Optum

PHM Pathfinder

Detailed User Guide

January 2025

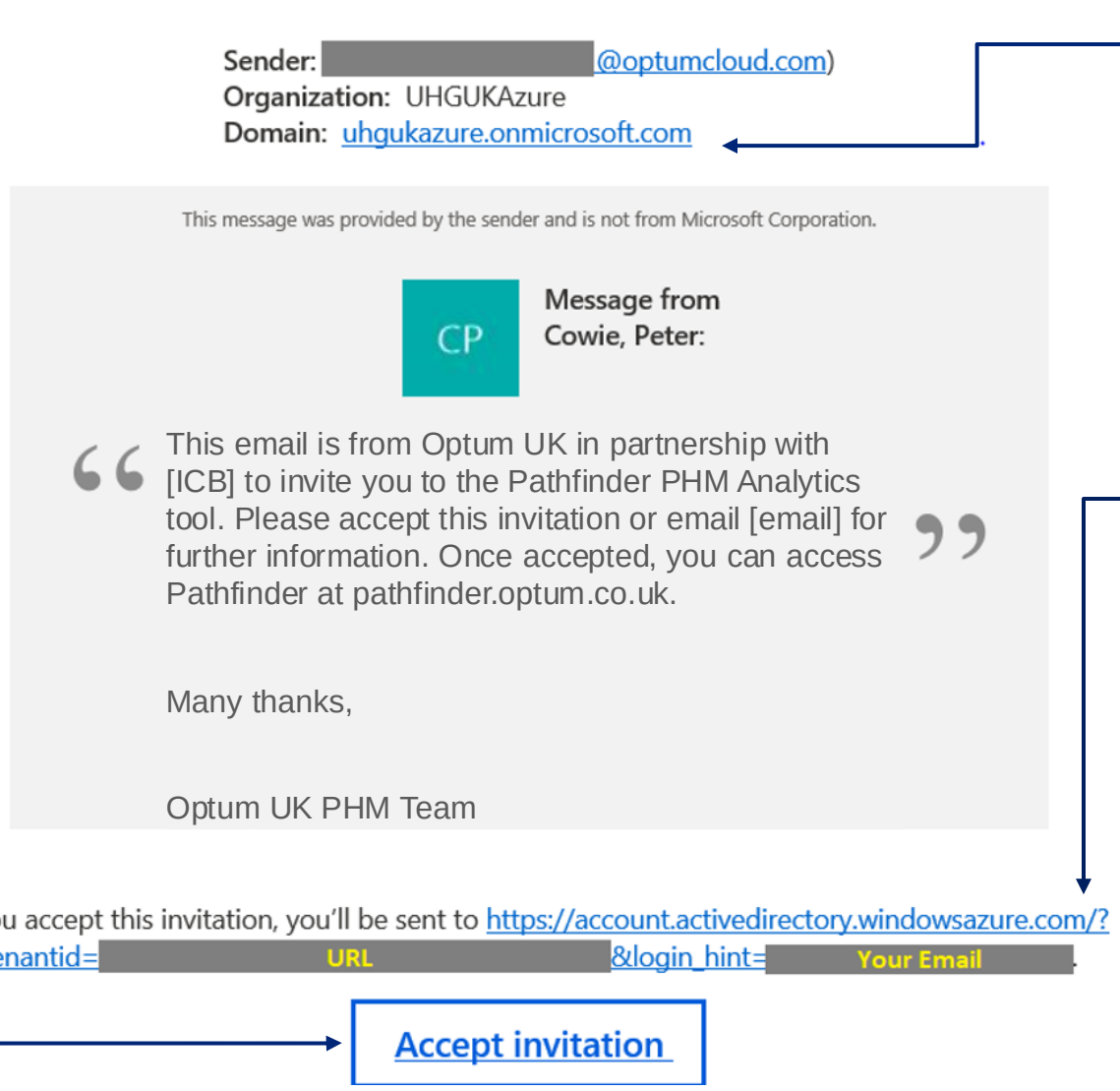
Contents

Sign Up

Sign Up: Step 1

Upon being signed up for the PHM Pathfinder, you will receive an email with your log in details:

1 **You need to click the "Accept Invitation" button. You must do this on your NHS device logged into your email account**



Note:

The initial email will come from a **UHGUKAZURE Microsoft email**

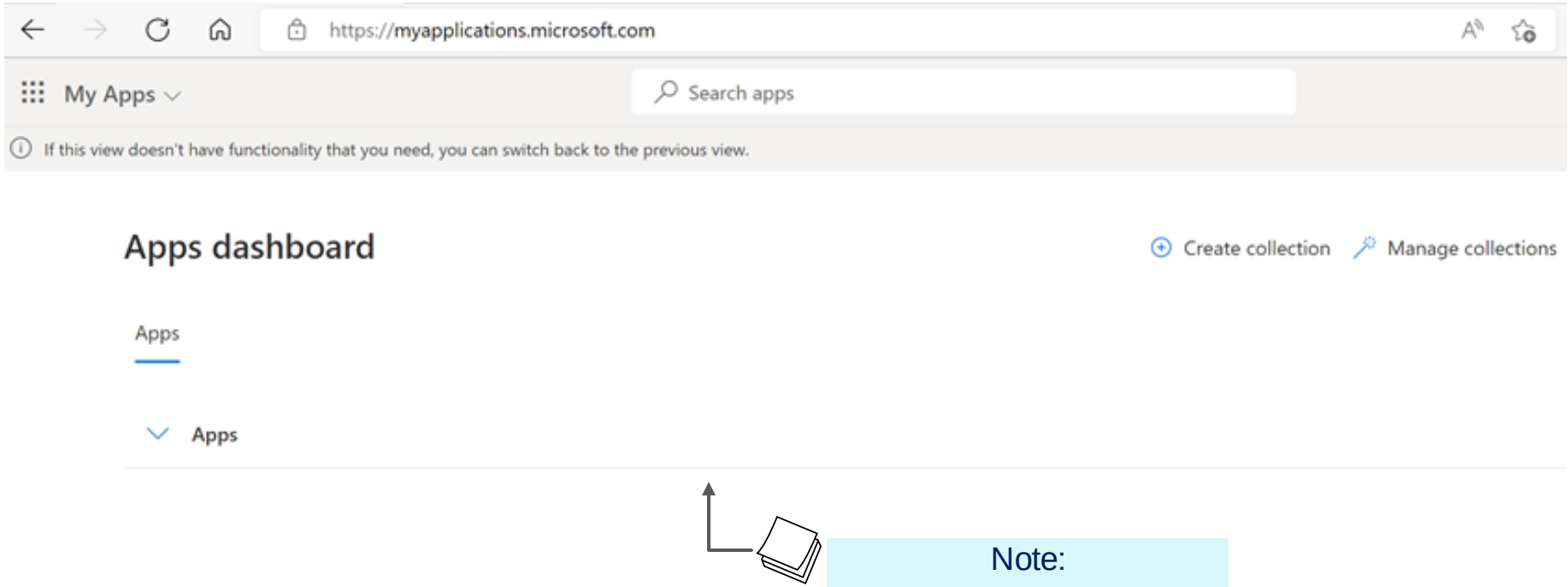
Note:

The link in your email will be **specific to you and only usable by you**

Sign Up: Step 2

You will need to set up automatic authentication through Microsoft:

2 **You will then need to accept the standard permissions review from Microsoft. This will link your email account to the Optum MS Azure account automatically**



Note:

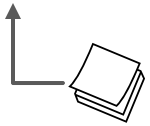
Once you are here there is **nothing further to do, go to step 3**

Sign Up: Step 3

Follow the link to access Pathfinder:

3 **Please click on this link to access Pathfinder**

https://pathfinder.optum.co.uk



Note:

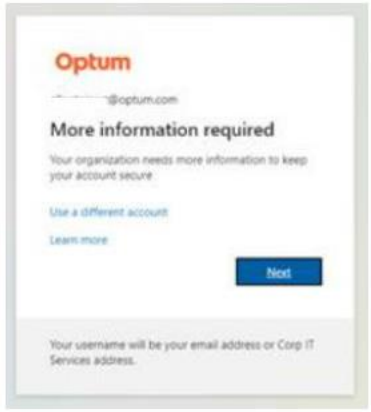
The Pathfinder URL **will authenticate using your email account**

Sign Up: Step 4

You will need to set up automatic authentication through Multi Factor Authentication

4 **When you log in via Azure, you will be asked by Microsoft to complete some additional steps to add MFA.**

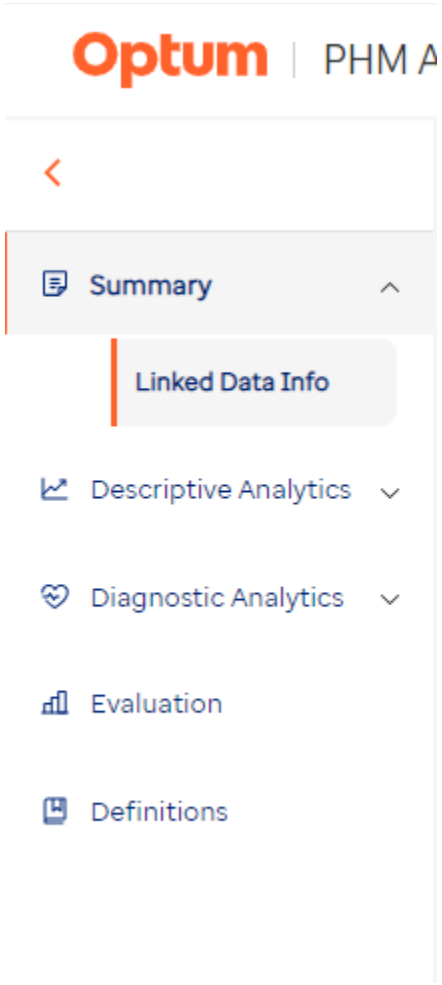
You may use the Microsoft Authenticator app or an authenticator app of your choosing. The screens will guide you through this process, and in future when logging in you will need to enter an MFA code



Navigating

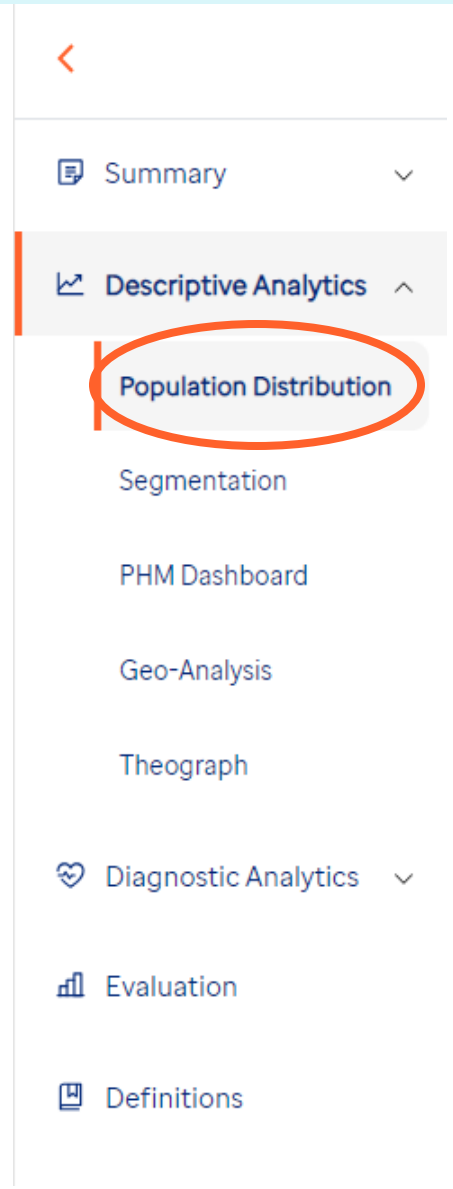
Navigating Pathfinder

Pages within Pathfinder are arranged into Domains and Pages on the Left Hand Side:



Summary domain is selected, and the second row shows the pages to choose from.

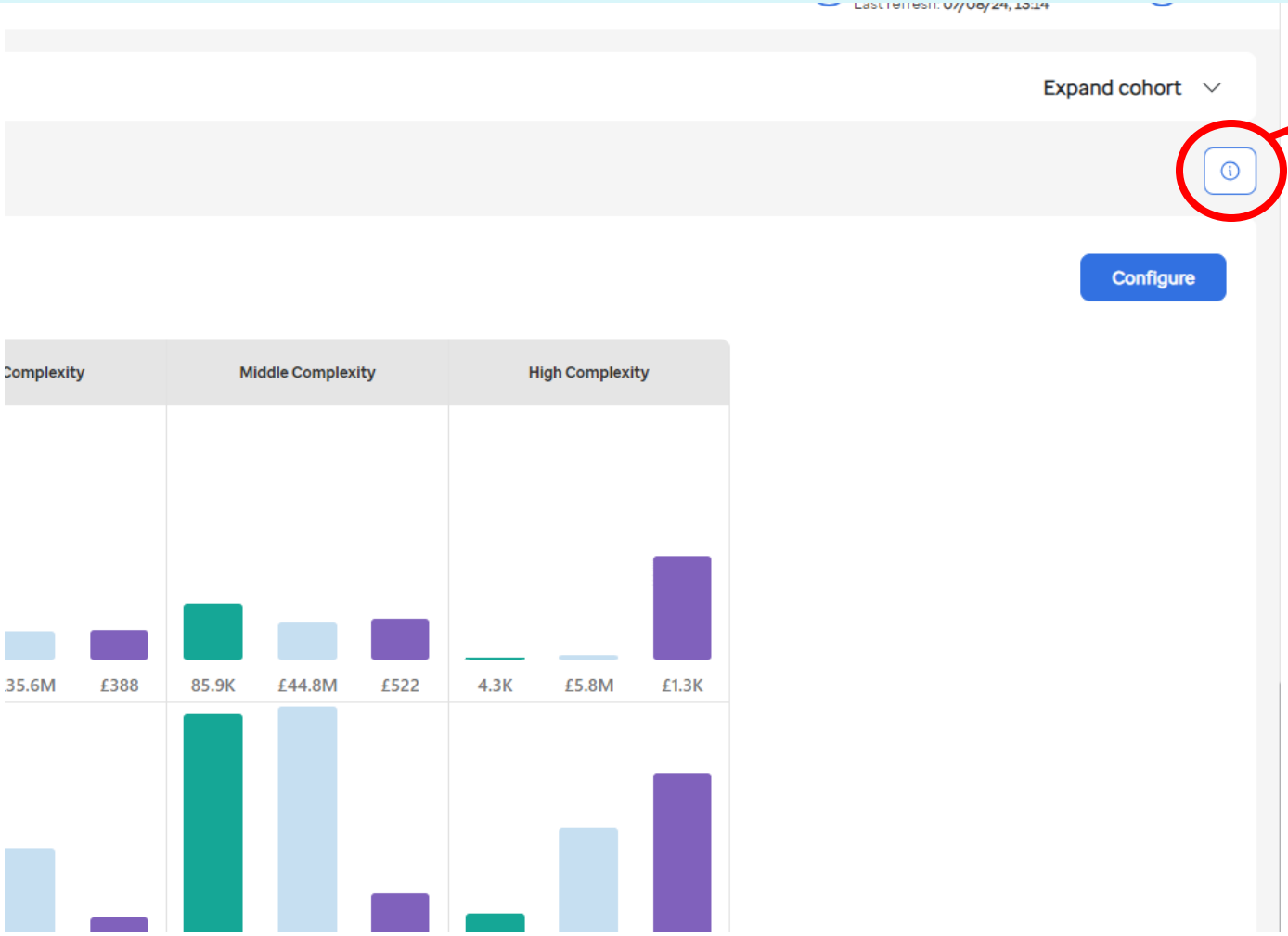
Descriptive Analytics domain is selected, and the second row has changed to show a different set of pages, which can now be navigated to.



Optum

'How to Use' Buttons

The ‘i’ icon button on each page can be accessed to provide more information:



How to Use

Summary

From the linked data model, we can derive many different metrics by which we can understand our population.

This visual allows us to compare each segment across each metric, to assess in detail our population's demographics, activity & finance, outcomes, and bio-psycho-social risk factor prevalence.

Reading the Report

In general, most of metrics on this page are presented as averages, such as average number of A&E attendance within a segment, or average age. Any with a % sign indicate a prevalence rate - showing what percentage of that segment have been recorded with the relevant indicator. The sections are also collapsable.

Overall Population Measures

High level demographic measures, from age & gender, to deprivation & ethnicity, and average multimorbidity (number of health conditions), for each segment.

Finance and Activity Measures

The average spend or activity rate for the listed care sector, for each segment.

Physical Health, Mental Health and Other Characteristics

The prevalence of the risk factors within the segment is displayed (%

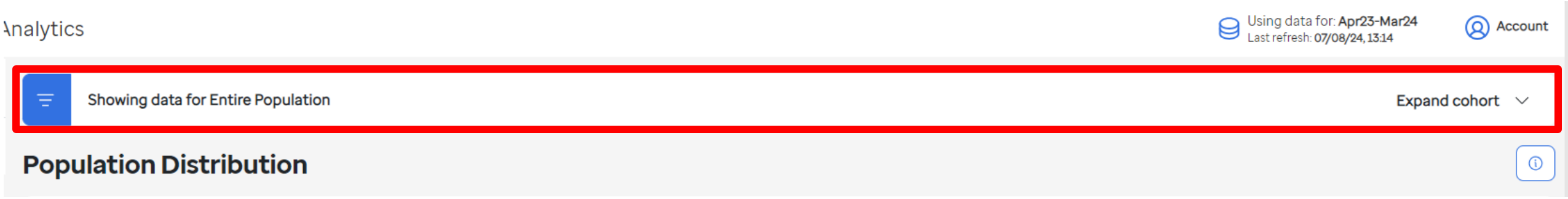
Optum

Cohorting

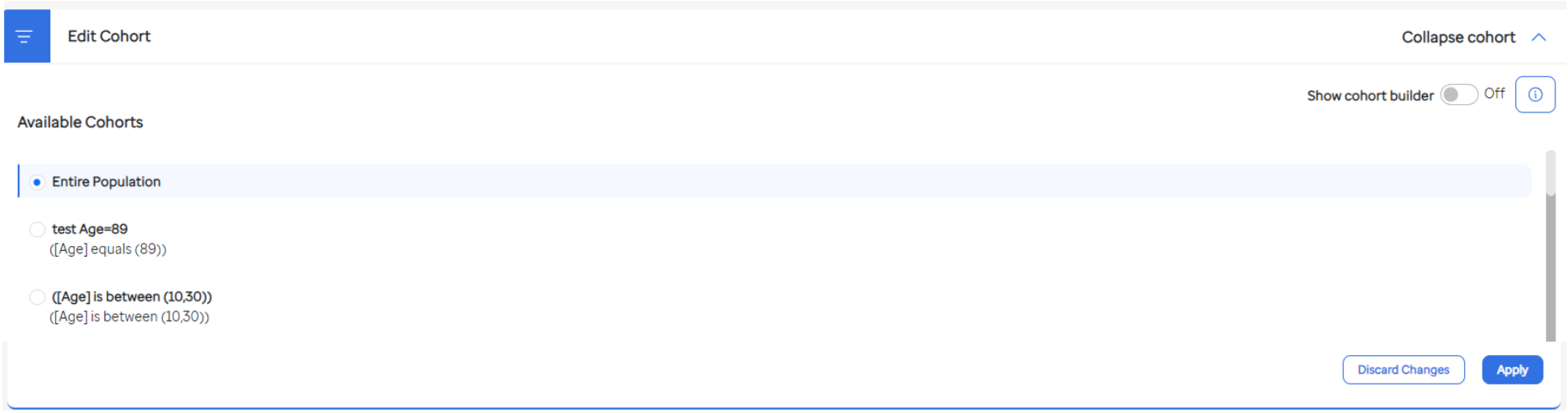
Specific groups in your Population: Creating a Cohort (1 of 13)

You can use the Cohort Builder to select specific groups of people within your population. This is available on the Population Distribution, Segmentation, PHM Dashboard and Geo-Analysis pages.

To open the cohort builder, click the banner.



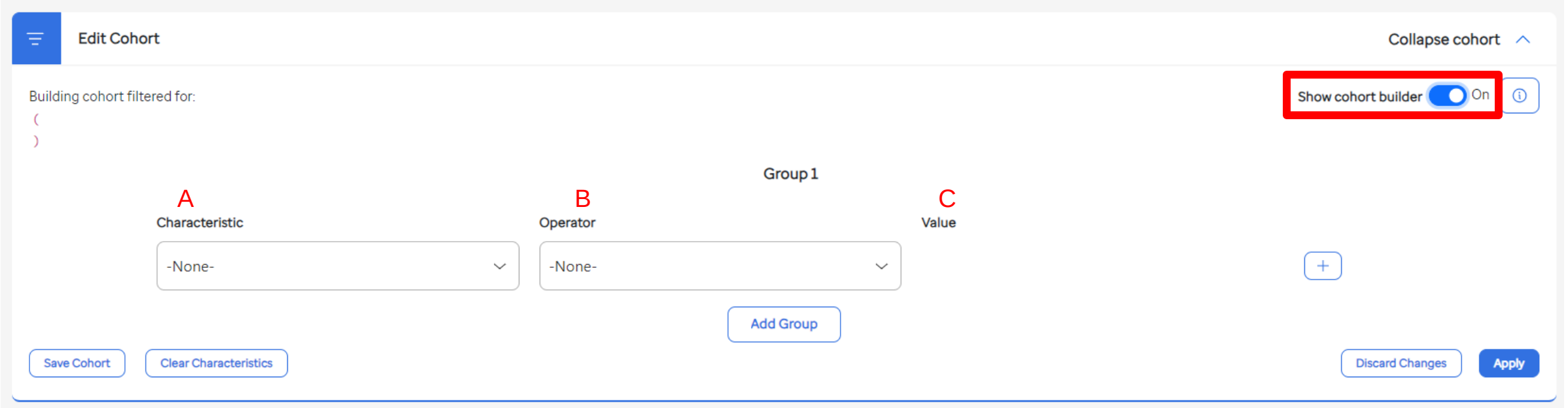
A list of available cohorts are displayed by default, with 'Entire Population' selected when no specific cohort is selected. In this list you can see all your saved cohorts, as well as cohorts that have been saved by other people in your ICS, that they have marked as 'Shared'. (for 'Saving a Cohort go to Slide 27)



Specific groups in your Population: Creating a Cohort (2 of 13)

To start building a cohort, toggle the ‘Show cohort builder' ON.

If 'Show cohort builder' is ON, the cohort builder will be shown. This allows the construction of cohorts (groups of people) based on a set of characteristics defined by you.

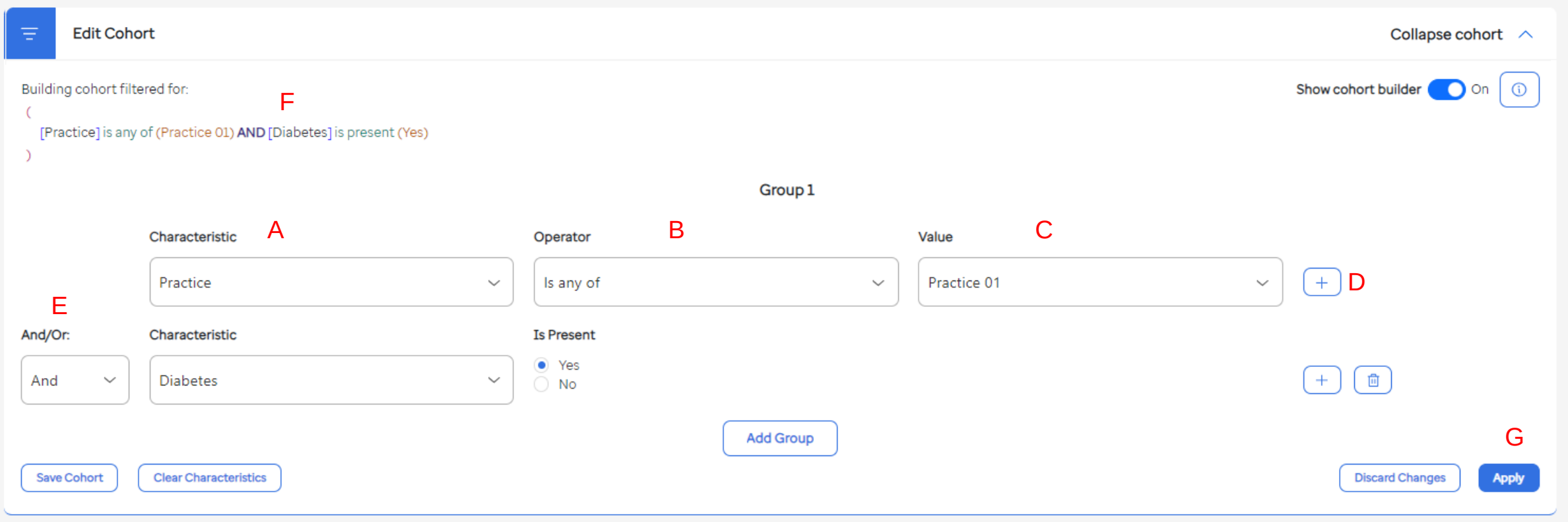


Use the characteristics dropdown A to search for and select the characteristic that you wish to filter your population on. These characteristics might be demographics, clinical factors, health inequalities factors, organisational membership (such as GP Practice), or anything else in the dataset. This dropdown is searchable so type to find the option you are looking for. Once you select the characteristic, the operator dropdown B will be populated with options relevant to the characteristic and you will be able to choose or input a value C.

Specific groups in your Population: Creating a Cohort (3 of 13)

Adding additional characteristics

To add additional characteristics to further narrow down the cohort, use the '+' icon D. On the left you can choose whether the 'and' / 'or' operator E is applied to that characteristic.



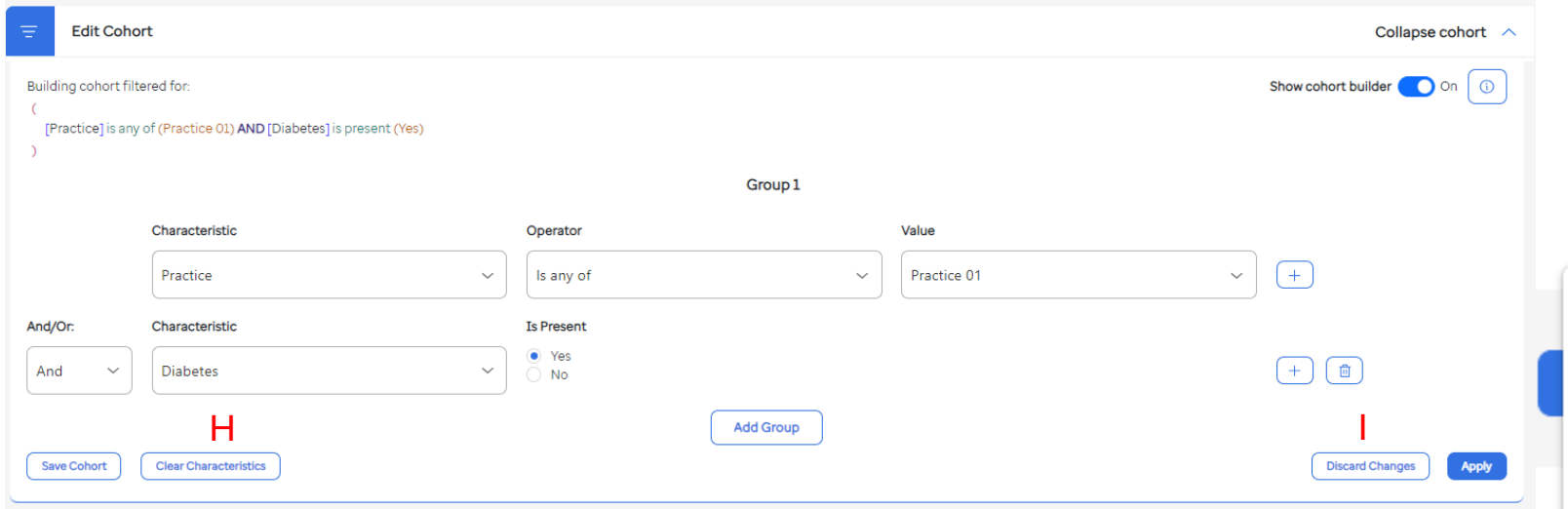
As you create your cohort, the query string F is generated on the top left to help you. To apply your cohort to the page, click Apply G. Once your cohort is applied, the banner at the top turns blue to identify that the cohort is applied to the chart.

Optum

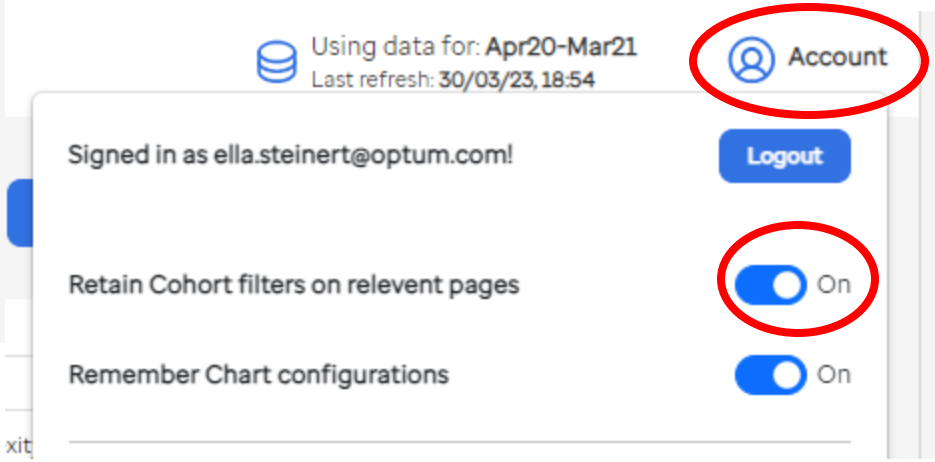
Specific groups in your Population: Creating a Cohort (3 of 13)

Clear Characteristics and Discard Changes

The ‘Clear Characteristics’ button H clears the cohort builder to allow you to start fresh building a cohort. The 'Discard Changes' button I revert your changes to the most recently applied cohort.



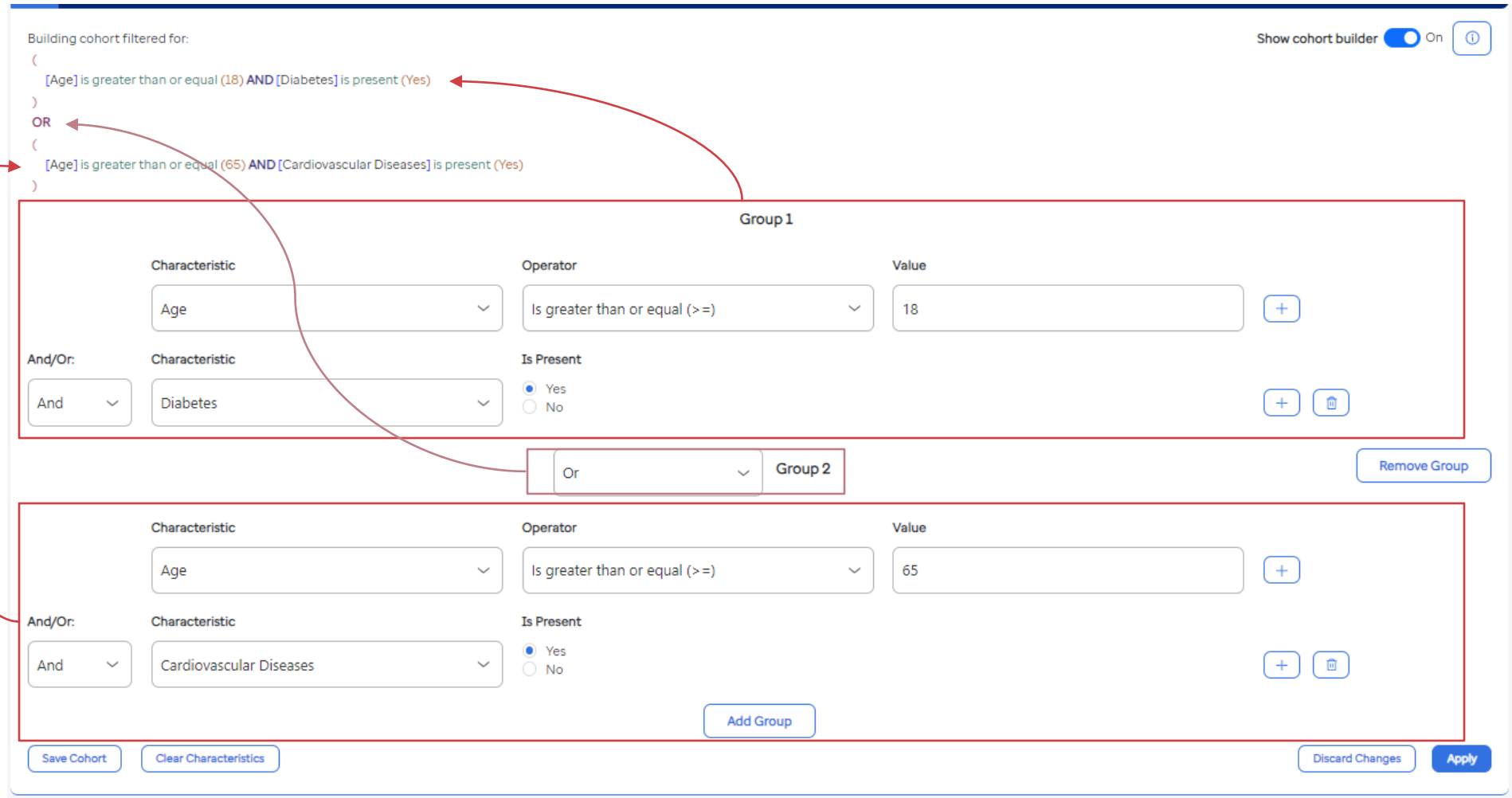
By toggling on 'Retain Cohort filters on relevant pages' in the Account Menu, your filters will be applied to all relevant pages across Pathfinder for the duration of your session.



Specific groups in your Population: Creating a Cohort (5 of 13)

Understanding the Dynamic Readable String

As you build your cohort, a dynamic readable string is generated in the top left of the cohort builder.
Each group is presented on the same line, separated by RED Brackets.



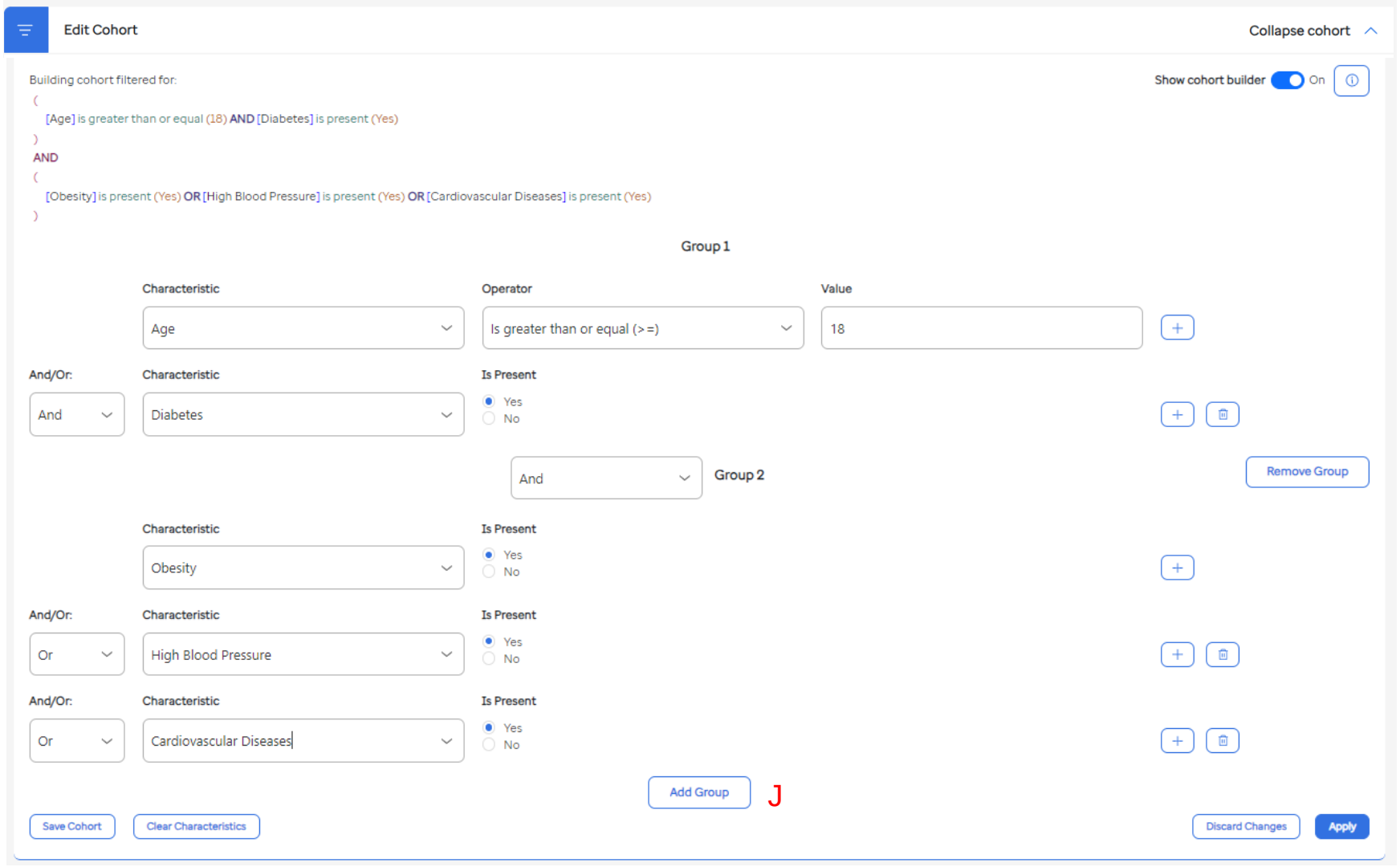
Specific groups in your Population: Creating a Cohort (6 of 13)

Creating Complex Cohorts, Example 1

If you would like to create more complex cohorts, including groups of conditions, use the ‘Add Group’ button J to add another group. This puts brackets around the subsequent characteristics.

If you use 'AND' and 'OR' in the same group, 'AND' is evaluated over ‘OR’, and we show precedence within groups using BLUE brackets. We recommend using different groups when using different operators.

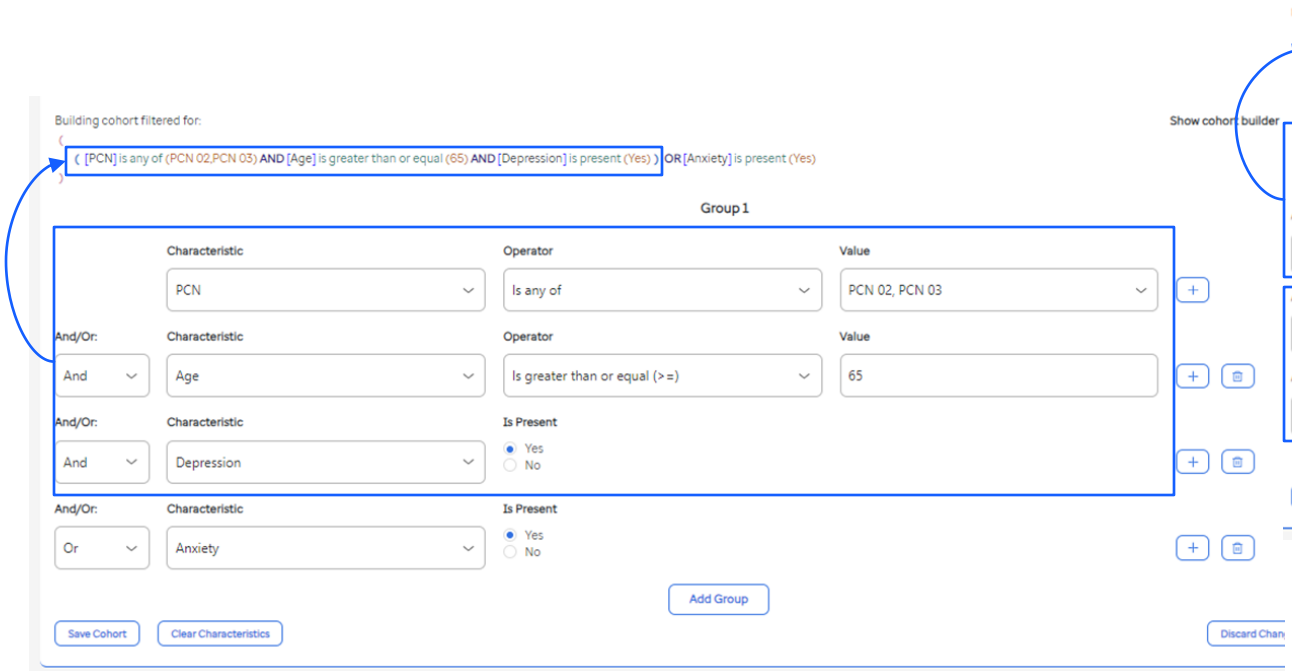
In this example, we have created a cohort for Adults (18+) with Diabetes and either are Obese, have High Blood Pressure or a Cardiovascular Disease.

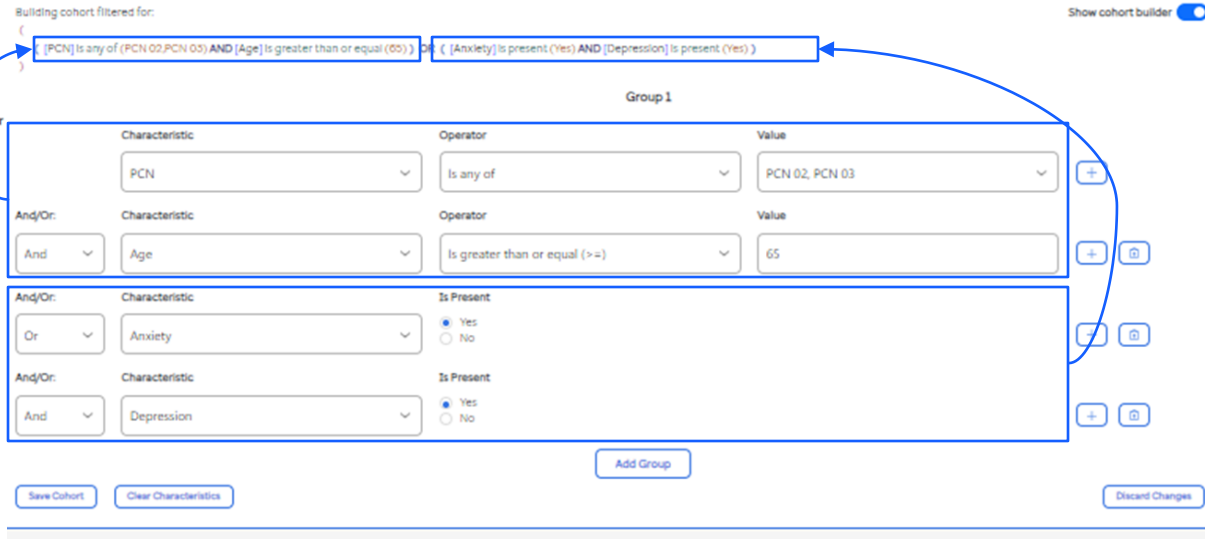


Specific groups in your Population: Creating a Cohort (7 of 13)

Understanding the Dynamic Readable String

If you use 'AND' and 'OR' in the same group, 'AND' is evaluated over ‘OR’, and we show precedence within groups using BLUE brackets. ‘OR’ acts to close a set of brackets and open a new set.
See the example below, where both ‘AND’ and ‘OR’ are in the same group, the order of the characteristics chosen, changes the cohort selected.

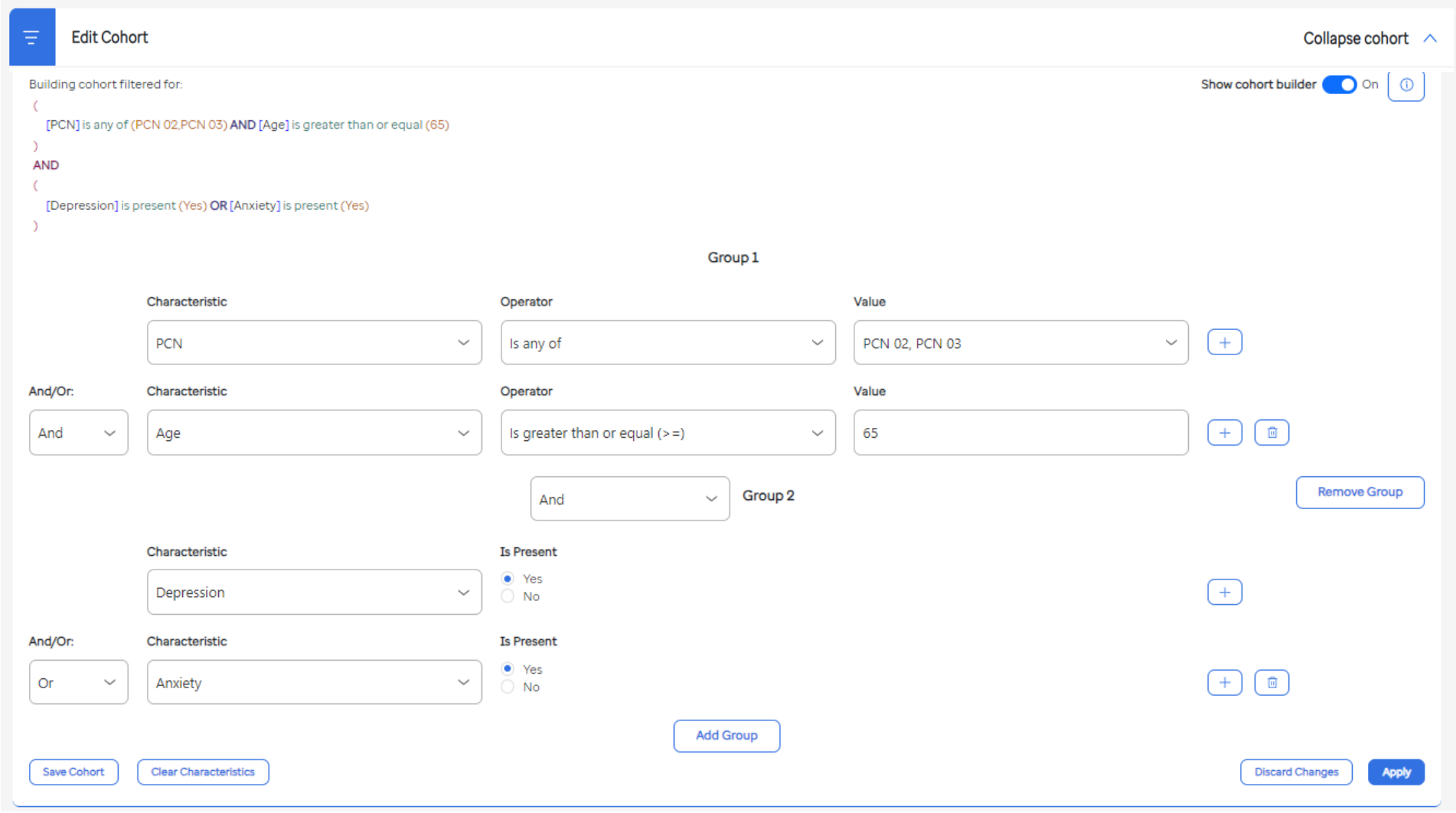




Specific groups in your Population: Creating a Cohort (8 of 13)

Creating complex cohorts, Example 2a

In this example, we have created a cohort for people in “PCN 02” or “PCN 03” whose age is 65+, who either have depression or have anxiety

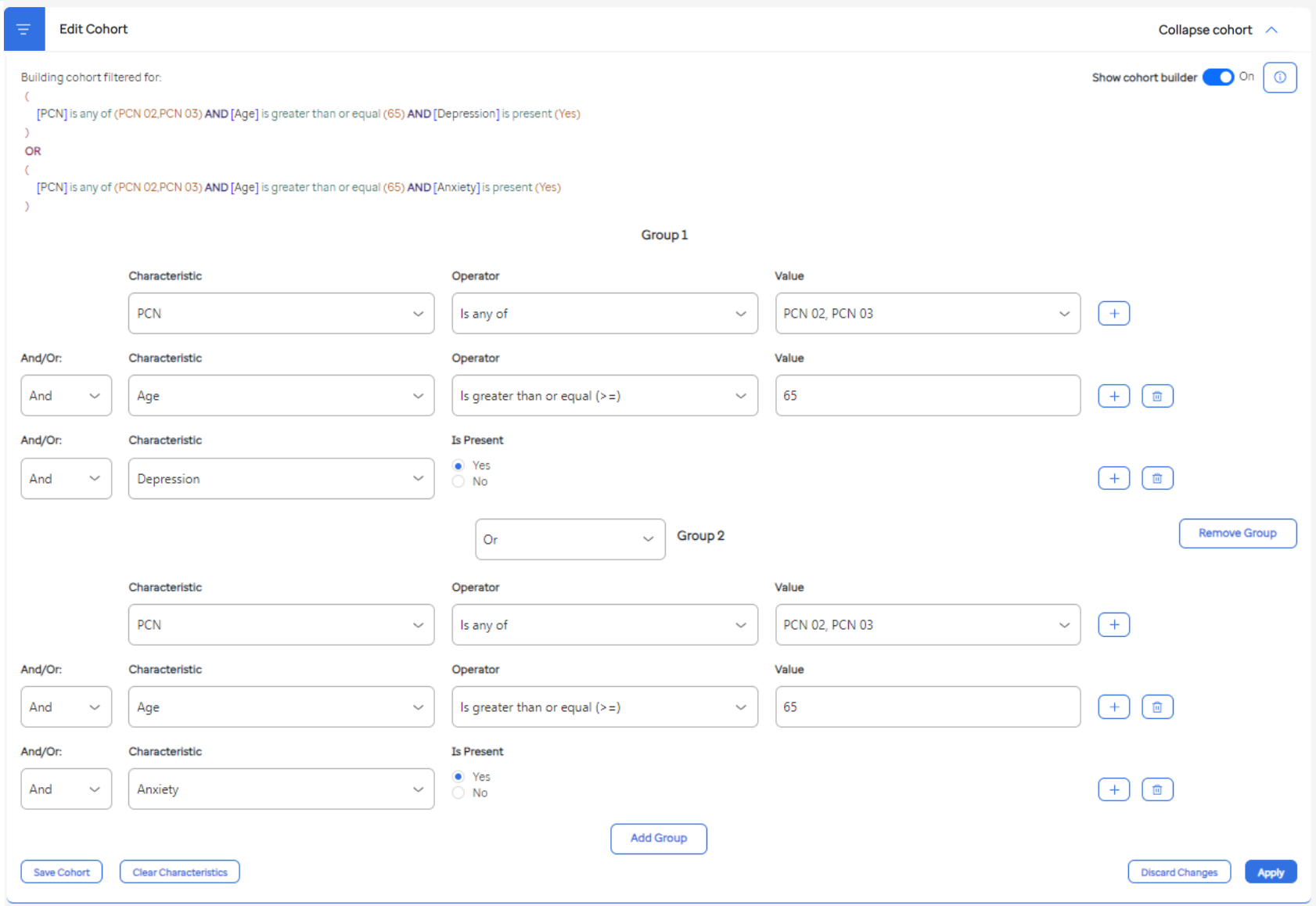


Specific groups in your Population: Creating a Cohort (9 of 13)

Creating complex cohorts, Example 2b

This is another example of the same cohort;

People in “PCN 02” or “PCN 03” whose age is 65+, who either have depression or have anxiety



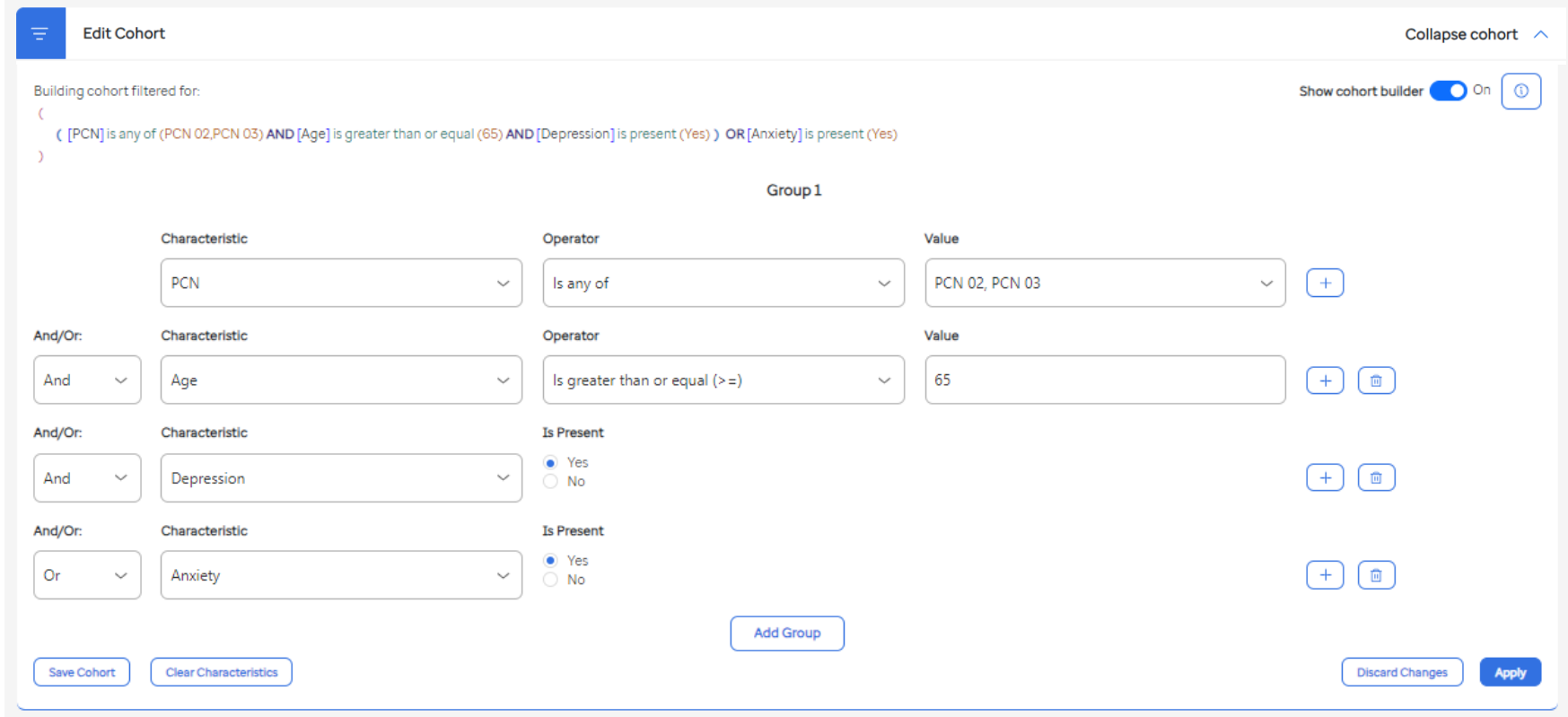
Optum

Specific groups in your Population: Creating a Cohort (10 of 13)

Using a combination of 'And' and 'Or' Operators Example 3

In this example, we have created a cohort for people in “PCN 02” or “PCN 03” whose age is 65+, who have depression or people that have anxiety

Using this very similar example, we haven't used groups and the cohort is different. That's because Age, PCN and Depression are all evaluated together, and then those with anxiety are included.

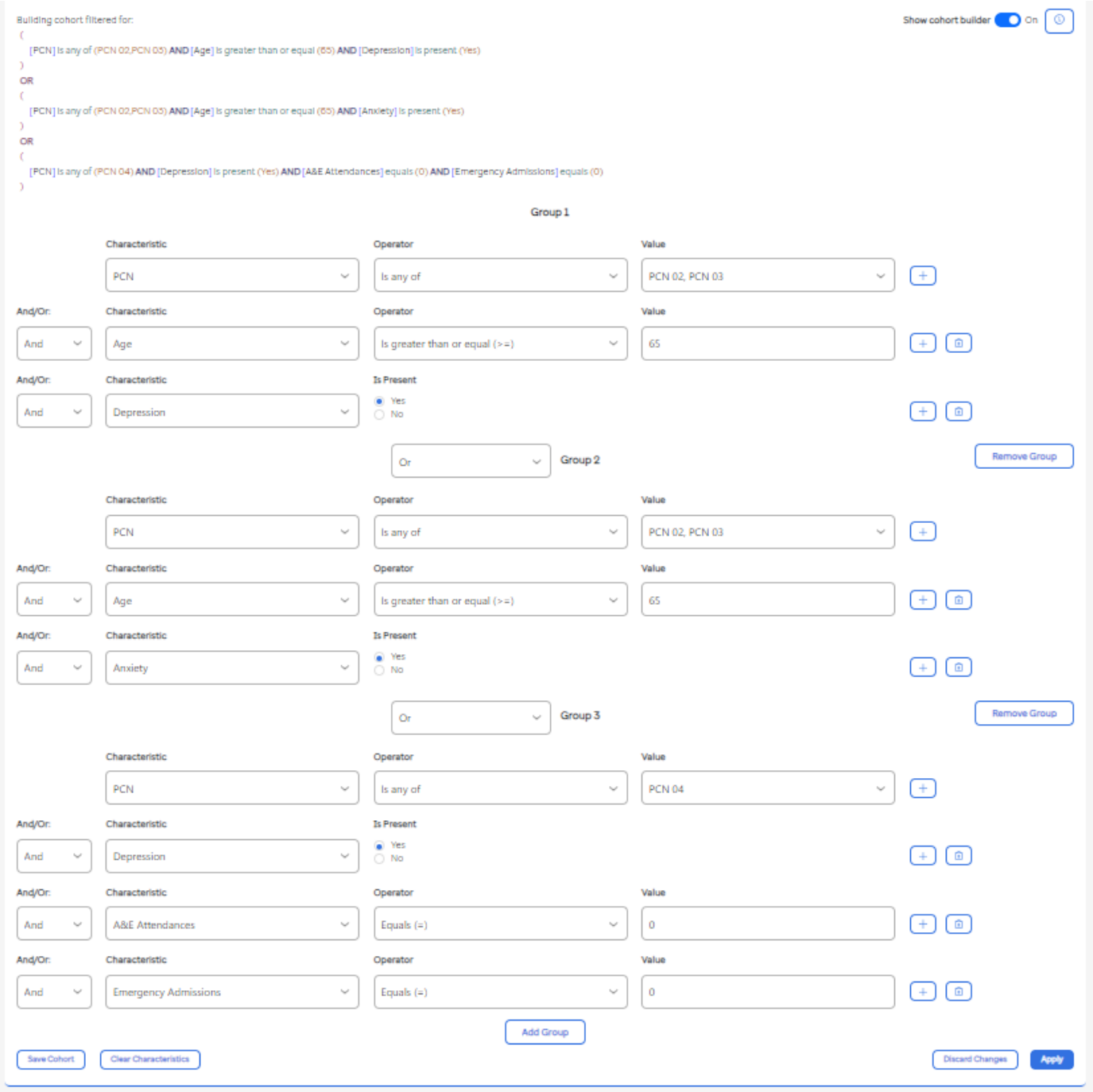


Specific groups in your Population: Creating a Cohort (11 of 13)

Using a combination of 'And' and 'Or' Operators Example 4

Using another example, we have added another layer of complexity looking for;

People in “PCN 02” or “PCN 03” whose age is 65+, who have depression or have anxiety as well as people in “PCN 04” who have depression and no A&E Attendances or Emergency Admissions



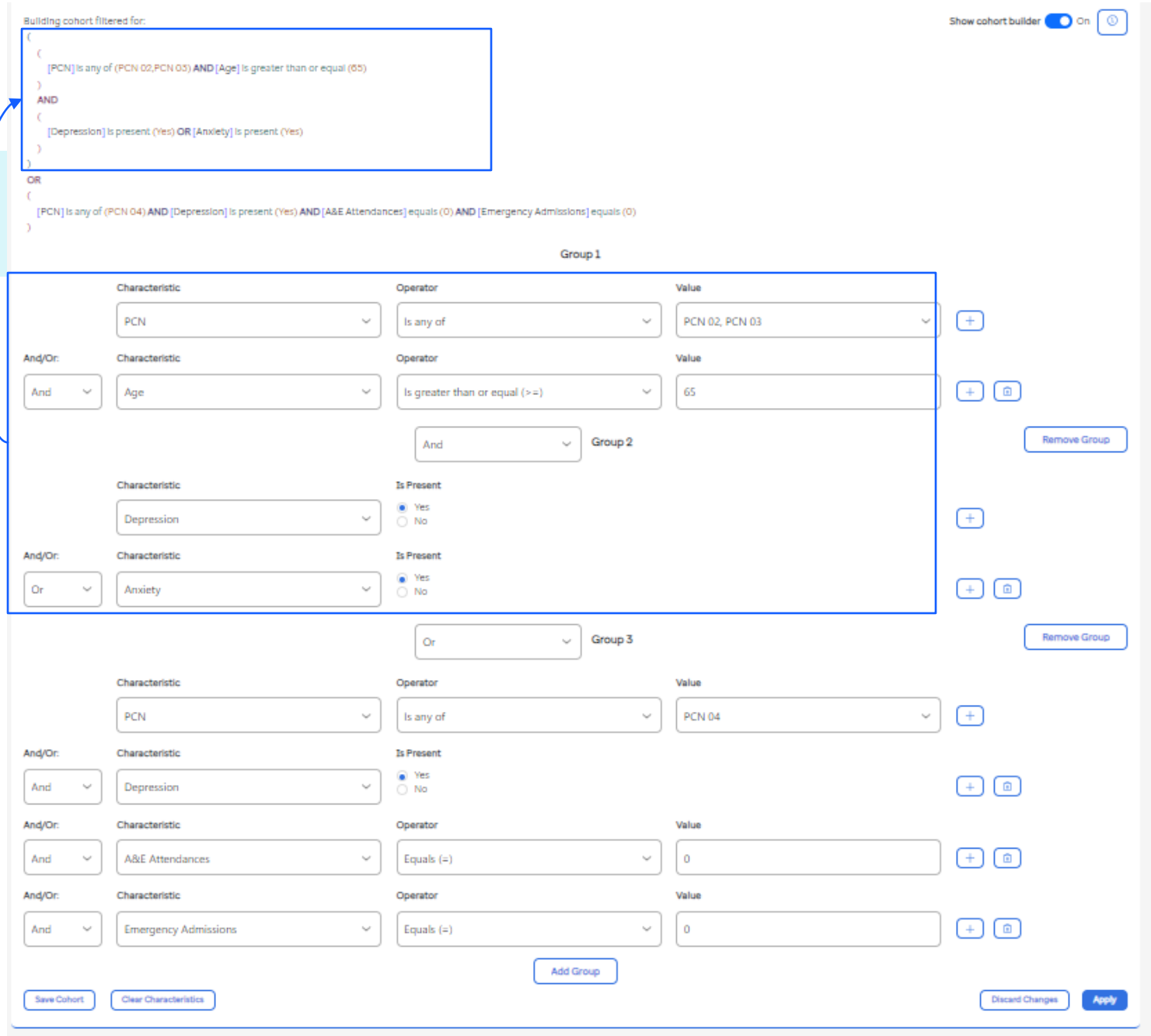
Specific groups in your Population: Creating a Cohort (12 of 13)

Using a combination of 'And' and 'Or' Operators Example 5

In this similar example. We have used a different combinations of groups to create a cohort that includes;

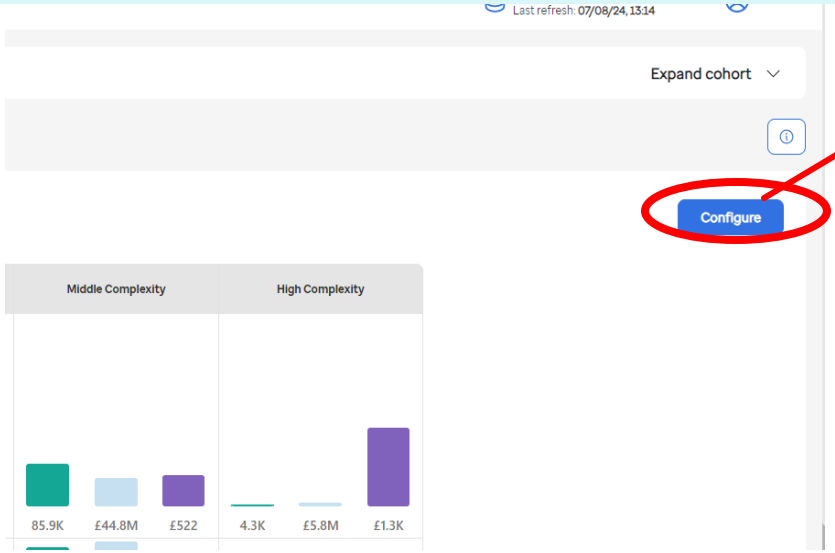
People in “PCN 02” or “PCN 03” whose age is 65+, who have depression or have anxiety as well as people in “PCN 04” who have depression and no A&E Attendances or Emergency Admissions

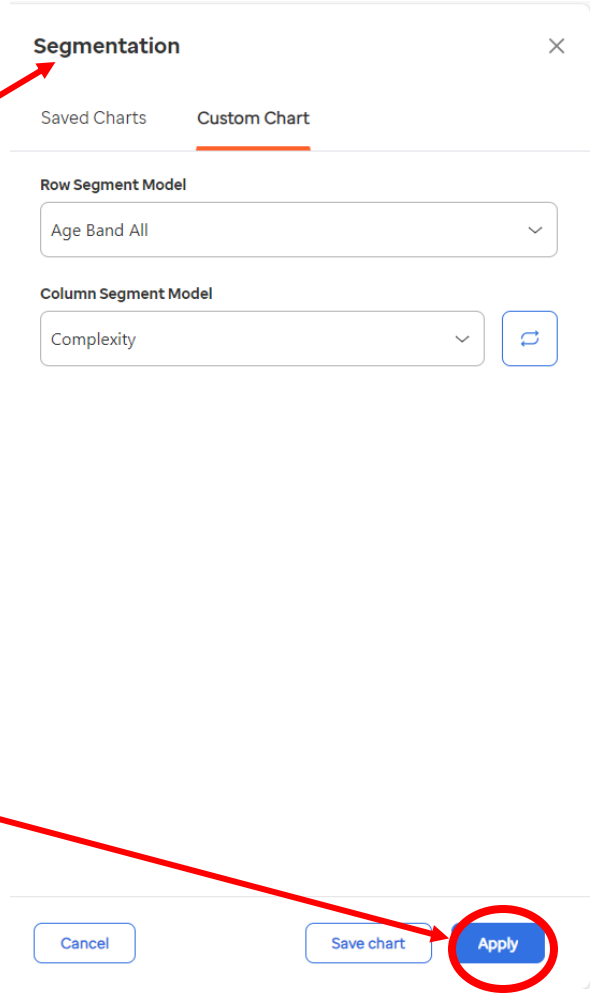
Where groups are evaluated with different operators, we have evaluated ‘AND’ first. Therefore Group 1 and Group 2 are evaluated together, and then Group 3 is evaluated. As seen within the dynamic readable string denoted by the BLUE brackets

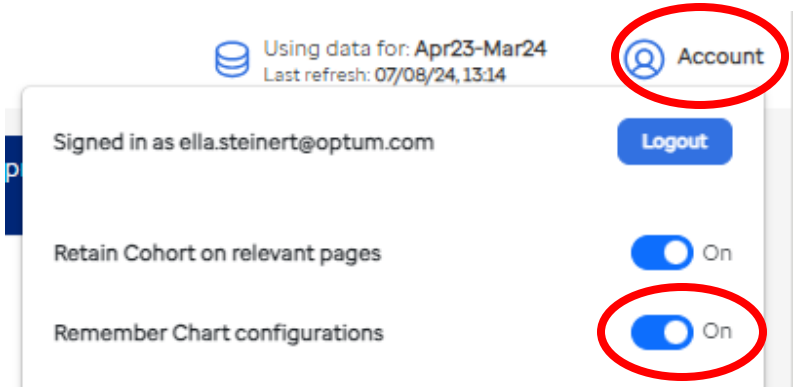


Configuring a Report (1 of 1)

You can use our Configuration panels on each page to select the data and characteristics to view on the page to create a report.







Make selections about which data and characteristics including risk factors and health indicators you would like to see and click apply to view on the report.

You can save your report configurations (per session) by toggling on 'remember chart configuration' in the Account Menu.

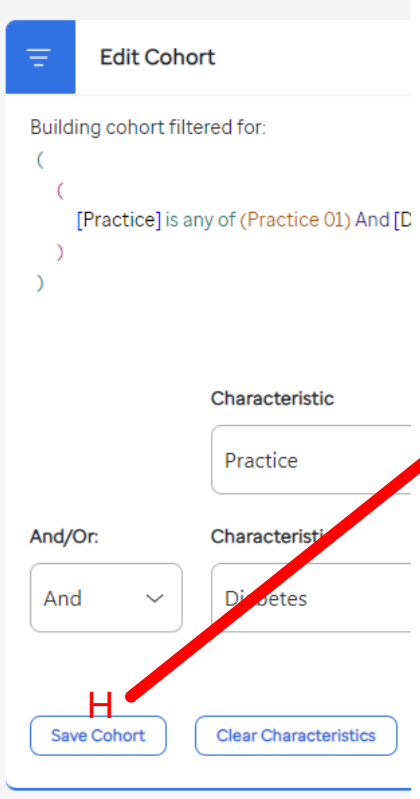
Optum

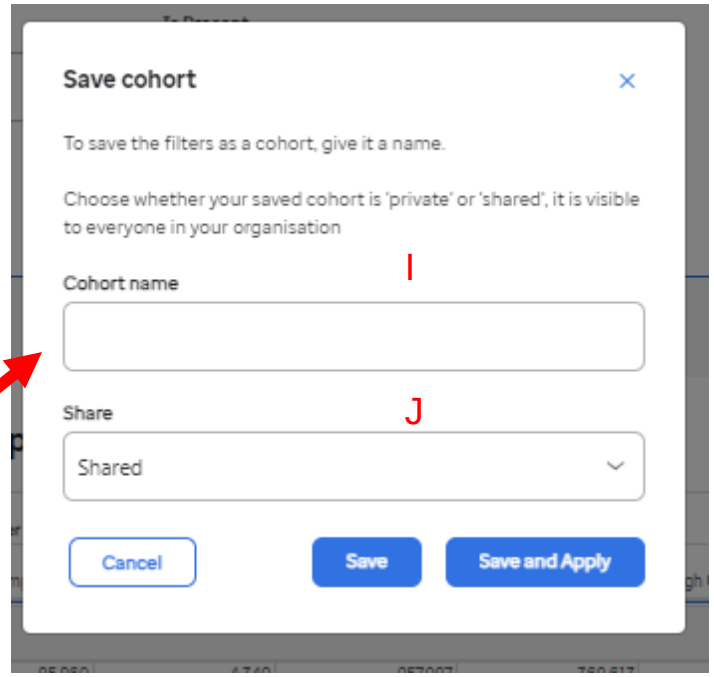
Saving

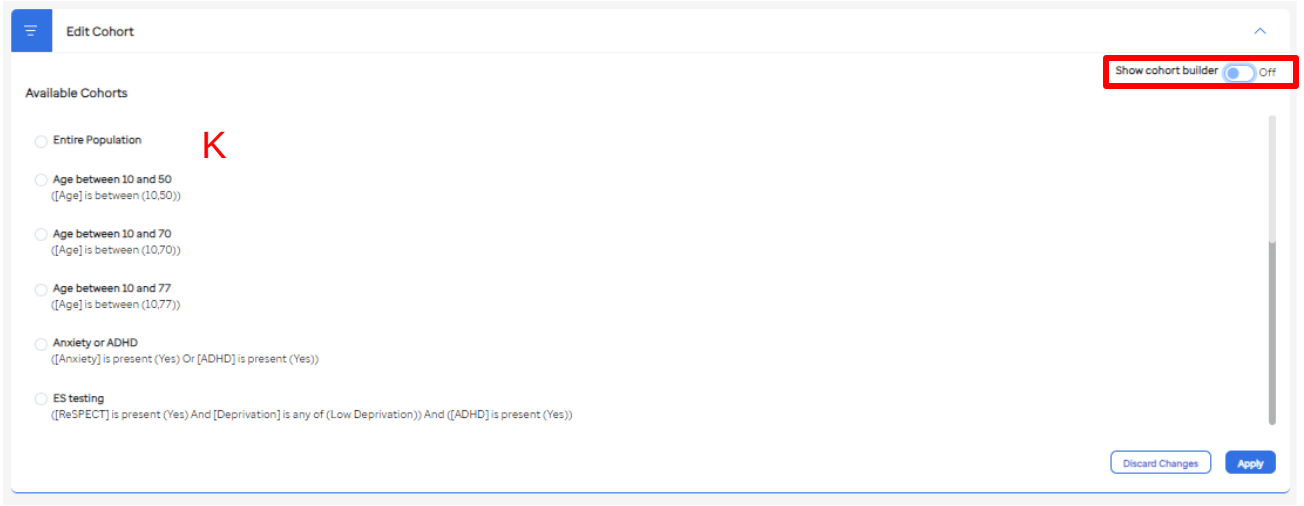
Saving a Cohort

Saving your Cohort

To save your cohort to come back to it later. Click the 'Save Cohort' button H and give it a unique name I, and decide if the cohort is Shared or Private J. Shared cohorts are visible to anyone in your organisation and private cohorts are only available to you. Saved cohorts can be selected from the 'Available Cohorts' list K which is shown when you open the cohort builder, or by toggling 'Show cohort builder' OFF .





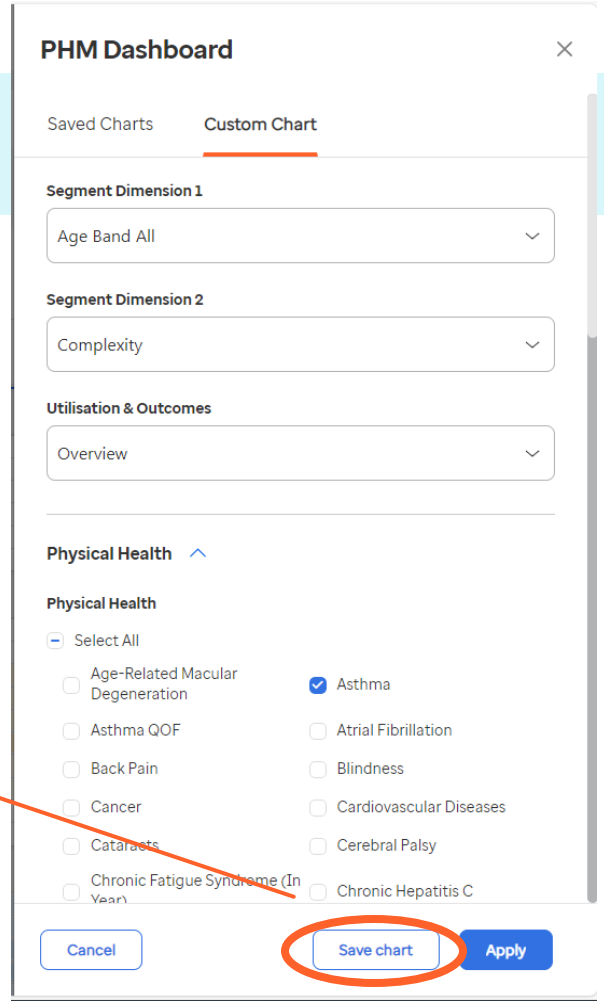


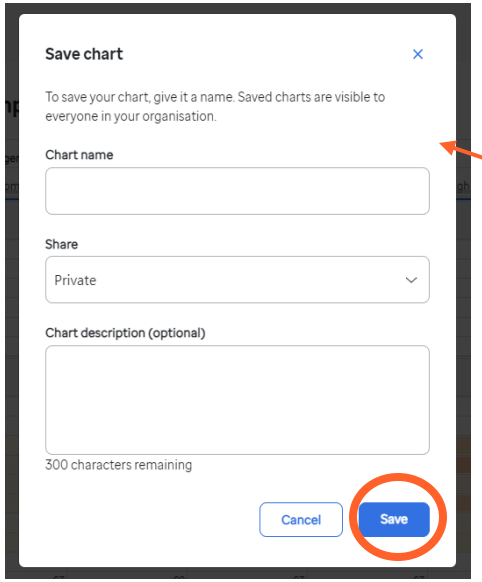
Saving a Chart

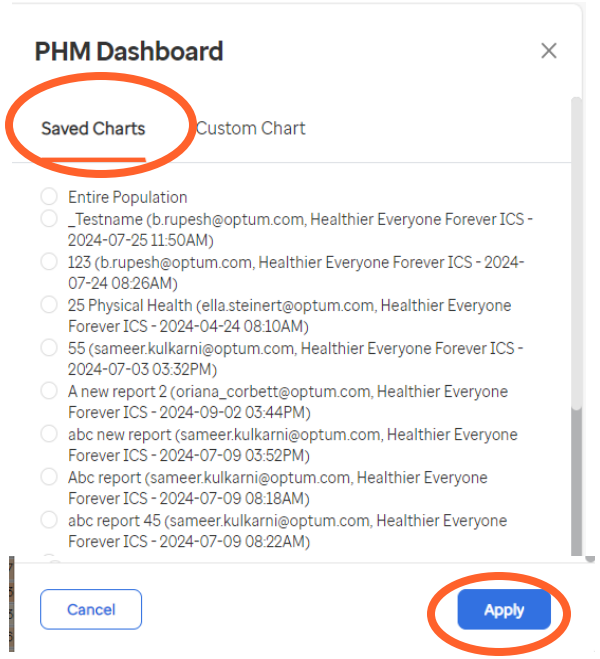
You can save your chart configurations and cohort to come back to later by using the 'Save Chart' functionality.

In the Configure Panel, you can save your configurations and the filter applied by clicking the 'Save Chart' button.

This will open a Modal that will allow you to give your chart a name, decide if the chart is Shared or Private and give your chart a description. Shared charts are visible to anyone in your organisation and private charts are only available to you. All reports must have unique names across your ICS.





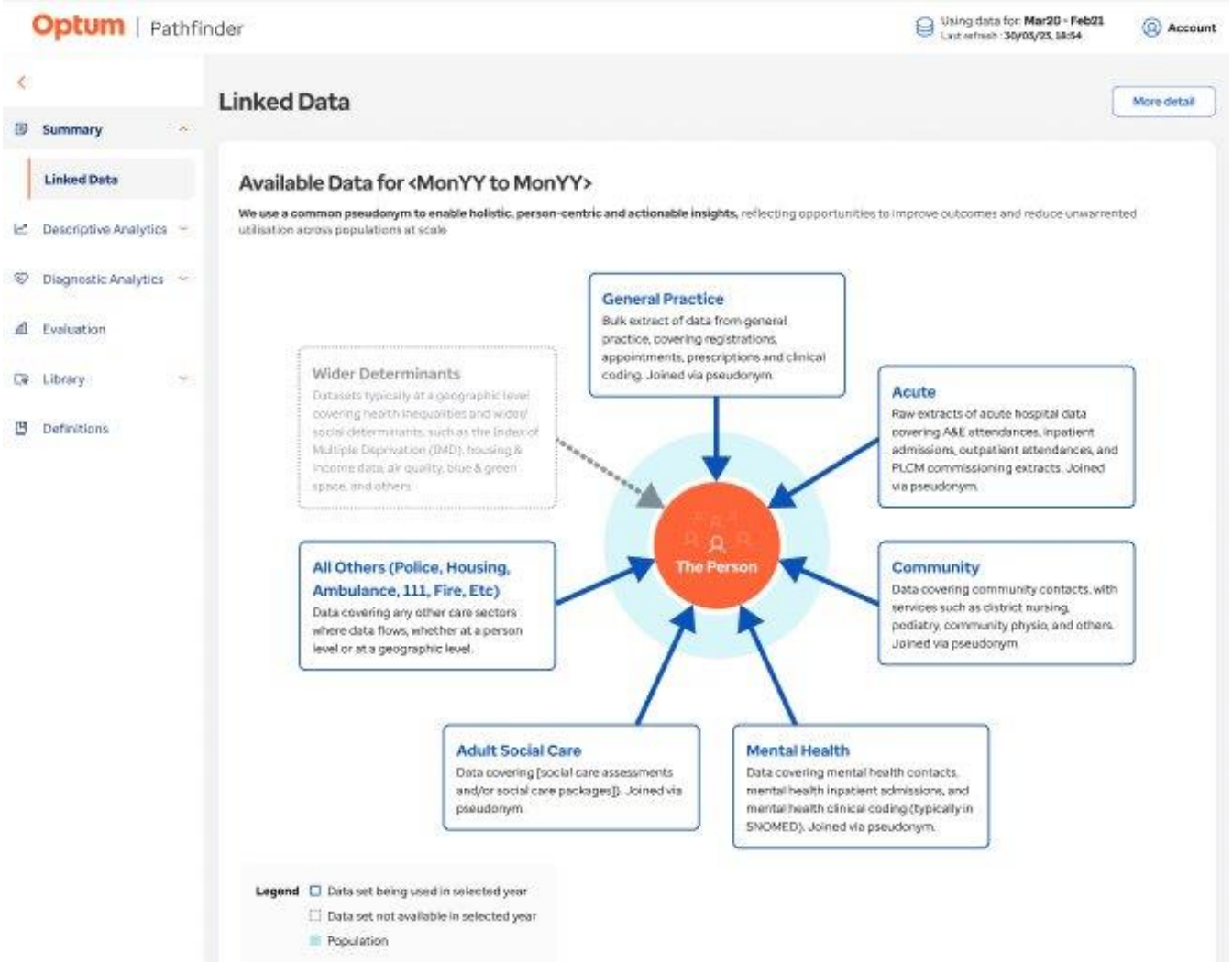


You can also load a previously saved chart (your own or Shared within your ICS) in the Saved Charts tab by selecting the chart you want to load and clicking Apply.

Data and PHM

Summary: Linked Data

Understanding the Data you have access to in the Linked Data Model



- Most of the analytics in the PHM Dashboard makes use of the **Population Health Person Master Index (PHPMI)**, a single output dataset bringing together demographic, social, economic & activity, clinical, and other metrics to holistically represent a whole population, at a person level, using the common pseudonym

- This dataset enables us to analyse **person-level demographics, total cost of care and risk factors** through a range of analytical approaches and visualisations

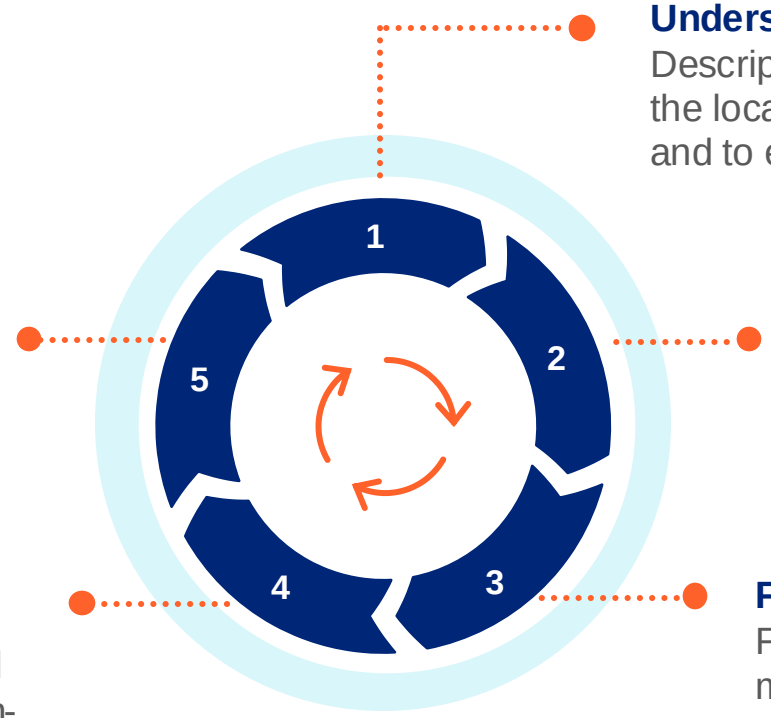
- The Linked Data Page shows you which data sets are available in Pathfinder for you

The PHM cycle — making things stick through continuous learning and doing

Understanding Population Health and care needs
Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.

Opportunity analysis and targeting
Analytics such as risk stratification and segmentation models to identify characteristics and the groups challenged by them.

Financial system modelling
Future-facing financial modelling of unmitigated and mitigated system financial risk using person level costing data and mitigated scenarios.



Design and begin to implement interventions
Design and implementation of multidisciplinary, cross-organisational interventions that are targeted at high-risk population segments through a bio-psycho-social approach.

Active monitoring and rapid improvement
Whole system impact assessment to measure net impact on population groups (utilisation, cost, outcomes and experience).

[NHS England » Population health management]

Optum

Understanding Population Health and Care Needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.

Descriptive Analytics: Population Distribution

Population Distribution shows the way in which a population is divided amongst a chosen segment model, and a characteristic or outcome rate for each segment as well.

Summary

The chart allows you to get a quick, high-level understanding of a particular population according to one segment model and characteristic or outcome of interest. For example, it can show how many individuals are in each 5-year age band, and what the average A&E attendances per person per year are.

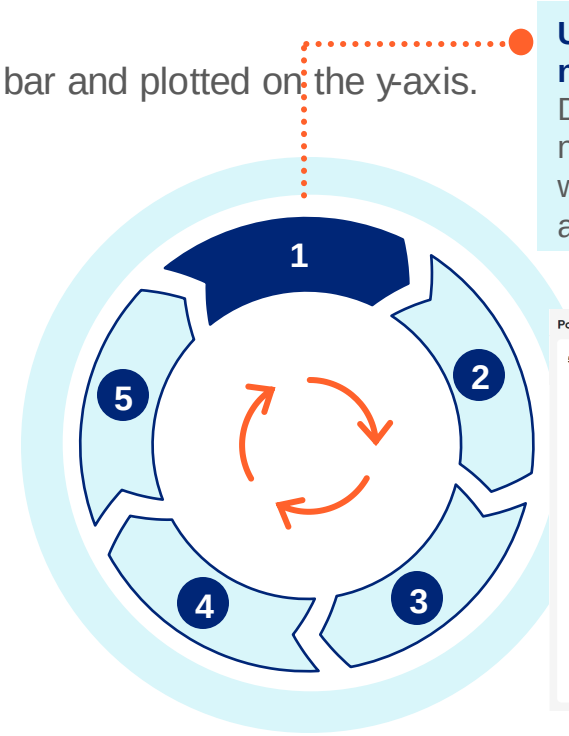
For the specific segments chosen you can see the:

Population

How many people are in each segment represented by the height of the bar and plotted on the y-axis.
The hover over will display the exact number.

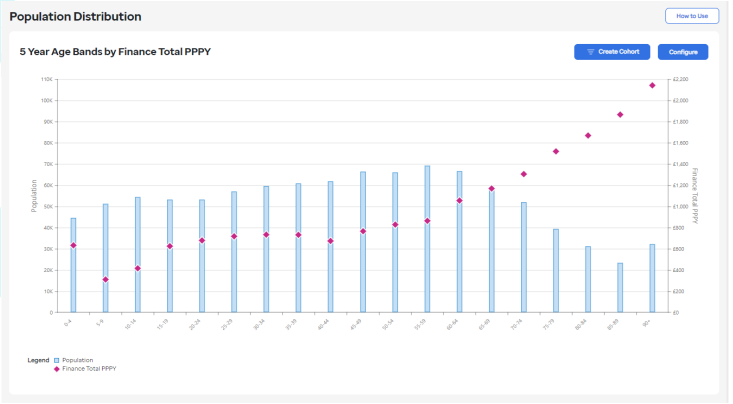
Characteristic or Outcome

A characteristic or outcome is chosen to display as a diamond on the chart which is plotted on the righthand side y-axis.
The hover over will display the exact number for this characteristic or Outcome and segment.



Understanding Population Health and care needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.



Optum

Descriptive Analytics: Population Distribution

Reading the Report

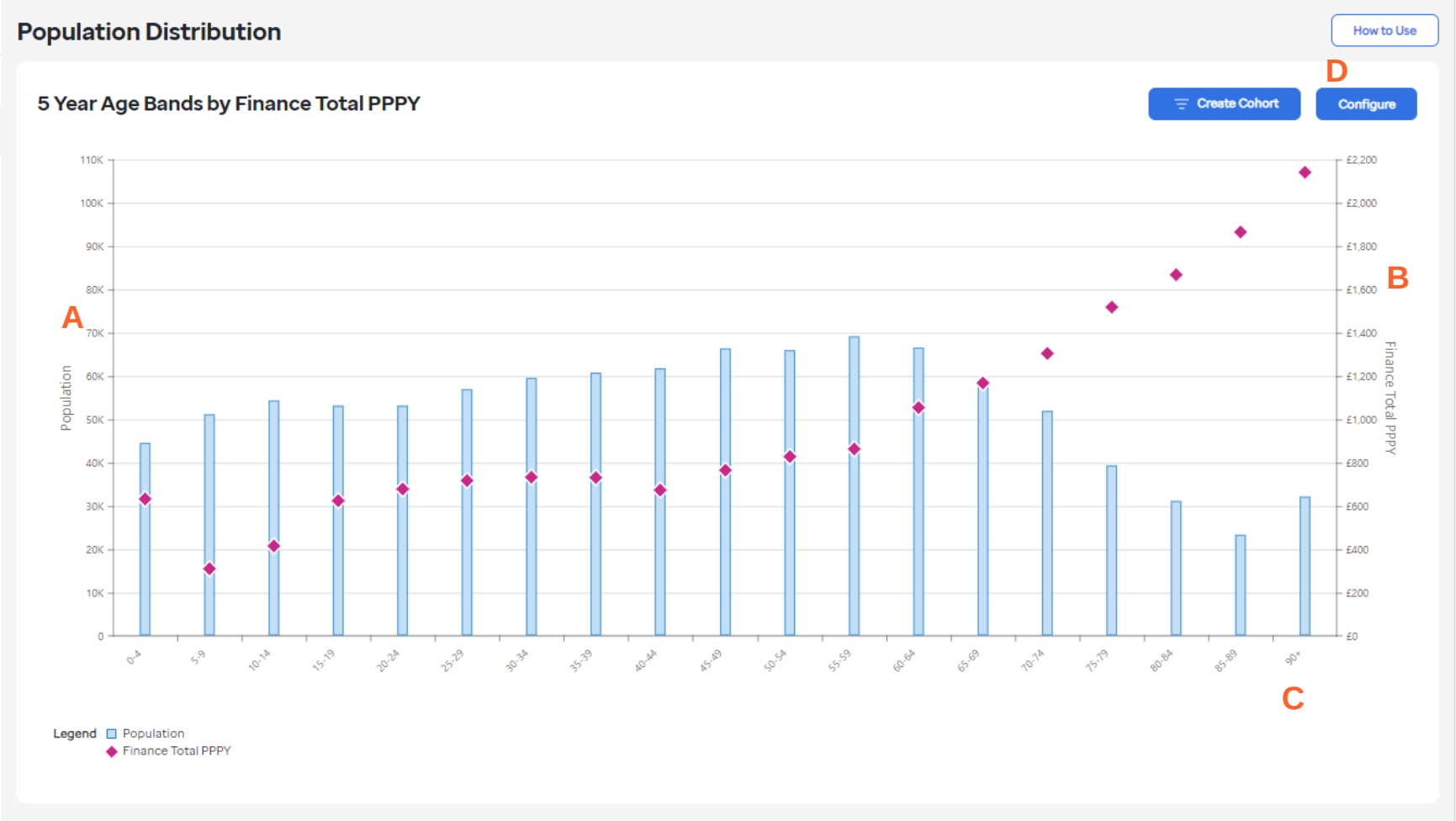
Population A
How many individuals are in this segment represented by the height of the bar and plotted on the y-axis. The hover over will display the exact number.

Characteristic or Outcome B
Choose which characteristic or outcome to display as a pink diamond on the chart which is plotted on the right-hand side y-axis. The height of the shape relates to average value for that segment shown on the righthand y-axis and the hover over will display the exact number for this option and segment.

Segment Model C
Displayed with labels on the x-axis as segments.

Configuration of the Report D
A Segment model and can be chosen via the Configure Panel which will display along the x-axis as segments for comparison. A characteristic or outcome can also be chosen via the Configure Panel using the searchable dropdown.

Example
By default, ‘5 year Age Bands’ is the segment model displayed and 'Finance Total PPPY (per person per year)' is the outcome shown. The height of the bar will always be Population and is not configurable.



Descriptive Analytics: Segmentation

Segmentation is a methodology by which we can understand the composition of specific groups within a population.

Summary

This is the population segmentation view on Pathfinder. Segmentation refers to the process of dividing a population into distinct subgroups based on specific criteria. This allows you to gain better population insights and optimise outcomes.

The “matrix segmentation” allows you to segment the population by considering two different characteristics, such as age, complexity, deprivation, etc., which helps to gain a deeper understanding of specific population groups.

For the specific segments chosen you can see the:

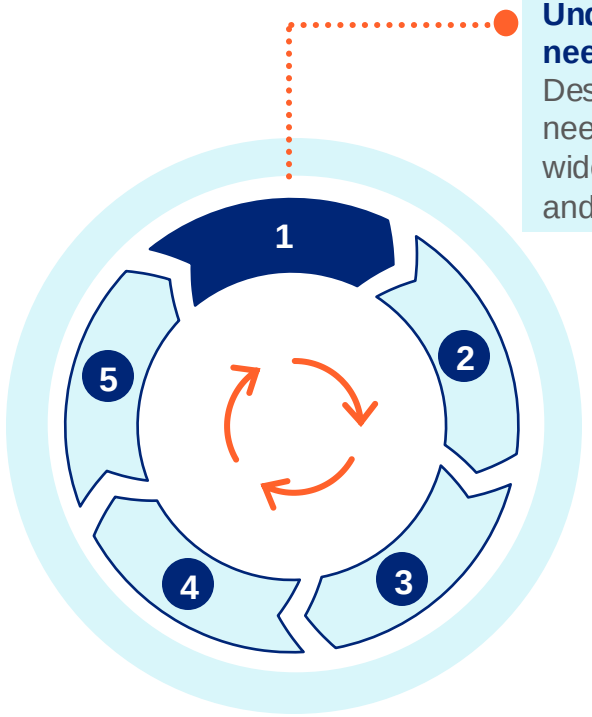
Total number of people for each segment (population)

Total resource utilisation over a 12-month period

Total resource utilisation as a per person per year (PPPY)

Further Resources and References:

[NHS England » Population health management]



Understanding Population Health and care needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.

Descriptive Analytics: Segmentation

Reading the Report

Population A
How many individuals are in the segment.

Finance Total B
Total spend on the population of the specific segment.
Please note that this is the total spend across all care sectors.

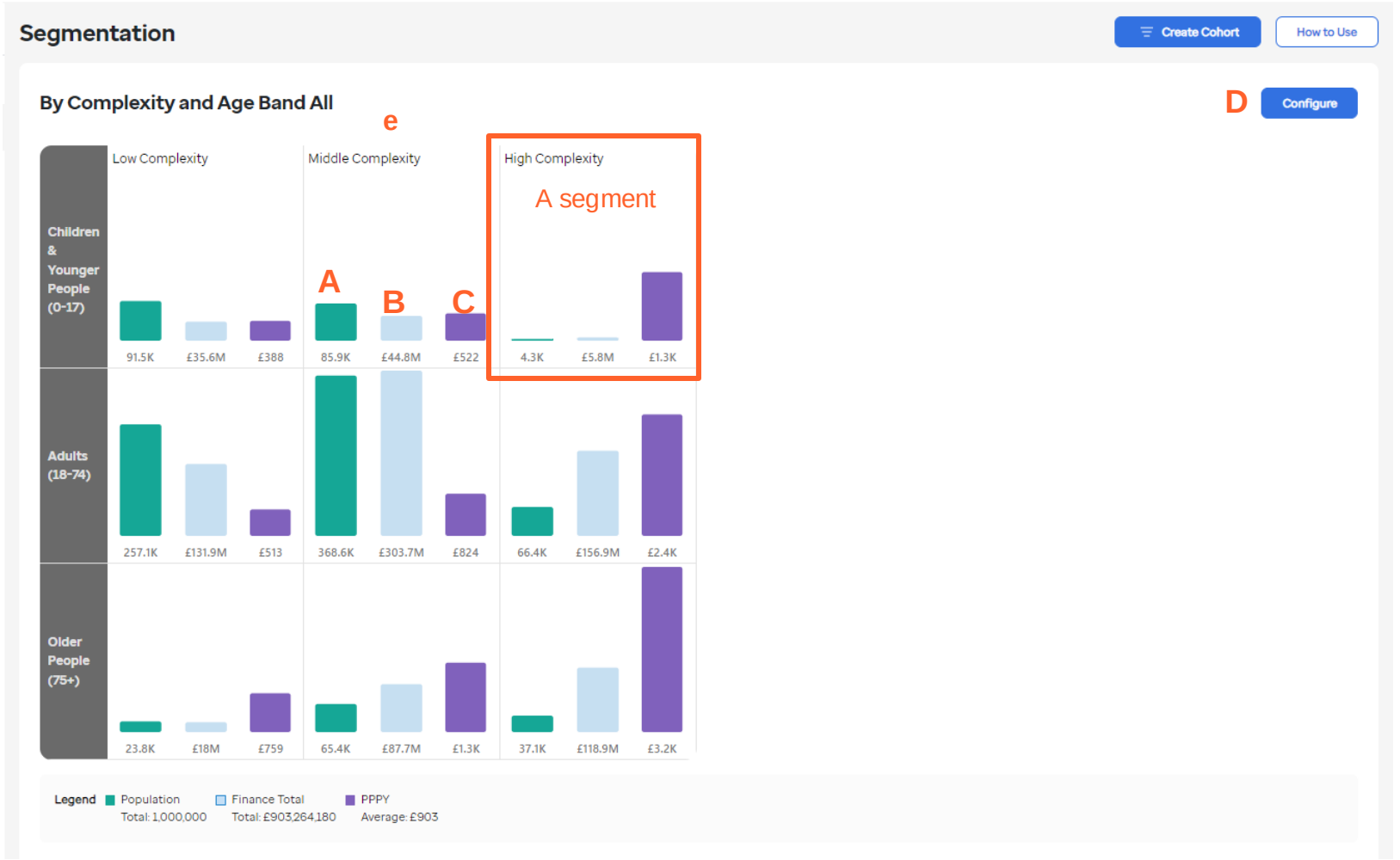
PPPY C
Average spend PPPY (per person per year) for a 12-month period.
Please note that values result from dividing total spend by population.

Configuration of the Report

Up to two segment models can be chosen in the configure panel which you can open by clicking the 'Configure' button **D**.
The chosen segment model will give you the rows (**d**) and columns (**e**) of the matrix.

Example

By default, ‘Age’ and ‘Complexity’ are the two segment models selected. Reading across the bottom row within Older People (75+), we can see that as we move from Low Complexity to High Complexity, the purple Spend PPPY bar grows in height. This shows resource use increasing as people become more clinically complex.



Descriptive Analytics: PHM Dashboard

From the linked data model, we can derive many different metrics by which we can understand our population.

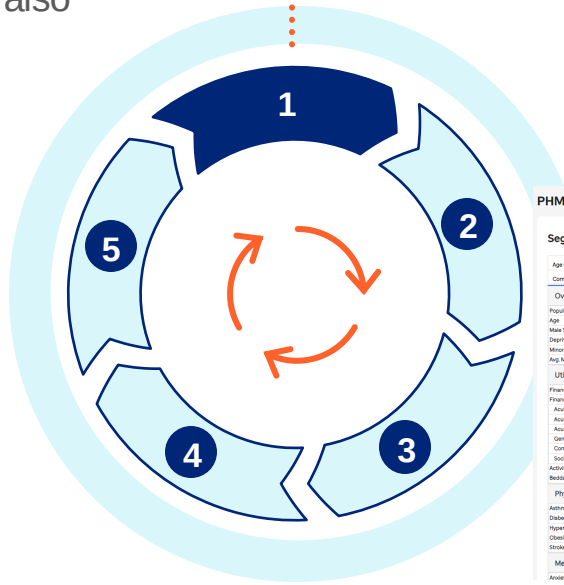
Summary

On the PHM dashboard visual you can compare a specific segment across a specific metric. This allows you to assess in detail your population demographics, outcomes and bio-psycho-social prevalences.

This is an interactive dashboard that you can configure according to your needs.

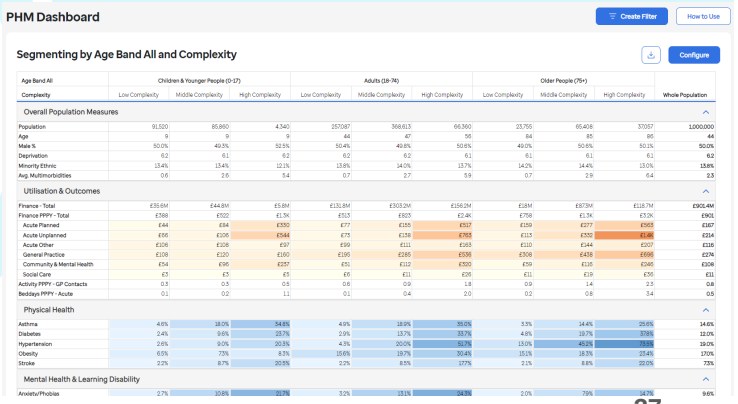
In general, most of metrics on this page are presented as averages, such as average number of A&E attendance within a segment, or average age.

Any with a % sign indicate a prevalence rate - showing what percentage of that segment have been recorded with the relevant indicator. The sections are also collapsible.



Understanding Population Health and care needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.



Descriptive Analytics: PHM Dashboard

Overall population measures

High-level demographic characteristics such as age, gender, deprivation, etc., for a specific segment (column) of the population. **A**

Outcome measures

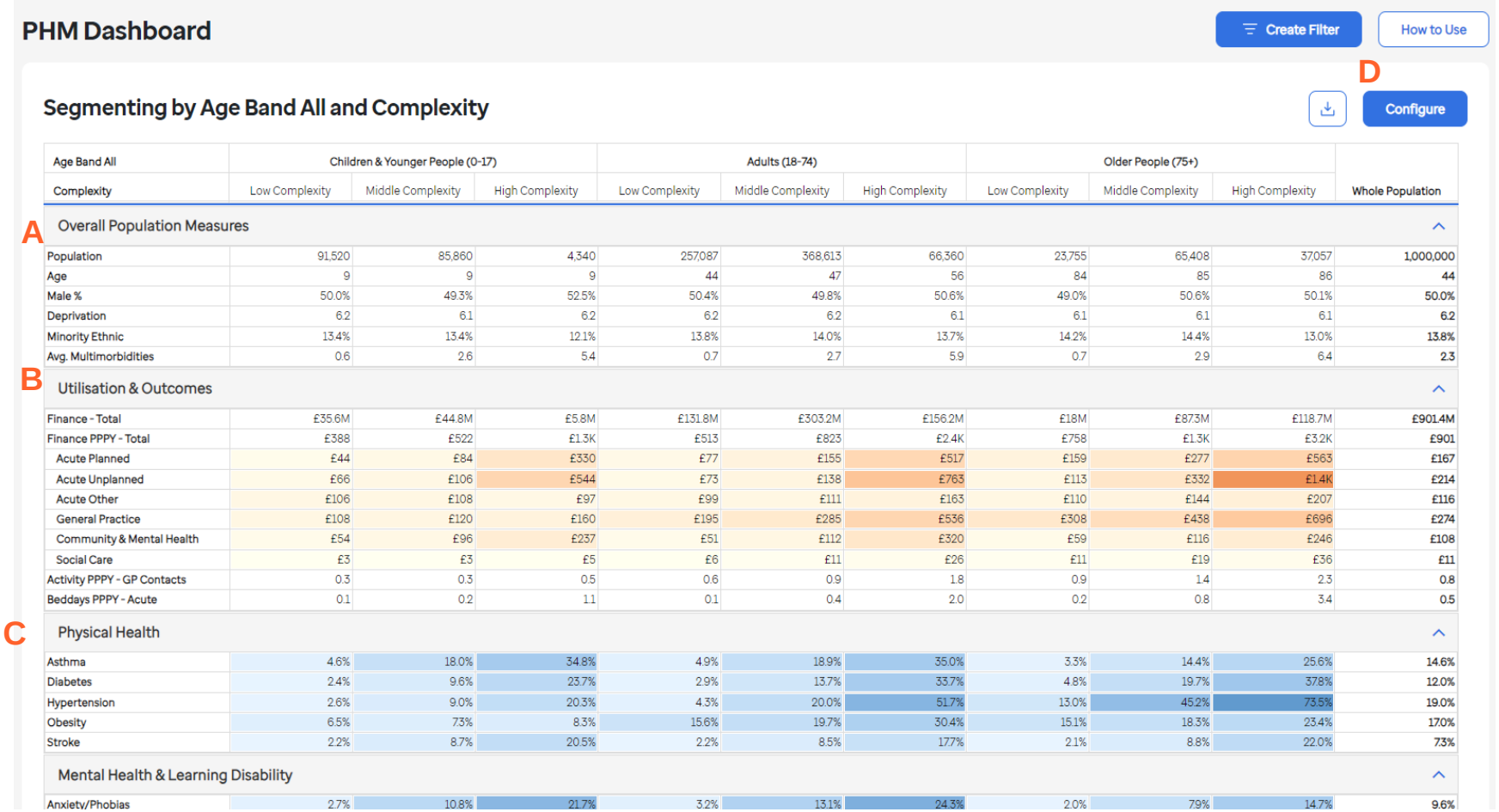
For each specific segment (columns), you can see the average spend or activity for each care sector, such as acute planned, general practice, and social care. **B**

Physical Health, Mental Health and Other characteristics

For each specific segment (columns), you can see the prevalence (in %) for the population that have a specific characteristic. **C**

Configuration of the report

Open the configuration panel by clicking the ‘Configuration’ button. This allows you to completely configure your PHM Dashboard table. **D**



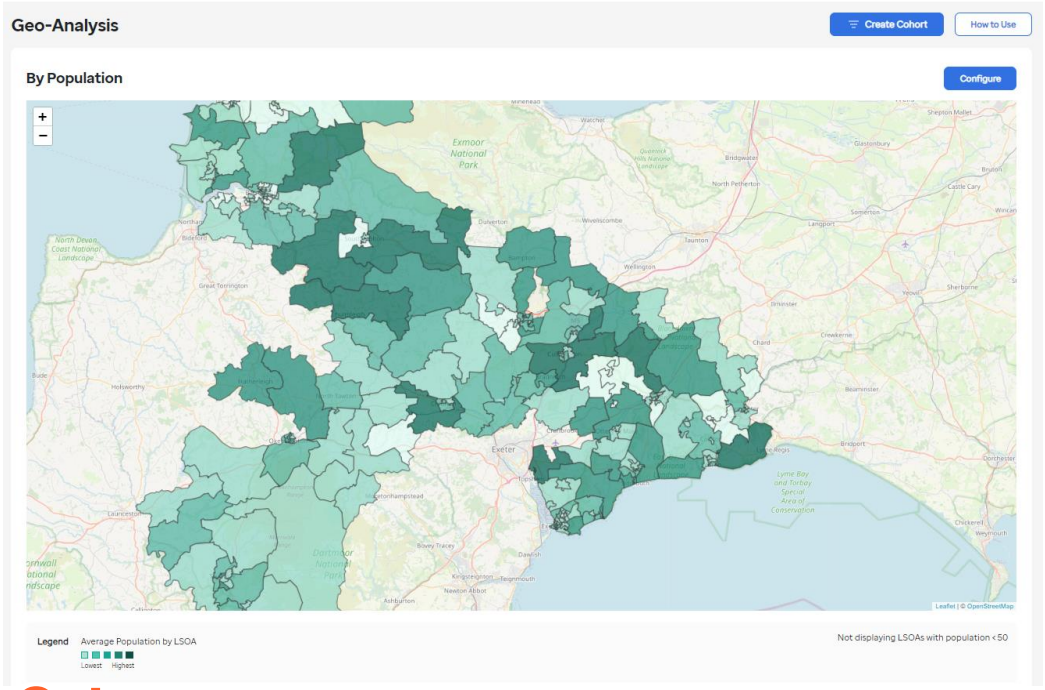
Age Band All	Children & Younger People (0-17)			Adults (18-74)			Older People (75+)			
Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Low Complexity	Middle Complexity	High Complexity	Whole Population
Overall Population Measures										
Population	91,520	85,860	4,340	257,087	368,613	66,360	23,755	65,408	37,057	1,000,000
Age	9	9	9	44	47	56	84	85	86	44
Male %	50.0%	49.3%	52.5%	50.4%	49.8%	50.6%	49.0%	50.6%	50.1%	50.0%
Deprivation	6.2	6.1	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.2
Minority Ethnic	13.4%	13.4%	12.1%	13.8%	14.0%	13.7%	14.2%	14.4%	13.0%	13.8%
Avg. Multimorbidities	0.6	2.6	5.4	0.7	2.7	5.9	0.7	2.9	6.4	2.3
Utilisation & Outcomes										
Finance - Total	£35.6M	£44.8M	£5.8M	£131.8M	£303.2M	£156.2M	£18M	£873M	£118.7M	£901.4M
Finance PPPY - Total	£388	£522	£1.3K	£513	£823	£2.4K	£758	£1.3K	£3.2K	£901
Acute Planned	£44	£84	£330	£77	£155	£517	£159	£277	£563	£167
Acute Unplanned	£66	£106	£544	£73	£138	£763	£113	£332	£1.4K	£214
Acute Other	£106	£108	£97	£99	£111	£163	£110	£144	£207	£116
General Practice	£108	£120	£160	£195	£285	£536	£308	£438	£696	£274
Community & Mental Health	£54	£96	£237	£51	£112	£320	£59	£116	£246	£108
Social Care	£3	£3	£5	£6	£11	£26	£11	£19	£36	£11
Activity PPPY - GP Contacts	0.3	0.3	0.5	0.6	0.9	1.8	0.9	1.4	2.3	0.8
Beddays PPPY - Acute	0.1	0.2	1.1	0.1	0.4	2.0	0.2	0.8	3.4	0.5
Physical Health										
Asthma	4.6%	18.0%	34.8%	4.9%	18.9%	35.0%	3.3%	14.4%	25.6%	14.6%
Diabetes	2.4%	9.6%	23.7%	2.9%	13.7%	33.7%	4.8%	19.7%	37.8%	12.0%
Hypertension	2.6%	9.0%	20.3%	4.3%	20.0%	51.7%	13.0%	45.2%	73.5%	19.0%
Obesity	6.5%	7.3%	8.3%	15.6%	19.7%	30.4%	15.1%	18.3%	23.4%	17.0%
Stroke	2.2%	8.7%	20.5%	2.2%	8.5%	17.7%	2.1%	8.8%	22.0%	7.3%
Mental Health & Learning Disability										
Anxiety/Phobias	2.7%	10.8%	21.7%	3.2%	13.1%	24.3%	2.0%	7.9%	14.7%	9.6%

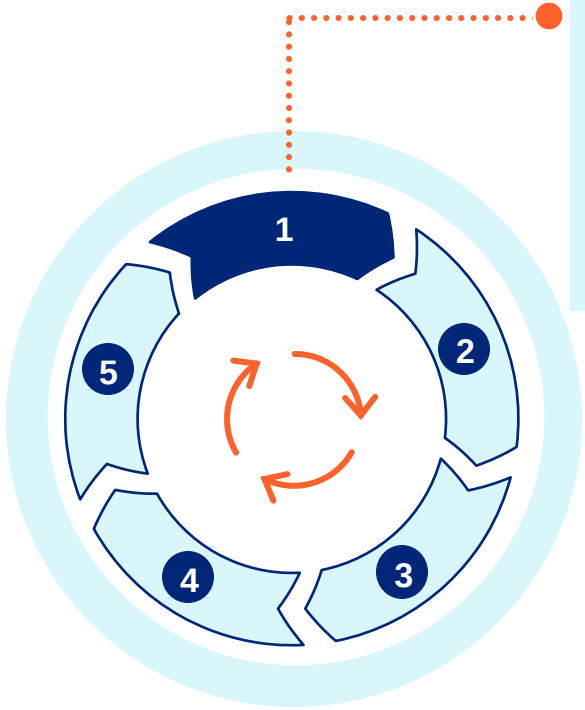
Descriptive Analytics: Geo-Analysis

Geo-analysis allows you to visualise a population on a map and see a comparison of different characteristics across your population by geographic area

Summary

You can see the number of people who live in each area, their average age or level of multi-morbidity, their utilisation or prevalence rate, or any other characteristic.





Understanding Population Health and care needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.

Optum

Descriptive Analytics: Geo-Analysis

Reading the Report

Here you can see each LSOA (Lower Layer Super Output Area) highlighted in a different gradient colour. **A** The gradient colour is shown according to the characteristic or outcome selected and is ordered from low to high as per the legend. **B**

If you hover over an LSOA, a summary will appear. **C**

Configuration of the report

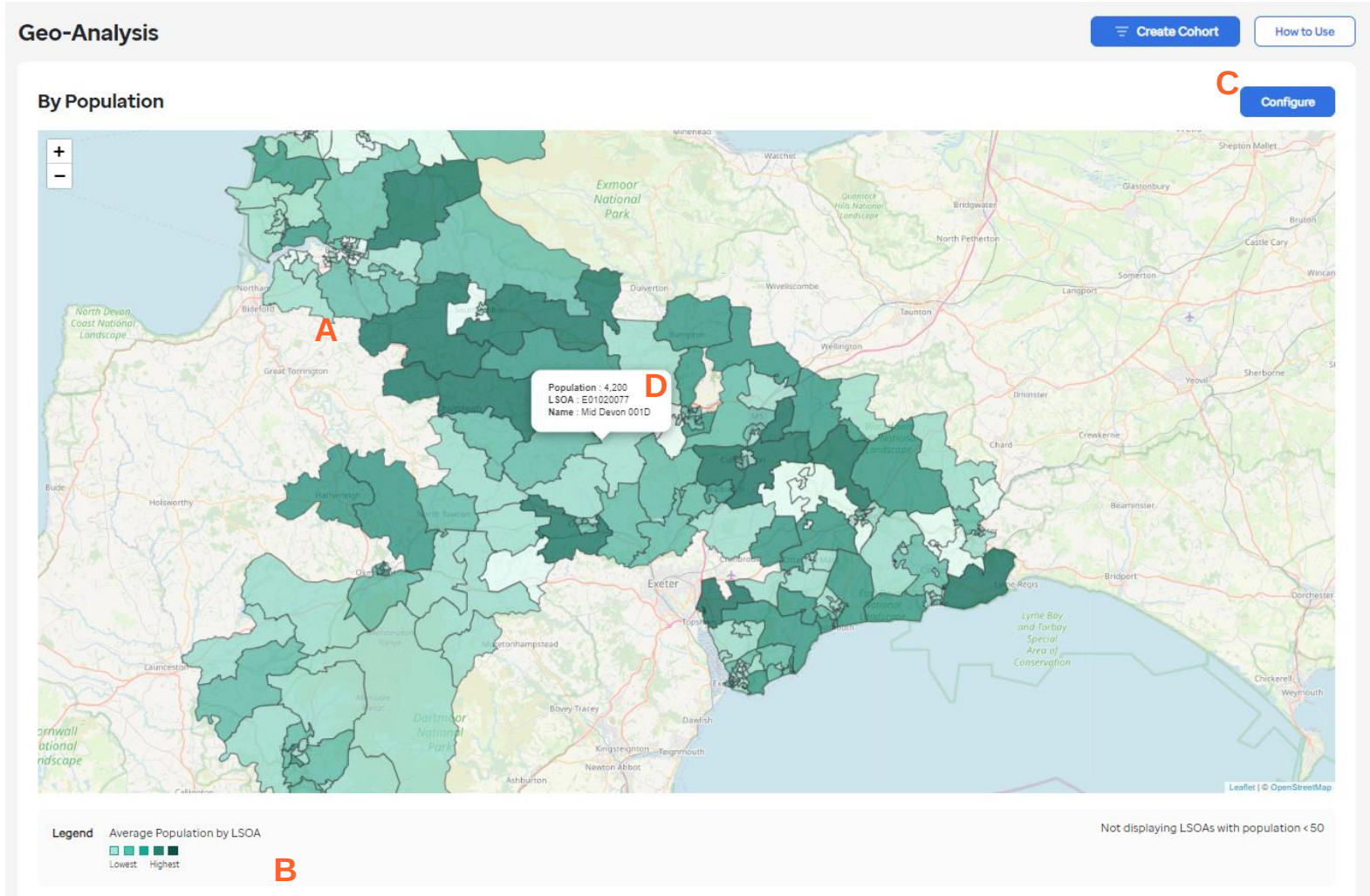
You can choose the characteristic or outcome you are interested in by clicking the 'Configure' button and opening the side panel. **D**

Typically you will visualise average rates, except for “Population”, which is a total.

Utilisation can be visualised by spend or activity.
By default, we hide LSOAs with fewer than 50 individuals and you can also choose whether to display LSOAs with fewer than 6 and fewer than 25.

Example

By default, the map shows Population, the number of people in each LSOA. Those with the highest population shaded the darkest, and those with the lowest population the lightest, as indicated by the legend.
Upon changing the characteristic to LTC Count, the LSOA shading now represents the average number of long-term conditions amongst those individuals who live in each LSOA.

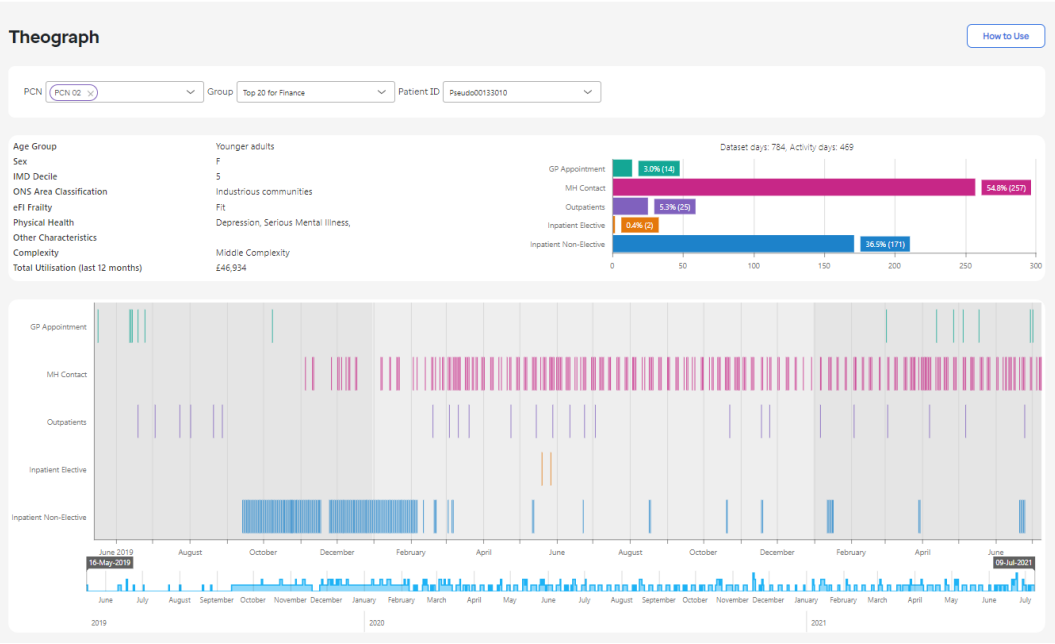


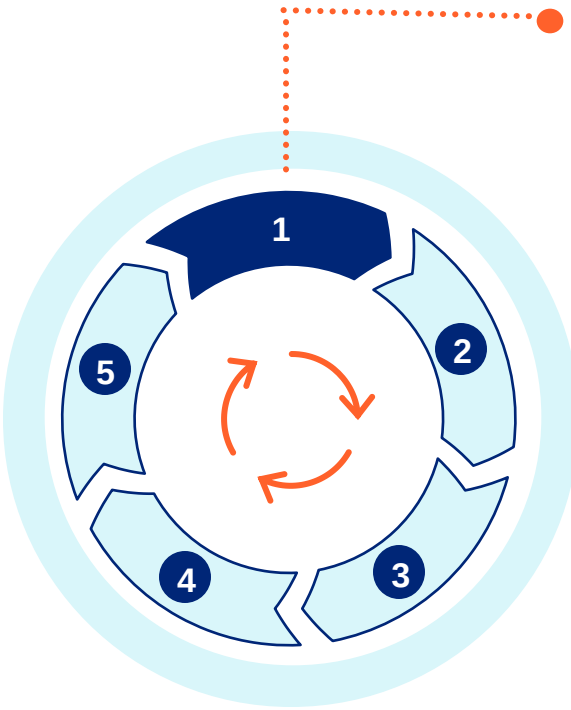
Descriptive Analytics: Theograph

Theographs use the linked data at an individual level, to illustrate a person's journey through health and care services over time.

Summary

This individual level visualisation provides a cross-sector, person-level timeline for historic care delivery.





Understanding Population Health and care needs

Descriptive analytics to understand the specific needs of the local population, the impact of wider determinants and to explore gaps in care and unwarranted variation.

Descriptive Analytics: Theograph

Reading the Report

Individual Summary

You can visualise the main characteristics of the individual selected such as age group, sex, IMD decile etc. **A**

Outcomes Summary Chart

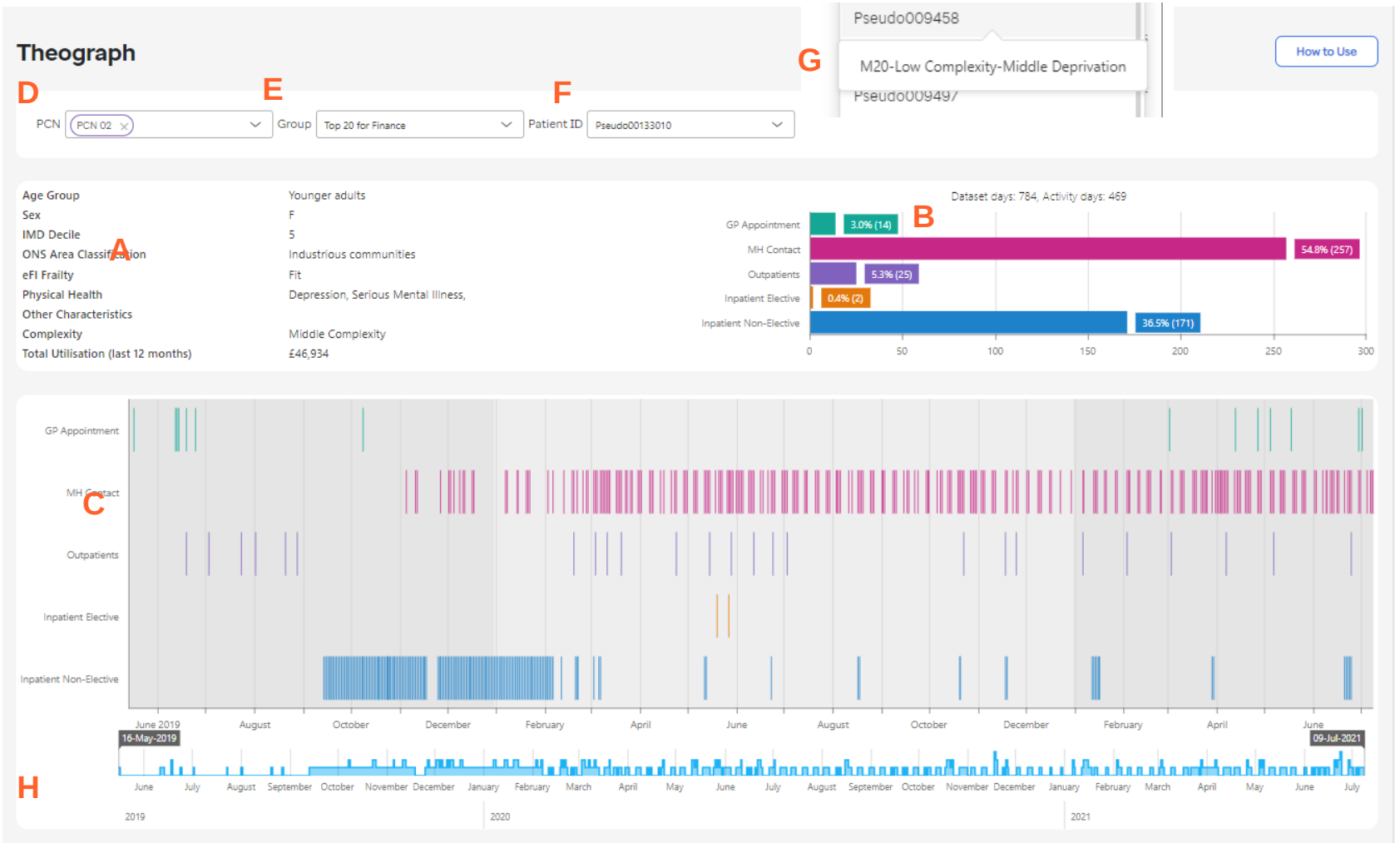
This graph represents a percentage of the resource utilisation by the selected individual across the system **B**

Timeline View

You can visualise the individual's journey through the health and care system over a period. You can see in detail all the interactions the inidividual has had in a specific period across different organisations in the system such as GP appointments, Outpatients appointments, Inpatient Elective, etc. **C**

Configuration of the report

You can select your highest utilisation inidividuals by PCN **D** using the drop down function as well as a group of interest **E** such as Finance total, Beddays, etc.
You can then proceed to the “Patient ID” drop down box where you can select a specific individual **F.** You can see a summary of the person by hovering on the pseudonumber **G**
You can also change the timeline on the longitudinal view by scrolling on the timeline or dragging the start and end points **H**.



Opportunity analysis and targeting

Analytics such as risk stratification and segment models to identify characteristics, and the groups challenged by them.

Diagnostic Analytics: Risk Stratification

Risk stratification involves categorising people into different risk groups based on various factors.

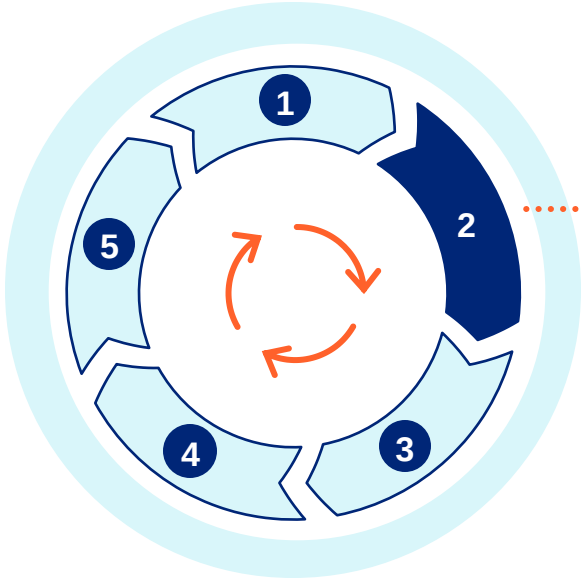
Summary

Pathfinder uses linear regression, hurdle models, decision trees, and statistical tests (such as t-test) to understand the link between characteristics in a population and an outcome of interest (such as activity or finance).

This graph shows the number of individuals with each risk factor and the model's estimate of the associated increase or decrease in the outcome, at a per person, per year level. It shows how much more activity or spend happen on average to a person with a characteristic versus a comparable person without this characteristic.

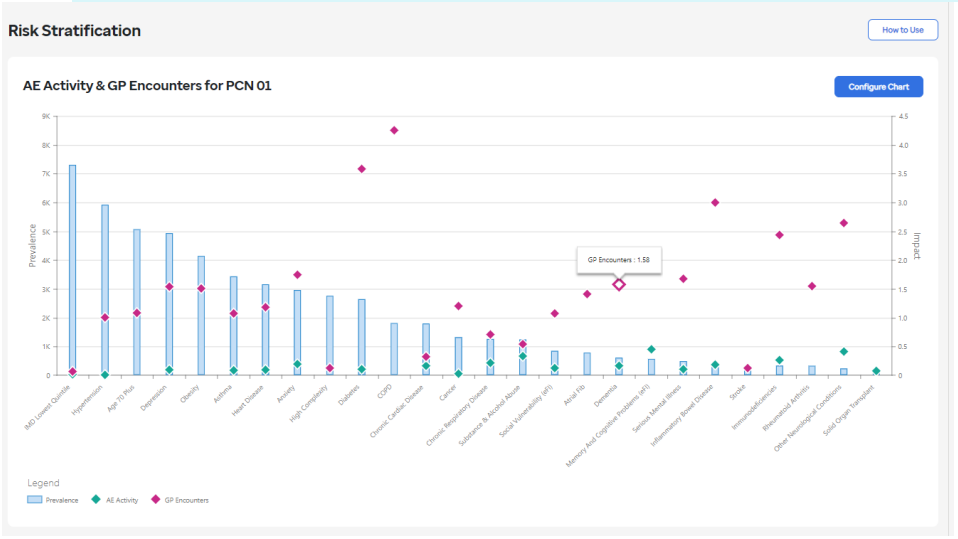
A model is built for each PCN, allowing us to understand that area's unique population and the characteristics that influence the way they access care.

Further Resources: NHS England » Population health management



Opportunity analysis and targeting

Diagnostic analytics such as risk stratification and segmentation models to identify characteristics and the groups challenged by them.



Optum

Diagnostic Analytics: Risk Stratification

Reading the Report

Vertical Prevalence Axis

The blue bars represent the number of individuals in a PCN that have a specific characteristic. **A**

Vertical Impact Axis

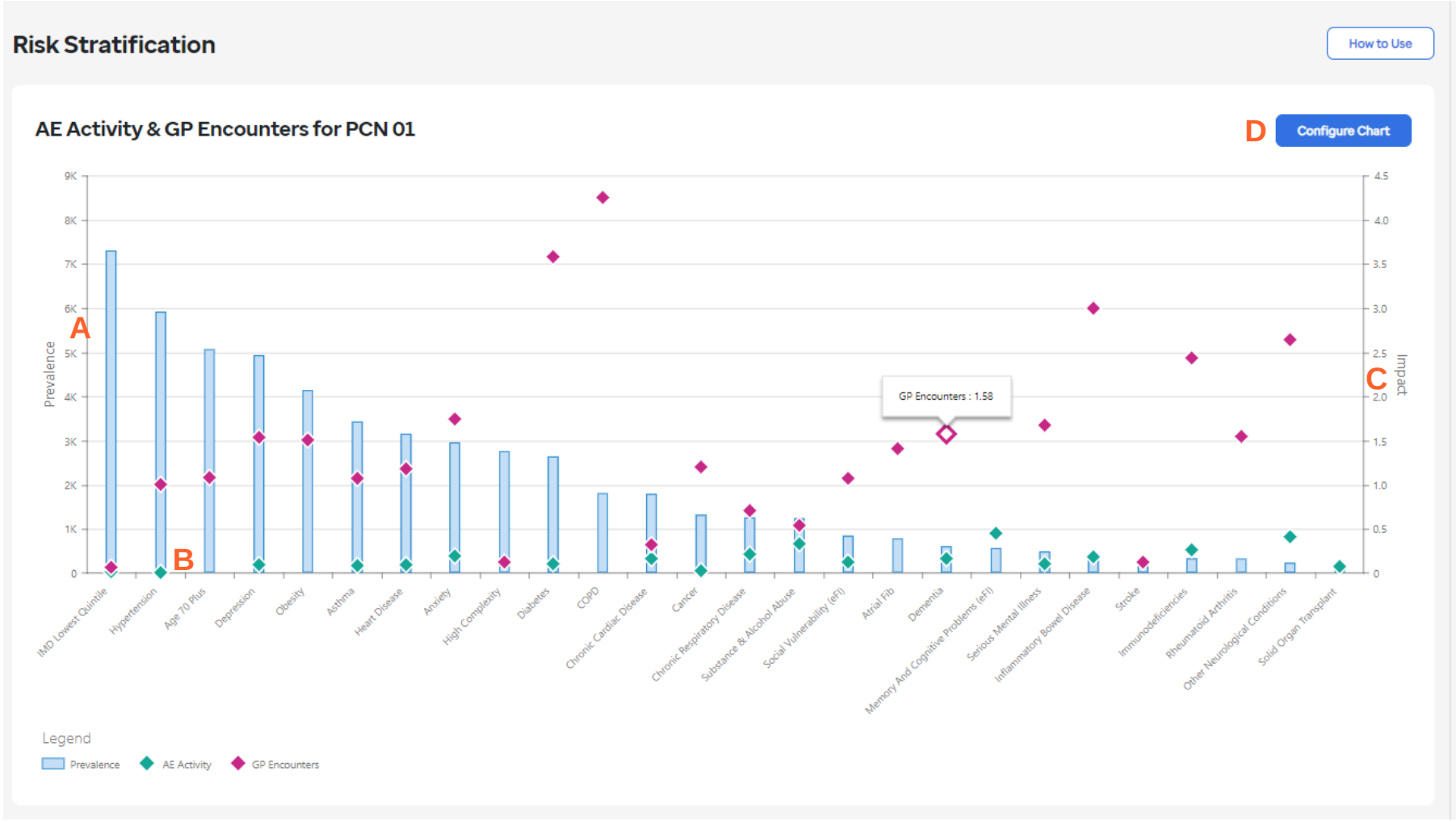
The diamonds on the chart. Each diamond shows the average size of the association between an individual with a characteristic (e.g., Anxiety, Obesity, etc.) and the selected outcome (e.g., A&E Activity, GP Encounters) when compared with someone who does not have the characteristic. The association is expressed as the number of system interactions (e.g., number of GP visits), while for financial spend, the association is expressed in GBP (£). **C**

Configuration of the Report

You can use the "Configure' button on the right-hand corner to open the Configure Chart Panel. Here you can select the specific PCN you want to explore, and the characteristics you want to visualise on the horizontal axis against the impact on outcomes. **D**

Example

Using Anxiety as an example, if A&E Activity has an impact of 3, it means that in the selected reporting period, someone with Anxiety visited A&E 3 more times on average compared to someone without Anxiety. If, for example, Diabetes is also found to have an impact of 3 on A&E Activity, information on prevalence may help decide on which condition to intervene. If Diabetes has a prevalence of 10,000, while Anxiety has a prevalence of 3,000, intervening on a Diabetes subgroup may reduce A&E attendance by a greater number than intervening on a subgroup with Anxiety.



Diagnostic Analytics: Risk Benchmarking

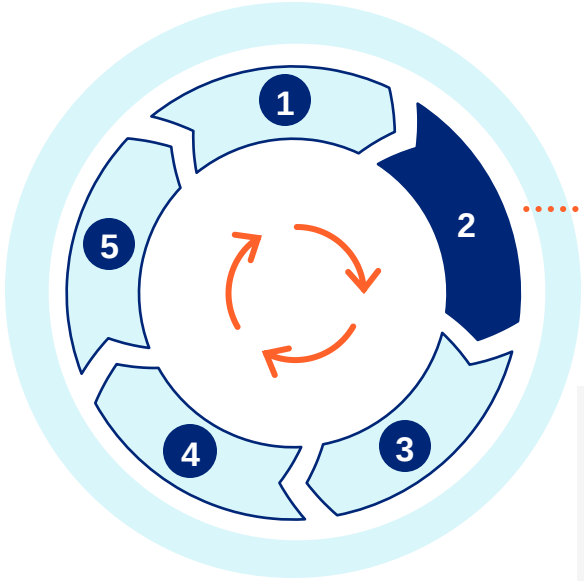
Risk Benchmarking is a method of comparing the importance of population characteristics and the impact on outcomes across an area, by organisation.

Summary

Using the risk stratification models, we can compare increases or decreases in activity associated with particular characteristics and look for areas of commonality or outliers.

Those areas of similarity may be where characteristics act on PCNs in a consistent way and systemic action can resolve this; conversely, we can see where there are differences and some PCNs are outliers, and tailored interventions might be the solution.

The impact between characteristics and outcomes (in activity or spend) for each selected area (e.g., PCN) can be visualised and is expressed as the average change per person per year.



Opportunity analysis and targeting

Diagnostic analytics such as risk stratification and segmentation models to identify characteristics and the groups challenged by them.

Diagnostic Analytics: Risk Benchmarking

Reading the Report

Diamonds

The diamonds **A** on the chart represent, for a single PCN, the size of the impact of a characteristic (e.g. Anxiety, Social Vulnerability, Obesity, etc.) **B** on the selected target (activity or spend). Within a PCN, this can be interpreted by the average change per person with the characteristic, compared to not having the characteristic.

Vertical Axis

Here you can see the impact of a characteristic when compared to an individual that does not have the same characteristic. **C** For measures of activity, the impact is expressed as the number of system interactions (e.g., number of GP visits), while for financial spend, the association is expressed in GBP (£).

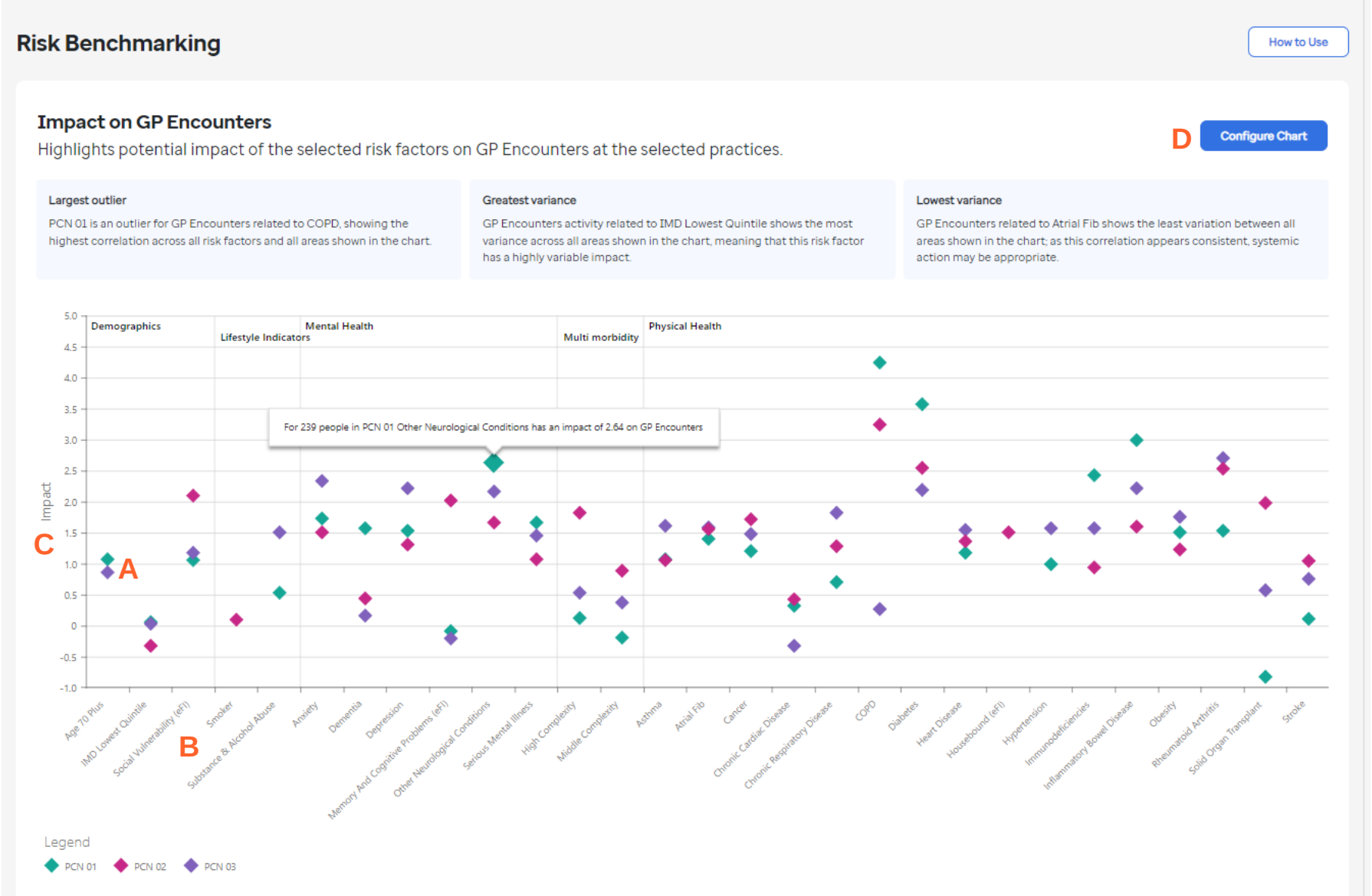
Horizontal Axis

Here you can see all the bio-psycho-social characteristics.

Configuration of the report

You can use the “Configure” button in the right-hand corner to open the Configure Chart Panel. Here, you can select the characteristics you want to visualise on the horizontal axis, the impact metric on activity or spend, and the PCNs you would like to perform benchmarking.

D

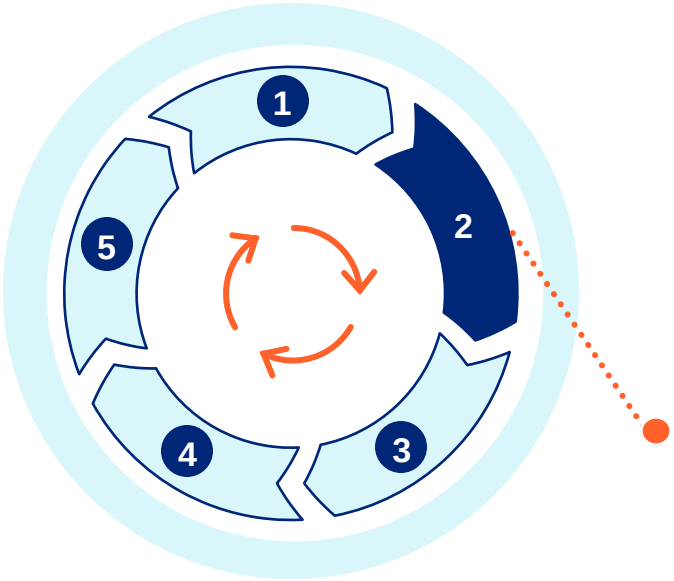


Diagnostic Analytics: Comorbidity Matrix

This visual allows you to view the overlap in comorbidities across your population, in the 'bubble matrix' format.

Summary

Each circle represents the % of individuals with a characteristic, that also have another specific characteristic.



Opportunity analysis and targeting
Diagnostic analytics such as risk stratification and segmentation models to identify risk factors and the groups challenged by them.

Optum

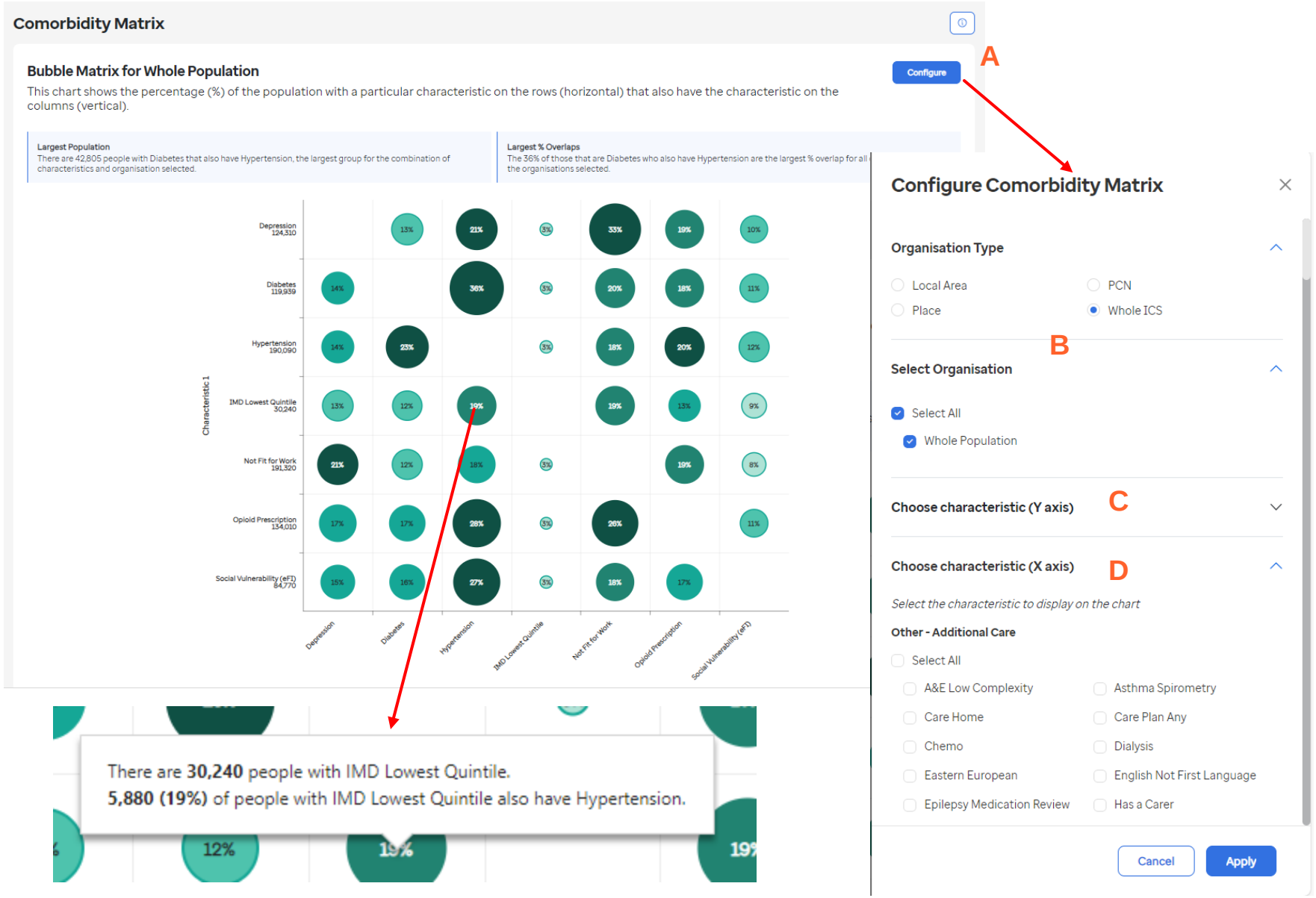
Diagnostic Analytics: Comorbidity Matrix

Reading the Report

Each circle represents the % of individuals with a characteristic, that also have another specific characteristic. By tracking where the row characteristic intersects with a column characteristic the presented circle indicates the percentage of people with the row characteristic who also have the column characteristic. The colour and size of the circle are also proportionate. You can also mouse over to see more details including number of people.

Configuration of the report

You can use the “Configure' button **A** on the right-hand corner to open the Configure Panel. Here you can select the Organisations **B** for which you want to view the comorbidities for, as well as the row (Y axis) **C** and column (X axis) **D** characteristics.



Active monitoring and rapid improvement

Whole system impact assessment to measure net impact on population groups (utilisation, cost, outcomes and experience).

Evaluation

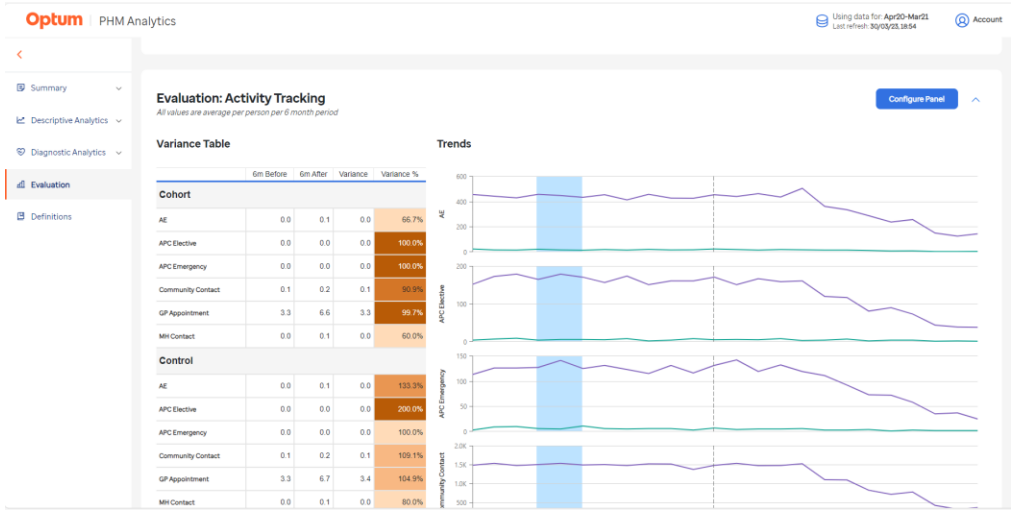
You can use this page to assess the impact of an intervention.

Summary

By selecting populations who have received an intervention, and a similar population that has not received an intervention, you can track the utilisation and outcomes of these cohorts over time to build a strong picture of the effectiveness of these interventions.

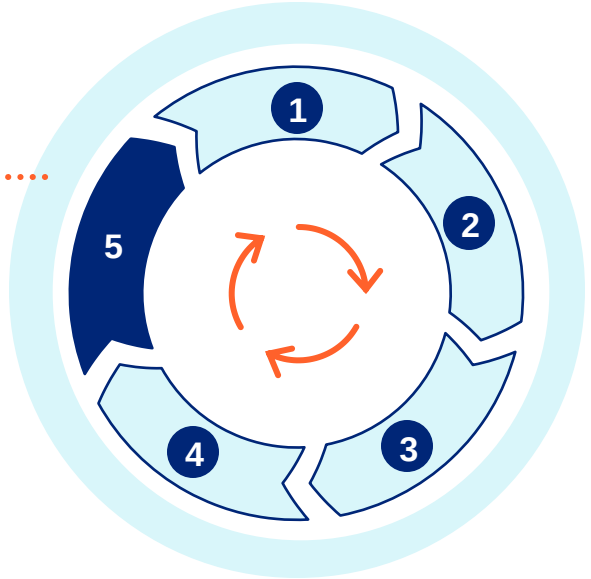
This module allows you to select intervention groups, control groups, and track the utilisation and clinical outcomes before and after the intervention.

Hypothesis tests are applied to assess the statistical significance of any movements.



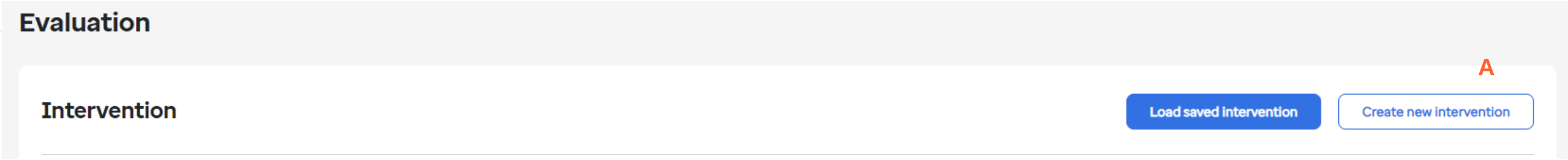
Active monitoring and rapid improvement

Whole system impact assessment to measure net impact on population groups (utilisation, cost, outcomes and experience).

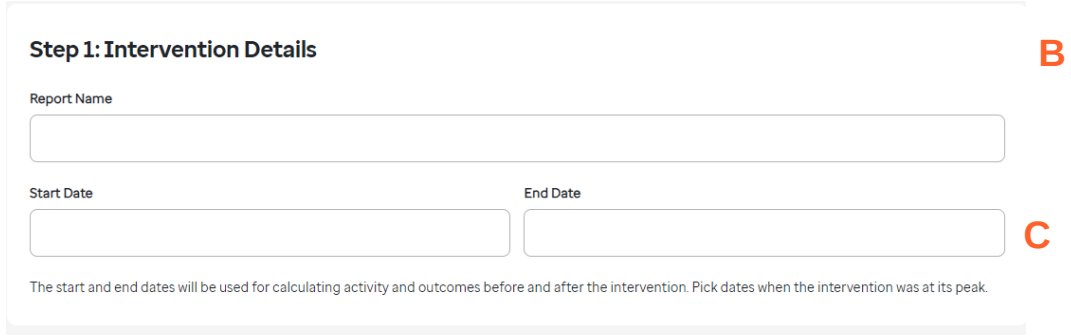


Evaluation: Create Intervention

Choosing populations who have received an intervention, an appropriate control group to use as a comparator, and when the interventions occurred, is essential for evaluating the effectiveness on any intervention.



Navigate to the Create Intervention page **A** and follow the steps below



Step 1: Intervention Details

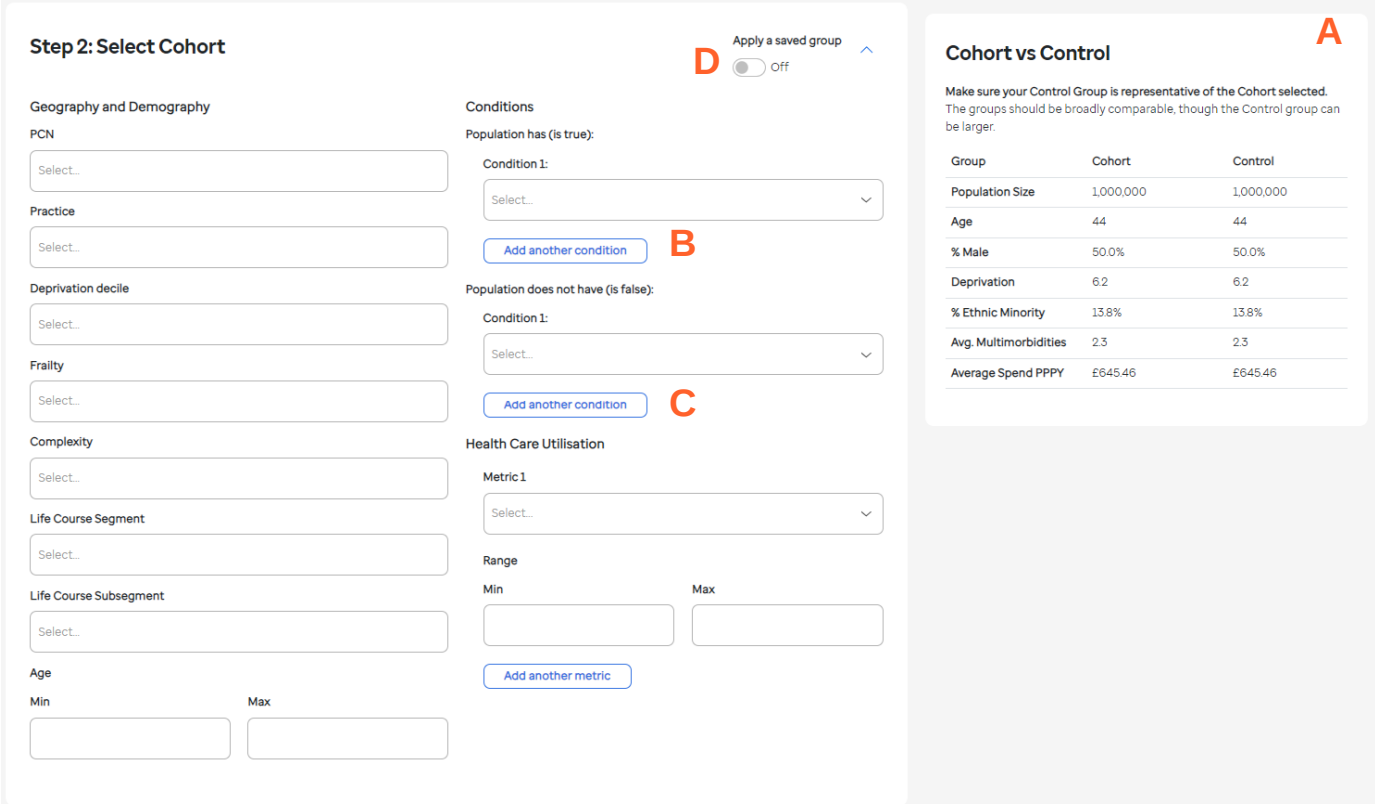
Give your intervention a memorable and descriptive name **B** that will appear on your dashboards and allow you to re-load at any time to track progress. Pick the date the intervention started and finished **C**. Not all interventions will occur on the same day but try and pick the period of 1 – 3 months when most of it was delivered.

Evaluation: Create Intervention

Selecting your cohort and control

Select Cohort

Use the cohort builder tool to select the group that the intervention has been targeted at. As you build your cohort, As you build your cohort, observe the table in the top right to see how many people you have selected, and what their broad demographic breakdown is **A.**
You can filter by Geography and Demography Factors, Age, Characteristics and Utilisation and Outcomes.
On the right, filter by additional characteristics by clicking 'Add another characteristic' **B** or filter by those that do not have a characteristic by using the 'Population does not have (is false)' dropdown. **C**
You can also 'Apply a save cohort' **D** , which will provide a list of cohort saved using the 'Save chart' functionality.
A cohort will often be delivered in a specific geography (e.g. PCN, Practice, etc), and people with certain criteria (e.g. Severely Frail patients with Cardiovascular Disease). Use the cohort builder to narrow down to these groups accordingly.
The 'Utilisation and Outcomes' options can be used to select users who have been frequent users of health services in the past year.



Select a Control

Use the cohort builder in the 'Step 3: Select Control' Panel to find your control group.
Often the most natural control group has the same criteria (e.g. Severely Frail patients with Cardiovascular Disease), but in a neighbouring geography where the intervention has not been implemented. It is often sensible to pick ALL other geographies – this will generally create a larger control group than the intervention cohort, but this is statistically fine and adds power to the calculations.
After Cohorts and Controls have been selected, review the table on the right to check they look comparable (there is more functionality on the main Evaluation page to help confirm this), and then click the Save button at the bottom.

Evaluation

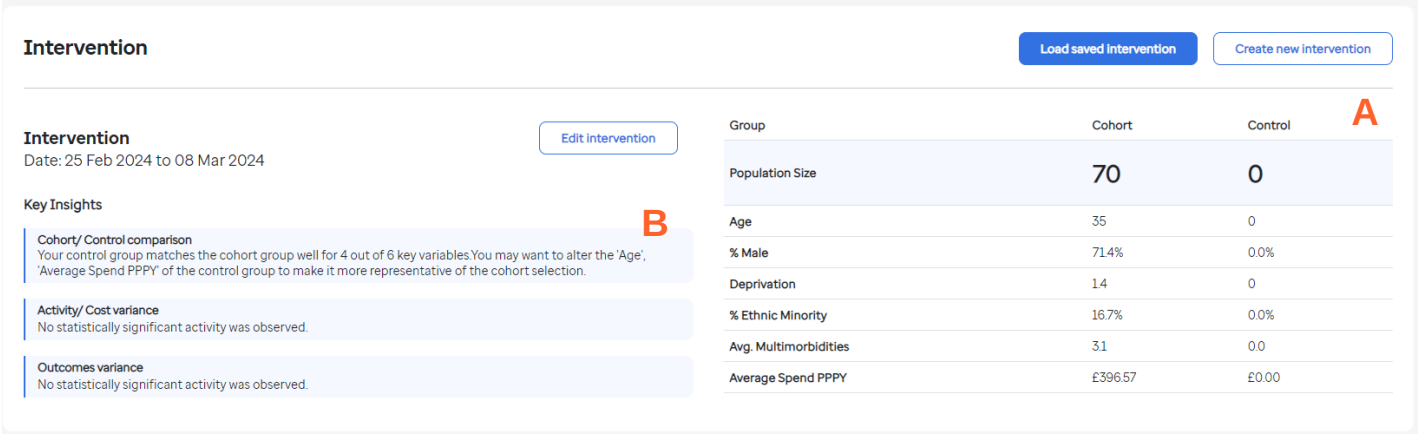
Cohort and Control summary table A

In general, most of characteristics on this table are presented as averages, such as average spend, or average age. Ideally, the cohort and control columns should be similar, which is a good indication that the groups are comparable. The main exception to this rule is population size – it is not essential for the two cohorts to be equally sized, as all values elsewhere in the report are calculated as averages.

Key Insights B

The similarity of the cohorts is also assessed in the first Key Insight box – Cohort/Control comparison. This tells you how many of the characteristics are statistically well matched. If they are not well matched, it may be necessary to adjust the makeup of your control group to make it match the intervention (cohort) group better (e.g. use the cohort builder to make it older, or more deprived).

The Utilisation variance and Outcomes variance Key Insight boxes both use t-tests to determine whether there has been a statistically significance change before and after interventions in the Cohort group compared to the Control group.



Evaluation: Utilisation Tracking

This panel shows you how Activities have changed over time for your Control and Cohort before and after your intervention

Configuring the Report

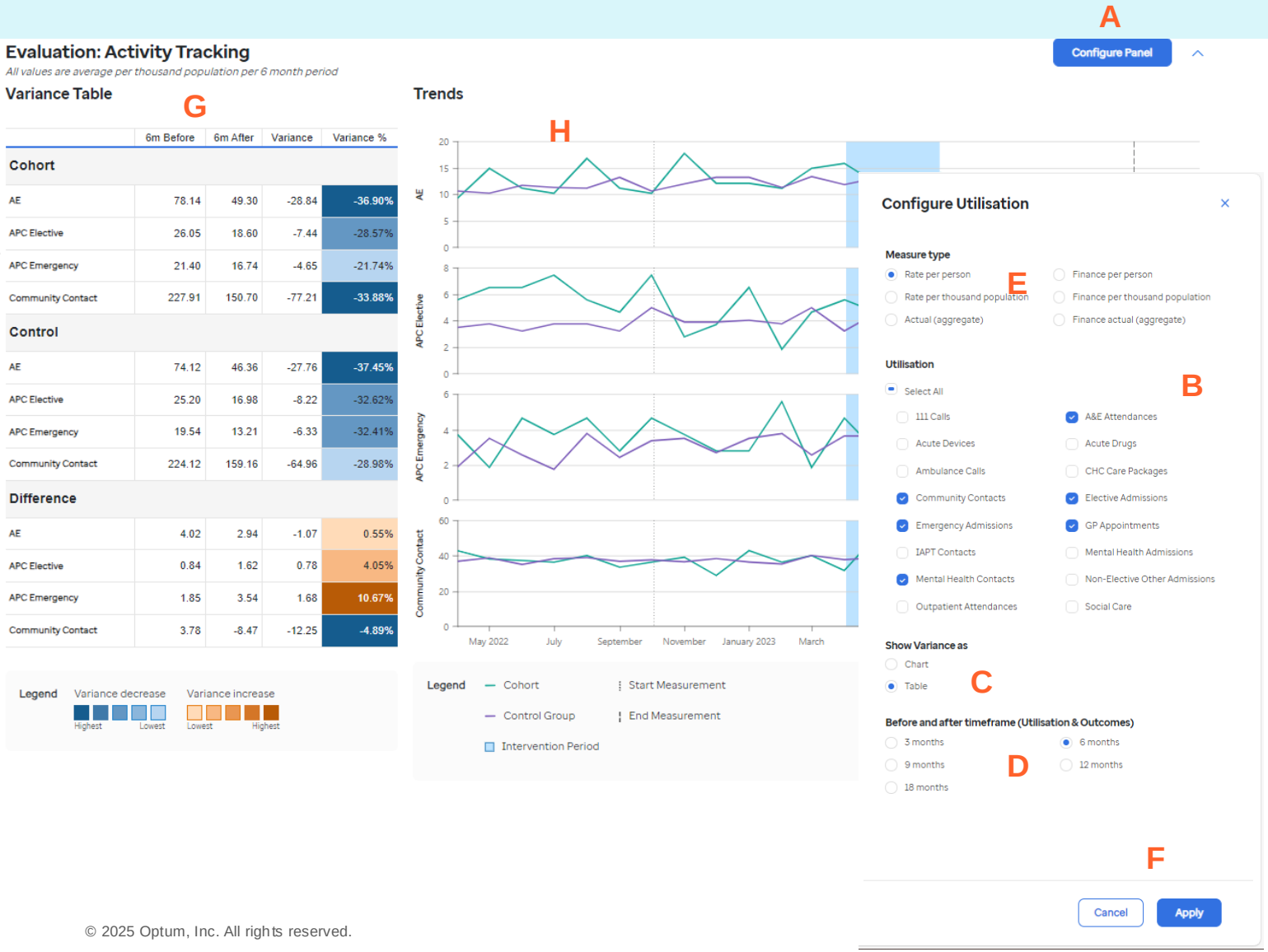
Open the Configure Panel by clicking the 'Configure' button **A**.
Here you can select the activity or spend you would like to see on the variance and trends chart **B**
You can also switch between a variance chart and table **C** and select for which timeframe you would like the trends chart to display, which also impacts the variance calculations. **D**
You can also choose whether to display the measures as activity/ finance per person, activity/ finance per thousand population or activity/ finance actual (aggregate). The best measure might depend on your data. **E**
If you select Finance, you will also see a total row for both cohort and control which will be the sum of the utilisation selected. The values are rounded to the nearest GBP so if a difference calculation looks incorrect by a value of 1, please be assured this is a nature of the rounding, if you hover over you will see the value to the nearest pence.
Remember to click Apply before closing the panel to see your changes applied. **F**

Variance Table

The Variance Table **G** shows for each activity or spend characteristic, the number of contacts or cost per person per timeframe, before and after the intervention. It also shows the difference in these averages, and what percentage change this represents. The top table is for the cohort group, and the middle is for the control group, and the bottom table is the Difference between the cohort and control group.

Trends Graph

The Trends graph **H** on the right is a time series showing the trends for both cohorts for the full extent of the data available, for each activity or spend characteristic. The blue shaded area is the time when the selected intervention took place, and the dashed lines represent when the measurement period for the table started and finished. It is important to visually look for changes and trajectories after the blue shaded area and the seconded dashed line. This will be where the impact of the intervention is



Evaluation: Outcomes Tracking

This panel shows you how Outcomes have changed over time for your Control and Cohort before and after your intervention

Configuring the Report

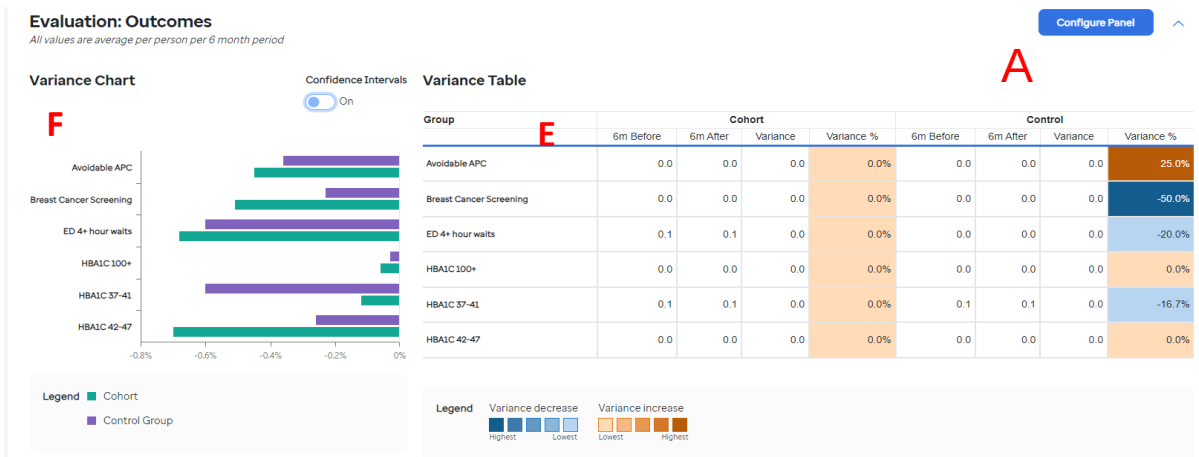
Open the Configure Panel by clicking the 'Configure' button **A**.
Here you can select the measure type (Rate per person, rate per thoursaund or actual (aggregate). **B**
You can also select the outcomes you would like to see on the variance Chart and Table **C** select for which timeframe you would like the trends chart to display, which also impacts the variance calculations.
The timeframe and you have selected of the Utilisation panel, applies to the outcomes automatically.
Remember to click Apply before closing the panel to see your changes applied. **D**

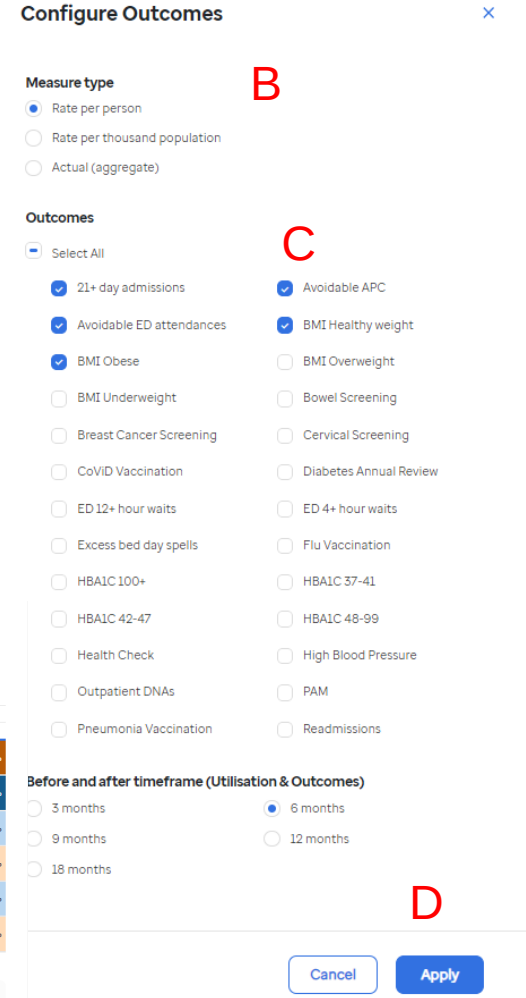
Variance Table E

The Variance Table on the right shows the number of clinical outcomes per person per timeframe. The variance field shows if things have increased or decreased in terms of volumes, and the variance % field shows the proportionality of this. It also shows the difference in these averages, and what percentage change this represents.

The Variance Chart F

The Variance Chart to the left represents the Variance % field of the table in a graphical format. Bars flowing to the left represent decreases, and bars flowing to the right represent increases. It is important to look for differences between Cohort and Control as this represents the possible impact of your intervention.





Next Steps

Next Steps

Coaching & handover sessions, query collation, and PHM Pathfinder focus sessions

1

Orientation sessions

Once a majority of the group have access, virtual handover sessions will be held to get everyone started

2

Focus Sessions

Focus sessions will dive into the detail on specific topics e.g., the data process, specific analytical approaches and/or the data science used

3

Ongoing Feedback

Throughout, we welcome feedback and ideas on how to develop this tool further and support your use cases

Optum

FAQs

FAQs

Please read the following frequently asked questions (FAQs):

1

What if I haven't received an email?

A) Please check with your Implementation lead that you were on the user list sent to Optum. If not, please request access through them in the first instance

B) The email invite will come from UHGUKAzure and a Microsoft email as below*. Please check your junk mail, if you still cannot find it, please contact the Customer Service Desk (please see slide 16)

*

2

How do I request access for a colleague?

Ask your Implementation Lead to send additional user details to the Customer Services Desk (please see slide 49)

3

What if I can't make *any* of the sessions?

Ask your Implementation Lead to record the session so you can catch up on valuable material later

4

What if I have further questions?

Send your query to the Customer Services Desk (please see slide 49) who will be happy to help you

Optum

Get in Touch

Get in Touch

if you have any questions or queries

Please contact:

Who: **Customer Service Desk**

Email: customerserviceuk@optum.com

Telephone: **02476 214 700**

Available: **Monday to Friday, 8am to 6pm**