



# Distributed Query Tool

## Investigator Manual

Powered by PopMedNet™

Based on release 3.3

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## Document History

The following table is a revision history for this document.

**Table 1: Document History**

Version	Author(s)	Date	Description
3.1	Lincoln Peak Partners	11/15/2012	Created.
3.2	Jeff Brown, Elizabeth Balaconis, Megan Mazza, Melanie Davies	5/13/2013	New Build. This new documentation represents a new release of the PMN software. Prior Mini-Sentinel query tool documentation was based on release 2.3.24 and this documentation is based on PMN 3.2.0. New features include User Registration, Plug-in Architecture, Security Group Access Control, and Projects.
3.3	Melanie Davies, Alison Leibowitz, Jessica Malenfant	11/13/2013	New Build. New features include ESP Query Composer and Modular Program Distribution. Text and screenshot edited for clarity. Additional screenshots added. Added Registering for an Account and Resubmitting a Request sections.

## 1 Introduction

The **PopMedNet™** software application enables simple, efficient creation and use of distributed data networks, through a set of tools and web-based services. It is optimized to facilitate distributed analyses of medical product safety, comparative effectiveness, quality, medical resource utilization, cost-effectiveness, and related studies. The system provides secure, customized private portals, query tools, and file transfer capabilities. It supports both menu driven queries and distributed analyses using complex, single use or multi-use programs designed to execute against local data resources.

Data partners exercise full control over the files they make available for querying, the results returned to requestors, and the individuals who are permitted to submit requests.

This [Investigator Manual](#) describes the main features and functions for Investigators participating in a health data network powered by PopMedNet software. Investigators interact with the PopMedNet network through a secure web-based portal as described below. Different networks will have different types of requests and capabilities. Networks powered by PopMedNet software can customize and brand the network as desired.

The Department of Population Medicine at the Harvard Pilgrim Health Care Institute (HPHCI) led development of the system in collaboration with Lincoln Peak Partners (LPP). Lincoln Peak Partners provides support services and secure hosting for current system users, and leads development of system enhancements.

## 2 System Overview

The Distributed Query Tool software is comprised of two separate applications, the web-based **Portal** and the **DataMart Client**. There is one Portal in the network and each data partner has one or more “DataMarts”. The Portal is the starting point for all information requests and controls all system communications, security, and governance policies. Data partners receive requests, process them, and securely return them to the Portal via their locally installed DataMart Client software application. Each data partner will have at least one DataMart; multiple DataMarts per data partner are possible. Each DataMart can contain different types of data and DataMarts can have different request processing settings. All requests and communications within the network are securely routed from the Portal to the DataMarts and then back to the Portal.

**Note:** The term **DataMart** is used in an information technology context referring to the place where the data are held for querying. Use of this term does not imply that data partner information is being sold or being made broadly available; data partners maintain control of all their data and all uses.

### Browser Requirements

The Portal is designed to work with Internet Explorer (IE) 8 or later. Earlier versions of IE may not display the user interface properly. Although IE8 is the only officially supported browser, other browsers such as Firefox and Chrome may also work; Firefox and Chrome have been used extensively in testing.

### The DataMart Client Application

The DataMart Client application allows the DataMart Administrator to view requests distributed to the DataMart, execute requests locally, review the results, and upload the results to the Portal. The DataMart Client is a .NET/C# Windows desktop application developed by LPP that is installed locally on a DataMart Administrator’s desktop. Note that the DataMart Client requires Microsoft .NET 4 to be installed on the user’s desktop. The free download for Microsoft .NET4 is available at the following link: <http://www.microsoft.com/enus/download/details.aspx?id=17851>. All communications between the DataMart Client application and the Portal use HTTP/SSL/TLS connections to securely transfer requests and results between the application and the Portal. The application uses ODBC connections to local databases or connections to a Postgres database in the pgAdmin application to process requests and generate results.

### Audience

This manual is intended for PopMedNet™ Investigators who want to:

- Submit a request to the available DataMarts
- Monitor the status of a request
- Review the results of a request

### Investigator Security Groups

Security groups (or “roles”) determine the rights that individual users have when using the Portal. Security groups are highly customizable; however, there are three typical investigator security groups:

**Limited Investigator**: can submit requests to DataMarts that have given them or their organization permission to submit requests and view only aggregated request results.

**Enhanced Investigator**: can submit requests to DataMarts that have given them or their organization permission to submit requests and review their results. This role has the additional right to view disaggregated (site-specific) results.

**Query Administrator**: can approve requests before they are sent to DataMarts.

A user may be a member of one or more security groups.

**Table 2: Rights of Limited and Enhanced Investigators**

<b>Right</b>	<b>Limited Investigator</b>	<b>Enhanced Investigator</b>
Compose requests	x	x
Submit requests to one or more DataMart(s) from their own organization	x	x
Submit requests to two or more DataMarts from other organizations	x	x
Submit requests to a single DataMart from another organization		x
View aggregate site results	x	x
View individual site results		x
View results without canceling outstanding DataMart routings		x
Add or cancel outstanding DataMart routings		x
Resubmit requests to DataMarts		x

### **Related Documents**

For more information about the PopMedNet™ system, see the following documents available on the PopMedNet public website ([popmednet.org](http://popmednet.org)):

## **PopMedNet Distributed Query Tool DataMart Administrator Manual**

The *DataMart Administrator Manual* describes the tasks and activities required to install and manage a DataMart. This includes:

- Installing the DataMart Client
- Processing requests distributed to the DataMart
- Administering DataMart settings and accessibility

## **PopMedNet Distributed Query Tool Overview and Administrator's Guide**

The *Overview and Administrator's Guide* describes the overall network system architecture, key querying features, and hosting and security details. This includes:

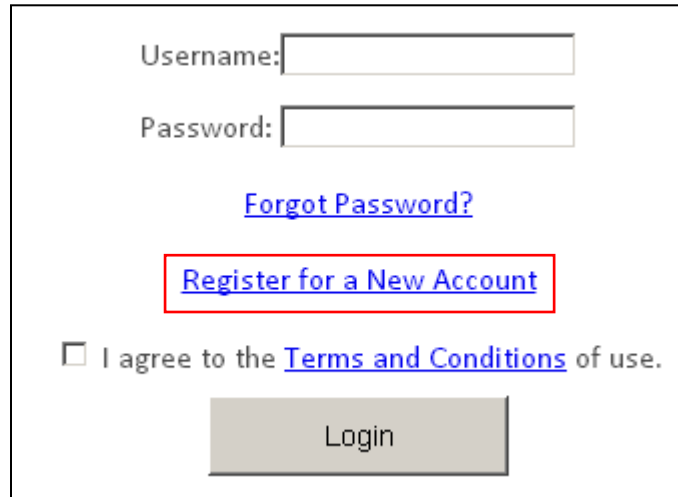
- System overview and workflow
- Policies and features
- Technical architecture and security
- Installing an instance of a Portal and an associated database
- Performing the initial administrative setup
- Performing typical System Administrator functions such as adding new users and DataMarts, creating new roles, and deleting users and DataMarts
- Hosting configurations



### 3 Registering for an Account

Register for an account in order to receive login credentials to the query tool portal.

1. Navigate to the logon page.
2. Click on “Register for a New Account”



Username:

Password:

[Forgot Password?](#)

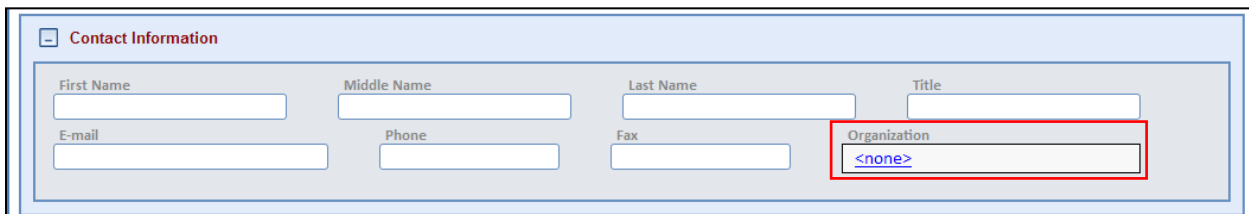
[Register for a New Account](#)

I agree to the [Terms and Conditions](#) of use.

Login

Figure 1: Portal Logon - Register for a New Account Link

3. Enter contact information
  - a. First name, last name, and email are required fields.
  - b. Click on the hyperlink in the “Organization” box and select your organization from the list within a pop-up box. This box must be filled in.

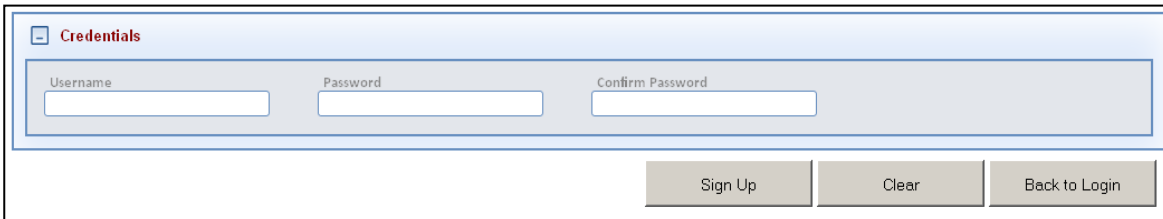


Contact Information

First Name	Middle Name	Last Name	Title
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail	Phone	Fax	Organization
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="&lt;none&gt;"/>

Figure 2: User Registration Form – Organization Selector

4. Create credentials
  - a. Enter username with the format [first initial][last name] in the box provided
  - b. Create and confirm desired password
  - c. The password must be at least 8 characters and contain a combination of upper case, lower case, digits, and special characters.



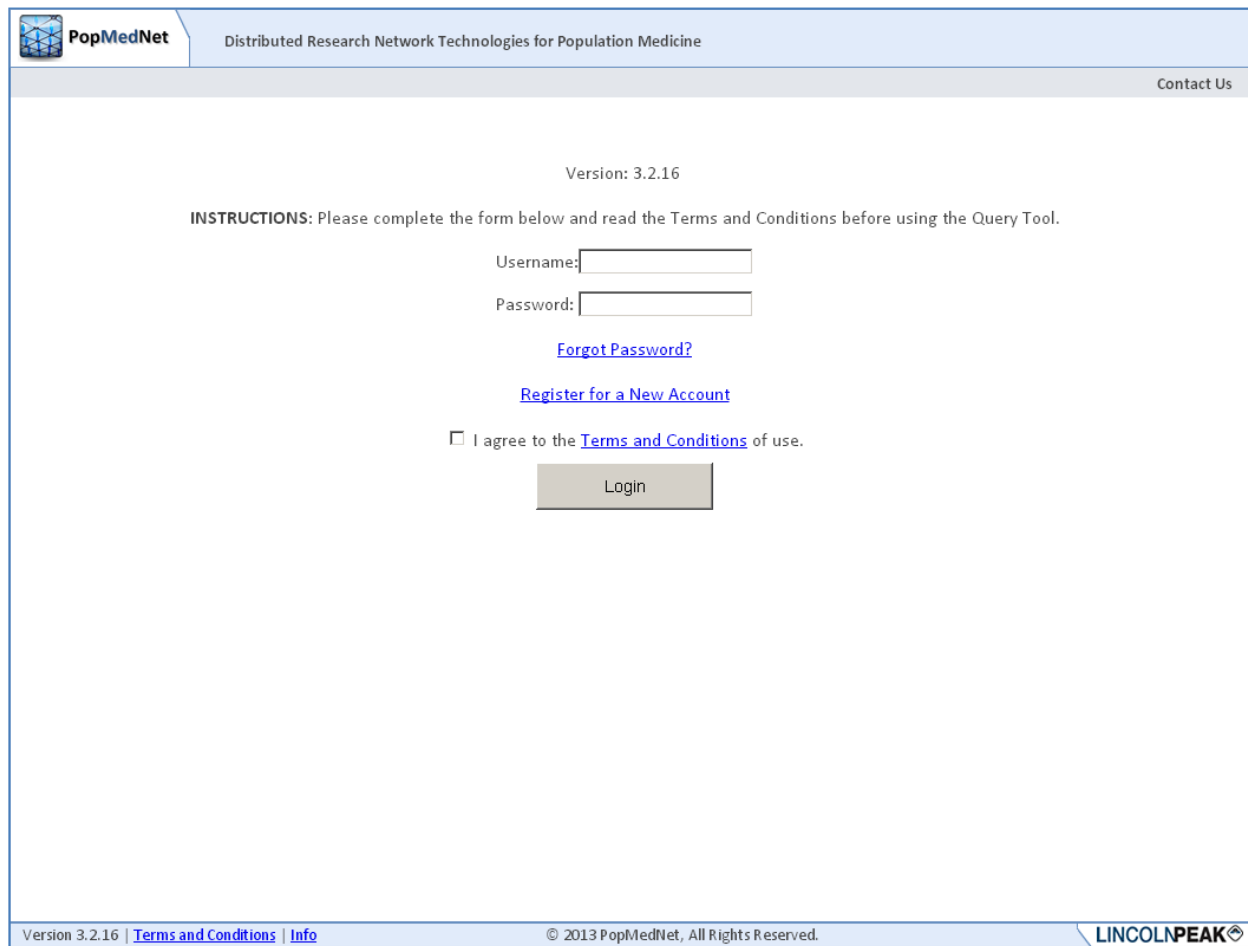
The screenshot shows a web form titled "Credentials" with a blue header bar. Below the header, there are three input fields: "Username", "Password", and "Confirm Password". At the bottom of the form, there are three buttons: "Sign Up", "Clear", and "Back to Login".

**Figure 3: User Registration Form - Registration Credentials and Sign Up**

5. Click the “Sign Up” button to submit your registration
  - a. After signing up, you will receive an email from the query tool confirming that your registration was submitted. This email is confirmation that your registration was submitted; it does not indicate that your request has been processed or that your account has been created.
  - b. Once your request has been processed, you will receive another email from the query tool indicating that your registration has been approved. Once you receive this email, you will be able to use your credentials to access the portal from the login page.

## 4 Login to the Web Portal

Once your registration has been approved, follow the steps below to log into the website portal.



The screenshot shows the PopMedNet login page. At the top left is the PopMedNet logo and the text "Distributed Research Network Technologies for Population Medicine". At the top right is a "Contact Us" link. The main content area displays "Version: 3.2.16" and "INSTRUCTIONS: Please complete the form below and read the Terms and Conditions before using the Query Tool." Below this are two input fields for "Username:" and "Password:". There are three links: "Forgot Password?", "Register for a New Account", and "Terms and Conditions". A checkbox is present with the text "I agree to the Terms and Conditions of use." Below the checkbox is a "Login" button. The footer contains "Version 3.2.16 | Terms and Conditions | Info", "© 2013 PopMedNet, All Rights Reserved.", and the LINCOLNPEAK logo.

**Figure 4: Logon Page**

1. Navigate to the network portal logon page.
2. Enter your username and password.
3. If this is your first login, read and acknowledge your agreement to the Terms and Conditions of use.
4. Click the "Login" button to enter the Portal.

Once you have logged in, the Portal displays the home page shown below. From the home page, you can view your notifications, view existing requests, and create a new request.

PopMedNet

Distributed Research Network Technologies for Population Medicine

Welcome, MDDemoEI

Home   Requests   Profile   Resources   Reports   Network
Contact Us   Logoff

Network Browser <<

- Network
- Requests
- Groups
- Organizations

**What's New**

**Software Version 3.2.12 Features and Enhancements**

- PopMedNet 3.2 Feature Enhancements:
  - Projects - Project based request processing and administration
- PopMedNet 3.1 Feature Enhancements:
  - User Workspaces - Built-in folders that allow requests to be automatically organized into sub-folders
  - Shared Folders - Allows users to share requests with other users.
  - Network Navigator - Visual tools network browser that allows the user to navigate through the network hierarchy.
  - Bread-crum Navigation Control - Control the maintains position within the network hierarchy providing context and allowing the user to easily back up through the hierarchy
  - Sticky User Settings - Remembers users settings, such as collapsible controls, the number of requests shown on the request page will be remember from session to session.
  - Auto DataMart Configuration - this will make it easier for datamart administrators to configure their datamart client. This feature streamlines the datamart client configuration process as it can be done from the portal.
  - User Registration - Allows users to register for an account by entering contact information, username, and password in addition to the traditional user creation process performed by Administrators.
  - User registration Workflow Process - User registration requests enter a task based workflow process used by Administrators to approve or reject user registrations via a new Task panel displayed on the home page.
- PopMedNet 3.0 ONC Query Health Enhancements:
  - Query Envelope - Formalization of the PMN request tunnel to comply with ONC Query Health requirements
  - Enhanced Security - Implementation of mutual authentication over TLS using X.509 certificates
  - I2B2 Request Plugin - Integration of I2B2 request composer that submits request to the PMN network that are routed to I2B2 end-points used to process the request
- MDPHnet Feature Enhancements:
  - Menu-driven query builder request plugin used to compose ICD-9 Diagnosis requests and Reportable Disease Requests submitted against ESP databases.
- PopMedNet 3.0 Design and Technical enhancements:
  - New Request Model Plug-in architecture allowing the application to be easily extended to accommodate new request types and data models.
  - Upgraded technology platform that includes Microsoft .NET 4, Entity Framework 4, MVC 3, WCF, and MEF under Visual Studio 2010 solution.
  - Consolidation of all request and response data into documents that may be displayed using built-in viewer or downloaded to for use by custom applications.
  - Redesigned/rewritten DataMart Client application that uses a simplified threading model to process requests.
  - Use of the Windows Credential Manager to store local DataMart Client credentials.

**Notifications**

Date	Event	Message
11/13/2013 11:16:48 AM	Results Reminder	Results Reminder: DataMarts = Demo DM 1, Demo DM 2, Request = Prev: ICD-9 Diagnoses (3 digit codes) - 15 (83), RequestType = Prev: ICD-9 Diagnoses (3 digit codes), Project = Demo
11/12/2013 11:16:18 AM	Results Reminder	Results Reminder: DataMarts = Demo DM 1, Demo DM 2, Request = Prev: ICD-9 Diagnoses (3 digit codes) - 15 (83), RequestType = Prev: ICD-9 Diagnoses (3 digit codes), Project = Demo
11/11/2013 11:15:48 AM	Results Reminder	Results Reminder: DataMarts = Demo DM 1, Demo DM 2, Request = Prev: ICD-9 Diagnoses (3 digit codes) - 15 (83), RequestType = Prev: ICD-9 Diagnoses (3 digit codes), Project = Demo
11/10/2013 11:15:38 AM	Results Reminder	Results Reminder: DataMarts = Demo DM 1, Demo DM 2, Request = Prev: ICD-9 Diagnoses (3 digit codes) - 15 (83), RequestType = Prev: ICD-9 Diagnoses (3 digit codes), Project = Demo

[Showing 10 notifications per page](#)

**Requests**

Name	Id	Date	User	Status	Type	Project
<a href="#">Counts of diabetes</a>	108	09/20/2013 02:16 PM	MDDemoEI	Completed	Prev: ICD-9 Diagnos	Demo
<a href="#">Counts of diabetes (Copy)</a>	127	10/11/2013 12:36 PM	MDDemoEI	Draft	Prev: ICD-9 Diagnos	Demo
<a href="#">ICD-9 Diagnosis - 21</a>	122	10/07/2013 02:30 PM	MDDemoEI	Draft	ICD-9 Diagnosis	Demo
<a href="#">Prev: Enrollment - 3</a>	124	10/25/2013 03:22 PM	MDDemoEI	Submitted	Prev: Enrollment	Demo
<a href="#">Prev: ICD-9 Diagnoses (3 digit codes) - 15</a>	83	09/11/2013 11:47 AM	MDDemoEI	Completed	Prev: ICD-9 Diagnos	Demo
<a href="#">Prev: ICD-9 Diagnoses (3 digit codes) - 20</a>	109	09/20/2013 02:44 PM	MDDemoEI	Draft	Prev: ICD-9 Diagnos	Demo
<a href="#">Reportable Disease - 7</a>	123	10/09/2013 03:42 PM	MDDemoEI	Scheduled	Reportable Disease	Demo

[Showing 20 requests per page](#)

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**Figure 5: Home Page**

The home page is a landing page that contains a set of content panels that provide you with recent information relevant to your tasks.

The network browser on the left side of the screen allows you to view and navigate through the network entities, including requests, groups, organizations, DataMarts, and users. Click “<<” to minimize it.

The following panels are available on the home page:

- What’s New message panel – used to communicate system wide information site upgrades, new features and functions
- Notifications – list of recent notifications. See section 11.3 for information on subscribing to notifications.
- Requests list – your recent requests or requests that require your approval or review

Collapsible content panels are used throughout the user interface that allow you to collapse, expand, and maximize the content panel within the page. Additionally, for panels that contain grid controls, you may specify the number of items displayed in the grid, and set column sort orders and column filters. All these settings are preserved across your sessions.

**Note:** The term “request” may be used interchangeably with “query.” With the introduction of PopMedNet Release 3, the application has the ability to compose and route a variety of queries, commands, and general requests to DataMarts through a “plugin” framework that allows the network to be easily extended to introduce new requests types.

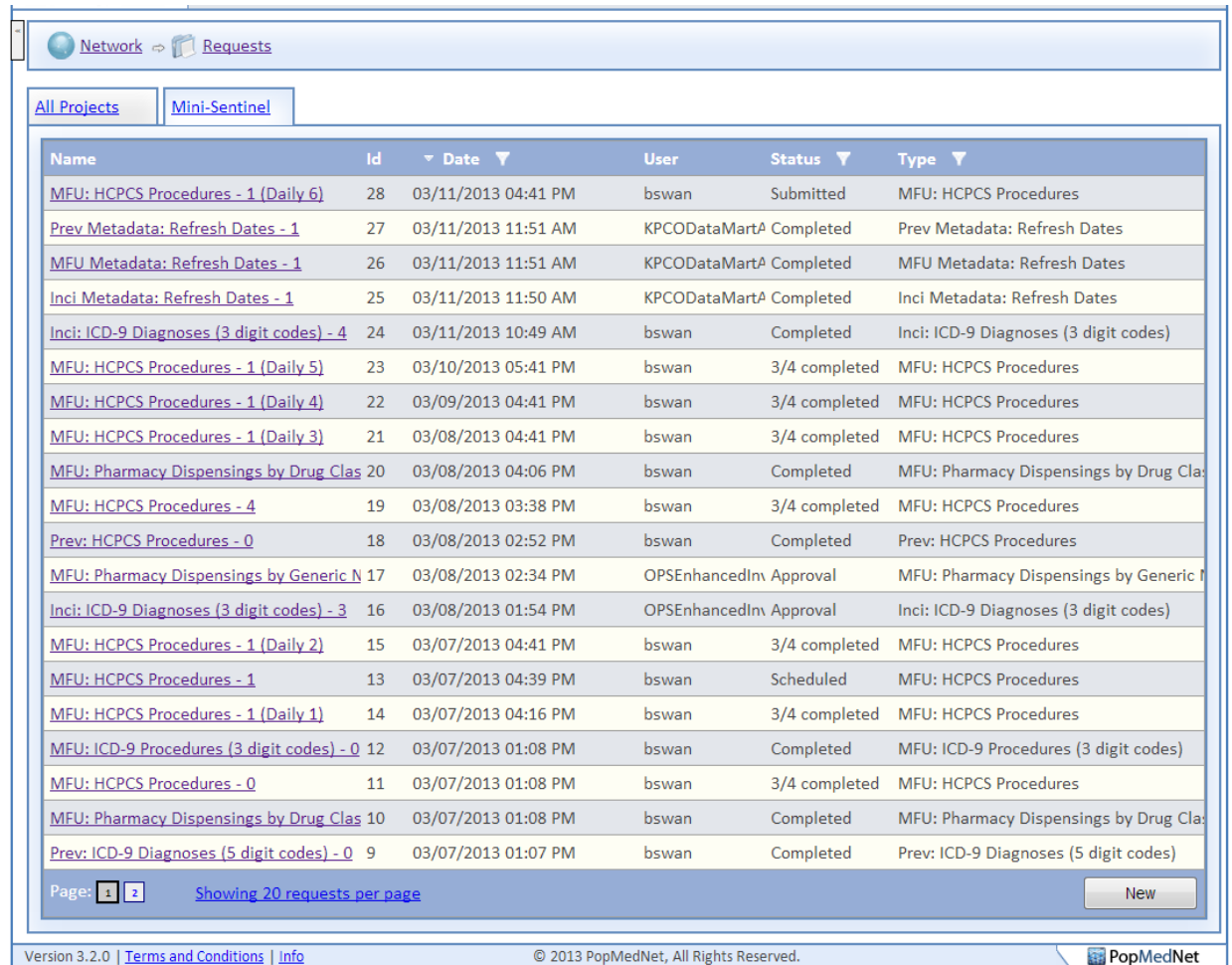
## 5 Project Based Requests

Projects allow networks to group activities and access controls within one or more Projects. A project establishes security policies for composing and executing requests for users and DataMarts assigned to the project. Projects are created within an organizational Group. Groups have one or more member organizations whose users and DataMarts may participate within projects owned by the group. Note that the network may have one or more groups, and an organization may be a member of one or more groups.

Network Administrators have the rights to modify and administer the Groups, Organizations, and Projects and may grant access to a project and configure its security policies. Other users such as Group and Project Administrators may also be granted these rights, depending on network governance. See the PopMedNet Overview and Administrator's Guide for more information.

## 6 Submitting a Request

The Requests panel lists the queries that have been composed by the user. A full page dedicated to requests is available by clicking the Requests tab at the top of the page. The following figure shows the Requests page and project tabs.



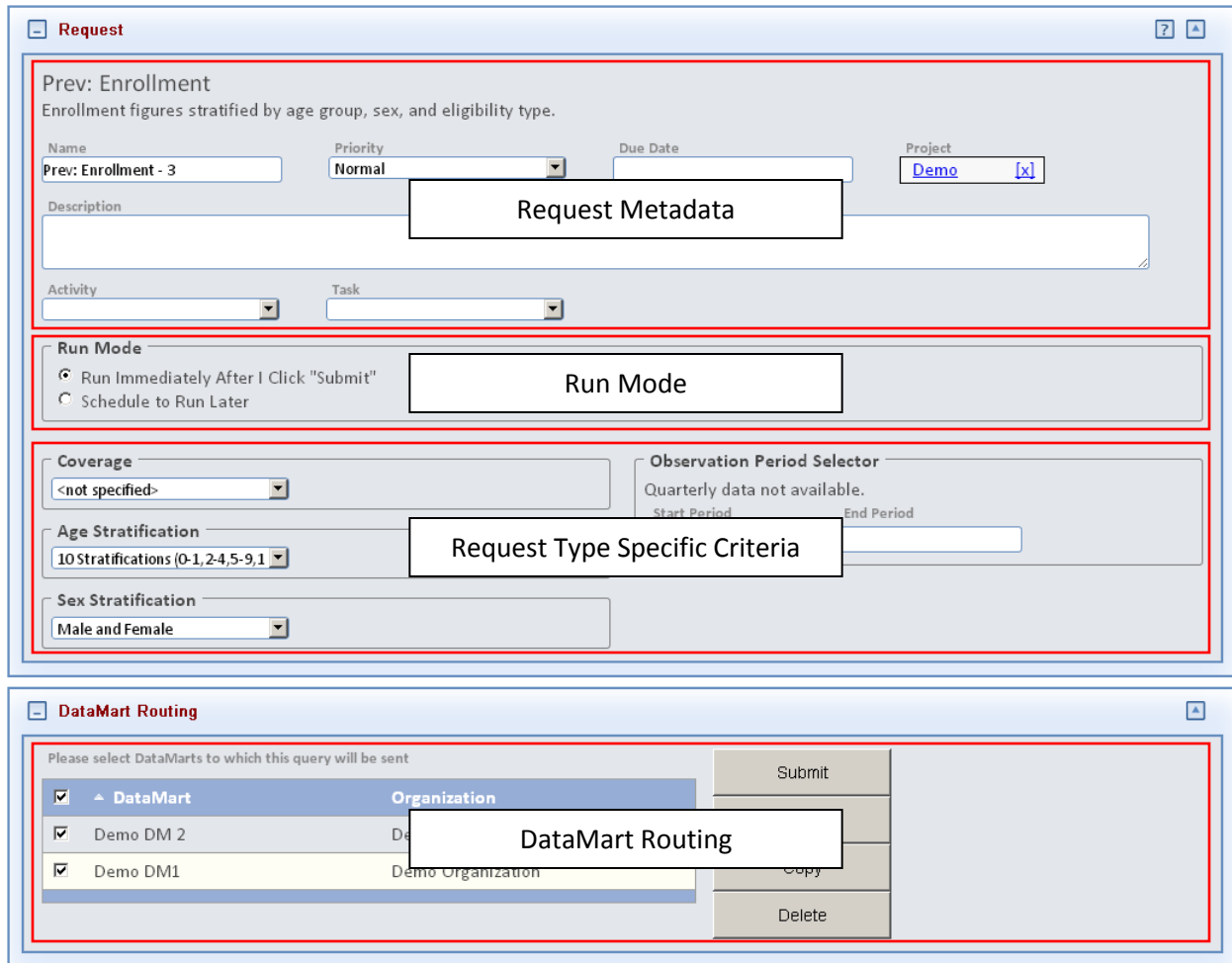
Name	Id	Date	User	Status	Type
<a href="#">MFU: HCPCS Procedures - 1 (Daily 6)</a>	28	03/11/2013 04:41 PM	bswan	Submitted	MFU: HCPCS Procedures
<a href="#">Prev Metadata: Refresh Dates - 1</a>	27	03/11/2013 11:51 AM	KPCODataMartA	Completed	Prev Metadata: Refresh Dates
<a href="#">MFU Metadata: Refresh Dates - 1</a>	26	03/11/2013 11:51 AM	KPCODataMartA	Completed	MFU Metadata: Refresh Dates
<a href="#">Inci Metadata: Refresh Dates - 1</a>	25	03/11/2013 11:50 AM	KPCODataMartA	Completed	Inci Metadata: Refresh Dates
<a href="#">Inci: ICD-9 Diagnoses (3 digit codes) - 4</a>	24	03/11/2013 10:49 AM	bswan	Completed	Inci: ICD-9 Diagnoses (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 1 (Daily 5)</a>	23	03/10/2013 05:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 4)</a>	22	03/09/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 3)</a>	21	03/08/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Drug Clas</a>	20	03/08/2013 04:06 PM	bswan	Completed	MFU: Pharmacy Dispensings by Drug Clas
<a href="#">MFU: HCPCS Procedures - 4</a>	19	03/08/2013 03:38 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">Prev: HCPCS Procedures - 0</a>	18	03/08/2013 02:52 PM	bswan	Completed	Prev: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Generic N</a>	17	03/08/2013 02:34 PM	OPSEnhancedIn	Approval	MFU: Pharmacy Dispensings by Generic N
<a href="#">Inci: ICD-9 Diagnoses (3 digit codes) - 3</a>	16	03/08/2013 01:54 PM	OPSEnhancedIn	Approval	Inci: ICD-9 Diagnoses (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 1 (Daily 2)</a>	15	03/07/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1</a>	13	03/07/2013 04:39 PM	bswan	Scheduled	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 1)</a>	14	03/07/2013 04:16 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: ICD-9 Procedures (3 digit codes) - 0</a>	12	03/07/2013 01:08 PM	bswan	Completed	MFU: ICD-9 Procedures (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 0</a>	11	03/07/2013 01:08 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Drug Clas</a>	10	03/07/2013 01:08 PM	bswan	Completed	MFU: Pharmacy Dispensings by Drug Clas
<a href="#">Prev: ICD-9 Diagnoses (5 digit codes) - 0</a>	9	03/07/2013 01:07 PM	bswan	Completed	Prev: ICD-9 Diagnoses (5 digit codes)

Page: 1 2 Showing 20 requests per page New

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**Figure 6: Request Page**

The Requests page allows you to create requests within a selected project. The criteria that you can enter vary for each request type. However, the basic steps are the same for all requests. Once you select a request type, the Request Composer page shows a common header panel that identifies the request, a common run mode section to schedule a request or have it run immediately, a common footer panel that contains the DataMarts where the request will be routed, and a content panel in the middle that displays controls used to enter criteria settings for the particular request type.



**Request**

Prev: Enrollment  
Enrollment figures stratified by age group, sex, and eligibility type.

Name:  Priority:  Due Date:  Project:  [x]

Description:

Activity:  Task:

**Run Mode**

Run Immediately After I Click "Submit"  
 Schedule to Run Later

**Request Type Specific Criteria**

Coverage:  Observation Period Selector: Quarterly data not available.  
Start Period:  End Period:

Age Stratification:

Sex Stratification:

**DataMart Routing**

Please select DataMarts to which this query will be sent

<input checked="" type="checkbox"/>	DataMart	Organization
<input checked="" type="checkbox"/>	Demo DM 2	Demo Organization
<input checked="" type="checkbox"/>	Demo DM1	Demo Organization

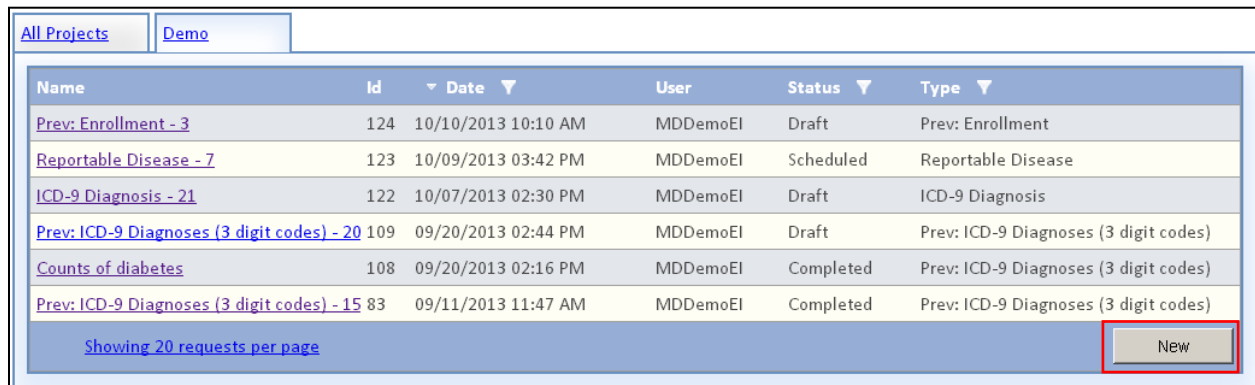
Buttons: Submit, Copy, Delete

**Figure 7: Sections of the Request Composer Page**

## Procedure

Follow these basic steps to submit a request:

1. Click the “New” button in the Request panel.



All Projects | Demo

Name	Id	Date	User	Status	Type
<a href="#">Prev: Enrollment - 3</a>	124	10/10/2013 10:10 AM	MDDemoEI	Draft	Prev: Enrollment
<a href="#">Reportable Disease - 7</a>	123	10/09/2013 03:42 PM	MDDemoEI	Scheduled	Reportable Disease
<a href="#">ICD-9 Diagnosis - 21</a>	122	10/07/2013 02:30 PM	MDDemoEI	Draft	ICD-9 Diagnosis
<a href="#">Prev: ICD-9 Diagnoses (3 digit codes) - 20</a>	109	09/20/2013 02:44 PM	MDDemoEI	Draft	Prev: ICD-9 Diagnoses (3 digit codes)
<a href="#">Counts of diabetes</a>	108	09/20/2013 02:16 PM	MDDemoEI	Completed	Prev: ICD-9 Diagnoses (3 digit codes)
<a href="#">Prev: ICD-9 Diagnoses (3 digit codes) - 15</a>	83	09/11/2013 11:47 AM	MDDemoEI	Completed	Prev: ICD-9 Diagnoses (3 digit codes)

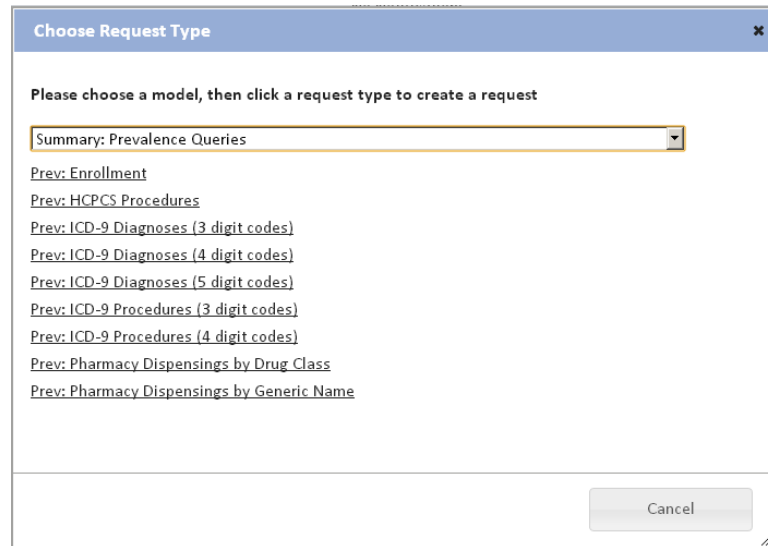
Showing 20 requests per page

**New**

**Figure 8: Request Panel**



- Choose a request model and type from the drop down menu.



**Figure 9: Request Type Dialog**

- On the Request Composer page, enter the metadata for the request. This must include a unique name and a brief description of the request and its purpose. If a project is not specified, do so by clicking on the hyperlink in the Project field and selecting from a list of projects that you have permission to submit requests within.

Name	Priority	Due Date	Project
Counts of diabetes	Normal	09/21/2013	<a href="#">Demo</a> [x]
Description			
Query for counts of diabetes in any care setting in 2008-2010 for prep-to-research purposes			

**Figure 10: Request Composer Page – Request Metadata**

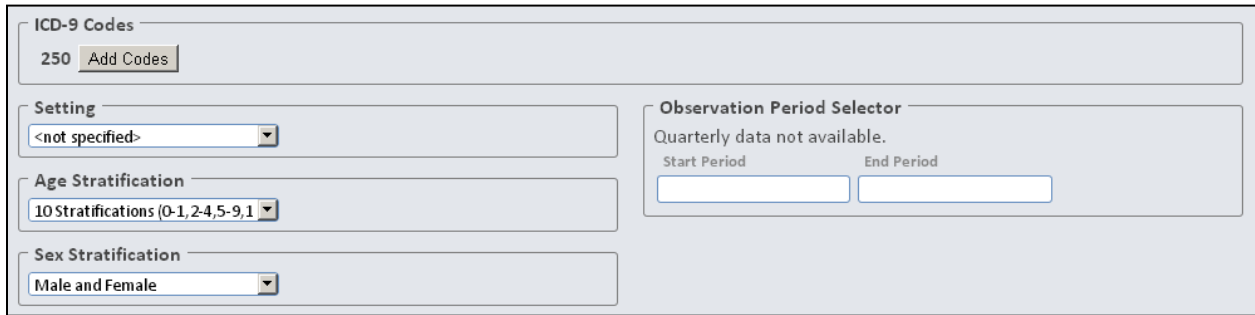
All metadata is distributed to the DataMarts with the request and should be detailed enough to allow data partners to identify the request and determine how to respond.

- Select the run mode for the requests. Requests may be submitted immediately or set to run later according to a schedule. See section 1.

Run Mode
<input checked="" type="radio"/> Run Immediately After I Click "Submit" <input type="radio"/> Schedule to Run Later

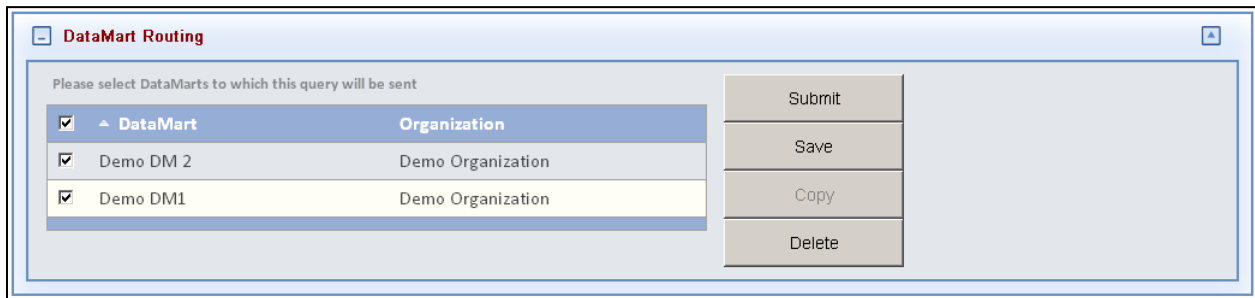
**Figure 11: Request Composer Page – Run Mode**

- Specify the request specific criteria and settings. See Section 7: Request Types for information on the criteria associated with each request type.



**Figure 12: Request Composer Page – Request Specific Criteria**

- In the DataMart Routing panel, use the checkboxes to select the DataMarts to submit the request to. Only those DataMarts that you have the rights to submit to will be displayed.



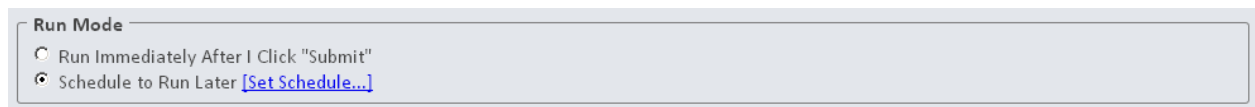
<input checked="" type="checkbox"/> DataMart	Organization
<input checked="" type="checkbox"/> Demo DM 2	Demo Organization
<input checked="" type="checkbox"/> Demo DM1	Demo Organization

**Figure 13: Request Composer Page – DataMart Routing**

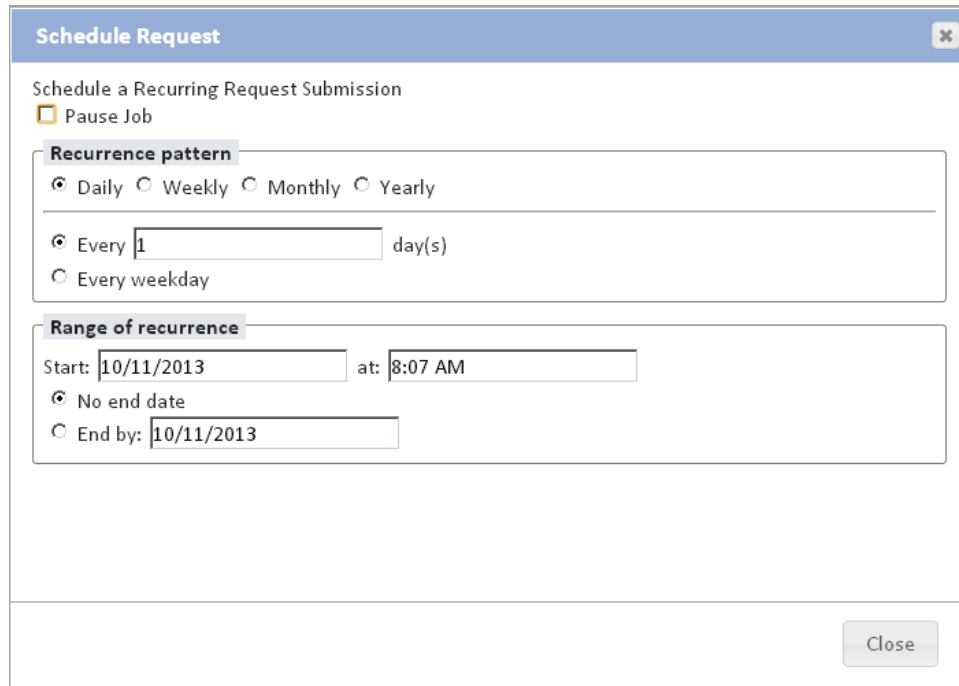
- Click “Submit” to submit the request to the selected DataMarts, “Save” to save the request in draft form, or “Delete” to delete the draft.

## 6.1 Scheduling Requests

A request may be immediately submitted upon clicking “Submit” or set to run later, according to a schedule of your choice. To schedule a request, click the “Schedule to Run Later” radio button in the Run Mode section of the request composer page. This will display a “Set Schedule” hyperlink that will display a popup dialog box.



**Figure 14: Request Composer Page - Run Mode**

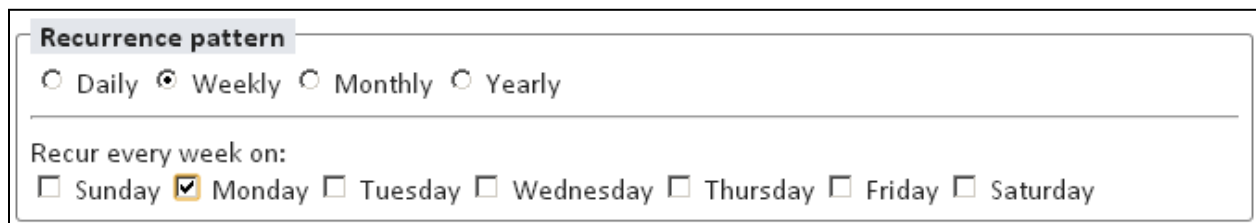


**Figure 15: Schedule Request Dialog**

Set the schedule by selecting the recurrence pattern and range of recurrence. Requests may be submitted daily, weekly, monthly, or yearly.



**Figure 16: Schedule Request Dialog – Daily Recurrence Pattern**



**Figure 17: Schedule Request Dialog – Weekly Recurrence Pattern**

**Recurrence pattern**

Daily
  Weekly
  Monthly
  Yearly

---

Day  of every  month(s)

The   of every  month(s)

Figure 18: Schedule Request Dialog – Monthly Recurrence Pattern

**Recurrence pattern**

Daily
  Weekly
  Monthly
  Yearly

---

Recur every year on:

On

On the   of

Figure 19: Schedule Request Dialog - Yearly Recurrence Pattern

Once the schedule is set and the rest of the request parameters are entered, select DataMarts to submit the request to and click “Save.” This will schedule the request to run based on the settings that you entered. Back in the request list on the homepage and under the Requests tab, the status of the request will read “Scheduled.” When it comes time to run the request, a copy of it is made and submitted to the DataMarts that were selected in the base request, with its name modified to reflect the scheduled copy (e.g. *BaseRequestName\_Weekly\_1*). Once submitted, the request behaves like any other request that was submitted.

To make any changes to the scheduled request, open the base request and modify it from the Request Composer page. To modify the request or its schedule, make any changes on the Request Composer page and click “Save.” To pause the request, click the “Set Schedule” hyperlink in the Run Mode section to open the Request Schedule dialog, select “Pause Job,” and save the request. Unschedule the request by changing the run mode to “Run Immediately” and saving the base request as a draft or click “Delete” under the DataMart Routing panel to delete the base request. Note that modifying or deleting the base request will not affect any previously submitted requests.

## 7 Request Types

The system currently supports a number of request types:

- Menu-driven queries that execute against Mini-Sentinel Common Data Model Summary Table databases.
- Menu-driven queries that execute against ESP databases.
- File distribution queries used to exchange documents between the portal and DataMarts.
- SQL distribution queries use to distribute raw SQL between the portal and DataMarts.
- Queries composed from a number of external applications, such as i2b2, that uses a native interface to compose a query and submit it to a PopMedNet network.

### 7.1 Summary Queries

The PopMedNet software supports querying against Mini-Sentinel Common Data Model Summary Tables. The summary tables are created through distributed SAS code written by the Mini-Sentinel Operations Center and executed against the Mini-Sentinel Distributed Database held by each data partner. These tables provide summary counts of individuals by period, age group, and sex. The summary counts include information on medication use (e.g., number of dispensings, users, and days supplied), diagnoses (e.g., number of individuals with the diagnosis), procedures, and the overall data partner population. The structure of the tables is described in separate documentation.

The summary queries are grouped into three request models as follows:

**Table 3: Summary Table Request Models and Types**

Request Model	Request Type
Prevalence	Enrollment
	ICD-9 Diagnosis (3 digit codes)
	ICD-9 Diagnosis (4 digit codes)
	ICD-9 Diagnosis (5 digit codes)
	ICD-9 Procedures (3 digit codes)
	ICD-9 Procedures (4 digit codes)
	HCPCS Procedures
	Pharmacy Dispensings by Drug Class
	Pharmacy Dispensings by Generic Name

Request Model	Request Type
Incidence	ICD-9 Diagnosis (3 digit codes)
	Pharmacy Dispensings by Drug Class
	Pharmacy Dispensings by Generic Name
Most Frequently Used	ICD-9 Diagnosis (3 digit codes)
	ICD-9 Diagnosis (4 digit codes)
	ICD-9 Diagnosis (5 digit codes)
	ICD-9 Procedures (3 digit codes)
	ICD-9 Procedures (4 digit codes)
	HCPCS Procedures
	Pharmacy Dispensings by Drug Class
	Pharmacy Dispensings by Generic Name

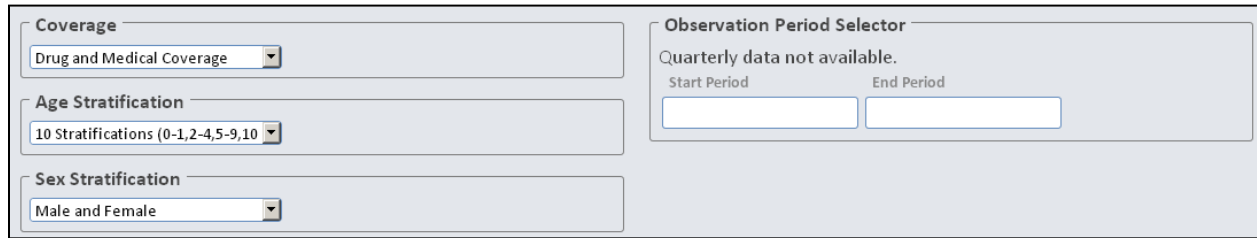
### 7.1.1 Prevalence Queries

The Prevalence query types are based on the Prevalence MSCDM Summary Tables. The Prevalence summary tables represent prevalence counts of diagnoses, procedures, and drug utilization.

#### 7.1.1.1 Enrollment Queries

The Enrollment query provides a count of unique individuals who are members/patients during the period. The count is stratified by age group, sex, year, drug coverage status, and medical coverage status. The member counts and days covered in the enrollment table can be used as denominators to calculate crude prevalence rates for Prevalence, Incidence, and Most Frequent Utilization query types. See Section 0: for more details.

To compose an Enrollment query, click on the “New” button in the request panel, choose “Summary: Prevalence Queries”, and then choose the “Enrollment” request type. This will display the Request Composer page for Enrollment queries. The following figure shows the request-specific criteria for an Enrollment query.



**Figure 20: Enrollment Query Request Composer Page – Request Specific Criteria**

Enter the following criteria for an Enrollment query:

**Table 4: Enrollment Query Criteria**

Control	Description
<b>Coverage</b>	Select the coverage type from the dropdown menu. Options include Drug and Medical Coverage, Drug Coverage Only, Medical Coverage Only, or All Members (a union of the previous three coverage types)
<b>Age Stratification</b>	Select the age stratification from the dropdown menu. Options include ten, seven, four, two, or no age stratifications.
<b>Sex Stratification</b>	Select the sex stratification from the dropdown menu. Options include female only, male only, male and female, or male and female aggregated.
<b>Observation Period Selector</b>	Enter the start year and ending year for the observation period range.

### 7.1.1.2 Prevalence Diagnosis and Procedure Queries

The Prevalence Diagnosis and Procedure queries provide counts of unique members with a diagnosis or procedure observed during the period and a count of events experienced within each stratum. The counts are stratified by code, setting of visit, age group, sex, and year.

The Prevalence Diagnosis and Procedure queries include ICD-9 3-, 4-, or 5-digit Diagnosis, HCPCS Procedure, and ICD-9 3-, and 4-digit Procedure queries. To compose a Prevalence Diagnosis or Procedure query, click on the “New” button in the request panel, select “Summary: Prevalence Queries”, and select the request type. This will display the Request Composer page for the specific query type.

The request specific criteria for the Prevalence Diagnosis and Procedure query types only vary from one another by the codes that are queried. Note that you cannot query across code types. For example, you may not include codes for ICD-9 3-digit and 5-digit diagnoses in the same query. The following figure shows the request specific criteria for a Prevalence ICD-9 3-digit Diagnosis query type:

**ICD-9 Codes**  
250 ,251 Add Codes

---

**Setting**  
Any Setting ▼

**Age Stratification**  
10 Stratifications (0-1,2-4,5-9,10) ▼

**Sex Stratification**  
Male and Female ▼

**Observation Period Selector**  
Quarterly data not available.  
Start Period  End Period

**Figure 21: Prevalence ICD-9 3-digit Diagnosis Request Composer Page - Request Specific Criteria**

The Prevalence Diagnosis and Procedure queries use a list of codes provided by OptumInsight (previously Ingenix). The query tool software uses the short name description, as opposed to the long name description, to match code names. The following figure shows a 3-digit ICD-9 Diagnosis code selector dialog:

✕
**Select one or more codes**

Search by specific code, range of codes (e.g., 250-255) or keyword to identify codes for the query; wildcards (\*) can be used.

The code set used for the specifications for HCPCS, ICD-9 Diagnosis (3, 4 and 5 digit) and ICD-9 Procedure (3 and 4 digit) query types are provided by Ingenix, Inc.

Type in a text query:

Or choose a category:

(240-279) ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS
▼

**Search Results**

	Code	Name
[add]	240	SIMPLE AND UNSPECIFIED GOITER
[add]	241	NONTOXIC NODULAR GOITER
[add]	242	THYROTOXICOSIS W/WO GOITER
[add]	243	CONGENITAL HYPOTHYROIDISM
[add]	244	ACQUIRED HYPOTHYROIDISM
[add]	245	THYROIDITIS
[add]	246	OTHER DISORDERS OF THYROID

Page: 1 2 3 4 5 6

**Selected Codes**

	Code	Name
[remove]	250	DIABETES MELLITUS

Close

**Figure 22: Request Composer Page – 3-digit ICD-9 Diagnosis Code Selector Dialog**



Enter the following criteria for a Diagnosis or Procedures query:

**Table 5: Prevalence Diagnosis and Procedures Query Criteria**

Control	Description
<b>Code Selection</b>	<p>Click “Add Codes” to open the code selector dialog.</p> <p>There are two ways to search for codes:</p> <ol style="list-style-type: none"> <li>1. Search by text string or code. Wildcards (*) and ranges of codes (e.g., “240-250”) may be used.</li> <li>2. Select a category from the dropdown menu.</li> </ol> <p>The Search Results panel will populate with a list of codes and their short names. Click “[Add]” to add the code to the Selected Codes list. Click “[Remove]” to remove a code from the list.</p> <p>Click “Close” to close the code selector dialog and insert the codes into the query.</p>
<b>Setting</b>	<p>Select the care setting from the dropdown menu. Options include inpatient, outpatient (ambulatory), emergency department, or any setting.</p>
<b>Age Stratification</b>	<p>Select the age stratification from the dropdown menu. Options include ten, seven, four, two, or no age stratifications.</p>
<b>Sex Stratification</b>	<p>Select a sex grouping from the dropdown menu. Options include female only, male only, male and female, or male and female aggregated.</p>
<b>Observation Period Selector</b>	<p>Enter the start year and ending year for the observation period range.</p>

### 7.1.1.3 Prevalence Drug Queries

The Prevalence Drug queries include Pharmacy Dispensings by Drug Class and Pharmacy Dispensings by Generic Name. They provide counts of unique members who had a drug dispensing during the period, a count of dispensing received by all of these members, and total days supplied by strata. Counts are stratified by drug category/generic drug name, age group, sex, quarter-year, and year.

To compose a Prevalence Drug query, click on the “New” button in the request panel, select “Summary: Prevalence Queries”, and select the request type. This will display the Request Composer page for the specific query type.

The request specific criteria for the Prevalence Drug query types only vary based on whether drug categories or specific generic drug names are queried. The following figure shows the request specific criteria for a Pharmacy Dispensings by Generic Name query type:

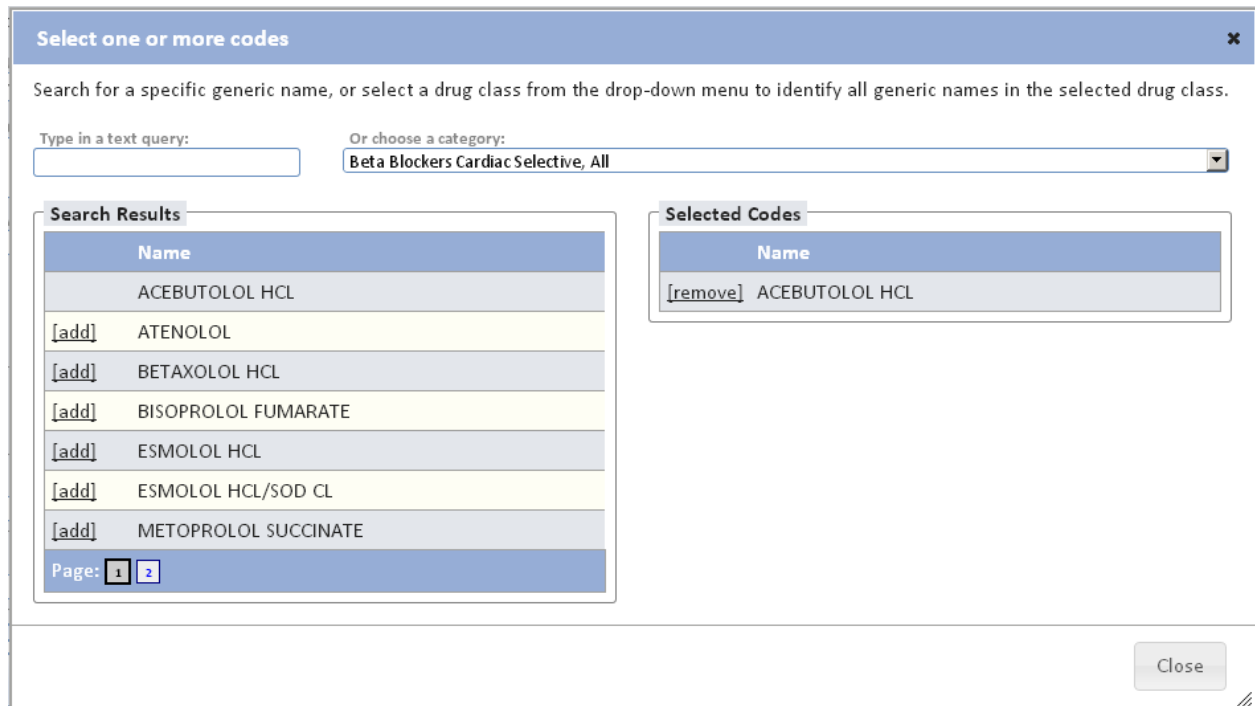


The screenshot shows a form with the following sections:

- Drug Names:** ACEBUTOLOL HCL [Add Codes]
- Age Stratification:** 10 Stratifications (0-1,2-4,5-9,1)
- Sex Stratification:** Male and Female
- Observation Period Selector:**
  - By Years (selected) / By Quarters
  - Start Period: [ ]
  - End Period: [ ]

**Figure 23: Prevalence Pharmacy Dispensings by Generic Name Request Composer Page - Request Specific Criteria**

The Prevalence Drug queries use a standardized list of drug categories and generic names provided by the Mini-Sentinel Operations Center and mapped from National Drug Codes provided by First DataBank. The following figure shows a generic drug name code selector dialog:



The dialog box is titled "Select one or more codes" and contains the following elements:

- Search for a specific generic name, or select a drug class from the drop-down menu to identify all generic names in the selected drug class.
- Type in a text query: [ ]
- Or choose a category: Beta Blockers Cardiac Selective, All
- Search Results:**

Name
ACEBUTOLOL HCL
[add] ATENOLOL
[add] BETAXOLOL HCL
[add] BISOPROLOL FUMARATE
[add] ESMOLOL HCL
[add] ESMOLOL HCL/SOD CL
[add] METOPROLOL SUCCINATE
- Selected Codes:**

Name
[remove] ACEBUTOLOL HCL
- Page: 1 2
- Close button

**Figure 24: Request Composer Page –Generic Drug Name Code Selector Dialog**

Enter the following criteria for a drug query:

**Table 6: Drug Query Criteria**

Control	Description
<b>Drug Selection</b>	<p>Click “Add Codes” to open the code selector dialog.</p> <p>For Pharmacy Dispensings by Generic Name, there are two ways to search for codes:</p> <ol style="list-style-type: none"> <li>1. Search by text string. Wildcards (*) may be used.</li> <li>2. Select a category from the dropdown menu.</li> </ol> <p>For Pharmacy Dispensings by Drug Class, only searching by text string is available. Wildcards (*) may be used.</p> <p>The Search Results panel will populate with a list of codes and their short names. Click “[Add]” to add the code to the Selected Codes list. Click “[Remove]” to remove a code from the list.</p> <p>Click “Close” to close the code selector dialog and insert the codes into the query.</p>
<b>Age Stratification</b>	<p>Select the age stratification from the dropdown menu. Options include ten, seven, four, two, or no age stratifications.</p>
<b>Sex Stratification</b>	<p>Select a sex grouping from the dropdown menu. Options include female only, male only, male and female, or male and female aggregated.</p>
<b>Period Type</b>	<p>Select the period type: Quarterly or Yearly.</p>
<b>Observation Period Selector</b>	<p>Enter the start year and ending year for the observation period range and select Q1 –Q4 for the start and ending years if applicable.</p>

### 7.1.2 Incidence Queries

Incidence queries are based on the Incidence MSCDM Summary Tables. The Incidence summary tables represent incidence counts of diagnoses and drug utilization.

Incidence is defined as a member with an encounter with the diagnosis of interest (i.e., the index date), in the care setting of interest, in the year of interest with no evidence of that diagnosis in the 90, 180 and 270 days (i.e., the look back periods) before the index date in any care setting. Both medical and drug coverage are required during the 3 possible look back periods, allowing for eligibility gaps of <=45

days. In addition, the tables also report number of encounters in the care setting of interest with that diagnosis in the 90, 180, 270 days after the index date (including the index event). Only the first incident event/index date within each year is considered.

The request composition for Prevalence and Incidence query types follow the same format. For the request specific criteria for Incidence queries, see the corresponding Prevalence sections.

### 7.1.3 Most Frequently Used Queries

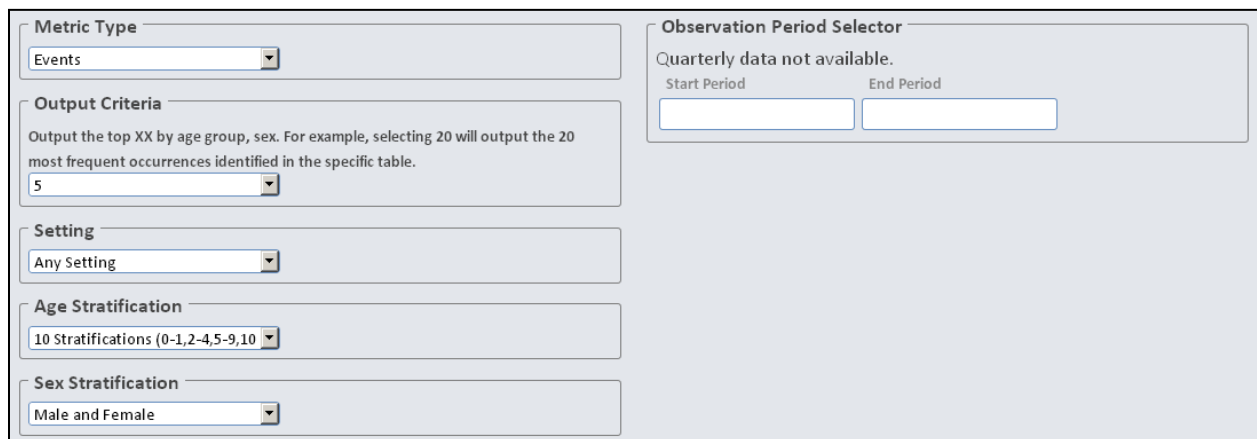
The Most Frequently Used (MFU) feature allows you to query the top *n* events, members, days supply, or dispensing within a specified query type (drugs, diagnoses, or procedures) within the Prevalence tables.

#### 7.1.3.1 Most Frequently Used Diagnosis and Procedure Queries

The MFU Diagnosis and Procedure queries provide the top *n* events or members within the Prevalence tables. The counts are stratified by code, setting of visit, age group, sex, and year.

The MFU Diagnosis and Procedure queries include ICD-9 3-, 4, or 5-digit Diagnosis, HCPCS Procedure, and ICD-9 3-, and 4-Digit Procedure queries. To compose an MFU Diagnosis or Procedure query, click on the “New” button in the request panel, select “Summary: Most Frequently Used Queries”, and select the request type. This will display the Request Composer page for the specific query type.

The request specific criteria for the MFU Diagnosis and Procedure query types only vary from one another by the codes that are included. Note that you cannot query across code types. For example, a single query may not return codes for ICD-9 3-digit and 5-digit diagnoses. The following figure shows the request specific criteria for an MFU ICD-9 3-digit Diagnosis query type:



<b>Metric Type</b> Events	<b>Observation Period Selector</b> Quarterly data not available. Start Period: <input type="text"/> End Period: <input type="text"/>
<b>Output Criteria</b> Output the top XX by age group, sex. For example, selecting 20 will output the 20 most frequent occurrences identified in the specific table. 5	
<b>Setting</b> Any Setting	
<b>Age Stratification</b> 10 Stratifications (0-1,2-4,5-9,10)	
<b>Sex Stratification</b> Male and Female	

Figure 25: MFU ICD-9 3-digit Diagnosis Query Request Composer Page - Request Specific Criteria

Enter the following criteria for an MFU Diagnosis or Procedures query:

**Table 7: Most Frequently Used Diagnosis or Procedures Query Criteria**

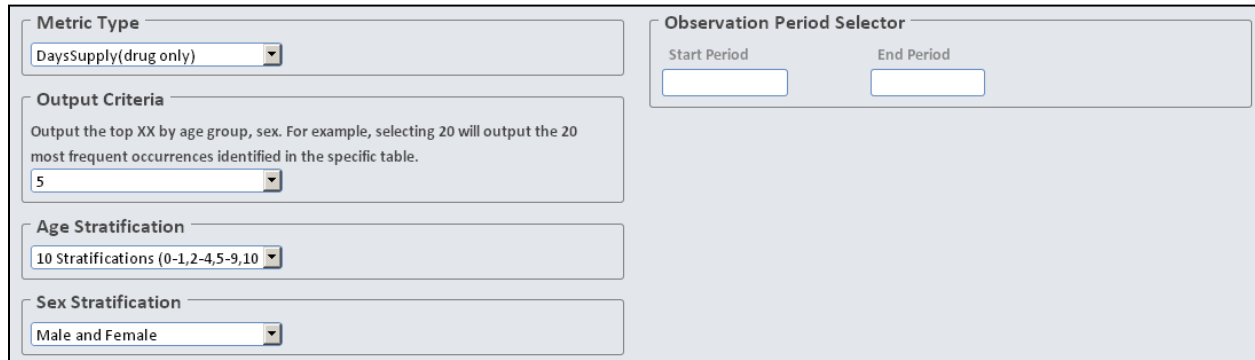
<b>Control</b>	<b>Description</b>
<b>Metric Type</b>	Select the metric type from the dropdown menu. Options include Events and Users.
<b>Output Criteria</b>	Select the number of rankings to return per strata. For example, selecting 20 for an MFU HCPCS query will return the 20 most frequent occurrences of HCPCS codes (by event or user, depending on the metric selected above) per strata. Options include 5, 10, 20, 25, 50, or 100.
<b>Setting</b>	Select the care setting from the dropdown menu. Options include inpatient, outpatient (ambulatory), emergency department, or any setting.
<b>Age Stratification</b>	Select the age stratification from the dropdown menu. Options include ten, seven, four, two, or no age stratifications.
<b>Sex Stratification</b>	Select a sex grouping from the dropdown menu. Options include female only, male only, male and female, or male and female aggregated.
<b>Observation Period Selector</b>	Enter the start year and ending year for the observation period range.

### 7.1.3.2 Most Frequently Used Drug Queries

The MFU Drug queries provide the top n users, days supplied, or dispensings within the Prevalence tables. The counts are stratified by drug category/name, age group, sex, and year.

The MFU Drug queries include Pharmacy Dispensings by Drug Class and Pharmacy Dispensings by Generic Name. To compose an MFU Drug query, click on the “New” button in the request panel, select “Summary: Most Frequently Used Queries”, and select the request type. This will display the Request Composer page for the specific query type.

The request specific criteria for the MFU Drug query types only vary from one another by the results that are returned. The following figure shows the request specific criteria for an MFU Pharmacy Dispensings by Drug Class query type:



**Figure 26: MFU Pharmacy Dispensings by Drug Class Query Request Composer Page - Request Specific Criteria**

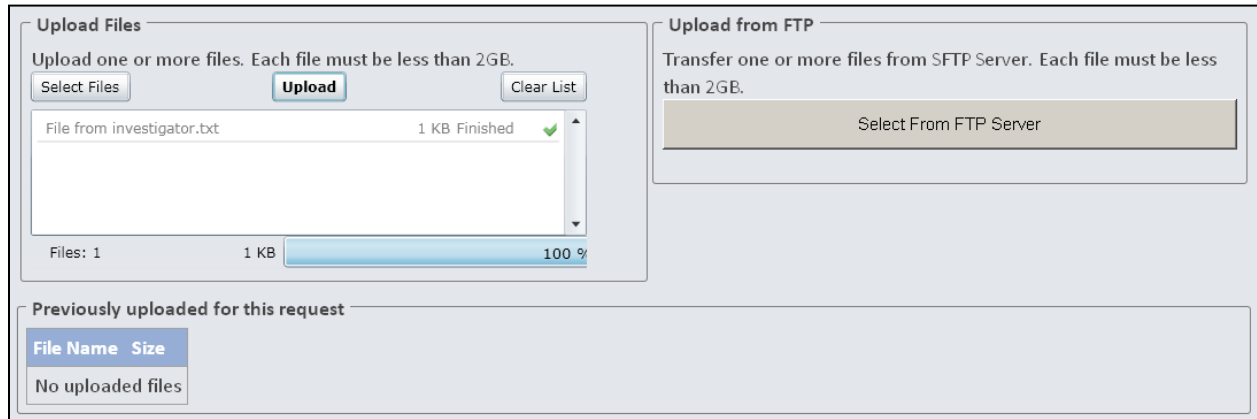
Enter the following criteria for an MFU Drug query:

**Table 8: Most Frequently Used Drug Query Criteria**

Control	Description
<b>Metric Type</b>	Select the metric type from the dropdown menu. Options include Days Supply, Dispensings, and Users.
<b>Output Criteria</b>	Select the number of rankings to return per strata. For example, selecting 20 for an MFU Pharmacy Dispensings by Drug Class query will return the 20 most frequent occurrences of drug classes (by user, days supply, or dispensings, depending on the metric selected above) per strata.
<b>Age Stratification</b>	Select the age stratification from the dropdown menu. Options include ten, seven, four, two, or no age stratifications.
<b>Sex Stratification</b>	Select a sex grouping from the dropdown menu. Options include female only, male only, male and female, or male and female aggregated.
<b>Observation Period Selector</b>	Enter the start year and ending year for the observation period range.

## 7.2 File Distribution

The File Distribution request type allows you to distribute any type of file to the network DataMarts. To compose a File Distribution request, click on the “New” button in the request panel, select the “File Distribution” request model and the “File Distribution” request type. This will display the Request Composer page for the File Distribution request. The following figure shows the request specific criteria for the File Distribution request type:



**Figure 27: File Distribution Request Composer Page - Request Specific Criteria**

Files may be uploaded to a File Distribution request via your local computer or an FTP site.

### **Upload a file from your local computer**

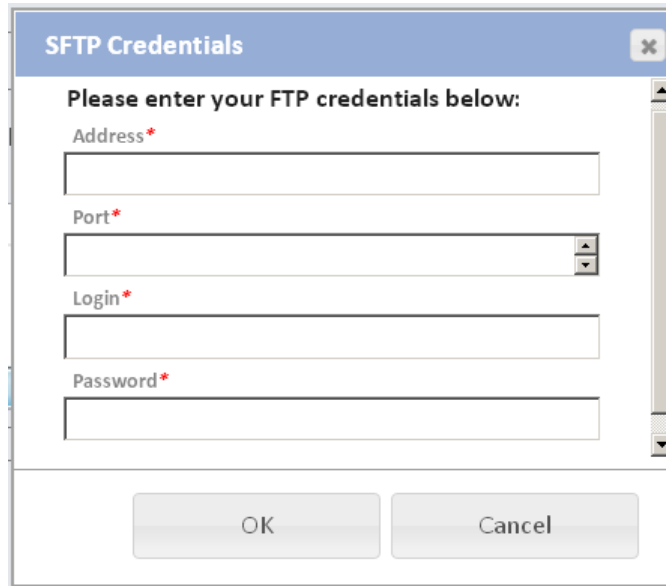
Follow these steps to upload a file from your computer:

1. In the Upload Files panel, click “Select Files.”
2. Browse your computer’s folders to find the desired file(s) and click “Open.”
3. The box will display a list of files. Click the trashcan symbol to delete a file from the list. Click “Clear list” to delete all files. Click “Upload” to upload all files to the Portal.

### **Upload a file from an FTP site**

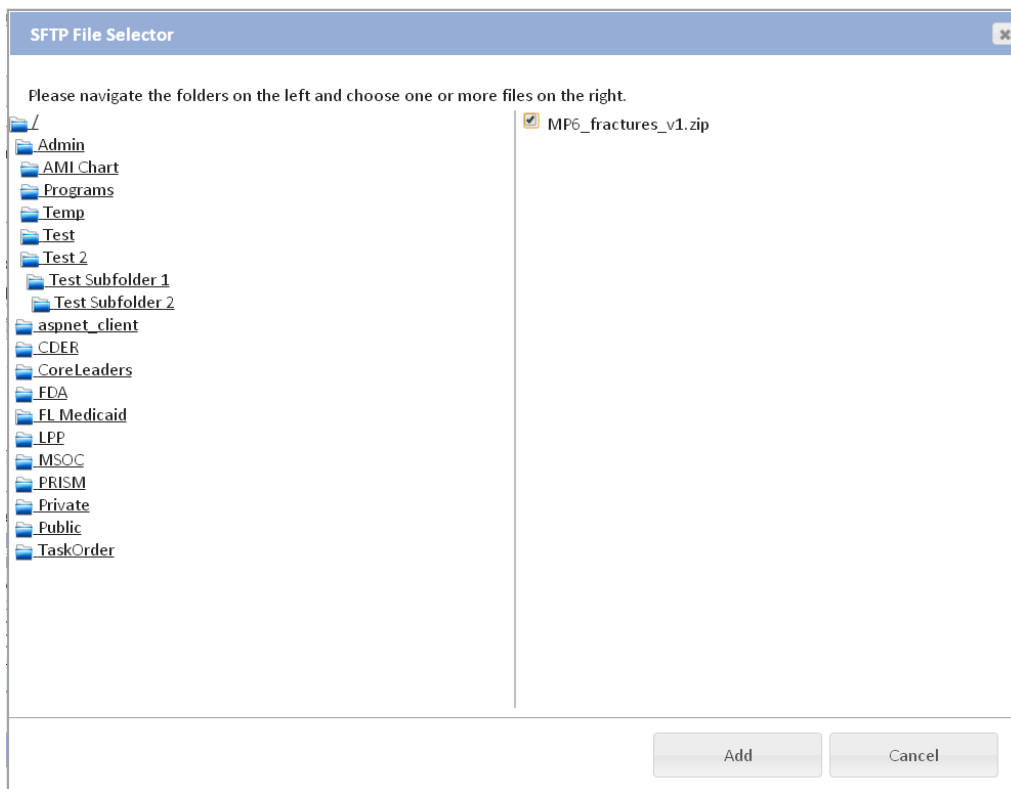
Follow these steps to upload a file from an FTP site. Note that the FTP server must have an open port and you must have valid user credentials to connect to the FTP server. Contact your FTP server administrator for help.

1. In the Upload from FTP panel, click “Select From FTP Server.”
2. In the SFTP Credentials dialog box, enter the following information and click “OK” to connect to the FTP server.
  - a. Address: the address of the FTP server. Note that this address should not include http:// or https://.
  - b. Port: contact your FTP server administrator for help in locating an open port.
  - c. Login: your username for the FTP server.
  - d. Password: your password for the FTP server.



**Figure 28: File Distribution Request Composer Page - SFTP Credentials Dialog**

3. The SFTP File Selector dialog displays folders to the left and files to the right. Open a parent folder by clicking on it to display its child files and folders. Select your file(s) by checking the checkboxes next to each one and click “Add” to upload the file(s) to the Portal.



**Figure 29: File Distribution Request Composer Page - SFTP File Selector Dialog**



### 7.3 Modular Program Distribution

The Modular Program Distribution request model allows you to distribute modular program packages to the network DataMarts and define the package manifest. The Modular Program request model provides three request types: Modular Program, Ad Hoc, and Beta Testing. The request specific criteria for the Modular Program request types do not differ. The following figure shows the request specific criteria for a Modular Program request type:

**Package Manifest**  
This is the list of programs in the package

Program Type	Program Name	Scenarios	Description
<input type="checkbox"/> Program 1	Program 1		
<input type="checkbox"/> Program 2	Program 2		
<input type="checkbox"/> Program 3	Program 3		
<input type="checkbox"/> Program 4	Program 4		
<input type="checkbox"/> Program 5	Program 5		
<input type="checkbox"/> Program 6	Program 6		
<input type="checkbox"/> Program 7	Program 7		
<input type="checkbox"/> Drug Use	Drug Use		
<input type="checkbox"/> Other	Other		

**Upload Files**  
Upload one or more files. Each file must be less than 2GB.

**Upload from FTP**  
Transfer one or more files from SFTP Server. Each file must be less than 2GB.

**Previously uploaded for this request**

File Name	Size
No uploaded files	

Figure 30: Modular Program Request Composer Page - Request Specific Criteria

#### Define the package manifest

The package manifest specifies the modular programs included in the request. Enter the following criteria for the package manifest:

**Table 9: Package Manifest Criteria**

<b>Control</b>	<b>Description</b>
<b>Program Type</b>	Use the checkboxes to select the program type. Options include Modular Programs 1-7, Drug Use, and Other.
<b>Program Name</b>	Enter the name of the modular program.
<b>Scenarios</b>	Enter the number of scenarios in the modular program.
<b>Description</b>	Enter a description for the modular program.

Files may be uploaded to a Modular Program Distribution request via your local computer or an FTP site.

**Upload a file from your local computer.**

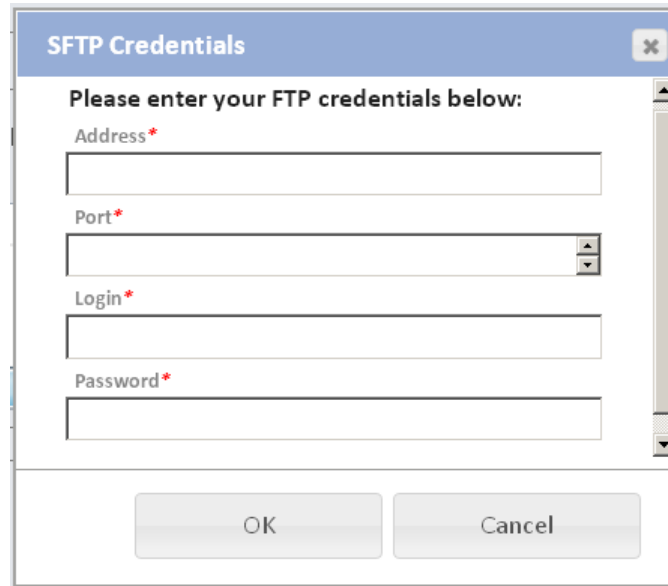
Follow these steps to upload a file from your computer:

1. In the Upload Files panel, click “Select Files.”
2. Browse your computer’s folders to find the desired file(s) and click “Open.”
3. The box will display a list of files. Click the trashcan symbol to delete a file from the list. Click “Clear list” to delete all files. Click “Upload” to upload all files to the Portal.

**Upload a file from an FTP site.**

Follow these steps to upload a file from an FTP site. Note that the FTP server must have an open port and you must have valid user credentials to connect to the FTP server. Contact your FTP server administrator for help.

1. In the Upload from FTP panel, click “Select From FTP Server.”
2. In the SFTP Credentials dialog box, enter the following information and click “OK” to connect to the FTP server.
  - a. Address: the address of the FTP server. Note that this address should not include http:// or https://.
  - b. Port: contact your FTP server administrator for help in locating an open port.
  - c. Login: your username for the FTP server.
  - d. Password: your password for the FTP server.



**SFTP Credentials**

Please enter your FTP credentials below:

Address\*

Port\*

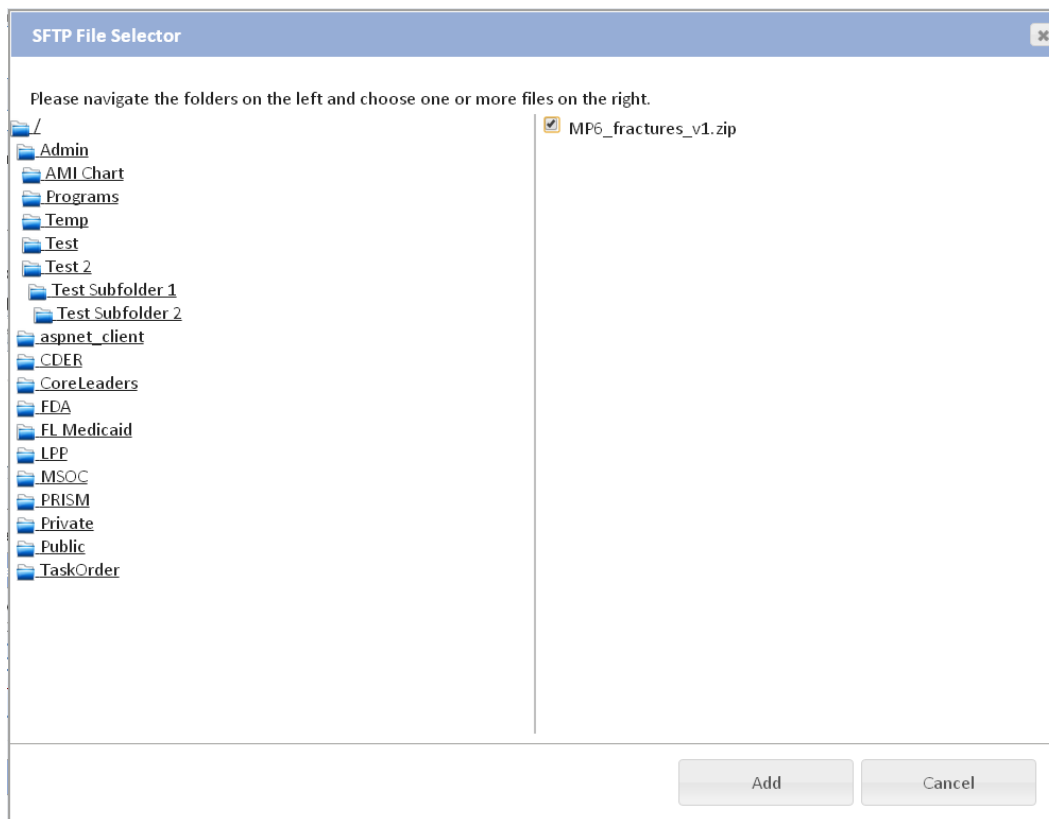
Login\*

Password\*

OK Cancel

**Figure 31: Modular Program Distribution Request Composer Page - SFTP Credentials Dialog**

- The SFTP File Selector dialog displays folders to the left and files to the right. Open a parent folder by clicking on it to display its child files and folders. Select your file(s) by checking the checkboxes next to each one and click “Add” to upload the file(s) to the Portal.



**SFTP File Selector**

Please navigate the folders on the left and choose one or more files on the right.

/  
 Admin  
 AMI Chart  
 Programs  
 Temp  
 Test  
 Test 2  
 Test Subfolder 1  
 Test Subfolder 2  
 aspNet\_client  
 CDER  
 CoreLeaders  
 FDA  
 FL Medicaid  
 LPP  
 MSOC  
 PRISM  
 Private  
 Public  
 TaskOrder

MP6\_fractures\_v1.zip

Add Cancel

**Figure 32: Modular Program Distribution Request Composer Page - SFTP File Selector Dialog**

## 7.4 SQL Distribution

The SQL Distribution request type allows you to distribute raw SQL from the portal to the network DataMarts. This request type is data model agnostic. To compose a SQL Distribution request, click on the “New” button in the request panel, select the “SQL Distribution” request model and the “SQL Distribution” request type. This will display the Request Composer page for the SQL Distribution request. The following figure shows the request specific criteria for the SQL Distribution request type. Paste or type the SQL code into the text box.

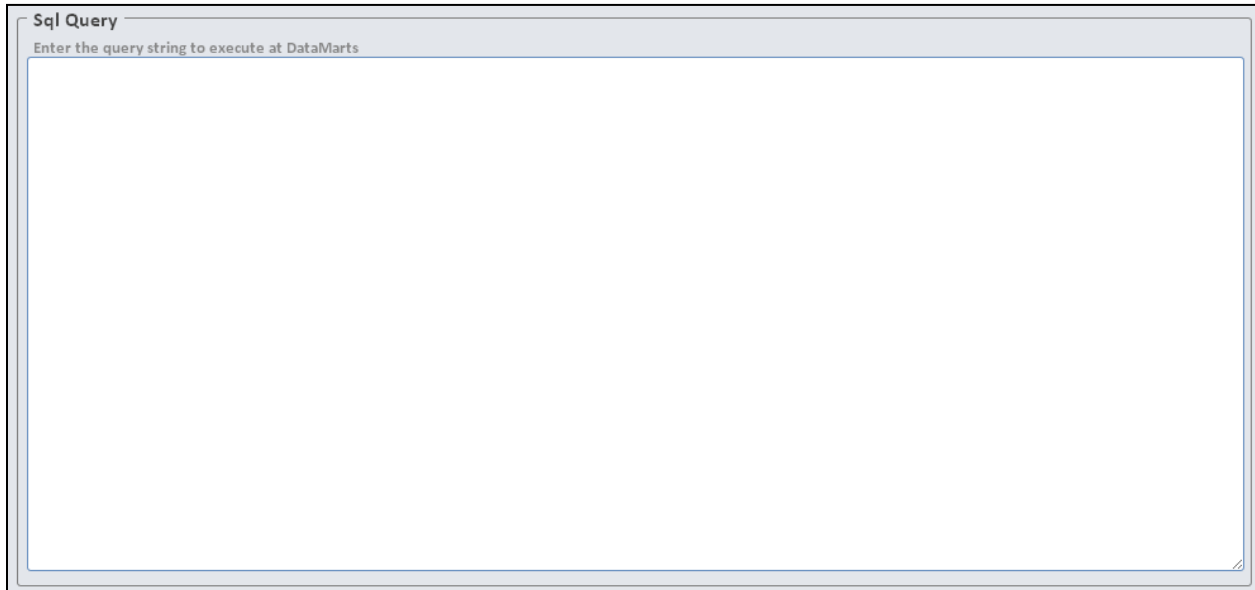


Figure 33: SQL Distribution Request Composer Page - Request Specific Criteria

## 7.5 ESP Requests

The Electronic Support for Public Health (ESP) Requests are a set of requests that operate against a simplified version of the full ESP data model, called ESP: MDPHnet. The ESP data model is a standardized representation of EHR-based encounter and patient demographic information. It uses a set of complex algorithms to identify selected diseases of public health concern such as acute hepatitis B, Lyme disease, influenza-like illness, and diabetes. The ESP: MDPHnet data model is generated via SQL scripts that execute against the full ESP data model. It provides a mapping layer between the full set of ESP tables and the PopMedNet software.

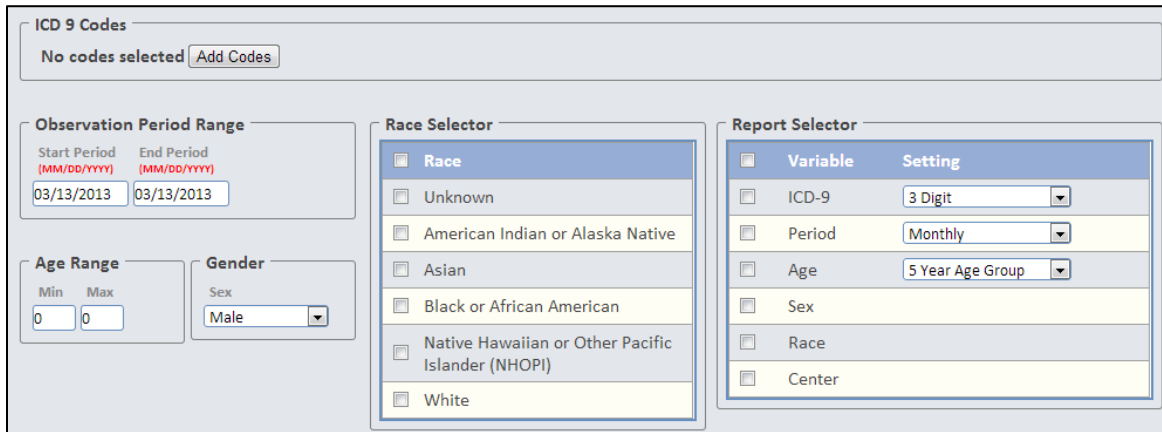
The requests supported by ESP Query Builder are:

- ICD-9 Diagnosis – used to build ad-hoc custom health measure queries based on ICD-9 3-digit, 4-digit, and 5 digit diagnosis codes that produce reports stratified by ICD-9 code, period, gender, race, age range, and zip code.
- Reportable Diseases – used to select one of a list of reportable disease reports that are produced periodically on the ESP servers stratified by period, gender, race, age range, and zip code

- Query Composer – used to identify cohorts using complex constraints within inclusion and exclusion criteria that are stratified by period, gender, race, age range, center, zip code, and ICD-9 code or reportable disease.

### 7.5.1 ESP ICD-9 Diagnosis Request

To compose an ESP ICD-9 Diagnosis query, click on the “New” button in the request panel, select the “ESP Query Builder” request model and the “ICD-9 Diagnosis” request type. This will display the Request Composer page for the ESP ICD-9 Diagnosis request type.



The screenshot shows the 'Request Specific Criteria' section of the ESP ICD-9 Diagnosis Request Composer. It includes the following fields and options:

- ICD 9 Codes:** A section with 'No codes selected' and an 'Add Codes' button.
- Observation Period Range:** Fields for 'Start Period (MM/DD/YYYY)' and 'End Period (MM/DD/YYYY)', both set to '03/13/2013'.
- Age Range:** Fields for 'Min' and 'Max', both set to '0'.
- Gender:** A dropdown menu set to 'Male'.
- Race Selector:** A list of race categories with checkboxes:
  - Race
  - Unknown
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Native Hawaiian or Other Pacific Islander (NHOPI)
  - White
- Report Selector:** A table with columns 'Variable' and 'Setting':
 

Variable	Setting
<input type="checkbox"/> ICD-9	3 Digit
<input type="checkbox"/> Period	Monthly
<input type="checkbox"/> Age	5 Year Age Group
<input type="checkbox"/> Sex	
<input type="checkbox"/> Race	
<input type="checkbox"/> Center	

**Figure 34: ESP ICD-9 Diagnosis Request Composer Page – Request Specific Criteria**

The ESP ICD-9 Diagnosis request uses a list of codes from the Unified Medical Language System (UMLS). The following figure shows an ICD-9 Diagnosis code selector dialog:

Select one or more codes
✕

Search by specific code (including decimal, for 4- and 5-digit codes), range of codes (e.g., 250-251, 250.1-255.1, or 296.00-296.99) or keyword to identify codes for the query; wild cards can be used.

Note, when ICD-9 codes of 3- or 4-digits are selected, all available codes to the highest degree of specificity will be displayed in the results. For example, selecting the code '250' is equivalent to a query of 250\*, results for available codes 250.xx codes are displayed. Each code within the output is displayed by row.

We recommend creating queries at the most granular level appropriate for the question to ensure the results meet expectations and include only what is necessary.

The code set used for the specifications for ICD-9 diagnosis codes (3-, 4- and 5- digit) are provided by Ingenix, Inc.

Type in a text query: 
Or choose a category:

ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES AND IMMUNITY DISORDERS:ICD9(240-279)
▼

Search Results

	Code	Name
[add]	240	SIMPLE AND UNSPECIFIED GOITER
[add]	240.0	GOITER - SIMPLE
[add]	240.9	GOITER, UNSPEC
[add]	241	NONTOXIC NODULAR GOITER
[add]	241.0	THYROID NODULE
[add]	241.1	GOITER - NONTOXIC MULTINODULAR
[add]	241.9	NONTOXIC NODULAR GOITER, UNSPEC

<<
<
1
2
3
4
5
...
>
>>

Selected Codes

	Code	Name
	No codes selected	

Close

**Figure 35: ESP ICD-9 Diagnosis Request Composer Page – ICD-9 Code Selector Dialog**

Enter the following criteria for an ESP ICD-9 Diagnoses request:

Table 10: ESP ICD-9 Diagnosis Request Criteria

Control	Description
<b>Code Selection</b>	<p>Click “Add Codes” to open the code selector dialog.</p> <p>There are two ways to search for codes:</p> <ol style="list-style-type: none"> <li>1. Search by text string or code. Include decimals for 4 and 5 digit codes. Wildcards (*) and ranges of codes (e.g., “240-250”) may be used.</li> <li>2. Select a category from the dropdown menu.</li> </ol> <p>The Search Results panel will populate with a list of codes and their descriptions. Click “[Add]” to add the code to the Selected Codes list. Click “[Remove]” to remove a code from the list.</p> <p>Click “Close” to close the code selector dialog and insert the codes into the query.</p> <p><b>Note:</b> When ICD-9 codes of 3- or 4-digits are selected, all available codes to the highest degree of specificity will be included in the results. For example, selecting the code 250 is equivalent to a query of 250*; results for all available 250.xx codes will be included.</p>
<b>Observation Period</b>	<p>Enter the starting period and ending period using the date selector. Note that these may not be left open-ended, but future dates may be defined.</p>
<b>Age Range</b>	<p>Enter the minimum age and maximum age for the patient population.</p>
<b>Gender</b>	<p>Select a sex from the dropdown menu for the patient population. Options include male, female, and male and female.</p>
<b>Race</b>	<p>Select one or more options from the race selector. Options include Unknown, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White.</p>

Control	Description
<b>Report Selector</b>	<p>Choose one or more values used to stratify the results. Options include:</p> <ul style="list-style-type: none"> <li>• ICD-9: 3 digit, 4 digit, or 5 digit</li> <li>• Period: Monthly, yearly</li> <li>• Age: 5 year age group, 10 year age group</li> <li>• Sex</li> <li>• Race</li> <li>• Center</li> <li>• Zip Code</li> </ul>

## 7.5.2 ESP Reportable Disease Request

To compose an ESP Reportable Disease request, click on the “New” button in the request panel, choose “ESP Query Builder”, and then choose the “Reportable Disease” request type. This will display the Request Composer page for the ESP Reportable Disease request type.

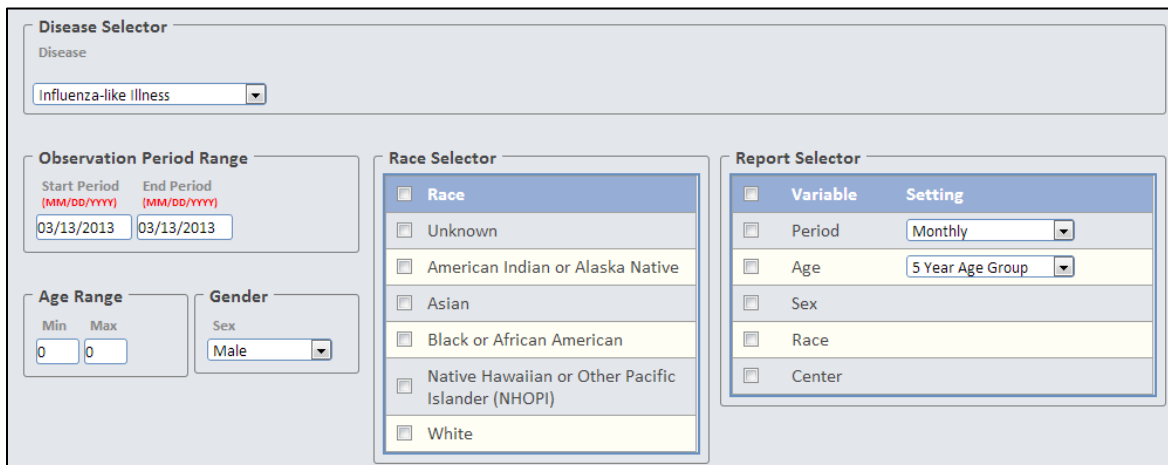


Figure 36: ESP Reportable Disease Request Composer Page - Request Specific Criteria

Enter the following criteria for an ESP Reportable Disease request:

Table 11: ESP Reportable Disease Request Criteria

Control	Description
<b>Reportable Disease</b>	Select a reportable disease from the dropdown menu. Options include Influenza-like Illness, Diabetes: Type 1, Diabetes: Type 2, Diabetes: Prediabetes, and Diabetes: Gestational Diabetes.



Control	Description
<b>Observation Period</b>	Enter the starting period and ending period using the date selector. Note that these may not be left open-ended, but future dates may be defined.
<b>Age Range</b>	Enter the minimum age and maximum age for the patient population.
<b>Gender</b>	Select a sex from the dropdown menu for the patient population. Options include male, female, and male and female.
<b>Race</b>	Select one or more options from the race selector. Options include Unknown, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White.
<b>Report Selector</b>	Choose one or more values used to stratify the results. Options include: <ul style="list-style-type: none"> <li>• Period: Monthly, yearly</li> <li>• Age: 5 year age group, 10 year age group</li> <li>• Sex</li> <li>• Race</li> <li>• Center</li> <li>• Zip Code</li> </ul>

### 7.5.3 ESP Query Composer Request

The ESP Query Composer allows you to define a cohort of patients using complex inclusion and exclusion criteria. For example, the ESP Query Composer allows you to develop custom denominator queries which return counts of patients with at least  $n$  number of medical encounters within a specified period and that meet the specified demographic or diagnostic criteria.

The table below demonstrates the complexity of Query Composer requests in comparison to the ESP ICD-9 Diagnosis or Reportable Disease requests.

**Table 12: Complexity of ESP Request Types**

ICD-9 Diagnosis or Reportable Disease Requests	Query Composer Request
Define a cohort of patients who meet the following criteria: <ol style="list-style-type: none"> <li>1. Have a diagnosis of diabetes within the last two years.</li> </ol>	Define a cohort of patients who meet the following criteria: <ol style="list-style-type: none"> <li>1. Have a diagnosis of diabetes within the last two years.</li> <li>2. Have no diagnosis for pulmonary hypertension at any time.</li> <li>3. Have had a minimum of four visits of any type within the healthcare system in the past two years.</li> </ol>

The ESP Query Composer utilizes criteria groups to specify the conditions of the query. At least one criteria group, the primary criteria group, must be specified. If no additional criteria groups are added, the query will behave similarly to an ESP ICD-9 Diagnosis or Reportable Disease request. Each subsequent criteria group reduces the patient cohort. Criteria groups are determined by terms within each group. ICD-9 Diagnosis and Disease terms within a criteria group are OR-ed, whereas demographic terms (Gender, Race, Age Range, and Zip Code) and Visit terms are AND-ed. Multiple Criteria Groups are AND-ed to determine the final cohort. Criteria groups may also be negated to exclude criteria from the final patient cohort.

On the Request Composer page of the Query Composer request, the primary criteria group is already present, as shown in the figure below.

[-] **Criteria Groups**
[+]

Click the [+] sign to add criteria groups. Criteria groups form cohorts that are determined by terms within each group. ICD9 Diagnosis and Disease terms within a criteria groups are OR-ed, whereas demographic terms (Gender, Race, Age) and Visit terms are AND-ed. Multiple Criteria Groups are AND-ed to determine the final cohort which will display a single or stratified patient count based on the Report Selector options selected. You may negate a Criteria Group by checking "Exclude Criteria Group" box which will filter out the group's cohort from the final cohort.

[-] **Criteria Group: Primary**

Group Name

[About this Criteria Group...](#)

Add Terms... >

---

**Report Selector**

Variable     Setting

**Observation Period Range**

Start Period (MM/DD/YYYY)	End Period (MM/DD/YYYY)
<input type="checkbox"/> 11/05/2013	<input type="checkbox"/> 11/05/2013

**Figure 37: ESP Query Composer Request Composer Page – Request Specific Criteria**

Enter a name for the criteria group. Hover over “Add Terms...” and select Diagnosis, Disease, or Visits, or hover over Demographic and select Age Range, Gender, Race, or Zip Code. The criteria group must contain at least a Diagnosis, Disease, or Visits term. To remove a term from the query, click the “[X]” control on the upper right of the term. See the table below for descriptions of the possible terms to include in a criteria group

Table 13: ESP Query Composer Criteria Group Terms

Term	Description
<b>ICD-9 Codes</b>	<p>Click “Add Codes” to open the code selector dialog.</p> <p>There are two ways to select codes:</p> <ol style="list-style-type: none"> <li>3. Search by text string or code. Include decimals for 4 and 5 digit codes. Wildcards (*) and ranges of codes (e.g., “240-250”) may be used.</li> <li>4. Select a category from the dropdown menu.</li> </ol> <p>The Search Results panel will populate with a list of codes and their descriptions. Click “[Add]” to add the code to the Selected Codes list. Click “[Remove]” to remove a code from the list.</p> <p>Click “Close” to close the code selector dialog and insert the codes into the query.</p> <p><b>Note:</b> When ICD-9 codes of 3- or 4-digits are selected, all available codes to the highest degree of specificity will be included in the results. For example, selecting the code 250 is equivalent to a query of 250*; results for all available 250.xx codes will be included.</p>
<b>Disease Selector</b>	<p>Select a reportable disease from the dropdown menu. Options include Influenza-like Illness, Diabetes: Type 1, Diabetes: Type 2, Diabetes: Prediabetes, and Diabetes: Gestational Diabetes.</p>
<b>Minimum Visits</b>	<p>Enter the minimum number of visits to select patients that have at least <i>n</i> visits matching the specified criteria in the criteria group. If a criteria group contains only a minimum visits term, that group will select for patients with at least <i>n</i> encounters of any type within the health system.</p>
<b>Observation Period Range</b>	<p>Enter the starting period and ending period using the date selector. Select the checkbox next to each period control to determine whether the date is in effect for the criteria group. For instance, selecting the checkboxes next to both the start and ending periods will restrict the patient cohort to just patients who meet the criteria in that date range. To leave one or both ends of the date range open-ended, do not select the checkboxes.</p> <p><b>Note:</b> the start and end period fields cannot be left blank. Future dates may be defined.</p>
<b>Age Range</b>	<p>Enter the minimum age and maximum age for the patient population.</p>

Term	Description
<b>Gender</b>	Select a sex from the dropdown menu for the patient population. Options include male, female, and male and female.
<b>Race</b>	Select one or more options from the race selector. Options include Unknown, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White.
<b>Zip Code Selector</b>	<p>Click “Add Codes” to open the code selector dialog.</p> <p>There are two ways to search for codes:</p> <ol style="list-style-type: none"> <li>1. Search by text string or zip code. Wildcards (*) and ranges of codes (e.g., “02215-02220”) may be used.</li> <li>2. Select a state from the dropdown menu.</li> </ol> <p>The Search Results panel will populate with a list of zip codes and their descriptions. Click “[Add]” to add the code to the Selected Zip Codes list. Click “[Remove]” to remove a code from the list.</p> <p>Click “Close” to close the code selector dialog and insert the zip codes into the query.</p>

Term	Description
<b>Report Selector</b> (primary criteria group only)	<p>Choose one or more values used to stratify the results. If no option is selected, a single patient count will be returned.</p> <p><b>Note:</b> this option is only available for the primary criteria group. Results will be stratified according to the criteria in the primary group. For example, if age is selected as a report selector, the results will be stratified according to the age at which the patients were when they met the criteria in the primary group.</p> <p>Options include:</p> <ul style="list-style-type: none"> <li>• ICD-9: 3 digit, 4 digit, 5 digit (<b>note:</b> appears whenever ICD-9 codes are selected.)</li> <li>• Reportable Disease (<b>note:</b> only appears if reportable diseases and not ICD-9 codes are selected. If both reportable diseases and ICD-9 codes are selected, stratification by ICD-9 code is the only option)</li> <li>• Period: Monthly, yearly</li> <li>• Age: 5 year age group, 10 year age group</li> <li>• Sex</li> <li>• Race</li> <li>• Center</li> <li>• Zip</li> </ul>
<b>Exclude Criteria Group</b>	Check the checkbox to exclude patients meeting the criteria in the criteria group from the final cohort.

To add another criteria group to the query, click the [+] symbol in the upper right of the Criteria Groups panel. To remove a criteria group, click the [X] symbol in the upper right of that criteria group. The figure below displays an example of an ESP Query Composer request with two criteria groups.

**Criteria Group: Primary**

Group Name:  [About this Criteria Group...](#)

---

ICD 9 Codes

250

Disease Selector

Disease

Disease Selector

Disease

---

Report Selector

Variable Setting

ICD-9

Period

Age

Sex

Race

Center

Zip

Observation Period Range

Start Period (MM/DD/YYYY)

End Period (MM/DD/YYYY)

---

**Criteria Group 2**

Group Name:  [About this Criteria Group...](#)

---

ICD 9 Codes

401

---

Exclude Criteria Group

Observation Period Range

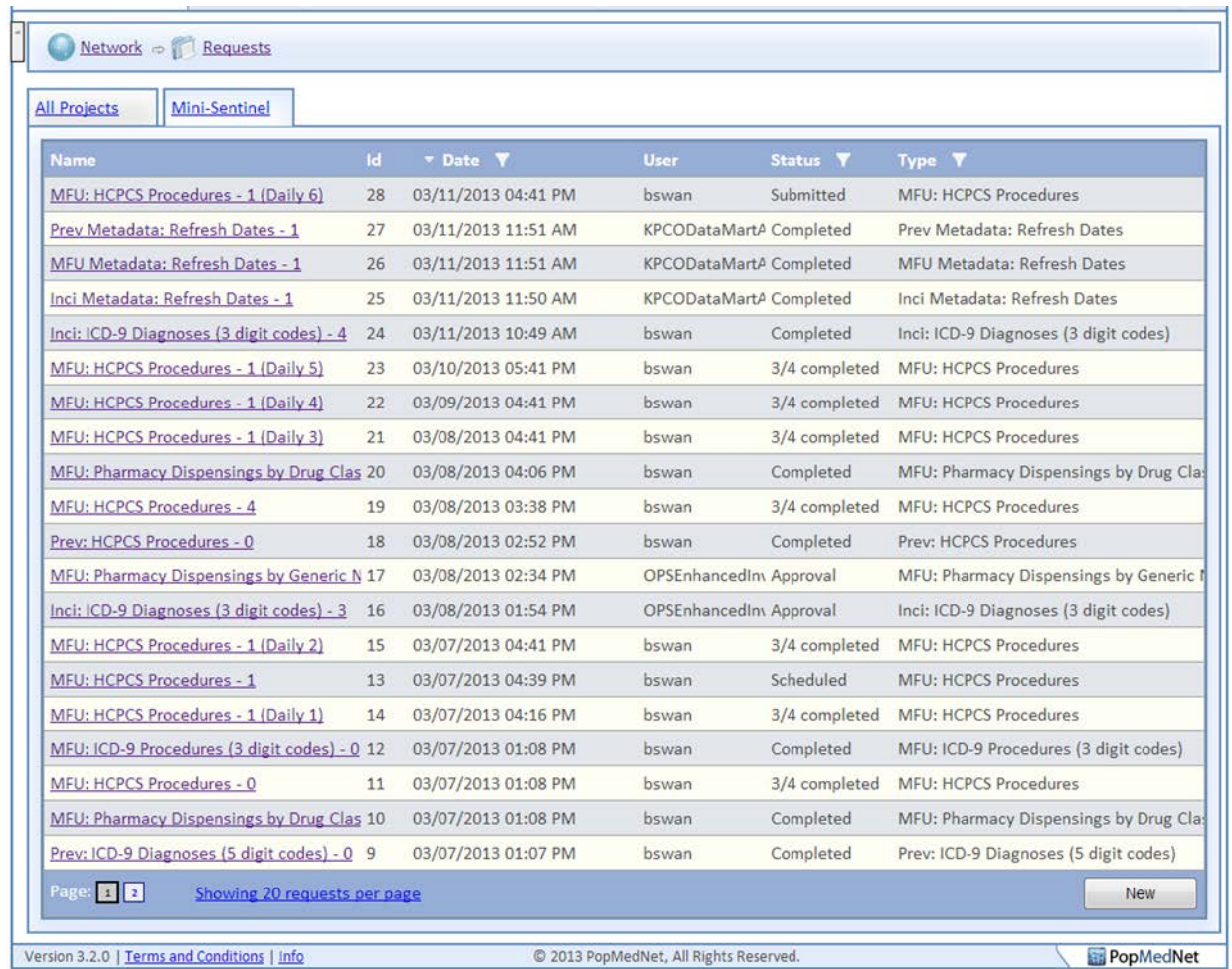
Start Period (MM/DD/YYYY)

End Period (MM/DD/YYYY)

Figure 38: ESP Query Composer Request Composer Page - Sample Query

## 8 Checking the Request Status

View the status of your requests in the Requests panel on the home page or the Request page.



The screenshot shows the 'Requests' panel in the PopMedNet interface. It features a navigation bar with 'Network' and 'Requests' tabs, and sub-tabs for 'All Projects' and 'Mini-Sentinel'. Below this is a table listing various requests with columns for Name, Id, Date, User, Status, and Type. The table contains 20 rows of data, with the first row being 'Submitted' and others showing various completion and approval statuses. At the bottom of the table, there is a pagination control showing 'Page: 1 2' and 'Showing 20 requests per page', along with a 'New' button. The footer of the page includes 'Version 3.2.0 | Terms and Conditions | Info', '© 2013 PopMedNet, All Rights Reserved.', and the PopMedNet logo.

Name	Id	Date	User	Status	Type
<a href="#">MFU: HCPCS Procedures - 1 (Daily 6)</a>	28	03/11/2013 04:41 PM	bswan	Submitted	MFU: HCPCS Procedures
<a href="#">Prev Metadata: Refresh Dates - 1</a>	27	03/11/2013 11:51 AM	KPCODataMartA	Completed	Prev Metadata: Refresh Dates
<a href="#">MFU Metadata: Refresh Dates - 1</a>	26	03/11/2013 11:51 AM	KPCODataMartA	Completed	MFU Metadata: Refresh Dates
<a href="#">Inci Metadata: Refresh Dates - 1</a>	25	03/11/2013 11:50 AM	KPCODataMartA	Completed	Inci Metadata: Refresh Dates
<a href="#">Inci: ICD-9 Diagnoses (3 digit codes) - 4</a>	24	03/11/2013 10:49 AM	bswan	Completed	Inci: ICD-9 Diagnoses (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 1 (Daily 5)</a>	23	03/10/2013 05:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 4)</a>	22	03/09/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 3)</a>	21	03/08/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Drug Clas</a>	20	03/08/2013 04:06 PM	bswan	Completed	MFU: Pharmacy Dispensings by Drug Clas
<a href="#">MFU: HCPCS Procedures - 4</a>	19	03/08/2013 03:38 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">Prev: HCPCS Procedures - 0</a>	18	03/08/2013 02:52 PM	bswan	Completed	Prev: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Generic N</a>	17	03/08/2013 02:34 PM	OPSEnhancedIn	Approval	MFU: Pharmacy Dispensings by Generic N
<a href="#">Inci: ICD-9 Diagnoses (3 digit codes) - 3</a>	16	03/08/2013 01:54 PM	OPSEnhancedIn	Approval	Inci: ICD-9 Diagnoses (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 1 (Daily 2)</a>	15	03/07/2013 04:41 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1</a>	13	03/07/2013 04:39 PM	bswan	Scheduled	MFU: HCPCS Procedures
<a href="#">MFU: HCPCS Procedures - 1 (Daily 1)</a>	14	03/07/2013 04:16 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: ICD-9 Procedures (3 digit codes) - 0</a>	12	03/07/2013 01:08 PM	bswan	Completed	MFU: ICD-9 Procedures (3 digit codes)
<a href="#">MFU: HCPCS Procedures - 0</a>	11	03/07/2013 01:08 PM	bswan	3/4 completed	MFU: HCPCS Procedures
<a href="#">MFU: Pharmacy Dispensings by Drug Clas</a>	10	03/07/2013 01:08 PM	bswan	Completed	MFU: Pharmacy Dispensings by Drug Clas
<a href="#">Prev: ICD-9 Diagnoses (5 digit codes) - 0</a>	9	03/07/2013 01:07 PM	bswan	Completed	Prev: ICD-9 Diagnoses (5 digit codes)

**Figure 39: Request Page**

View the detailed status of a request by clicking on the request name to navigate to the Request Status detail page. This page displays the metadata information for the request, the request criteria, and the statuses of the request at each DataMart to which you submitted the request.



Request
✖

Prev: Enrollment  
Enrollment figures stratified by age group, sex, and eligibility type.

Name	Priority	Due Date	Purpose of use
<input type="text" value="Prev: Enrollment"/>	<input type="text" value="Normal"/>	<input type="text" value="N/A"/>	<input type="text"/>
Level of PHI Disclosure	Project		
<input type="text"/>	<input type="text" value="Demo"/>		

Project Description

Description

Activity  Sub-Activity

Run Mode  
Request was submitted immediately.

[Show Documents List](#)

Coverage <input type="text" value="All Members"/>	Observation Period Selector Start Period <input type="text" value="2008"/> End Period <input type="text" value="2010"/>
Age Stratification <input type="text" value="10 Stratifications (0-1,2-4,5-9,10-14,15-18,19-21,22-74,75+)"/>	<b>Request Criteria</b>
Sex Stratification <input type="text" value="Male and Female"/>	

Received Responses
✖

DataMart	Last Response	Status	Message
<input checked="" type="checkbox"/> Demo DM 2	10/22/2013 4:10:07 PM	Completed	<a href="#">Low cells counts have been zeroed</a> <a href="#">[history]</a>

**DataMart Statuses**

Incomplete Routings
✖

DataMart	Status
<input type="checkbox"/> Demo DM1	Submitted <a href="#">[history]</a>

Figure 40: Sections of the Request Details Page

## 8.1 Request Statuses

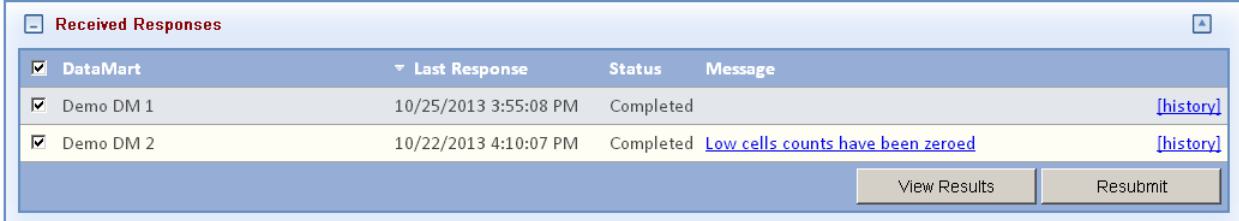
The table below contains the request statuses that may be displayed for each DataMart.

**Table 14: DataMart Client Request Statuses**

Status	Description
Submitted	The request has been submitted to the DataMart, but the DataMart Administrator has not updated the status from the DataMart Client.
Completed	The results of the request have been uploaded to the Portal. Requests are marked Completed when results have been uploaded manually by a DataMart Administrator or via unattended operation.
Awaiting Approval	The results have been uploaded to the Portal, but are awaiting Group Administrator approval before you may view the results.
Hold	The request has been placed on hold by the DataMart Administrator.
Rejected	The request has been rejected by the DataMart Administrator. Rejecting a request ends the life of the request submitted to that DataMart.
Canceled	You have removed the DataMart from the request.
Failed	The request encountered errors while processing or failed to upload results.

## 9 Viewing Request Results

A user designated as an Enhanced Investigator will have the right to view site results individually across the organizations within the query. This role will be assigned at the discretion of a Network Administrator and in accordance with the governance of the network. Users without the rights to view individual site results may only view aggregate results.



<input checked="" type="checkbox"/> DataMart	Last Response	Status	Message
<input checked="" type="checkbox"/> Demo DM 1	10/25/2013 3:55:08 PM	Completed	<a href="#">[history]</a>
<input checked="" type="checkbox"/> Demo DM 2	10/22/2013 4:10:07 PM	Completed	<a href="#">Low cells counts have been zeroed</a> <a href="#">[history]</a>

View Results    Resubmit

Figure 41: Request Detail Page – Received Responses Panel

### 9.1 Enhanced Investigators

View the results of a request from the Request Detail page by selecting the DataMarts to view in the Received Responses panel and clicking “View Results.” As an Enhanced Investigator, you may choose whether to view individual or aggregate site results.

In the results table, multiple individual site results are displayed stacked on top of one another and labeled by DataMart, such as in the figure below.

Request

Download these results

Prev: Enrollment  
Enrollment figures stratified by age group, sex, and eligibility type.

Name:  Priority:  Due Date:  Purpose of use:

Level of PHI Disclosure:  Project:

Project Description:

Description:

Activity:  Sub-Activity:

Source DataMarts:

[Show Documents List](#)

DataMart	DataMartID	AgeGroup	Sex	Year	DrugCov	MedCov	Total Enrollment in Strata[Members]	Days Covered
Demo DM 2	13	0-1	F	2008	All	All	4168	940438
Demo DM 2	13	2-4	F	2008	All	All	7249	2057886
Demo DM 2	13	5-9	F	2008	All	All	13376	3859096
Demo DM 2	13	10-14	F	2008	All	All	14189	4160082
Demo DM 2	13	15-18	F	2008	All	All	12476	3665218
Demo DM 2	13	19-21	F	2008	All	All	8188	2242165
Demo DM 2	13	22-44	F	2008	All	All	69907	19268378
Demo DM 2	13	45-64	F	2008	All	All	70200	21036034

**Figure 42: Request Response Page - Individual Site Results**

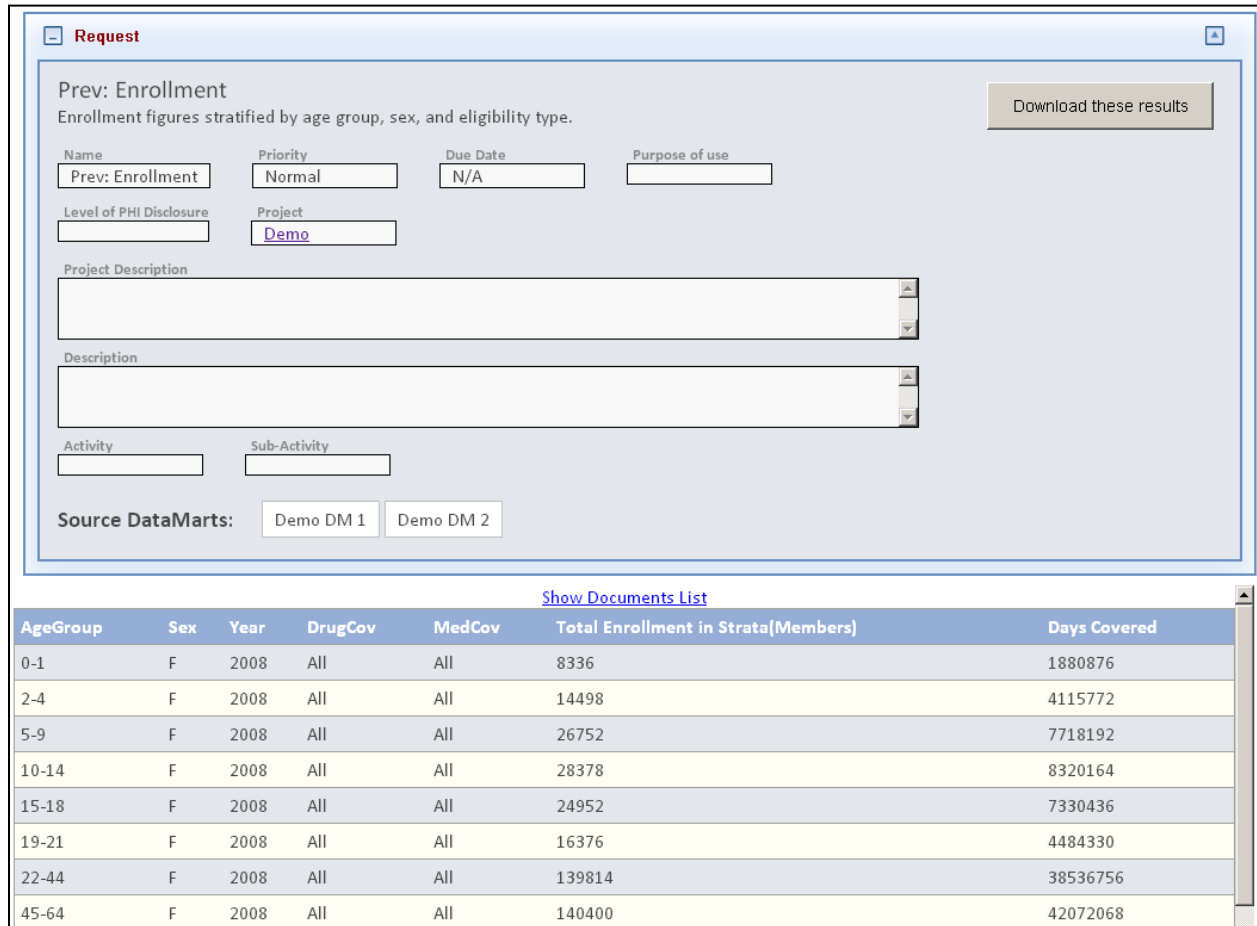
Files uploaded in response to a file distribution or modular program distribution request are displayed in a list. Click each file to download it.

## 9.2 Limited Investigators

View the results of a request from the Request Detail page by clicking “View Results” in the Received Responses panel.

**Note:** Be sure to check the status of the request before you view the results. If you select “View Results” before all DataMarts have uploaded their results, you will cancel the request for the DataMarts which have not yet responded. To receive results from those DataMarts, you must submit a new request.

Aggregate results are displayed in a table, such as in the figure below.



**Figure 43: Request Response Page - Aggregate Site Results**

The exception to limited investigators viewing aggregate-only results is when those results are files uploaded in response to a file distribution or modular program distribution request. In those cases, files from each site are displayed in a list. Click each file to download it.

### 9.3 Calculated Columns (Summary Table Requests)

**Note:** This section applies only to results from summary table requests.

The calculated columns are included to give supporting information for the codes of interest. The Enrollment summary tables for each category are used with the selected request type to calculate the rates.

Medical Queries: HCPCS Procedures, ICD-9 Diagnoses, and ICD-9 Procedures

- Total Enrollment in Strata (Members): Total count includes members with both medical and drug coverage plus those with medical coverage only.
- Prevalence Rates: Users per 1000 enrollees
- Event Rate: Events per 1000 enrollees

- Events per Member

Drug Queries: Pharmacy Dispensings by Generic Name and Drug Class

- Total Enrollment in Strata (Members): Total count includes members with both medical and drug coverage plus those with drug coverage only.
- Prevalence Rates: Users per 1000 enrollees
- Dispensing Rate: Dispensings per 1000 enrollees
- Days per Dispensing
- Days per User

## 9.4 Exporting Result Data

Export the result data to a CSV File or to Excel from the Request Response page.

Follow these steps to export your results:

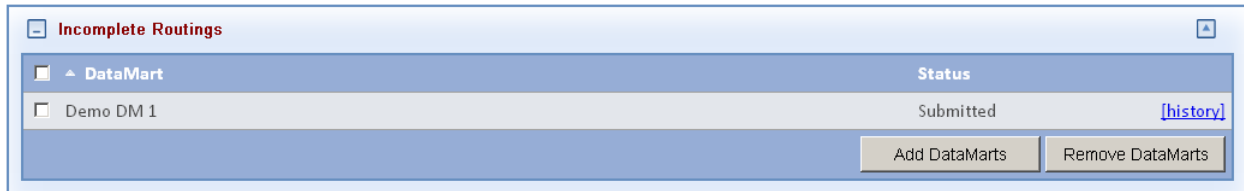
1. Click “Download These Results.”
2. Select Excel or CSV.

## 10 Changing DataMart Routings

Enhanced Investigators may change the DataMart routings after a request has been submitted. Note that Limited Investigators do not have these rights.

### 10.1 Adding or Removing DataMarts from Submitted Requests

Before a request is complete at all DataMarts, you may add or remove DataMarts from the Incomplete Routings panel. Note that you cannot remove a DataMart after it has uploaded results.



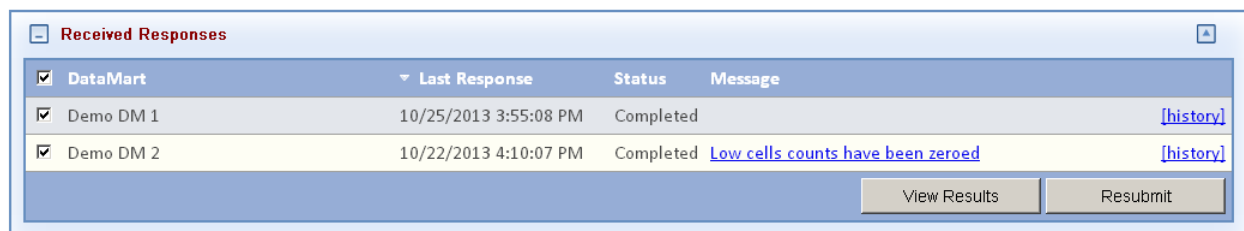
**Figure 44: Request Detail Page - DataMart Routing Buttons**

To add a DataMart to the request, click “Add DataMarts” and select the new DataMart from the list of DataMarts that you have the rights to query and click “OK.”

To remove a DataMart from the request, select the DataMart from the Incomplete Routings panel and click “Remove DataMarts.” When a DataMart is removed from a request, it will continue to appear in the Incomplete Routings panel, but with a status of “Canceled.” The DataMart Administrator for that DataMart will still see the request in their DataMart Client, but will not be able to upload results.

### 10.2 Resubmitting a Request to a DataMart

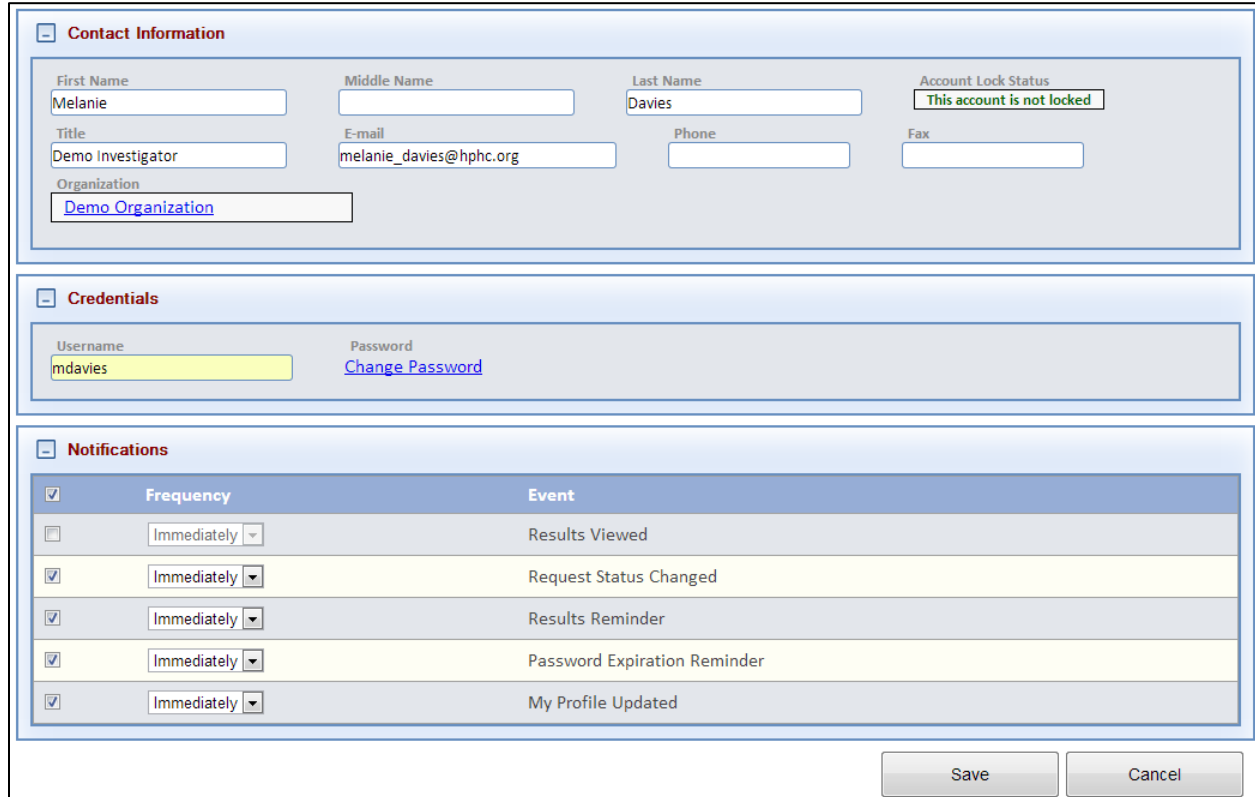
After a DataMart has uploaded results, you may resubmit the request to that DataMart. To resubmit the request, select the DataMart and click “Resubmit.” The DataMart will move to the Incomplete Routings panel, with a status of “Resubmitted.”



**Figure 45: Request Detail Page - Resubmit Button**

## 11 Administering your User Profile

Select the Profile tab to display your user profile. Use this page to change your contact information, password, and notification settings.



The screenshot shows the 'User Profile Page' with three main sections: Contact Information, Credentials, and Notifications. At the bottom right, there are 'Save' and 'Cancel' buttons.

**Contact Information**

First Name:  Middle Name:  Last Name:  Account Lock Status: This account is not locked

Title:  E-mail:  Phone:  Fax:

Organization:

**Credentials**

Username:  Password: [Change Password](#)

**Notifications**

<input checked="" type="checkbox"/>	Frequency	Event
<input type="checkbox"/>	Immediately	Results Viewed
<input checked="" type="checkbox"/>	Immediately	Request Status Changed
<input checked="" type="checkbox"/>	Immediately	Results Reminder
<input checked="" type="checkbox"/>	Immediately	Password Expiration Reminder
<input checked="" type="checkbox"/>	Immediately	My Profile Updated

Figure 46: User Profile Page

### 11.1 Contact Information

Enter or update your information in the Contact Information panel. First name, last name, email, and organization are required fields.

### 11.2 Credentials

You may change your password at any time. Passwords expire periodically based on network settings.

Your user profile has two boxes for passwords. To change your password, click “Change Password” in the Credentials panel and enter your new password into the boxes.

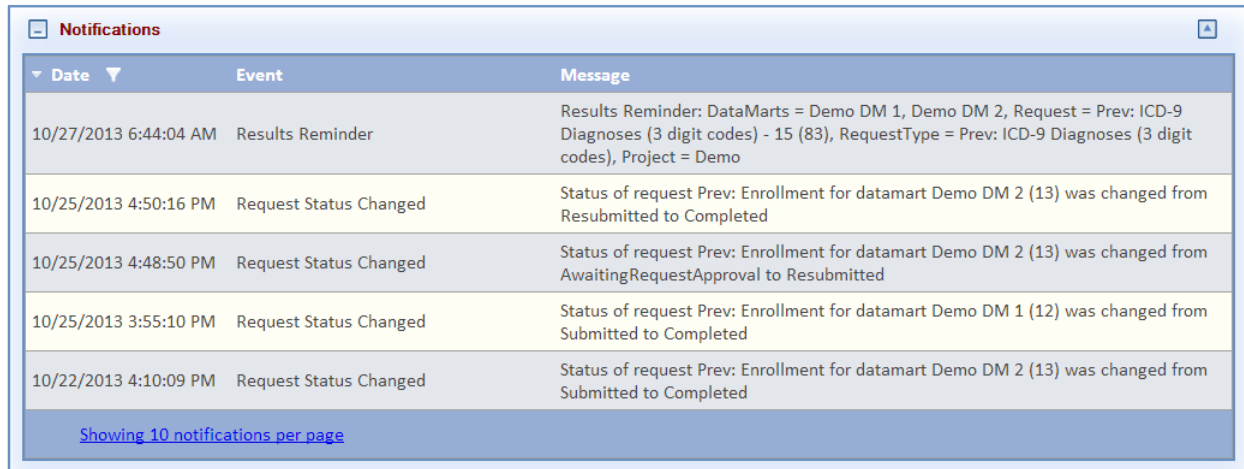
**Note:** All passwords must meet the following complexity standard:

- At least 8 characters long
- Include at least 1 upper case letter, 1 lower case, 1 number, and 1 symbol.



### 11.3 Notifications

Notification options allow you to manage notifications that are triggered due to actions performed by you or related to your role. Notifications are sent to the email address associated with your account and are displayed in the Notifications panel on the Portal home page. The Notifications panel on the home page displays all notifications immediately after the action has occurred.

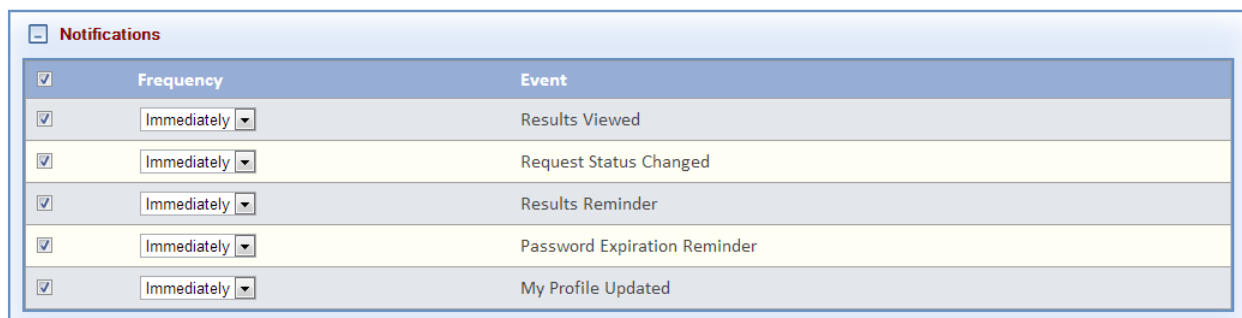


Date	Event	Message
10/27/2013 6:44:04 AM	Results Reminder	Results Reminder: DataMarts = Demo DM 1, Demo DM 2, Request = Prev: ICD-9 Diagnoses (3 digit codes) - 15 (83), RequestType = Prev: ICD-9 Diagnoses (3 digit codes), Project = Demo
10/25/2013 4:50:16 PM	Request Status Changed	Status of request Prev: Enrollment for datamart Demo DM 2 (13) was changed from Resubmitted to Completed
10/25/2013 4:48:50 PM	Request Status Changed	Status of request Prev: Enrollment for datamart Demo DM 2 (13) was changed from AwaitingRequestApproval to Resubmitted
10/25/2013 3:55:10 PM	Request Status Changed	Status of request Prev: Enrollment for datamart Demo DM 1 (12) was changed from Submitted to Completed
10/22/2013 4:10:09 PM	Request Status Changed	Status of request Prev: Enrollment for datamart Demo DM 2 (13) was changed from Submitted to Completed

[Showing 10 notifications per page](#)

**Figure 47: Home Page - Notifications Panel**

The frequency of email notifications may be set on the Profile page.



Frequency	Event
<input checked="" type="checkbox"/> Immediately	Results Viewed
<input checked="" type="checkbox"/> Immediately	Request Status Changed
<input checked="" type="checkbox"/> Immediately	Results Reminder
<input checked="" type="checkbox"/> Immediately	Password Expiration Reminder
<input checked="" type="checkbox"/> Immediately	My Profile Updated

**Figure 48: User Profile Page - Notifications Panel**

**Table 15: Email Notification Frequency Options**

Frequency	Description
<b>Immediate</b>	Sends an email immediately after the action has occurred.
<b>Daily</b>	Batches notification events and sends an email every 24 hours.
<b>Weekly</b>	Batches notification events and sends an email every 7 days.

Frequency	Description
Monthly	Batches notification events and sends an email every 28 days.

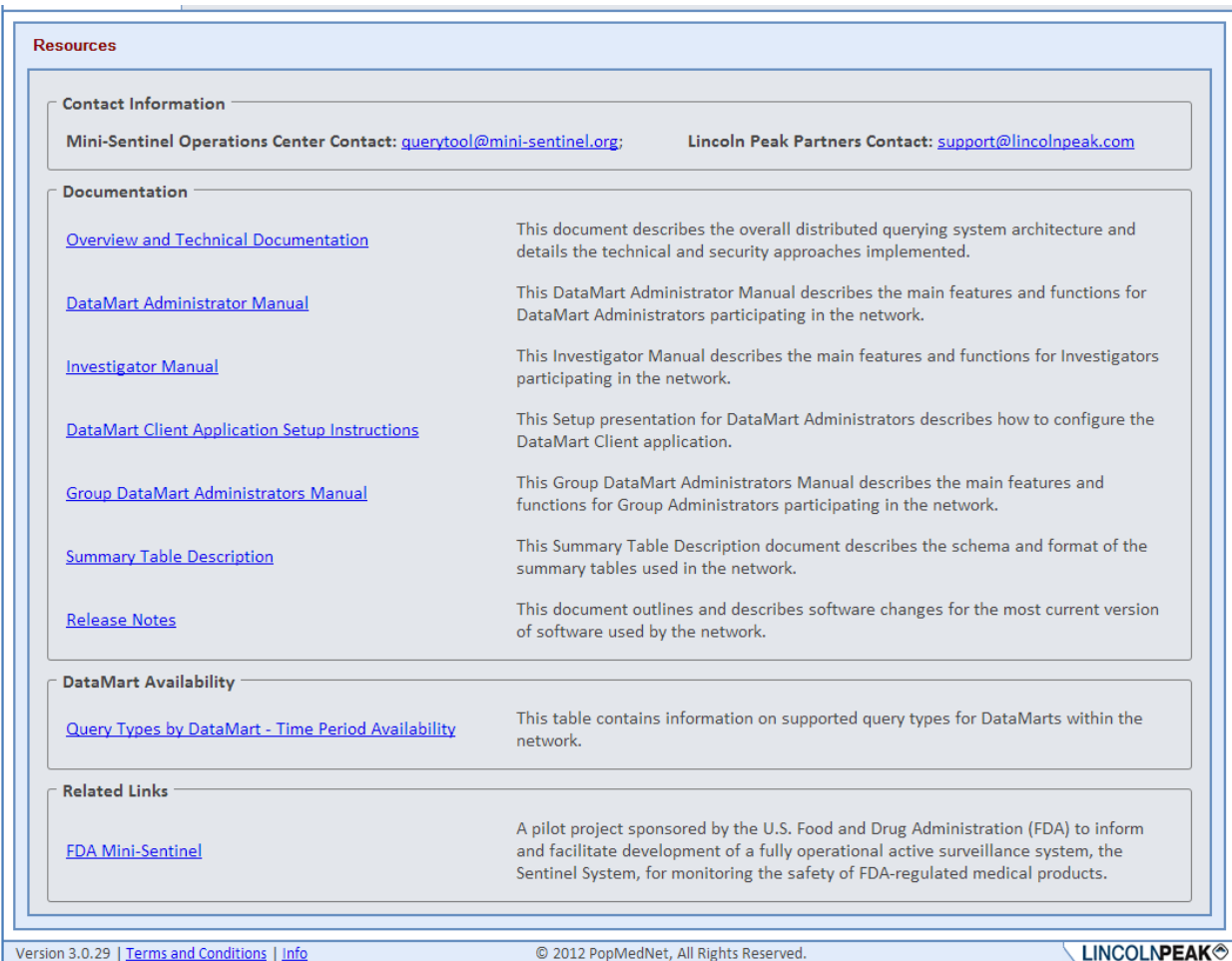
The notification options displayed in your profile are dependent on the roles or privileges that have been granted to you. Below are the recommended notification options for investigators.

**Table 16: Investigator Notifications**

Notification	Description	Frequency
<b>Password Expiration Reminder</b>	Notifies you that your password is about to expire.	One notification per day for 7 days prior to the password expiring.
<b>My Profile Change</b>	Notifies you that there was an update to your profile.	One notification per change.
<b>Request Status Changed</b>	Notifies you that the status of your request has changed to completed, awaiting approval, held, or reject.	One notification per DataMart per change per request.
<b>Results Reminder</b>	Notifies you that there are results waiting to be viewed on the Portal for your request.	One notification every 24 hours per results awaiting viewing.

## 12 Help

The Resource tab contains contact information, documentation, and related links.



**Resources**

**Contact Information**

Mini-Sentinel Operations Center Contact: [querytool@mini-sentinel.org](mailto:querytool@mini-sentinel.org); Lincoln Peak Partners Contact: [support@lincolnpeak.com](mailto:support@lincolnpeak.com)

**Documentation**

<a href="#">Overview and Technical Documentation</a>	This document describes the overall distributed querying system architecture and details the technical and security approaches implemented.
<a href="#">DataMart Administrator Manual</a>	This DataMart Administrator Manual describes the main features and functions for DataMart Administrators participating in the network.
<a href="#">Investigator Manual</a>	This Investigator Manual describes the main features and functions for Investigators participating in the network.
<a href="#">DataMart Client Application Setup Instructions</a>	This Setup presentation for DataMart Administrators describes how to configure the DataMart Client application.
<a href="#">Group DataMart Administrators Manual</a>	This Group DataMart Administrators Manual describes the main features and functions for Group Administrators participating in the network.
<a href="#">Summary Table Description</a>	This Summary Table Description document describes the schema and format of the summary tables used in the network.
<a href="#">Release Notes</a>	This document outlines and describes software changes for the most current version of software used by the network.

**DataMart Availability**

<a href="#">Query Types by DataMart - Time Period Availability</a>	This table contains information on supported query types for DataMarts within the network.
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**Related Links**

<a href="#">FDA Mini-Sentinel</a>	A pilot project sponsored by the U.S. Food and Drug Administration (FDA) to inform and facilitate development of a fully operational active surveillance system, the Sentinel System, for monitoring the safety of FDA-regulated medical products.
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**Figure 49: Resources Page**

If you have trouble accessing the Portal or your user account, click on the Contact Us link on the login page and describe your issue to request help from the PopMedNet support staff.

### **13 Development and Funding Statement**

The PopMedNet™ software application was developed as part of several contracts awarded by the Agency for Healthcare Research and Quality (AHRQ) to the HMO Research Network (HMORN) Center for Education and Research on Therapeutics (CERT) DEcIDE Center housed in the Department of Population Medicine at the Harvard Pilgrim Health Care Institute (HPHCI). Additional development was funded by AHRQ under the Scalable PARTnering Network for CER: Across Lifespan, Conditions, and Settings (SPAN) project. Additional support has been provided by The Food and Drug Administration's Mini-Sentinel project (Contract No. HHSF223200910006I) and the US Department of Health and Human Services Office of the National Coordinator for Health Information Technology (ONC) MDPHnet project.

The system was developed by Lincoln Peak Partners under the direction of HPHCI.

## 14 Frequently Asked Questions

This section lists some of the most frequently asked questions.

- What is the difference between Groups and Organizations?
  - Organizations have one or more users and zero, one, or more DataMarts. Groups are collections of one or more Organizations and an Organization may be a member of zero, one, or more Groups. Groups allow the management of a collection of organizations by a set of administrators.
- What are my rights as a user and how can I change them?
  - As a user, you belong to one or more security groups that have a set of rights and permissions. Security group membership is assigned to you by Network or Organization Administrators. Contact these administrators to request a change to your rights.
- Where can I get more information on the PopMedNet™ application?
  - You may contact the Operations Center for more information:

Jeffrey Brown, PhD  
Harvard Pilgrim Health Care Institute  
[Jeff\\_brown@hphc.org](mailto:Jeff_brown@hphc.org)  
[www.popmednet.org](http://www.popmednet.org)

## Appendix A: Quick Reference for Investigators

### Quick Reference: Investigator

- 1) How to Submit a Query
  - a) Log into the Portal with your credentials.
  - b) Click the Requests tab and select your project.
  - c) Click “New” in the Request panel and select the request model and type.
  - d) Complete the request form by entering a name, brief description of the query, and selecting the relevant parameters.
  - e) Select the DataMarts (Data Partners) who you would like to send the request.
  - f) Click “Submit.”
  
- 2) How to Distribute a File
  - a) Log into the Portal with your credentials.
  - b) Click the Requests tab and select your project.
  - c) Click “New” in the Request panel and select the request model and type.
  - d) Complete the request form by entering a name and a brief description of the file(s) you are sending.
  - e) Browse and upload your file(s) you wish to send to DataMarts.
  - f) Select the DataMarts (Data Partners) who you would like to send the file(s).
  - g) Click “Submit.”
  
- 3) How to View Results on the Portal
  - a) Log into the Portal and go to the Requests panel on the home page or click the Requests tab.
  - b) Find and click on the request name to navigate to the Request Status page.
  - c) Limited Investigators, click “View Results” after all sites have responded. Enhanced Investigators, select the DataMarts whose results you wish to view, click “View Results,” and select whether to view individual or aggregate site results.
  - d) Export result data to Excel/CSV or download files for review.