition 1: (All Patents)

Condition 2: (All Patents)

Condition 3: (All Patents)

Condition 4: (All Patents)

Chronic Count: 0 - 7

High Need Across All MD Acute Care Hospitals: (All)

Visit Type: (All)

APR DRG or EAPG: (All)

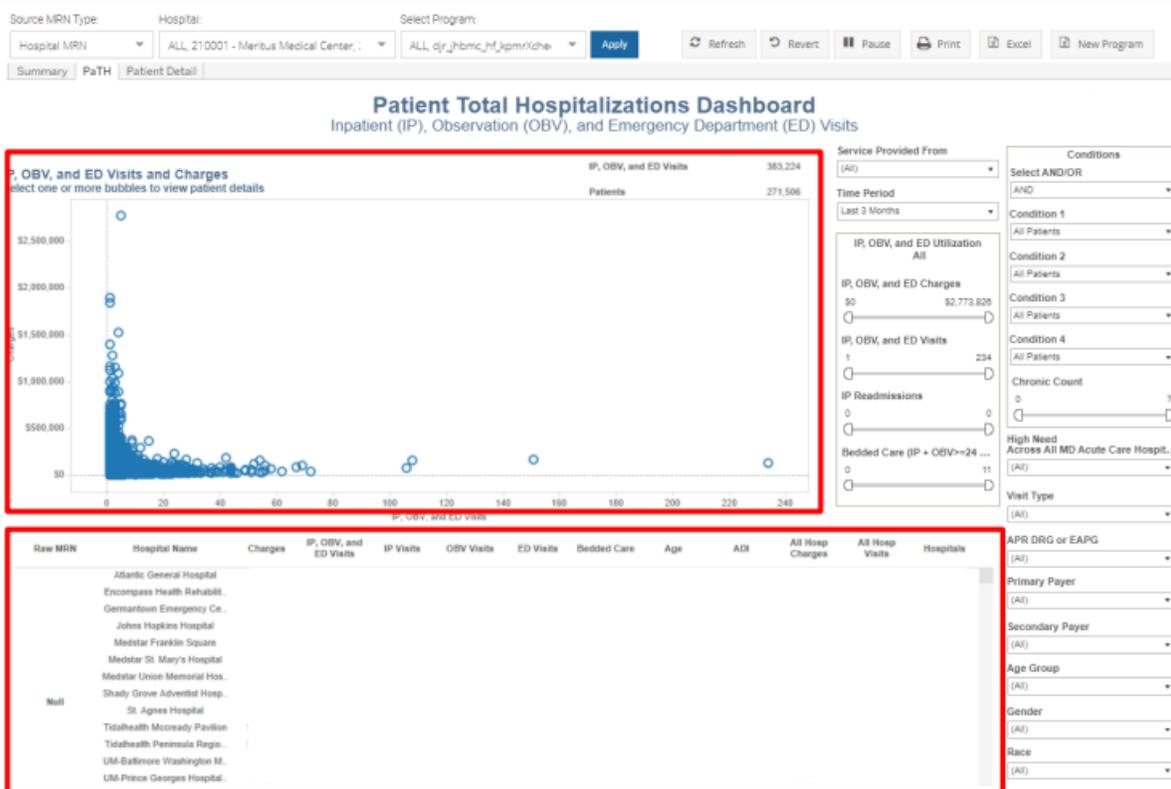
Primary Payer: (All)

Secondary Payer: (All)

## PaTH

The PaTH tab provides a chart of charges (y-axis) by number of inpatient, ED or OBV visits (x-axis). Each blue dot represents an individual patient.

The chart below the graph provides demographics and hospital utilization metrics for the patients that populate the graph. Here users can further understand their patient population.



**Note:** Users can select specific patients they want to view by clicking and dragging the mouse over the desired bubbles in the graph as shown below. The patients selected will appear in the chart below the graph.



## Patient Details

Users can view all the patients in their select program in the Patient Detail tab. This tab provides more information on each patient visit (every row is a visit).

Users can also export the data within Patient Detail tab. The export includes extra columns such as several additional visit-level diagnoses.

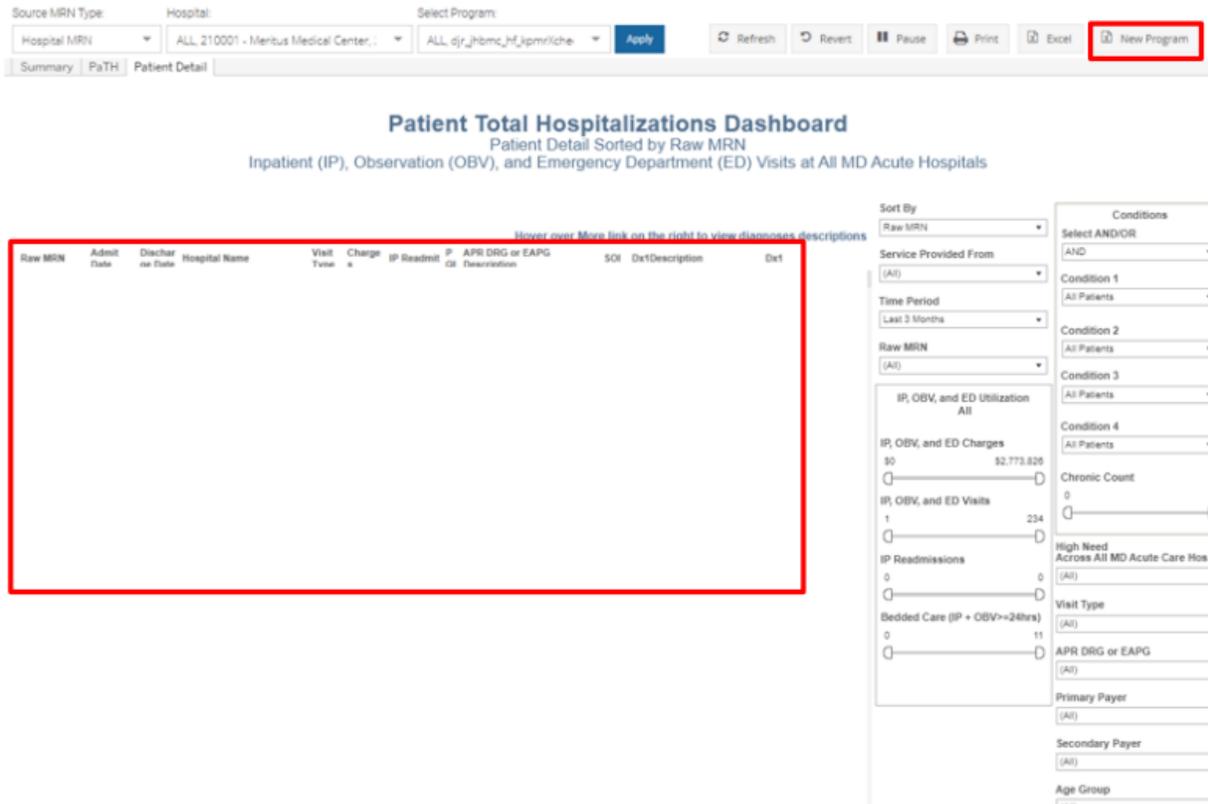


Table 1 – Source Codes

Account Name	Source Code
<i>Adventist Rehabilitation Hospital of Maryland</i>	ARHM
<i>Anne Arundel Medical Center</i>	AAMC
<i>Atlantic General Hospital</i>	AGH
<i>Baltimore Washington Medical Center</i>	UMMS_BWMC
<i>Bon Secours Hospital</i>	BSB
<i>Calvert Health Medical Center, Inc.</i>	CVMH
<i>Carroll Hospital Center</i>	CHC
<i>Doctors Community Hospital</i>	DCH
<i>Fort Washington Medical Center</i>	FWMC
<i>Frederick Memorial Hospital</i>	FMH_ID

<i>Garrett Regional Medical Center</i>	GCMH
<i>Greater Baltimore Medical Center</i>	GBMC
<i>Harford Memorial Hospital</i>	HARM
<i>Holy Cross Hospital</i>	HCH
<i>Holy Cross Hospital Germantown</i>	HCH_GT
<i>Howard County General Hospital</i>	HCGH
<i>Johns Hopkins Bayview Medical Center</i>	JHH_BVIEW
<i>Johns Hopkins Hospital</i>	JHH
<i>McCready Health</i>	MCMH
<i>Medstar Franklin Square Medical Center</i>	MEDSTAR_FSH
<i>Medstar Good Samaritan Hospital</i>	MEDSTAR_GSH
<i>Medstar Harbor Hospital</i>	MEDSTAR_HHC
<i>Medstar Montgomery Medical Center</i>	MGH
<i>Medstar Southern Maryland Hospital Center</i>	SMH
<i>Medstar St. Mary's Hospital</i>	STMH
<i>Medstar Union Memorial Hospital</i>	MEDSTAR_UMH
<i>Mercy Medical Center</i>	MHS
<i>Meritus Medical Center</i>	MMC
<i>Mt. Washington Pediatric Hospital</i>	MWPH
<i>Northwest Hospital Center</i>	LBH_NWH
<i>Peninsula Regional Medical Center</i>	PRMC
<i>Saint Agnes Hospital</i>	SAH
<i>Shady Grove Adventist Hospital</i>	ADVSGAH
<i>Sinai Hospital of Baltimore</i>	LBH_SHB
<i>Suburban Hospital</i>	SUBURBAN
<i>Union Hospital of Cecil County</i>	UHCC
<i>University of Maryland Charles Regional Medical Center</i>	CMC
<i>University of Maryland Laurel Regional Hospital</i>	LRH
<i>University of Maryland Medical Center (UMMC)</i>	UMMS_UMMC
<i>University of Maryland Medical Center Midtown Campus</i>	UMMS_MGH
<i>University of Maryland Prince George's Hospital Center</i>	PGHC
<i>University of Maryland Rehabilitation and Orthopaedic Institute</i>	UMMS_KERNAN
<i>University of Maryland Shore Medical Center at Chestertown</i>	UMMS_CHSTR
<i>University of Maryland Shore Medical Center at Easton</i>	UMMS_EASTON
<i>University of Maryland St. Joseph Medical Center</i>	SJMC
<i>Upper Chesapeake Medical Center</i>	UCMC
<i>Washington Adventist Hospital</i>	ADVWAH
<i>Western Maryland Health System</i>	WMHS



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