



CEND & Population Explorer

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Overview

The CRISP Event Notification Delivery (CEND) solution offers real-time alerts for patients' hospital encounters, now seamlessly integrated into the CRISP Portal through Population Explorer. Operated internally, CEND ensures timely troubleshooting and ongoing enhancements, advancing our ability to deliver accurate notifications.

Population Explorer offers a user-friendly interface for clinicians and care teams to review patients' encounters, providing access to the latest encounters and six-month encounter history. It is integrated directly in the CRISP Portal Homepage. To learn more, visit our [CEND and Population Explorer website page](#).

Event Notification Delivery Methods through CEND

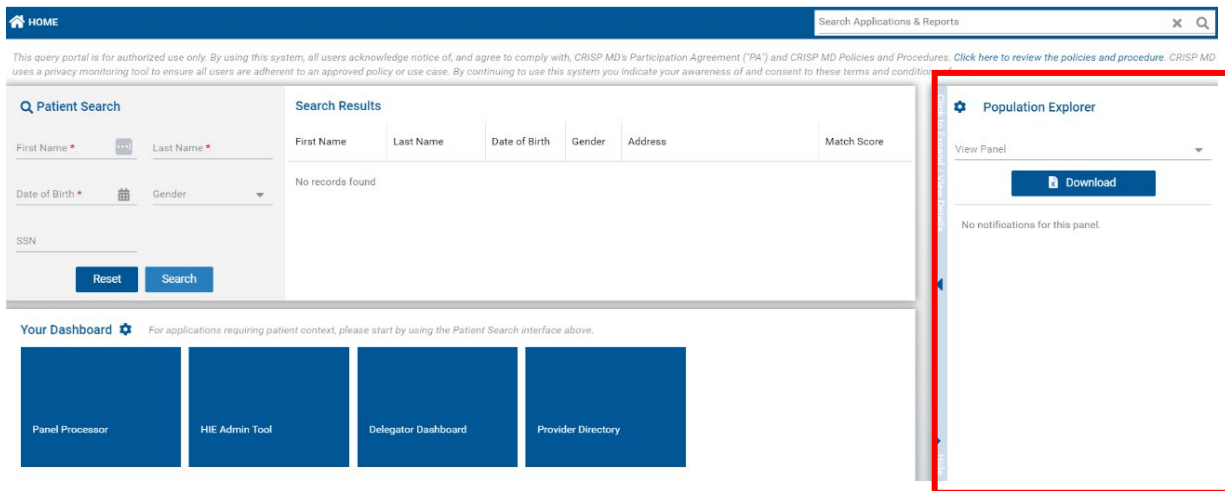
CEND supports ADT & Notification bulk files integrations via SFTP, MFT, & EMR. Additionally, we created an application called Population Explorer, enabling users to view notifications. More methods are being developed.

Notification delivery via Doc Halo & CRISP Direct are **NOT** supported under CEND.

Accessing Population Explorer

To use the Population Explorer in the CRISP Portal, users need to follow these steps:

- Obtain the CEND asset from an HIE Admin.
- Log in to the CRISP Portal using your username, password, and two-factor authentication credentials.
- Once logged in, you'll find Population Explorer conveniently displayed as a new widget on the right-hand side of the CRISP Portal Landing page.



Population Explorer Basic Functionality

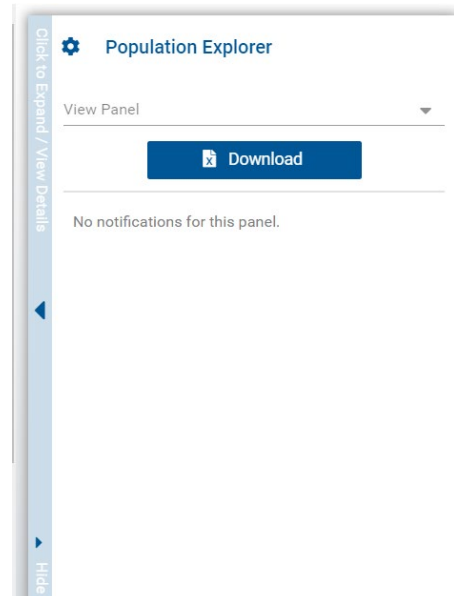
Panel Selection & Notification Timing

To choose a panel, use the drop-down menu labeled 'View Panel' at the top of the pane. All your available panels will be listed here. The pane will then display encounter notifications for the selected panel.

Notification updates are fetched every twenty minutes, with new notifications appearing automatically at the top of the pane. Twenty-five notifications load at a time; simply scroll down to load more. If no notifications are available, a 'No data to display' message will show.

If there are new notifications in a panel you're not viewing, a small red icon appears in the upper-right corner.

To download the current list of notifications, click the 'Download' button below the panel selection dropdown menu.





Population Explorer Settings

Using the settings in Population Explorer, users can set preferred defaults, including the default view on load for Population Explorer, default panel upon opening, and default number of records in downloaded extracts. Click the gear icon in the upper left corner of the Population Explorer pane to access settings.

Population Explorer Settings

Default panel
DC Demo Panel 1 (DC_CEND_DEM01)

Default filter

Default widget view
Collapsed Fully

Download size
50

Hide notification status management features:

Enable notification auto load:

DISCARD CHANGES SAVE CHANGES CLOSE

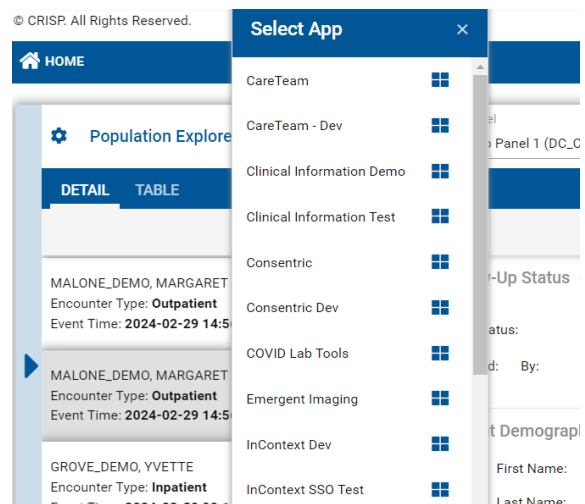
Note: the default panel will include practice patients to reduce lag time.

Event Notification Display

In Population Explorer, all related patient events will be consolidated into a single encounter line item. This provides one complete encounter with the patient's latest status.

Launching Patient Information into Clinical Information or Other Apps

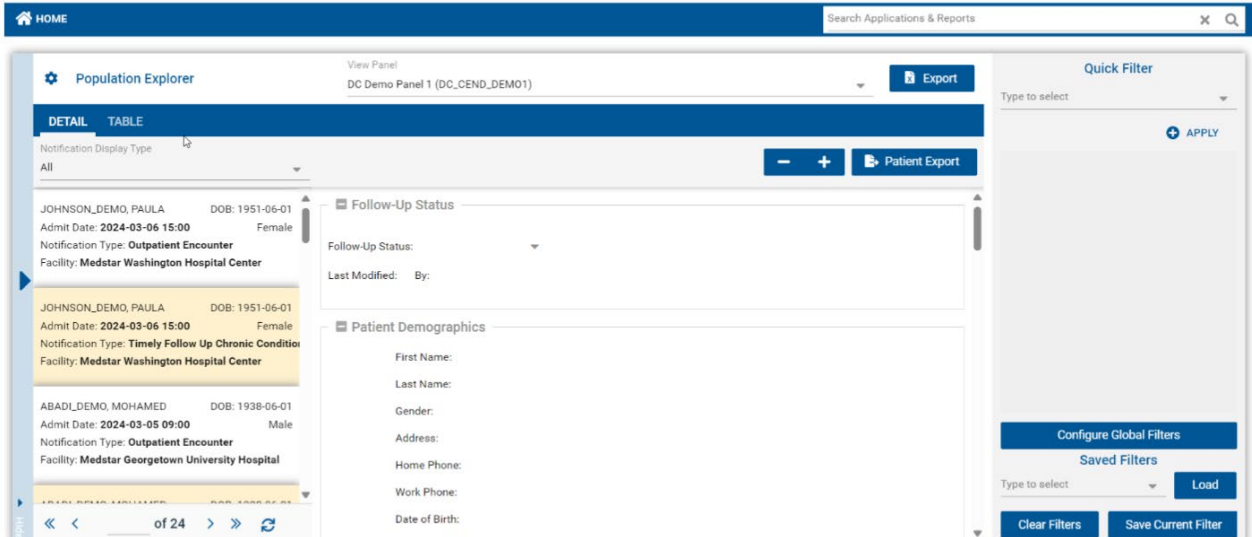
When you right-click on a patient in either the expanded or collapsed view, you can easily access the selected patient's clinical information within the portal. This method also allows you to launch other applications, although only applications such as Clinical Information or Snapshot, which are intended for use with a single patient, will automatically display the selected patient's data.





Expanded View

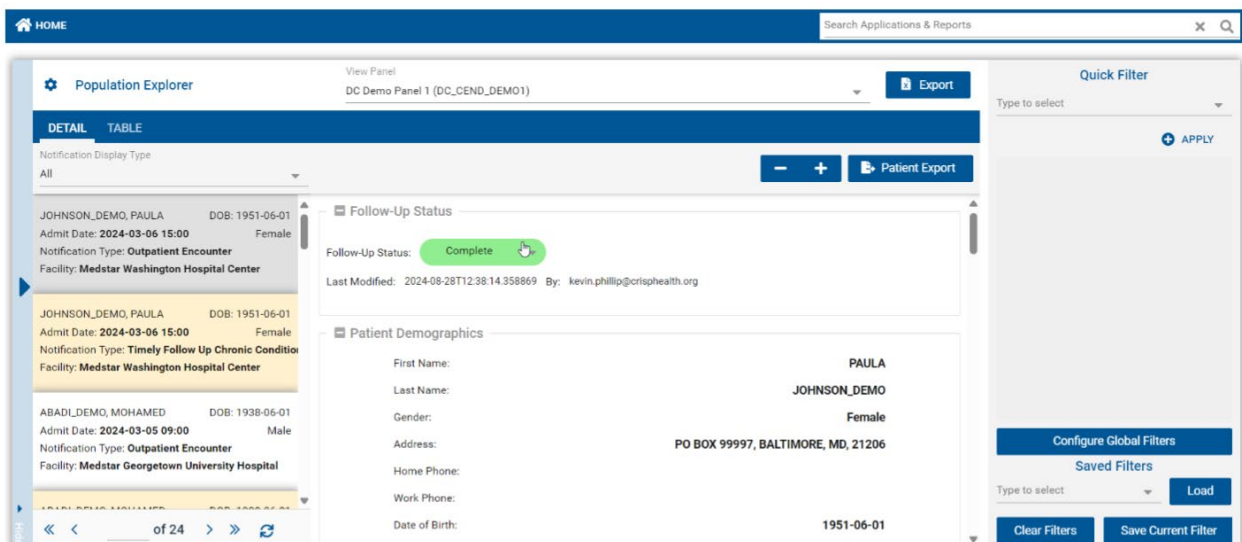
To expand the Population Explorer and access additional functionality, click the blue expansion bar on the left-hand side of the pane. Clicking the expansion bar again will collapse, then hide the pane entirely. Clicking again will restore the pane to its default view.



The Expanded View shows the current notification list, Detail View, and Quick Filter interfaces all in one location, as shown below. These items are described in greater detail in the sections that follow.

Detail View

To view the details for a notification, click on the notification you want to review. This will bring up a Notification Detail View that contains additional information on the notification, as shown below.





To expand or close patient data, use the plus/minus symbol above the menu. Or use the expander tabs to choose which section to always include during your search.

The screenshot shows the 'Population Explorer' interface in 'DETAIL' view. The top navigation bar includes 'DETAIL' and 'TABLE' tabs. Below the tabs, there are expand/collapse icons (+/-) and a 'Patient Export' button. The main content area is divided into two sections: 'Follow-Up Status' and 'Patient Demographics'. The 'Follow-Up Status' section shows a notification for 'JOHNSON_DEMO, PAULA' with a status of 'Complete'. The 'Patient Demographics' section displays patient information: First Name: PAULA, Last Name: JOHNSON_DEMO, Gender: Female, Address: PO BOX 99997, BALTIMORE, MD, 21206, Home Phone, Work Phone, Date of Birth: 1951-06-01, Date of Death, and Panel MRN: 21475794.

Along with the encounter details for the selected notification, the Detail View will contain all other notifications for the selected patient, loading history for the past 6 months by default. Clicking on any one of these past notifications will switch to the detail view for that notification. If you scroll down in the Detail View window, you will also see an expanded list of all diagnosis codes associated with that event.

Table View

Using the tabs in the upper left corner of the Expanded View, users can switch between Detail View and Table View. Table View presents users with a customizable list of notifications. The column headers allow users to edit what data is shown for the notification and the order in which notifications are sorted.

The screenshot shows the 'Population Explorer' interface in 'TABLE' view. The top navigation bar includes 'DETAIL' and 'TABLE' tabs. Below the tabs, there are expand/collapse icons (+/-) and a 'Patient Export' button. The main content area is a table with the following columns: Name, Age, Gender, State, Facility, Primary Care Provider, Encounter Type, and Follow-Up Status. The table contains several rows of patient notifications. The 'Follow-Up Status' column contains dropdown menus with options like 'Complete', 'Not Started', and 'In Progress'. A 'Quick Filter' sidebar is visible on the right, with a search box and an 'APPLY' button. At the bottom, there are buttons for 'Configure Global Filters', 'Saved Filters', 'Load', 'Clear Filters', and 'Save Current Filter'. The page number is 'Page 1 of 24' and the total number of records is 'Displaying 1 - 25 of 580'.

Patient Event Information

In the expanded view of Population Explorer, users can scroll to see the follow sections: Follow Up Status; Patient Demographics; Selected Encounter Details; Diagnosis Details; Follow Up Status History; Encounter History

Follow Up Status

Users can use the follow up status drop-down value to provide updates to other users of their panel to reflect resolving each notification. A full history of changes to the follow up status can be seen by scrolling.



MALONE_DEMO, MARGARET Encounter Type: Outpatient Event Time: 2024-02-29 14:56	DOB: 1942-06-01 Gender: Female
MALONE_DEMO, MARGARET Encounter Type: Outpatient Event Time: 2024-02-29 14:56	DOB: 1942-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 09:14	DOB: 1935-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 05:37	DOB: 1935-06-01 Gender: Female

1 of 23

Follow-Up Status

Follow-Up Status: **Complete**

Last Modified: 2024-05-03T11:29:53.926304 By: joi.perry@crisphealth.org

Patient Demographics

First Name: MARGARET
Last Name: MALONE_DEMO
Gender: Female
Address: 25 RIBBON ST, CHEVY CHASE, MD, 20815
Date of Birth: 1942-06-01
Home Phone:

Follow Up History:

Population Explorer

View Panel: DC Demo Panel 1 (DC_GEND_DEMO1) Export

DETAIL | TABLE Export

MALONE_DEMO, MARGARET Encounter Type: Outpatient Event Time: 2024-02-29 14:56	DOB: 1942-06-01 Gender: Female
MALONE_DEMO, MARGARET Encounter Type: Outpatient Event Time: 2024-02-29 14:56	DOB: 1942-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 09:14	DOB: 1935-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 05:37	DOB: 1935-06-01 Gender: Female

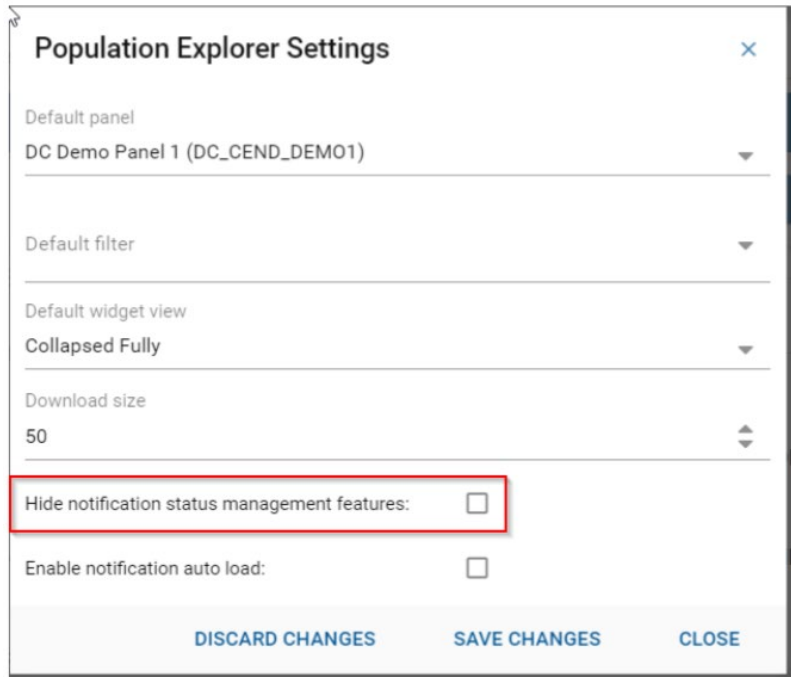
1 of 23

Follow-Up Status History

Updated Date	Updated By	Status
05/03/2024	joi.perry@crisphealth.org	Complete
05/02/2024	anishpk+admin@hmetrix.com	Not Started
05/02/2024	anishpk+admin@hmetrix.com	In Progress
04/25/2024	keishlyn.calhoun@crisphealth.org	Complete
04/25/2024	keishlyn.calhoun@crisphealth.org	In Progress
04/24/2024	eileen.doane@crisphealth.org	Complete

Organizations commonly utilize these follow-up options to communicate the patient's status regarding scheduling or discussing further care among staff members using the tool, however they have the flexibility to assign specific meanings to these follow-up status options based on their operational needs. If organizations are not interested in this follow-up status feature, users can disable it in the Population Explorer settings menu previously mentioned.

This functionality is automatically activated in the UI. To opt-out of notification status, simply click the gear icon in the upper left corner of the Population Explorer pane and check the 'Hide Notification Status Management features.' Note that this will not change or remove any statuses that have been set; it simply determines whether the functionality displays in the UI so that users who do not need this functionality can hide it to keep their interface clean. By default, this is enabled.



Population Explorer Settings

Default panel
DC Demo Panel 1 (DC_CEND_DEMO1)

Default filter

Default widget view
Collapsed Fully

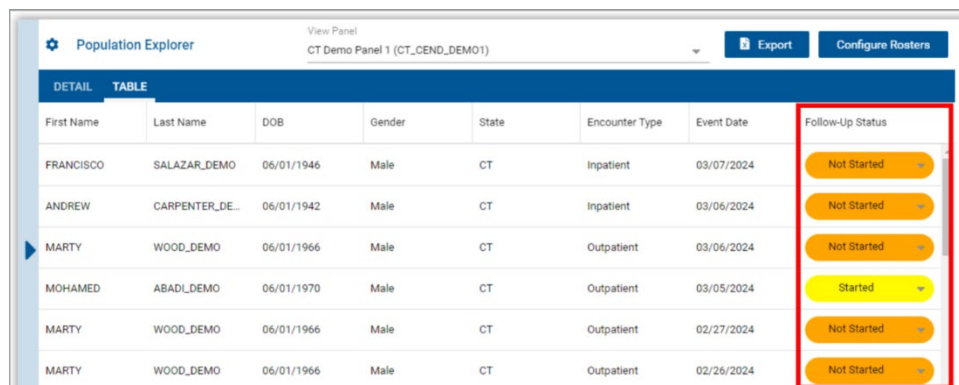
Download size
50

Hide notification status management features:

Enable notification auto load:

DISCARD CHANGES SAVE CHANGES CLOSE

If enabled, a Status drop-down menu will be available for each encounter in both the Detail View (as shown above) and Table view along with Last Edited information. The available status values are 'Not Started', 'In Progress', and 'Complete', and a set status will be shared with all users who have access to the specific panel and notification you are currently viewing.



First Name	Last Name	DOB	Gender	State	Encounter Type	Event Date	Follow-Up Status
FRANCISCO	SALAZAR_DEMO	06/01/1946	Male	CT	Inpatient	03/07/2024	Not Started
ANDREW	CARPENTER_DE...	06/01/1942	Male	CT	Inpatient	03/06/2024	Not Started
MARTY	WOOD_DEMO	06/01/1966	Male	CT	Outpatient	03/06/2024	Not Started
MOHAMED	ABADL_DEMO	06/01/1970	Male	CT	Outpatient	03/05/2024	Started
MARTY	WOOD_DEMO	06/01/1966	Male	CT	Outpatient	02/27/2024	Not Started
MARTY	WOOD_DEMO	06/01/1966	Male	CT	Outpatient	02/26/2024	Not Started



Patient Demographics

The 'Patient demographics' section aggregates the demographic information CRISP has in the 'Master Patient Index (MPI)' for your patient. Data in the MPI is pulled from multiple sources and organizations for your patient.

The Patient Demographics section contains:

- Patient First Name
- Patient Last Name
- Gender
- Address
- Patient Date of Birth
- Home Phone*
- Work Phone*

■ Patient Demographics

First Name:	MARGARET
Last Name:	MALONE_DEMO
Gender:	Female
Address:	25 RIBBON ST, CHEVY CHASE, MD, 20815
Date of Birth:	1942-06-01
Home Phone:	
Work Phone:	

*This fields will be filled if applicat

Selected Encounter Details

The Selected Encounters section provides information on the specific encounter for the patient.

The Selected Encounters section con

- Admit Time and Date:
- Event Time and Date:
- Admit Source:
- Care Manager:
- Care Manager Email:
- Care Program:
- Discharge Date:
- Discharge Disposition:
- Discharge to Location:
- Insurance Type:
- Encounter Type:
- Patient Class:
- Patient Complaint:
- Point of Care:
- Primary Diagnosis Code:
- Primary Diagnosis Descripti

■ Selected Encounter Details

Admit Date / Time:	2024-02-29 14:55
Event Date / Time:	2024-02-29 14:56
Admit Source:	RP
Care Manager:	
Care Manager Email:	
Care Program:	
Discharge Date:	
Discharge Disposition:	
Discharge To Location:	
Insurance Type:	AARP HEALTHCARE OPTIONS MEDICARE SUPPLEMENT -- Supplemental Policy
Encounter Type:	Outpatient
Patient Class:	0
Patient Complaint:	XR
Point of Care:	Medstar Surgery Center At Lafayette
Primary Diagnosis Code:	
Primary Diagnosis Description:	



Diagnosis Details

The Diagnosis Details contains ICD-10 codes and other diagnostic code information of the event if available.

Diagnosis Details

Diagnosis Code	Diagnosis Description
I10	Essential primary hypertension
E03.9	Hypothyroidism, unspecified

Encounter History

In Encounter History, you will be able to see encounter history dating back to the last six months for the selected patient.

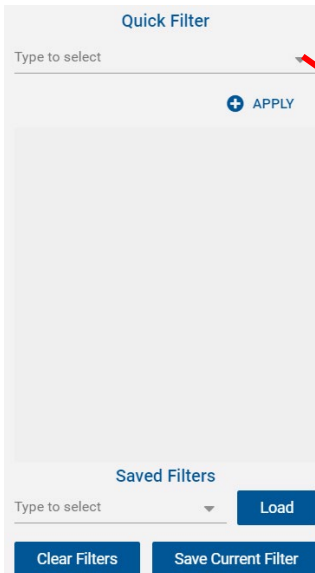
Encounter History

GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 09:14	DOB: 1935-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-02-29 05:37	DOB: 1935-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2024-01-08 13:41	DOB: 1935-06-01 Gender: Female
GROVE_DEMO, YVETTE Encounter Type: Inpatient Event Time: 2023-11-09 09:36	DOB: 1935-06-01 Gender: Female

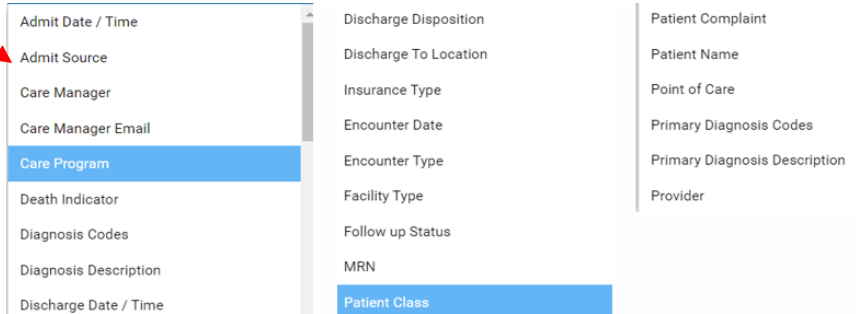
Filters

You can create, manage, save, and apply filters to the notification list using the 'Quick Filter' bar on the right-hand side of the screen. See the 'Available Filters' table section for all available filter options.

To add a new filter, click on 'type to select', then select the desired filter criteria and click the plus icon to apply the filter. The current list of notifications will then be automatically filtered based on the chosen criteria. You can apply multiple filters; all filters are applied as 'AND' criteria.



Available Filters:

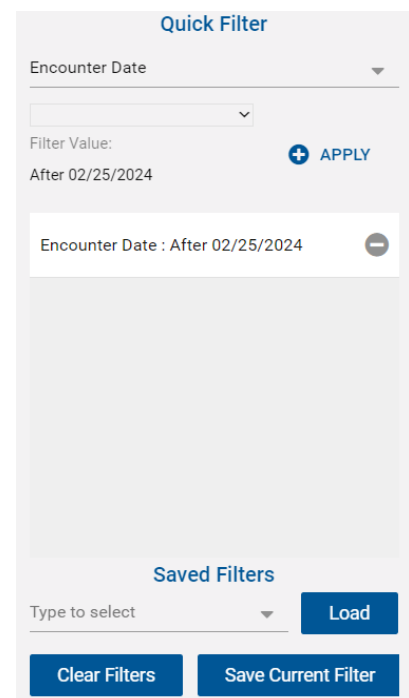


To remove a previously applied filter criteria, go to the list of current filters and click the Delete (minus) icon next to the filter you want to remove.

To clear all current filters, click the 'Clear Filters' button in the bottom left corner of the Quick Filter pane. This action removes all current filters but doesn't change or delete any previously saved filters.

To save the current set of filters for future use, click the 'Save Current Filter' button in the bottom right corner of the Quick Filter pane.

To apply a previously saved filter, select it from the 'Saved Filters' dropdown and click Apply. The criteria from the saved filter will then appear in the 'Current Filters' list. Note that this will override any filters currently in place.



Data Exports

There are two ways to export data from Population Explorer. First, you can export all notifications for a selected panel of patients by clicking 'Download' in the collapsed view or the topmost export button in the expanded view. This export option is available in CSV format for all encounters.



The second option is to export data for a single patient encounter. In the expanded view, the bottom 'Export' button allows you to export data for the selected patient's encounter. Both PDF and CSV options are available for exporting data for a single patient.

The screenshot shows the 'Population Explorer' interface. At the top, there's a 'View Panel' dropdown set to 'DC Demo Panel 1 (DC_CEND_DEMO1)' and an 'Export' button. Below this is a navigation bar with 'DETAIL' and 'TABLE' tabs. The main content area is divided into two sections: 'Follow-Up Status' and 'Patient Demographics'. The 'Follow-Up Status' section shows a dropdown for 'Follow-Up Status' and a 'Last Modified: By:' field. The 'Patient Demographics' section includes fields for 'First Name:', 'Last Name:', 'Gender:', 'Address:', and 'Date of Birth:'. On the left side, there's a list of patient encounters with details like name, DOB, gender, encounter type, and event time.

Upon clicking 'Export' for either of these options, you'll be prompted to review and agree to the Notice and Acknowledgements regarding the export of PHI Data. If you consent, simply check the consent box and click 'Accept and Continue' to proceed with exporting the data.

The screenshot shows a 'Notice and Acknowledgement: Exporting PHI' dialog box overlaid on the application interface. The dialog contains the following text: 'You are about to download a file containing privileged, confidential, and/or protected health information (PHI) that may be subject to protection under the law, including the Health Insurance Portability and Accountability Act of 1996, as amended (HIPAA). By clicking the 'Download' button, you are stating that you are authorized to view the information in this file. An audit record will be saved with the information below. Note: If you are a systems administrator, remember that downloading this file to your personal device is not allowed. You must use an approved device to download this file.' Below the text is a checkbox labeled 'I have read and understood the terms of downloading protected patient information.' which is checked. At the bottom of the dialog are two buttons: 'ACCEPT AND CONTINUE' and 'CANCEL'.

Next you can choose the optional fields you want to include in the export. You can also save the selected fields as your Default export settings by clicking 'Save Selected Fields as my Default'. Please note that PDF printing is only available for a single patient selection, not for exporting a whole panel.



Population Explorer - Export Interface

Select the data elements below that you would like to include in the exported extract. Some fields are required for successful export and may not be deselected.

Required Fields

- First Name
- Last Name
- Gender

Optional Fields

- Address
- Date of Birth
- Home Phone
- Work Phone
- Admit Date / Time
- Admit Source
- Care Manager
- Care Manager Email
- Care Program
- Discharge Date / Time
- Discharge Disposition
- Discharge To Location
- Insurance Type
- Encounter Type
- Follow up Status
- Patient Class
- Patient Complaint
- Point of Care
- Primary Diagnosis Codes
- Primary Diagnosis Description

Select All Select None

Save Selected Fields As My Default

PDF Excel

An approved device must be used to download this file. In downloading this data, you agree to CSS's terms for downloading protected patient information (PHI).

PDF Export Example

Population Explorer - Encounter Details

Patient Name : MALONE_DEMO, MARGARET
Date of Birth : 1942-06-01 Gender : Female

Patient Demographics:
First Name: MARGARET
Last Name: MALONE_DEMO
Gender: Female
Address: 25 RIBBON ST, CHEVY CHASE, MD, 20815
Date of Birth: 1942-06-01

Selected Encounter Details:

Diagnosis Details

Diagnosis Code	Diagnosis Description
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Encounter History

First Name	Last Name	DOB	Gender	Encounter Type	Event Time
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/29/2024 14:56:00
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/29/2024 14:56:00
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/27/2024 03:42:44
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/18/2024 08:27:47
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/10/2024 03:41:47
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/10/2024 03:41:47
MARGARET	MALONE_DEMO	06/01/1942 00:00:00	Female	Outpatient	02/09/2024 15:00:12

Excel Export Example

Microsoft Excel interface showing the exported data in a spreadsheet format. The spreadsheet has columns for First Name, Last Name, Gender, Address, and Date of Birth.

First Name	Last Name	Gender	Address	Date of Birth
MARGARET	MALONE_DEMO	Female	25 RIBBON ST, CHEVY CHASE, MD, 20815	1942-06-01



Logic-Based Alerts in Population Explorer

Logic-Based Alerts, also known as Smart Alerts or Intelligent Alerts, provide customized notifications based on specific criteria, beyond the standard ADT alerts (admit, discharge, transfer). While standard encounter alerts are triggered when a patient on your organization's panel generates an ADT, Logic-Based Alerts can be configured to notify users of specific scenarios, such as a patient visiting the hospital three times within a certain number of days.

These alerts are especially useful for organizations managing large patient panels who want to focus on specific patient conditions, utilization patterns, or patient types. Logic-Based Alerts appear in yellow within the Population Explorer table and can be filtered using the Notification Type dropdown menu, allowing users to select between "All," "Encounters" (standard ADT alerts), or "Notifications Only" (Logic-Based Alerts).

To set up Logic-Based Alerts, contact your CRISP outreach representative.

Available Filters

- ACO* – Text Field
- Admit Date/Time – Date Field
- Admit Source – Text Field
- Care Manager – Text Field
- Care Manager Email – Text Field
- Care Program* – Text Field
- Date of Birth – Date Field
- Death Indicator – Yes/No
- Diagnosis Code – Text Field
- Diagnosis Description – Text Field
- Discharge Date/Time – Date Field
- Discharge Disposition – Text Field
- Discharge to Location – Text Field
- Encounter Date – Date Field
- Encounter Type – Observation, Inpatient, Outpatient, Emergency
- Facility – Text Field
- Facility Type – Text Field
- Follow Up Status – Not Started, In Progress, Complete
- Group* – Text Field
- Insurance From ADT – Text Field
- Insurance Type – Text Field
- Location* – Text Field
- MRN – Text Field
- National Provider Identifier (NPI)* – Text Field
- Panel MRN* – Text Field
- Patient Class – Text Field
- Patient Complaint – Text Field
- Patient Name – Text Field
- Practice* – Text Field
- Primary Care Provider – Text Field
- Primary Diagnosis Code – Text Field
- Primary Diagnosis Description – Text Field
- Provider – Text Field
- Risk Methodology 1* – Text Field
- Risk Methodology 2* – Text Field
- Risk Score 1* – Text Field
- Risk Score 2* – Text Field

*Data Pulled from Panel Only (all other items can come from multiple data sources such as ADT messages, panels, CRISP registries etc.)

To learn more, visit our [CEND and Population Explorer website page](#).