

atmolytics

Cohort Insights

User Guide v2.63 SP1



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1 Introduction

The **Cohort Insights** area of Atmolytics enables in-depth exploration of any cohort you have access to. By default, it will display your **base cohort**, but you can select any of the cohorts available to you. You can then view and explore graphical representations of many different aspects of the cohort you select.

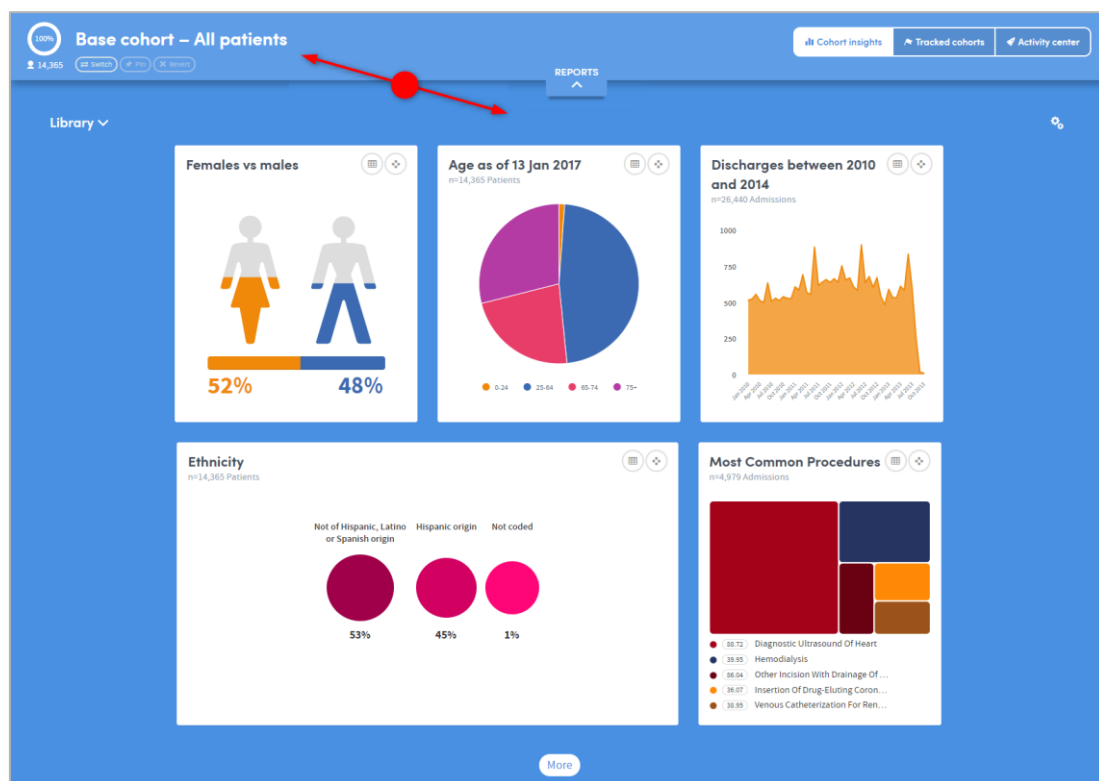
If you're new to Atmolytics, you may not have many (or any) cohorts to explore, other than your base cohort. Once you start using Atmolytics to create and possibly share more cohorts, you'll be able to view any of them in Cohort Insights.

As well as seeing insights that have been built into Atmolytics for you to view straight away, you can create your own custom cohort insights with just a few clicks, following a simple step-by-step process. You can select the cohort insight you wish to create, the data you wish to use and how the results should be visualized.

You can also choose which insights to display, regardless of whether the cohort insight is an inbuilt system insight or an insight you have created yourself.

2 Getting around

The Cohort Insights screen is divided into two main areas: the menu bar and the exploration area:



2.1 The Cohort Insights menu bar

The top part of the Cohort Insights screen contains the following features:



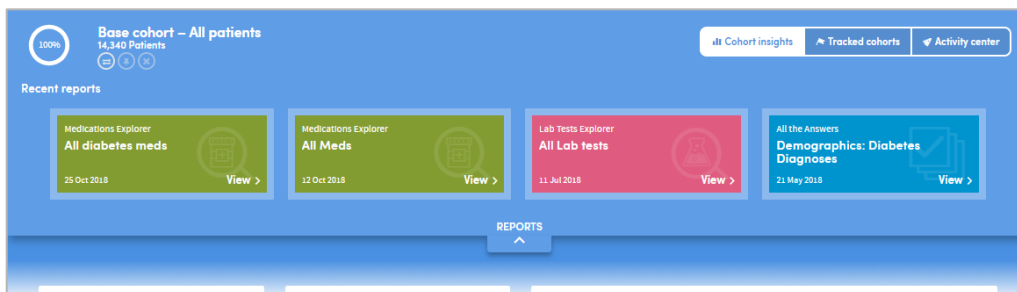
1 Here you can see the name of the cohort you are working with, and the number of patients it contains. Below this there are three buttons:

↔ **Switch cohort:** Click this button to explore a different cohort. You'll see a list of all the cohorts available to you. Click the name of one to select it and display it on screen. The circular percentage image to the left of the cohort name will show what percentage of the patients in your base cohort are included in the selected cohort.

📌 **Pin cohort:** Click this button to 'pin' the selected cohort to Cohort Insights. If you move to another area of Atmolytics and then return to this screen, the cohort will still be displayed. If you don't pin a cohort, then the Cohort Insights screen will always revert to its default view, which is to show your base cohort.

✖ **Revert:** Click this button to unpin your pinned cohort. Once you unpin it, the Cohort Insights screen will revert to its default view, and display your base cohort.

2 This is the **Reports** pulldown menu. Click the down-arrow to expand the view:

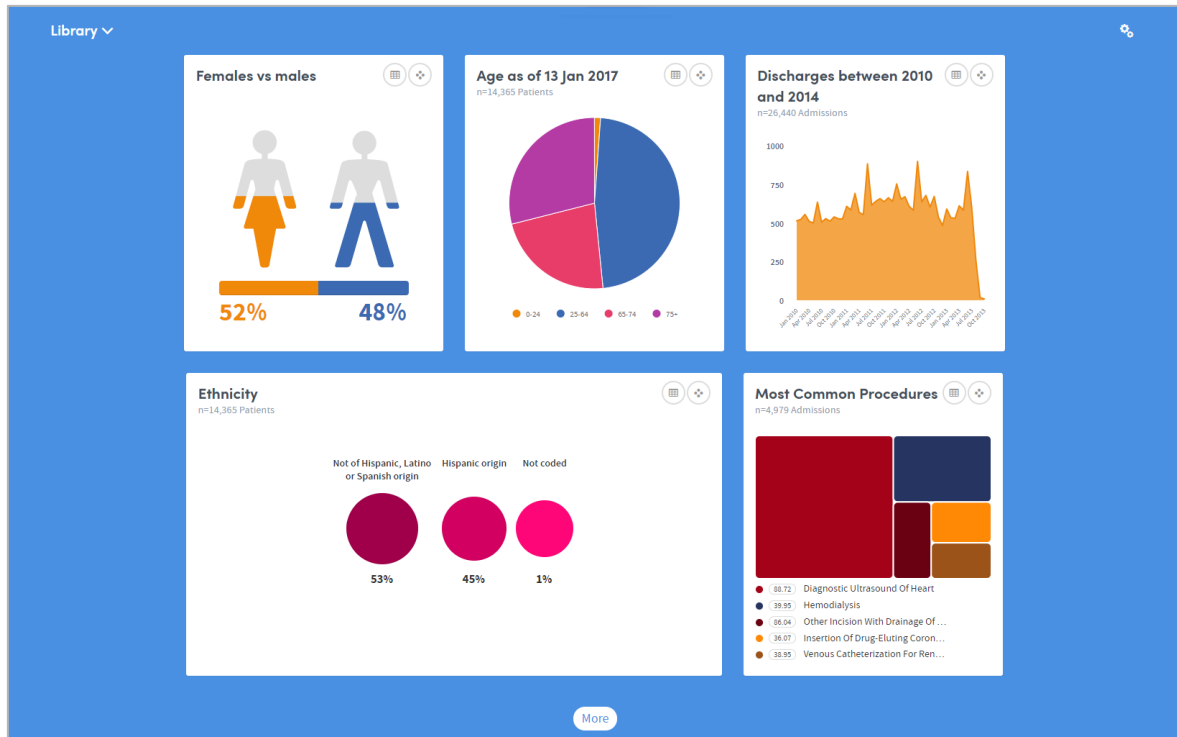


You'll see a simple view of the most recent reports you have created. Click one to quickly navigate straight to that report.

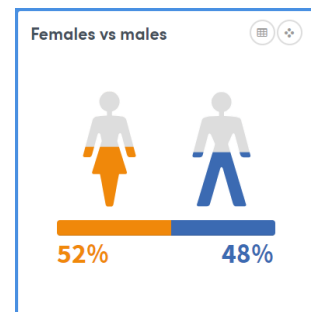
3 Click these buttons to toggle between the **Cohort Insights**, **Activity Centre** and **Tracked Cohorts** areas.

2.2 Exploring Cohort Insights

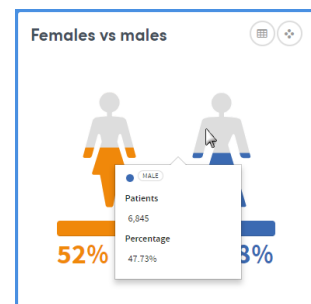
The bottom part of the Cohort Insights screen displays the data for you to explore:




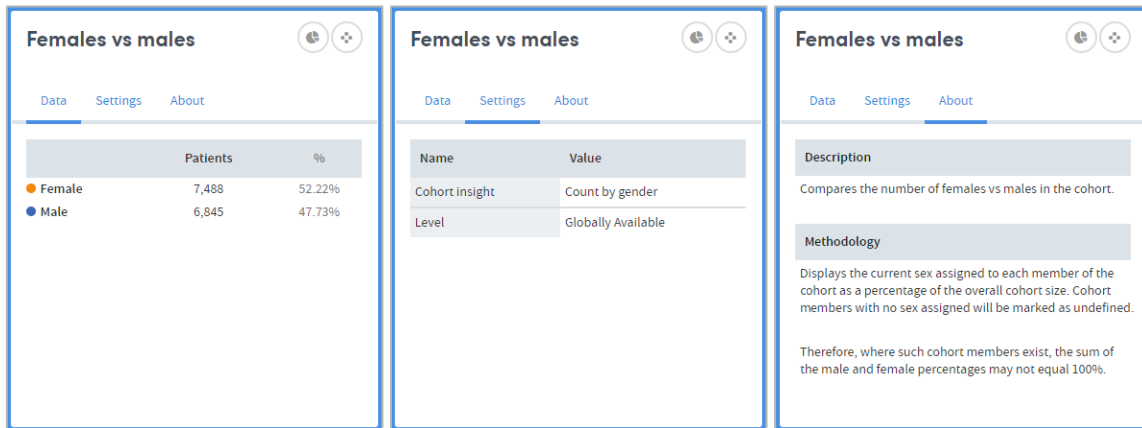
Depending on the data available to you, this section might show representations of demographic information, details of diagnoses, test results, costs, charges, or locations where patient interactions took place:



Hover the mouse over the images to see this information in greater detail:



Click the  symbol on the top right of each insight to see the **Data**, **Settings** and **About** tabs. These give you more information about the data and methodology used to generate the insight:



The image shows three panels for the 'Females vs males' insight. The first panel shows the 'Data' tab with a table of patient counts and percentages. The second panel shows the 'Settings' tab with a table of cohort insight and level. The third panel shows the 'About' tab with a description and methodology section.

	Patients	%
Female	7,488	52.22%
Male	6,845	47.73%


Name	Value
Cohort insight	Count by gender
Level	Globally Available

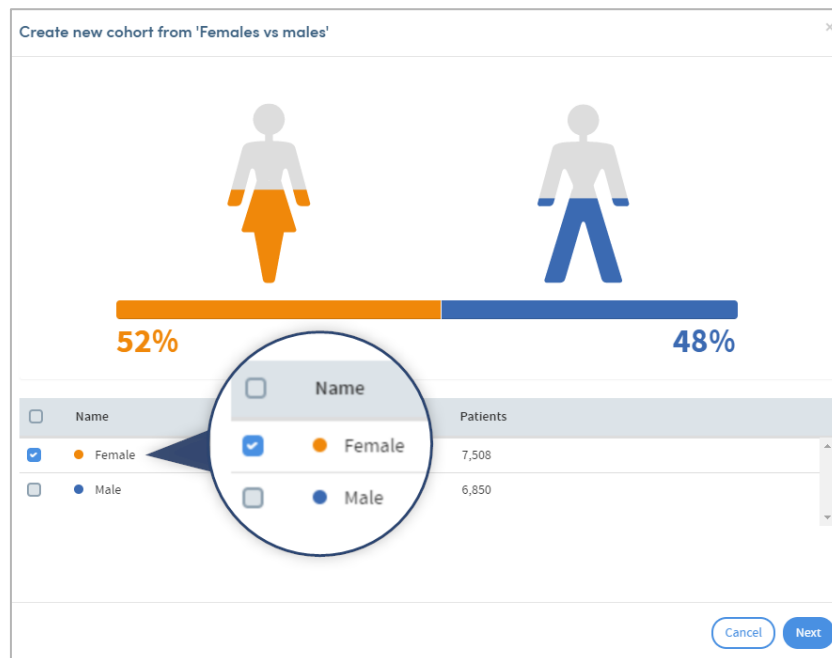
Description
Compares the number of females vs males in the cohort.

Methodology
Displays the current sex assigned to each member of the cohort as a percentage of the overall cohort size. Cohort members with no sex assigned will be marked as undefined.
Therefore, where such cohort members exist, the sum of the male and female percentages may not equal 100%.

3 Creating a new cohort within Cohort Insights

You can create a new cohort based on the data in a cohort insight.

Click the  symbol at the top right of any insight, and select one or more check boxes to create a new cohort containing those individuals:



The screenshot shows a dialog box titled 'Create new cohort from 'Females vs males''. It features a bar chart with a female icon on the left (52%) and a male icon on the right (48%). Below the chart is a table with columns for 'Name', 'Patients', and 'Patients'. The 'Female' row is selected with a checkmark, and the 'Male' row is not. A circular callout highlights the 'Name' column header and the 'Female' and 'Male' rows. At the bottom right, there are 'Cancel' and 'Next' buttons.

Name	Patients	Patients
<input checked="" type="checkbox"/> Female	7,508	
<input type="checkbox"/> Male	6,850	

Click **Next**. The new cohort will be given a name and a description which you can change if you wish:

Create new cohort from 'Females vs males'

This action will create a cohort by cloning "All Patients" and applying your selections as a filter.

Your selections

- Female (7,488 Patients)

Name

Description

Cohort created by applying cohort insight "Females vs males" to cohort "All Patients"

With selections:

Female

Back
Create


Click **Create** when you're ready. The new cohort will be created, and visible on the **My Cohorts** page:

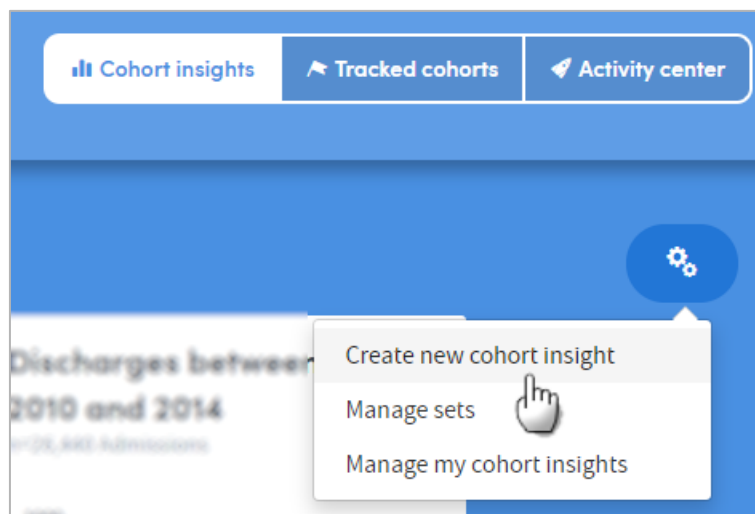
	NAME	COUNT	CREATED ON	LAST MODIFIED
	Inpatient cohorts		25 Jul 2016	
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> All Patients and Females vs males	7,488	21 Mar 2019	a few seconds ago
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> All Patients, top 3 procedures	14,340	15 Mar 2019	6 days ago
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> All Patients and Diagnostic Ultrasound Of Heart	14,340	15 Mar 2019	6 days ago

4 Creating a new insight

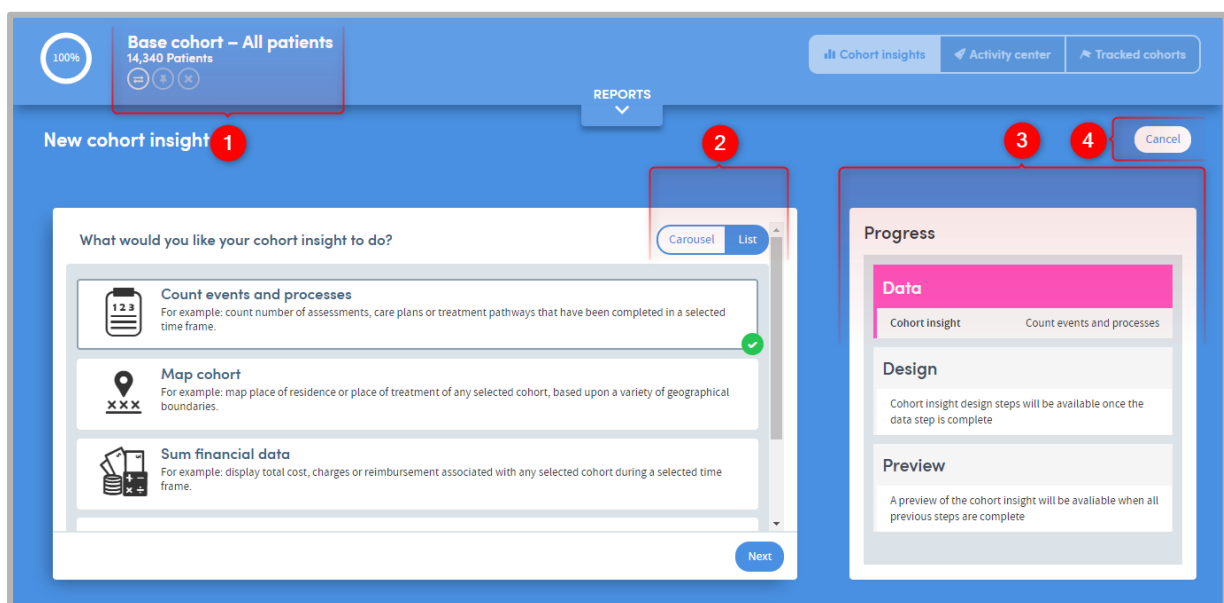
You create a cohort insight by answering a series of straightforward questions. This step-by-step process enables you to select which cohort insight you wish to create, the data you wish to use and how the results should be visualized.

Different types of insights have slightly different creation pathways, but the basic process is common to all.

To create your own custom insight, click the icon  at the top right of the **Cohort Insights** area, and select **Create new cohort insight**:



You'll be taken to the **New cohort insight** screen:



1 Here you can see the name of the cohort you are working with, and the number of patients it contains. This is the cohort that your new insight will initially explore, though you can also apply the new insight to other cohorts if you wish. Below the number of patients there are three buttons:



Switch cohort: Click this button to explore a different cohort. You'll see a list of all the cohorts available to you. Click the name of one to select it and display it on screen.



Pin cohort: Click this button to 'pin' the selected cohort to the **Cohort Insights** area. If you move to another area of Atmolitics and then return to Cohort insights, the cohort will still be displayed. If you don't pin a cohort, then the Cohort insights screen will always revert to its default view, which is to show your **base cohort**.



Revert: Click this button to unpin your pinned cohort. Once you unpin it, the Cohort Insights screen will revert to its default view, and display your **base cohort**.

2 You can view the list of cohort insight types and their descriptions as a list (shown here) or a browsable carousel.

3 The Progress panel tracks the choices you make while creating your insight.

4 Click here to cancel the creation process and return to the main **Cohort Insights** area.

4.1 Choosing the type of insight you want to create

Select the insight type by clicking the on-screen icon. Click **Next** to move to the next step.



Count admissions

For example: count the number of patients with each admission type, or number of admissions of each type; include all admissions or just the most recent.



Count admissions or discharges over time

For example: count the number of admissions (or discharges) of each admission type across all admissions for each patient.



Count events and processes

For example: count the number of assessments, care plans or treatment pathways that have been completed in a selected time frame.



Count events and processes over time

For example: count the number of assessments, care plans or treatment pathways that have been completed, grouped by a unit of time.



Map cohort

For example: map the place of residence or place of treatment of any selected cohort, based upon a variety of geographical boundaries.

Count locations



For example: count how many patients were admitted to a number of hospitals, or how many patients were seen by different care teams.



Age bands

Display the age range of your cohort using a number of different banding options.



Count clinical events

Count frequency of selected clinically coded events over a selected time frame; e.g. diagnoses made, medications prescribed, investigations undertaken.



Count date of first diagnoses

Based on the diagnostic filters used to define a cohort. For each patient in the cohort, the earliest date when one of these diagnoses was assigned will be counted. The results will be aggregated over time.



Identify newly-recorded clinical events

For example: identify new prescriptions of a type of medication, or new diagnoses of an illness within a selected time frame. 'New' is defined by the event not having occurred in a selected 'lookback' period.



Identify repeated clinical events

For example: identify repeated prescriptions of a particular medication or set of medications, or repeated tests or investigations within a selected time frame.



Identify changes in clinical decision

For example: identify change in prescribed antibiotic or antidepressant, change in diagnosis or change in a method of treatment, all within any selected time frame.



Count picklist answers

Count occurrences of each answer in a picklist, either overall or just the most recent instance. For example: count how many patients were high, medium or low risk.



Count dated answers

For example: count how many patients were admitted to a hospital, or had their height or weight measured, within a particular period of time. The dates are grouped by year or by month.



Count numeric answers

Counts all such answers or just the most recent answer and present them as banded values e.g. patients on 0-5 medications or 6-10 medications.



Sum financial data

For example: display the total cost, charges or reimbursement associated with any selected cohort during a selected time frame


















Compare two financial values over time

For example: compare total expenditure with total predicted costs over any selected period, such as the past year or quarter, or compare total charges made with total sum reimbursed

4.2 Choosing the data you want to explore

This step is tailored to the type of insight you are creating. Below are some examples, but your implementation may vary. The images here have been cropped: you may, for example, have more than 2 coding systems to choose from when creating a **Count clinical events insight**.

 Count events and processes  Count events and processes over time	<p>Which dataset would you like to count? ⓘ</p> <p>Blood sugar result</p> <p>Back Next</p>
 Map cohort	<p>Choose the region you wish to work with. ⓘ</p> <p>US</p> <p>Back Next</p>
 Sum financial data  Count locations	<p>Which admission type do you want your insight to be based on?</p> <p>Emergency Inpatient</p> <p>Back Next</p>
 Count picklist answers  Compare two financial values  Count dated answers  Count numeric answers	<p>Choose a dataset - this is just to help you find the question you want.</p> <p>Blood sugar result</p> <p>Back Next</p>
 Count clinical events  Identify repeated clinical events  Identify new clinical events  Identify changes in clinical decision	<p>Which coding system would you like to count? ⓘ</p> <p>ICD-9-CM ICD-10-CM</p> <p>Back Next</p>
 Count admissions  Count locations	<p>Choose what you would like to count</p> <p><input checked="" type="radio"/> Admissions <input type="radio"/> Patients</p> <p>Back Next</p>



Count admissions

Would you like to look at all admissions or the latest one per person?

All admissions
 Latest admissions

[Back](#) [Next](#)



Count picklist answers



Count dated answers



Count numeric answers

Would you like to count all answers to this question or the latest one per person?

Latest answer
 All answers

[Back](#) [Next](#)

As you move through the various steps of the creation process, the tracker panel on the right shows you the selections you've made along the way:

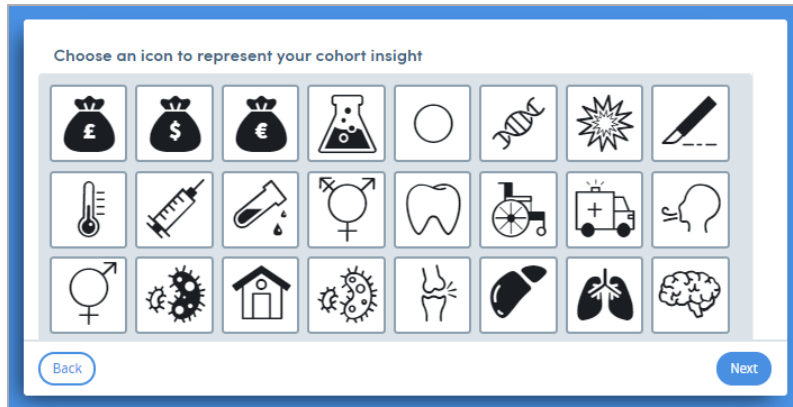
The screenshot shows the 'New cohort insight' interface. On the left, there are six chart type options: Bar chart (selected with a green checkmark), Box chart, Distributed spot chart, Pie chart, Simple pie chart, and Text chart. At the bottom left is a 'Back' button (marked with a red '2') and at the bottom right is a 'Next' button. On the right side, there is a 'Progress' panel with three sections: 'Data', 'Design', and 'Preview'. The 'Data' section lists: Cohort insight (Count clinical events), Coding system (ICD-9-CM), Question (Diagnosis type), Answer option (Primary), Relative date (Current year), Aggregate by (Admission), and diagnoses (6). The 'Design' section shows: Chart (Bar chart). The 'Preview' section contains the text: 'A preview of the cohort insight will be available when all previous steps are complete'. A red box highlights the 'Data' and 'Design' sections, with a red '1' next to it.

1 The choices you've made are listed here.

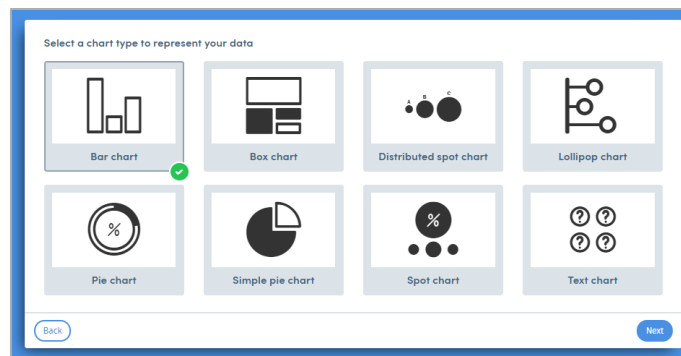
2 You can click the **Back** button at any time to go back a step and change your selections.

4.3 Choosing how to display the data

Depending on the type of insight and data you've specified, you'll be given options about how you want to view the data on screen. For simple counts of data items, you may just need to choose an icon:

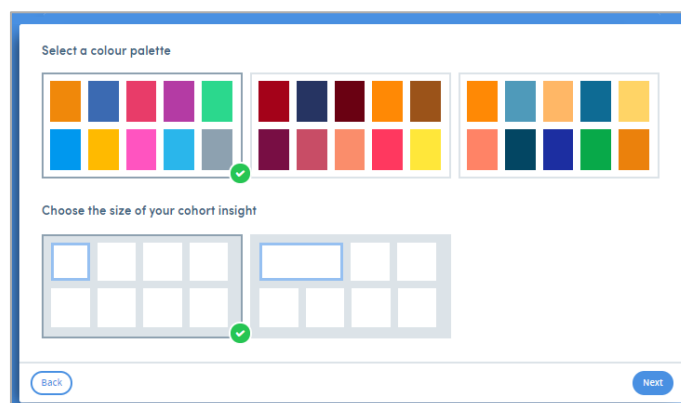


For more complex data you will select from appropriate chart types:



You may also be able to set the display parameters of the chart (again, this is dependent on the insight type and the data you have specified).

You will also be able to choose a colour palette, and the display size of the cohort insight in relation to others on screen:



4.4 Naming and previewing your insight

The final step is to name your cohort insight. If you wish, you can describe the methodology used to create it and add any other details you want to include:

You also choose which **Cohort insight set** to include it in initially. Insight sets are explained in Chapter 6 of this guide.

Once you have filled in this information, click **Next**:

Month	Charges
Jan	30M
Feb	30M
Mar	35M
Apr	25M
May	25M
Jun	25M
Jul	30M
Aug	25M
Nov	20M
Dec	25M

Property	Value
Size	2
Units	\$
Series colors	Theme colors
X-axis	Month
Y-axis	Charges
X-axis display	All
Y-axis display	All
Title	Charges by month
Cohort insight set	My insight
Methodology	No information provided

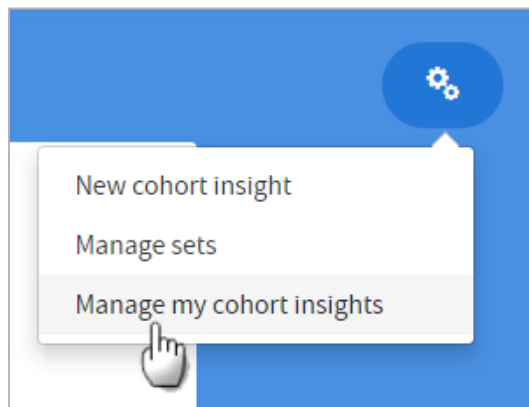
- 1 The preview pane will show your new insight. You can click the **Back** button to change any of your selections.
- 2 If you are happy with your insight, click **Save**. It will be displayed on the main **Cohort Insights** screen:



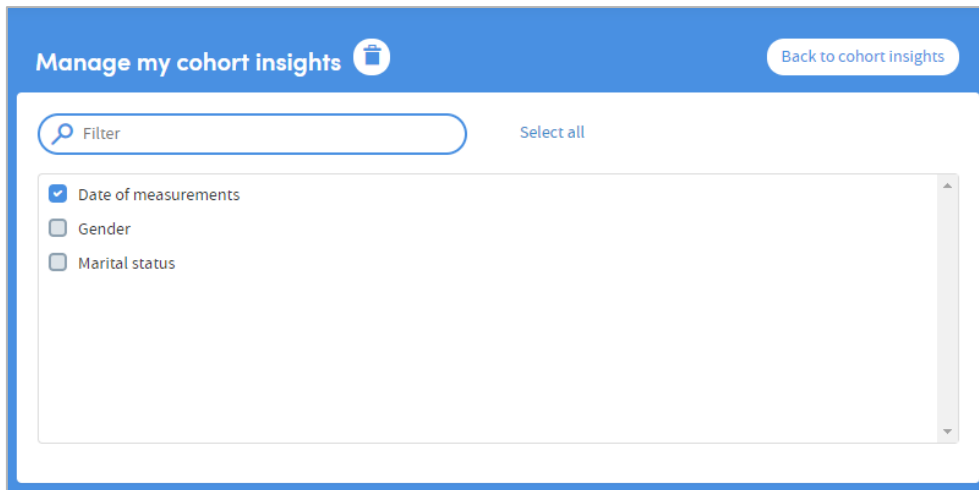
5 Deleting insights


Please note: you can only delete insights that you have created yourself. You can't delete any of the insights which are built into your Atmolitics system.

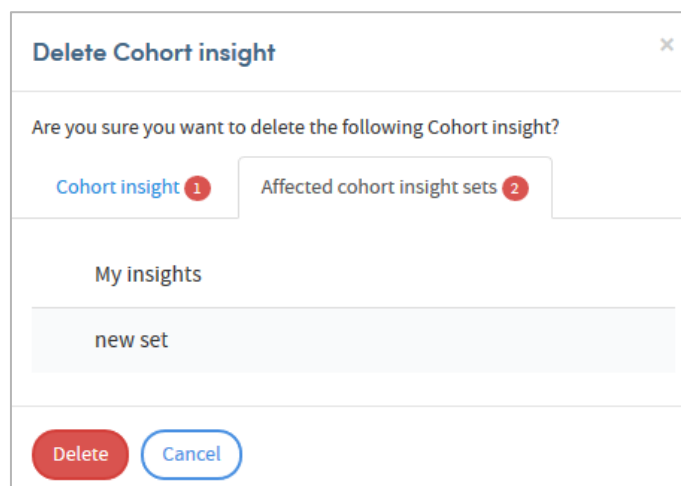
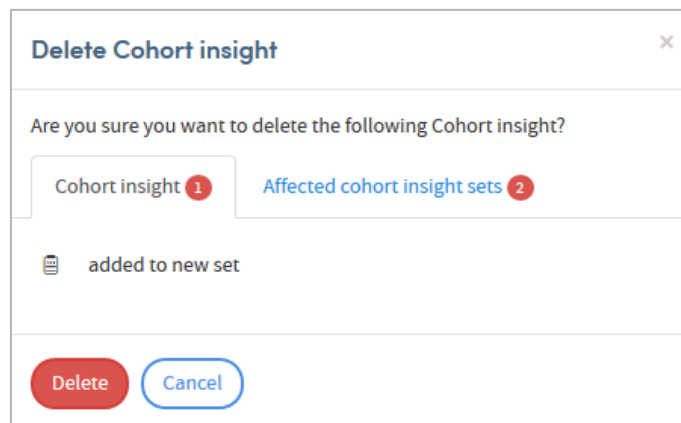
To delete an insight, click on the icon  at the top right of the **Cohort Insights** area, and select **Manage my cohort insights**:



You'll be taken to the following screen:



Select the insight(s) you want to delete, and click on the delete icon . A tabbed panel will appear, asking you to confirm your action, and showing which cohort insight(s) will be affected:



Click **Delete** to confirm the deletion.

6 Cohort Insight sets

You can organise your cohort insights into sets for display in the **Cohort Insights** and **Cohort Discovery** areas.

Sets can be useful in many ways. For example, you could:

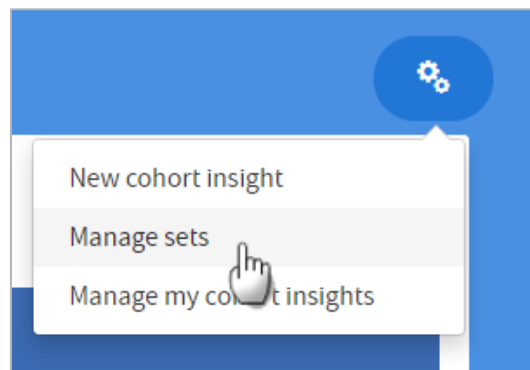
- Include the insights you find most useful or relevant for a particular cohort in one set.
- Keep and regularly update a set containing the insights you have most recently created.
- Create different sets of insights which apply to specific areas of interest (demographics, diagnoses, financial information, etc).

A cohort insight can belong to any number of sets, and there's no limit to the number of sets you can create.

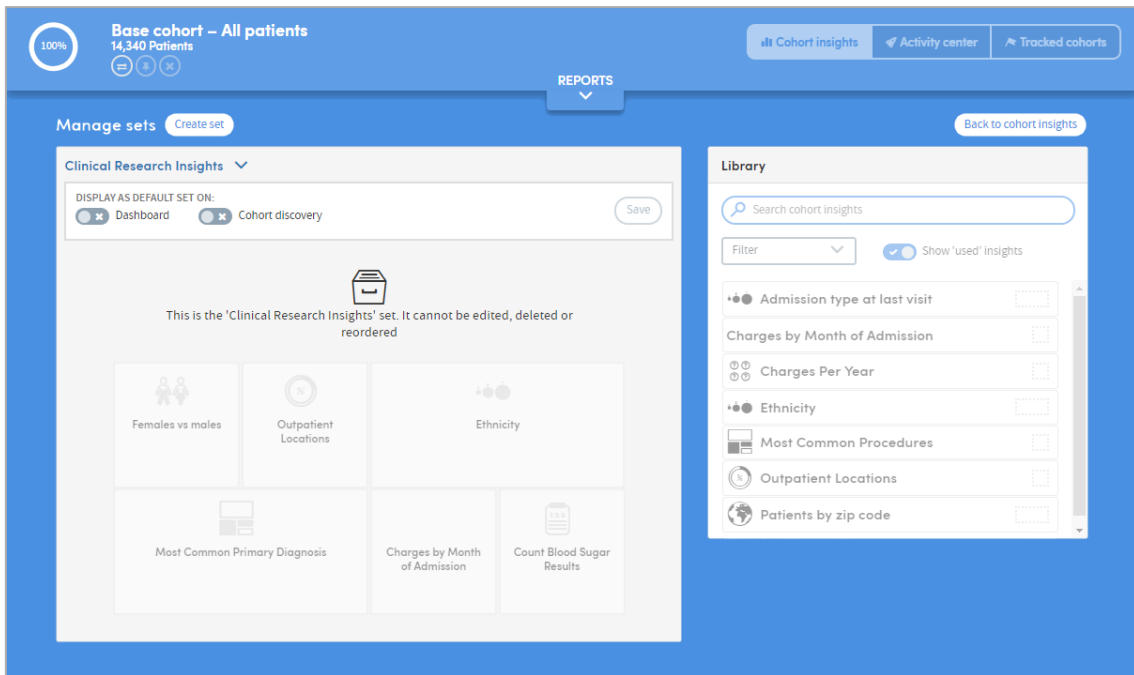
You can select separate default insight sets for the **Cohort Discovery** and **Cohort Insights** areas, meaning that the most relevant insights are instantly available to you.

6.1 Creating a new set

To create an insight set, click the icon  at the top right of the **Cohort Insights** area, and select **Manage sets**:

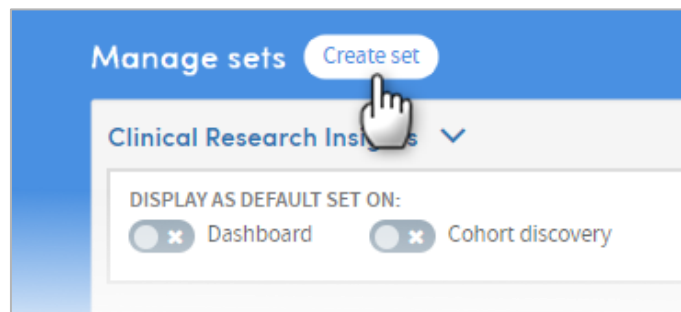


You'll be taken to the **Manage sets** screen, which will look similar to this:

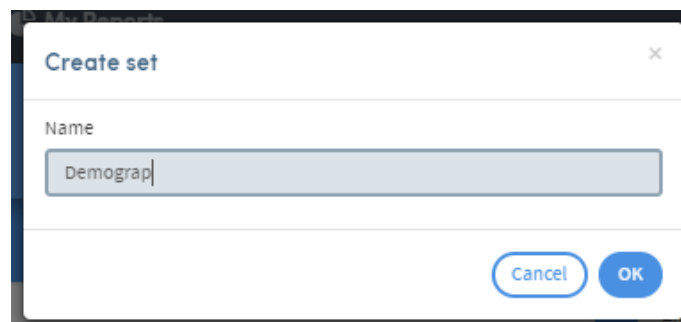


You'll have a number of cohort insights 'preloaded' into Atmolitics as part of your role. These are gathered into one set which can't be edited in any way, and this is the greyed-out set that you may see on screen. However, you can include any of these preloaded insights in any of the sets you create yourself.

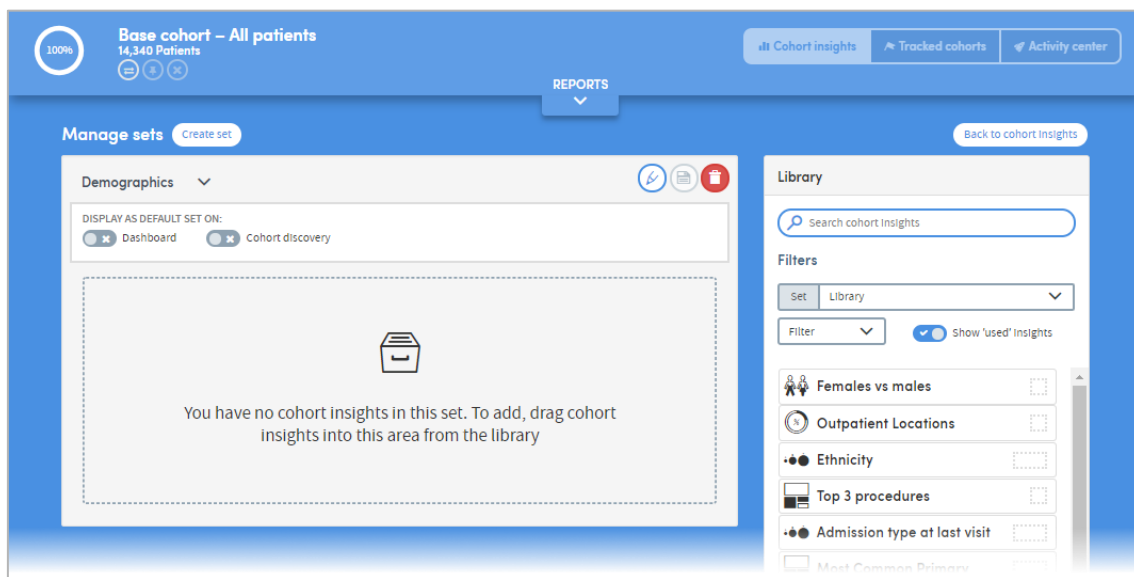
Click **Create set**, towards the top left of the screen:




You will be prompted to name the new set. Type in a name and click **OK**:

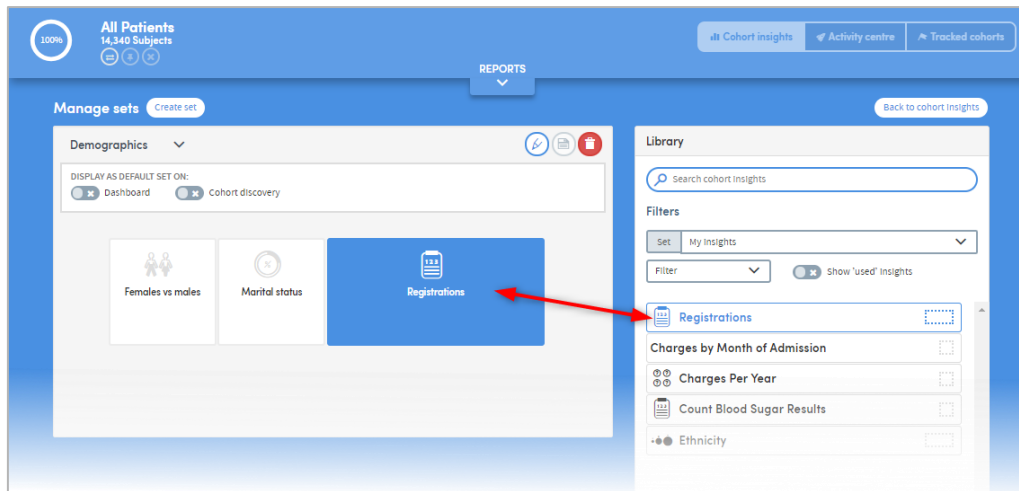


Your new, empty set will be displayed on screen:

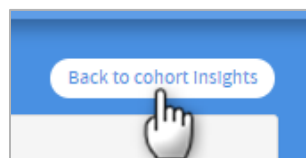


- 1 Here you can see the name of your new set, and two options to use this set as the default display in your **Cohort Insights** dashboard and **Cohort Discovery** areas.
- 2 You can rename a set, save any changes you make, or delete a set here.
- 3 If you have a lot of insights to choose from, you can search by name, or use the **Filters** options to reduce the number of insights in your list and make navigation easier.

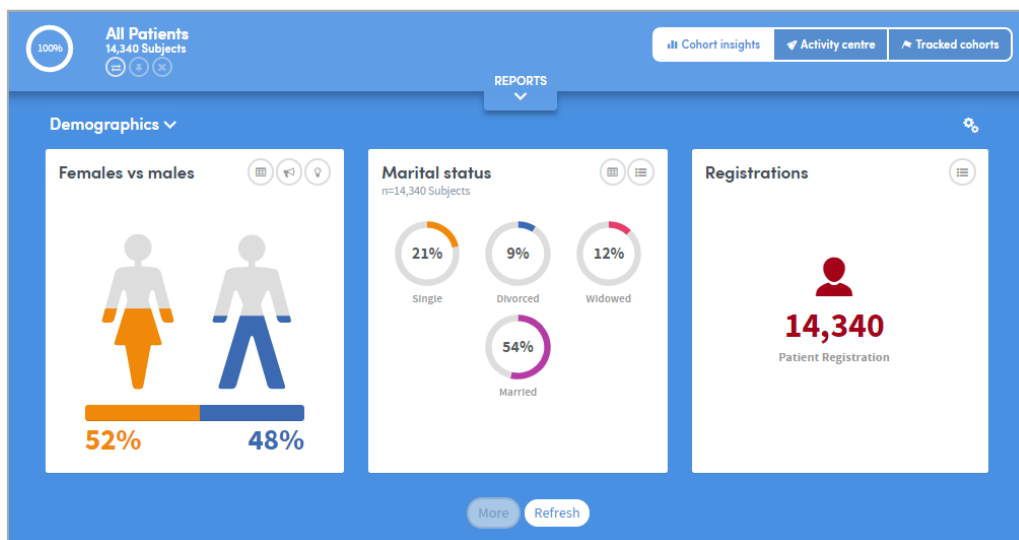
To build your set, click and drag insights from the list on the right over to the empty pane on the left. You can also click and drag the insights within the pane, to arrange them in whatever order you prefer. Click the **Save** icon  when you have finished.



To view your new insights set, click the **Back to cohort insights** button on the top right of your screen:




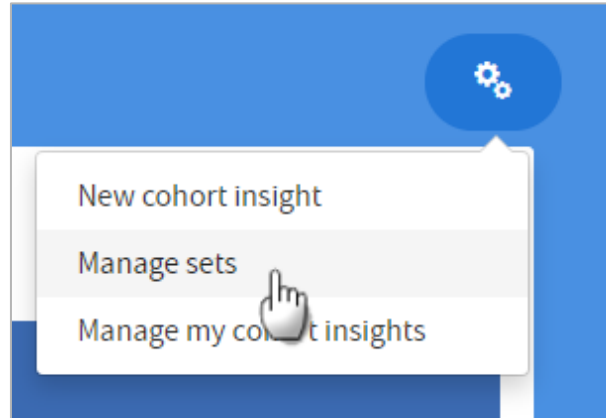
The **Cohort Insights** area will display your new set:



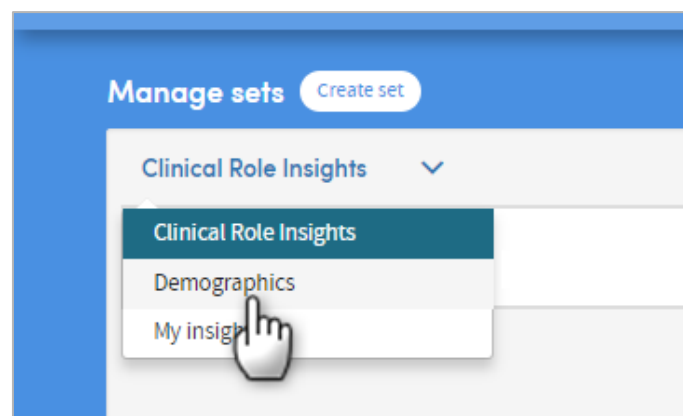
If you can't see it, click the small arrow to the right of the insight set name on the top left, and choose your set from the list.

6.2 Editing a set

To add, remove, or rearrange the insights within a set, click the icon  at the top right of the **Cohort Insights** area, and select **Manage sets**:

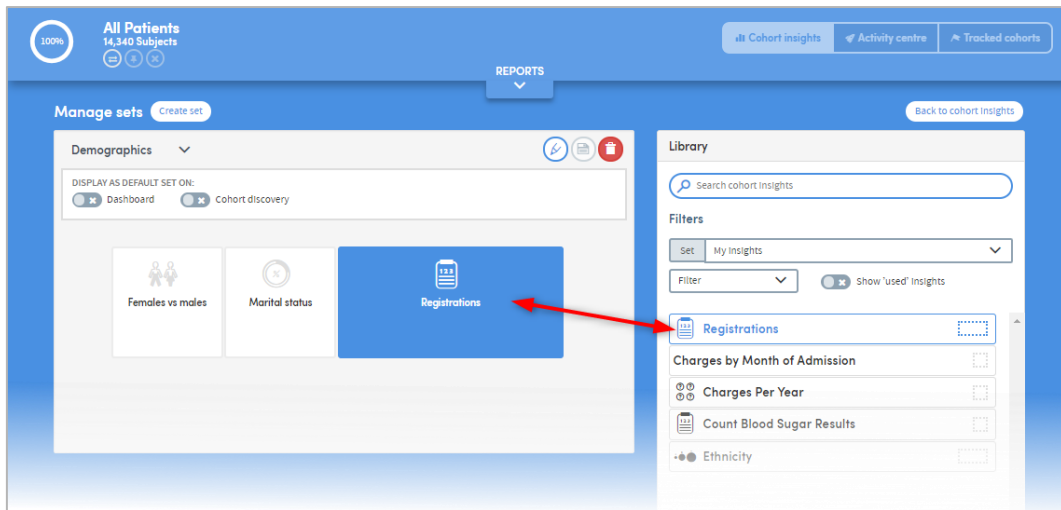


You'll be taken to the **Manage sets** screen. Choose the set you wish to work with from the dropdown list you will find by clicking on the small arrow to the right of the insight set name towards the top left of the screen:

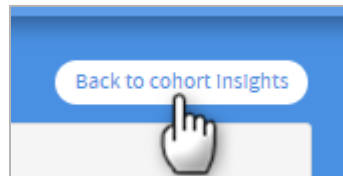


To edit your set, click and drag insights between the list on the right and the pane on the left. You can also click and drag insights within the pane, to arrange them in whatever

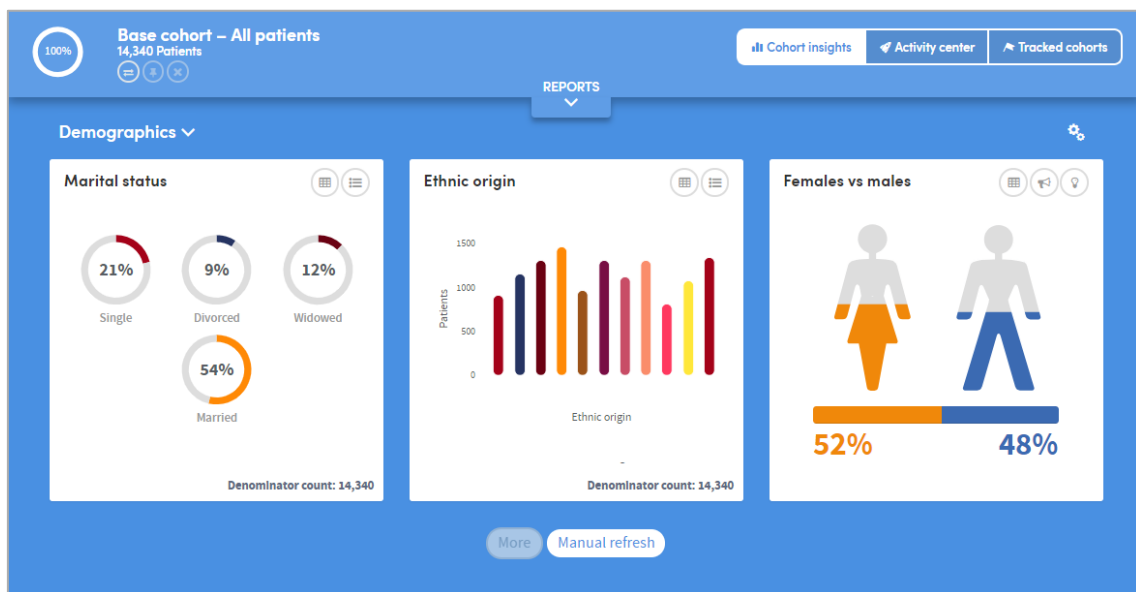
order you prefer. Click the **Save** icon  when you have finished.



To view your new insights set, click the **Back to cohort insights** button on the top right of your screen:



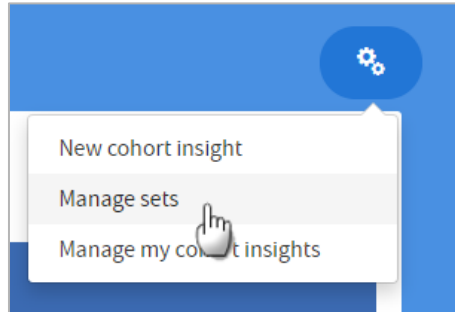
The **Cohort Insights** area will display your edited set:



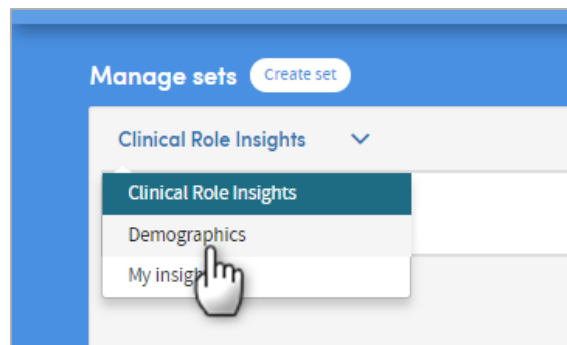
If you can't see it, click the small arrow to the right of the set name on the top left, and choose your set from the list.


6.3 Renaming a set

To change the name of an insights set, click the icon  at the top right of the **Cohort Insights** area, and select **Manage sets**:

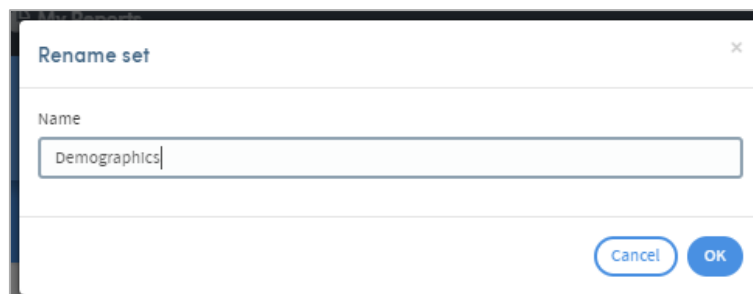


You'll be taken to the **Manage sets** screen. Choose the set you wish to work with from the dropdown list you will find by clicking on the small arrow to the right of the insight set name towards the top left of the screen:




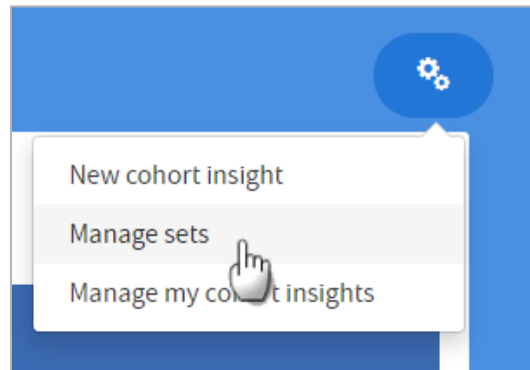
Click the **Rename set** icon  (found towards the top middle of your screen).

You will be prompted to type in the new name. Do this, then click **OK**:

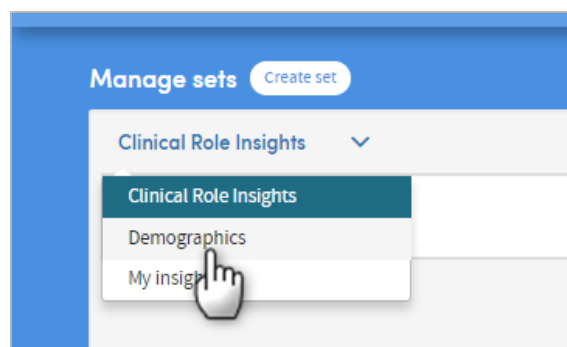



6.4 Deleting a set

To delete an insights set, click the icon  at the top right of the **Cohort Insights** area, and select **Manage sets**:



You'll be taken to the **Manage sets** screen. Choose the set you wish to work with from the dropdown list you will find by clicking on the small arrow to the right of the insight set name towards the top left of the screen:



Click the **Delete set** icon  (found towards the top middle of your screen). The insight set will be deleted.