

How to use Power BI

April 2024



1. Background

- Power BI is a business intelligence/reporting tool sold by Microsoft. It allows the creation of three types of visualisation:

Visualisation	Description
Report	A multi-page asset containing various representations of the data. A report can contain multiple screens / tabs.
Dashboard	a snapshot of the data containing various visuals that have been "pinned" from other reports or built for the dashboard. A dashboard can only take up one screen / tab.
App	A packaged collection of reports and dashboards that is made available through the organisation library in Power BI or automatically pushed to the users personal "My Workspace" area.

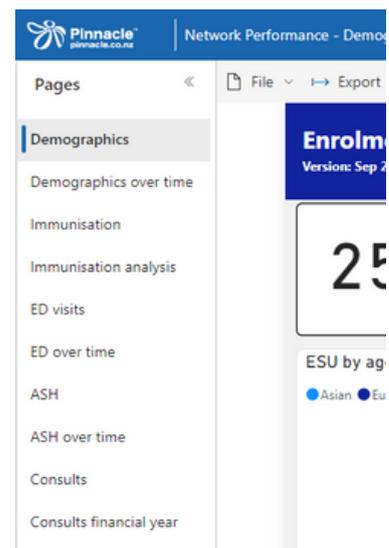
- Power BI Reports can be viewed through either a Browser; Internet Explorer / Chrome / Edge / Safari / Firefox are all supported though there can be some small differences in functionality between them; or using the Windows / Apple / Android Store, Power BI App. These are convenient if you use a mobile device.
- Note: The most complete experience is available when using a browser.

2. Access

- If you are a Pinnacle staff member, your Power BI credentials are the same as the credentials you use to sign in to your computer. You should simply be able to navigate to Power BI and will be logged in automatically.
- If you are external to Pinnacle, we may have shared some content with you. You can continue to use your usual organisation credentials to log in to Power BI, where you can access that content.

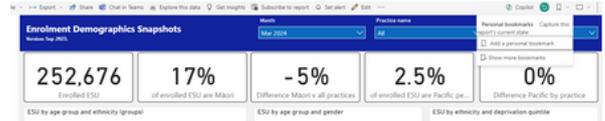
3. Navigation

- Most Pinnacle Power BI content is published as an App. You can access your Apps via the menu on the left-hand side of the screen. Click on the App you wish to open.



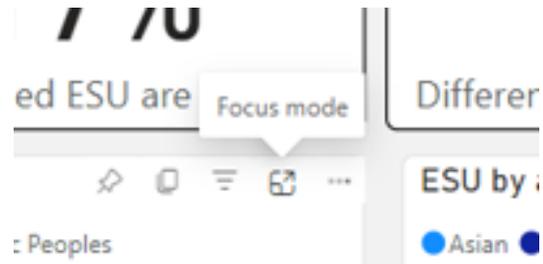
4. Bookmarks

- All our Power BI Apps come with a wealth of filters, so you can get to the data that you need to see. Sometimes it can be handy to save these settings, so that you can get a refresh of a particular view you are interested in.
- When you have set the right combination of filters, all you need to do is click the 'Bookmarks' button in the top menu bar, then choose 'Add a personal bookmark'.
- Once you've set your bookmark up, you can choose some further options - such as whether or not to make it the default for this App, or whether to rename it - by clicking on the ellipsis next to the bookmark name.



5. Focus

- Focus mode is a way to zoom in on a particular visual so it fills the screen, and you can see it in more detail. Every visual can be accessed in this way. Simply use the visual menu as described in the previous section, by hovering over the visual. But - instead of clicking the ellipsis - choose the icon to the left to use Focus mode.
- The chosen visual will now take up all of the screen. You can interact with the filters as usual.

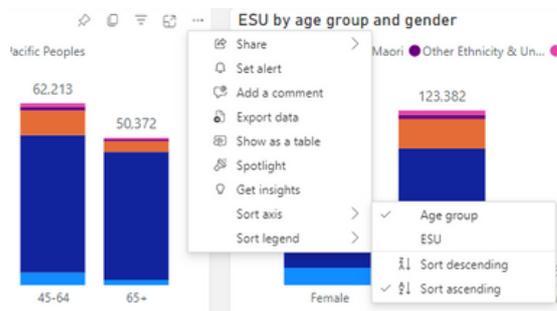


When you've finished, you can click 'Back to report' to return to the regular view.



6. Sorting

- Another useful tool is 'sorting'. Click the 'Sort By' options in the drop-down menu on any appropriate visual to change the way the chart or object is sorted, either by a measure, largest to smallest (and reverse) or by a dimension value (alphabetic order, or reverse).



7. The data behind the visuals

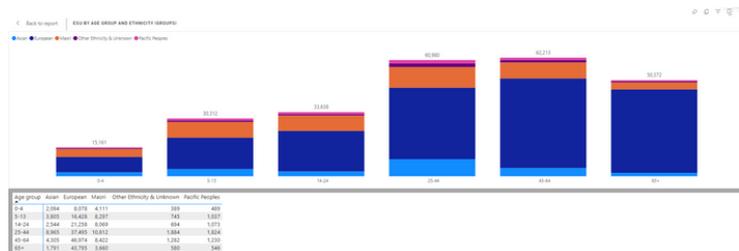
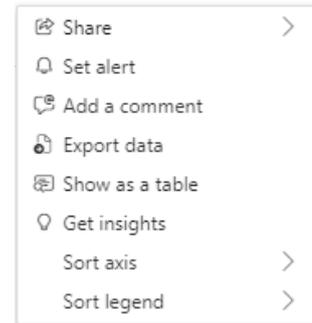
Sometimes you might need to access the data behind a visual. This can be done two ways:

Show data

For most (but not all) visuals, you can use the visual top-right menu and choose 'Show as a table'.

Doing this will put the visual in 'Focus mode', with a data table underneath it.

As we saw in 'Focus mode', you can click 'Back to report' to return to the regular view.



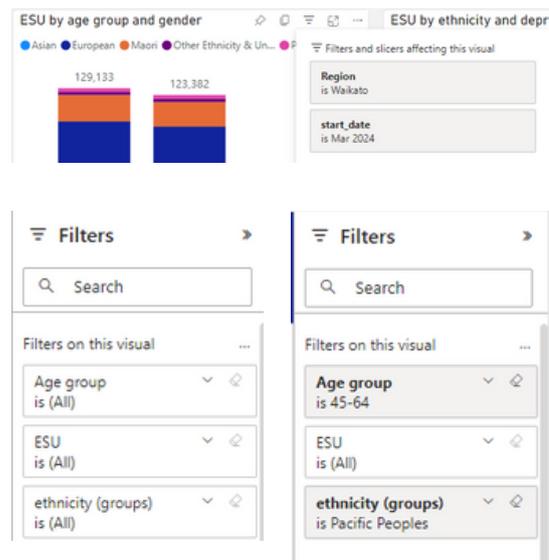
Export data

Above the 'Show as a table' menu item, you can instead choose to export the data. This will open up the underlying data as a spreadsheet, containing only aggregated data points.

A very small number of Power BI Apps are available with patient-level data, or identifiable patient data, and these must go through a rigorous assessment and governance process to determine that the information is necessary for the purpose of that particular app (for example, case finding, or auditing).

8. Filters

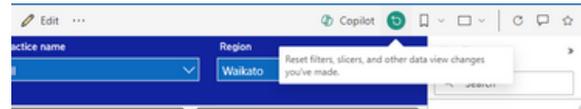
- Filters are a key component of Power BI, and allow you to drill down to a specific set of parameters. Each App will have a different set of filters available, and making the most of the App means that it's important you are familiar with filters and what they mean.
- The filters pane is always on the right, and can be hidden/revealed by clicking the arrow button.



Default filters may be set in a report to improve the time to load the report. Always check the filters pane if you are not sure. Filters appear in any of three sections.

- **Visual level filters** – you click a chart to reveal these; they apply only to that single chart / visual.
- **Page level filters** - apply only to the current page and affect all charts on that page only.
- **Report level filters apply across all pages of the report and to all charts.**

It's also really important to remember that filter selections are 'remembered' by your browser (by setting cookies). So, if you open up an App subsequently and the numbers don't look right, it's always a good to either pick one of your bookmarks or completely reset the report by using the 'Reset to default' button in the top menu bar.



9. Viewing active filters

- In the filter menu, it is usually easy to determine where a filter has been set. Applied filters will usually be highlighted, making it obvious where a setting has been made.
- If you no longer want a particular filter, you can just click the eraser icon next to it.
- To see what filters have been applied to a visual hover over the filter funnel icon on any chart. This will reveal any filters from the Filter Pane (the bar on the far right of the report) or from any user selections made using the charts on the page.



10. Setting filters from visuals

In Power BI, most clickable items can be used as filters. For example, click on an item in the legend to filter not only the selected chart but also all charts on the same page of the report (continued below). The default behaviour is to highlight the chosen value in the current chart but to filter other charts on the page to the selected item only; in this example selecting Māori shows only values categorised as “Māori” in other charts.

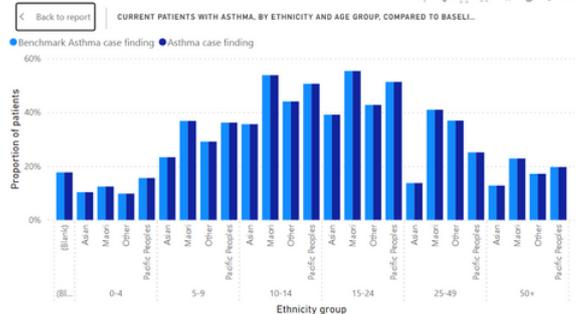
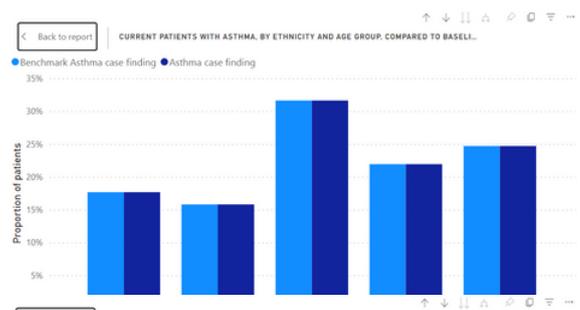
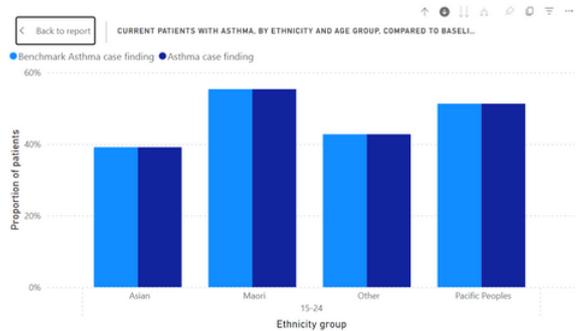
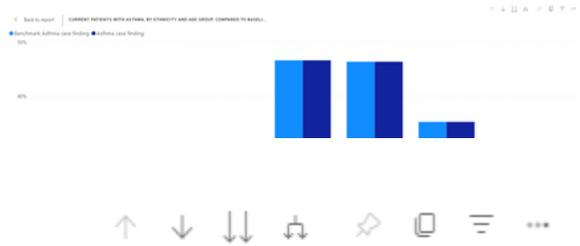
- Alternatively, click on an X axis label to filter the page by that value. In this example we have selected the 15-24 year old age group. The bottom chart in the following image has been filtered to only show the 15-24 age group column, after the 15-24 bar was clicked in the top chart!



Don't forget that you can combine multiple filters by holding the CTRL key while clicking the items you want to select.

11. Drill down

- To demonstrate the drill down functionality, the “Current patients with asthma, by ethnicity and age group, compared to baseline” chart is used. This will be available to you in the near future. Hover over the chart to see one “up” arrow and three different “down arrow” icons.
- The three arrow shapes shown above all do quite different things, and it's important to understand the difference.
- With drill down mode activated, clicking on an age group bar in this chart will take you through to the next level in the hierarchy of the visual, which in this case is a breakdown by ethnicity. The image below shows the drill down to ethnicity when the 15-24 age group bar was clicked.
- We can now click the 'Up' arrow to return to the original view.



12. Go to the next level in the hierarchy

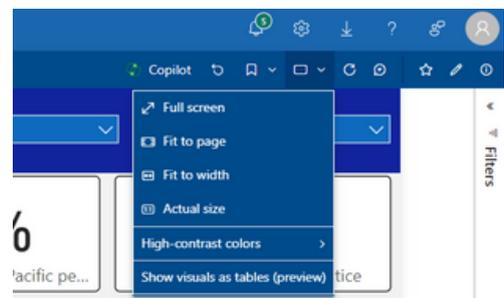
- If you unclick the single down arrow enabling the drill down function and click the double down arrows to the right, we can drill down to see the ethnic groups of all patients with asthma, irrespective of their age group (the top level of the hierarchy).

13. Expand all down one level in the hierarchy

- Likewise, after drilling up, you can click on the forked arrow icon to see a breakdown by age group (top level of hierarchy) and ethnic group (bottom level of hierarchy) in a single visual.

14. Adjusting your view

- There are a number of options available which allow you to adjust the view to your preference.
- Firstly, if you are looking at an App with someone else - or presenting something - it can be useful to use 'Full-screen mode'. This can be found near the top right.
- You can exit full-screen mode by pressing the 'Escape' key on your keyboard.
- Additionally you can set some other viewing preferences by accessing the View menu in the toolbar, near the top left of the screen.



15. Understanding different visuals

In a single Power BI app you may see a range of different visual types; it may not always be obvious how to interpret them. The following section runs through some of the more common ones and provides some explanation.

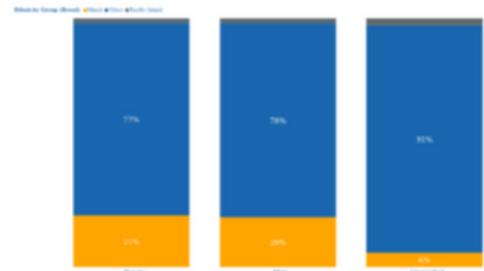
Card

- A card usually has a single figure on it and is intended for quick reference.



Column chart

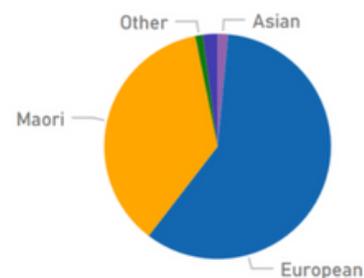
- Shows a single measure but grouped and split by other variables. The segments show the amount of the measure for each variable - in the above example, how many ESUs are male and female and their ethnicity.



Pie chart

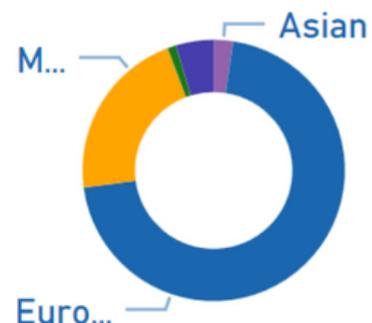
- Shows the proportion of a single measure allocated to each category. In this example, how many ESUs of each ethnicity.

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Donut chart

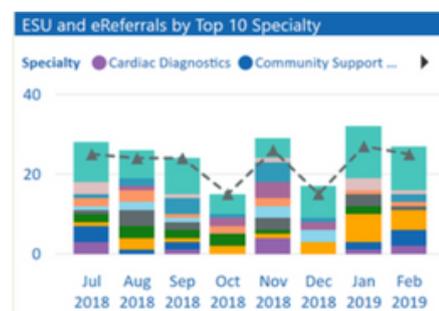
- Same as the Pie chart, with a slightly varied style.



Dual axis chart

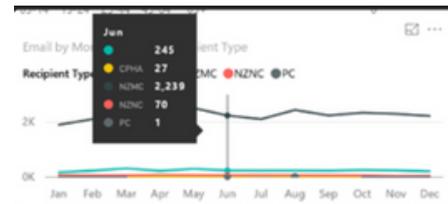
- Sometimes, line charts are used together with column charts to provide more information. In this example, the line represents the number of individuals that are referred, and the columns the number of referrals. The segments show the urgency of the referral.

Note in some cases there may be a separate axis on the right for the line.



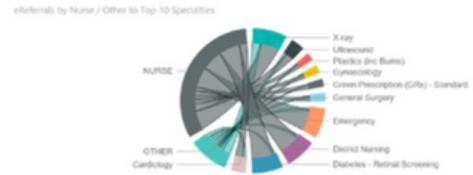
Line chart

- A standards time-series. In this case, showing the number of emails sent to each recipient type.



Chord chart

- Shows the relationship between different variables, with the thickness of the chord representing the strength of the relationship. In this example, we can see the volume of eReferrals instigated by 'Nurse' or 'Other' referrer types.



Bubble chart

- Shows the relative volume of a single measure across one variable. In this example, we can see the number of e-referrals split by the specialty being referred to.



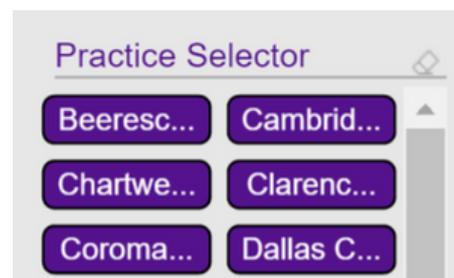
Radar chart

- Shows the distribution of a measure across another category, usually time period in our Apps. In the example above, we can see the distribution of emails received by the time of day. This shows us that the highest volume of incoming email arrives between 8am and 9am and then starts to drop off, before dropping off further again in the early evening.



Slicer

- A slicer is a filter that you can use to filter all charts on the page. Your choice is retained after you leave the page. You can multi-select items by holding the Ctrl key while making your selections. Your choices can be reset by using the eraser icon in the top right.



Waterfall

- A waterfall chart is generally used to show the change from the previous period as either a positive or negative value.
- Note that where data is refreshed during the month, the waterfall charts will show an exaggerated drop since the full month of data is not yet available. This drop will decrease as the month progresses.

