

# ePACT2 user guide

## Analysis In-Depth Master Guide



## **Interactive Contents**

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**ASTRO and Standard PU Reports**

**Getting more help**

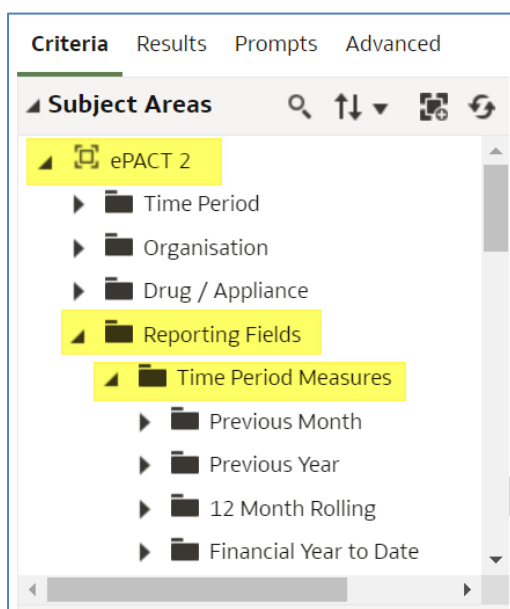
## Using the Time Period measures

To enable users to compare values over time the NHSBSA have produced 'Time Period Measure' columns.

By including a Time Period Measure column into your analysis you will be able to compare the time period in your analysis with either the corresponding time period in the previous year, the previous month, a twelve month rolling figure to the time period in your analysis or the figure for the financial year to date.

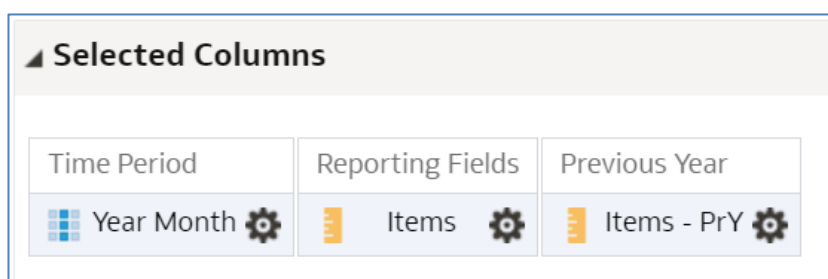
Within the Subject Areas panel of the Analysis Criteria, the 'Time Period Measure' folder can be found in the following location:

ePACT2 > 'Reporting Fields' > 'Time Period Measures'.



In the following example we will compare items for an ICB in August 2022 compared to Items for August 2021.

1. Open a blank analysis.
2. Include the following columns:



3. Include the following filters:

▲ Filters

Year Month is equal to / is in 202208

**AND**
 HS Commissioner / Provider plus Code is equal to / is in NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) - 13T00

4. Select 'Results'.

Criteria

**Results**

Prompts

Advanced

▲ Subject Areas

5. Your results will look like this:

- 'Year Month' shows August 2022
- 'Items' shows the number of items for the ICB in August 2022
- 'Items –PrY' shows the Items for August 2021.

Table

A

xyz

| Year Month | Items     | Items - PrY |
|------------|-----------|-------------|
| 202208     | 1,128,108 | 1,070,772   |

## Using Age bands

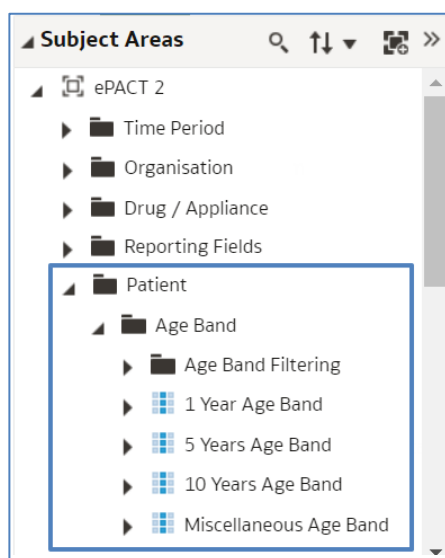
ePACT2 holds age band data, meaning it is possible to break your results down into specified age bandings.

You can break your data down into the following banding options:

- 5 Year Age Bands - The selected criteria is returned, split into pre-defined 5 year age bands showing the start age of the age bands selected i.e. 0, 5, 10 years etc.
- 10 Year Age Bands - The selected criteria is returned, split into pre-defined 10 year age bands of 0-9 years, 10-19 years, 20-29 years etc.
- Miscellaneous Age Bands - The selected criteria is returned, split into pre-defined miscellaneous age bands such as 0-11 years, 12-17 years, 18-24 years etc.

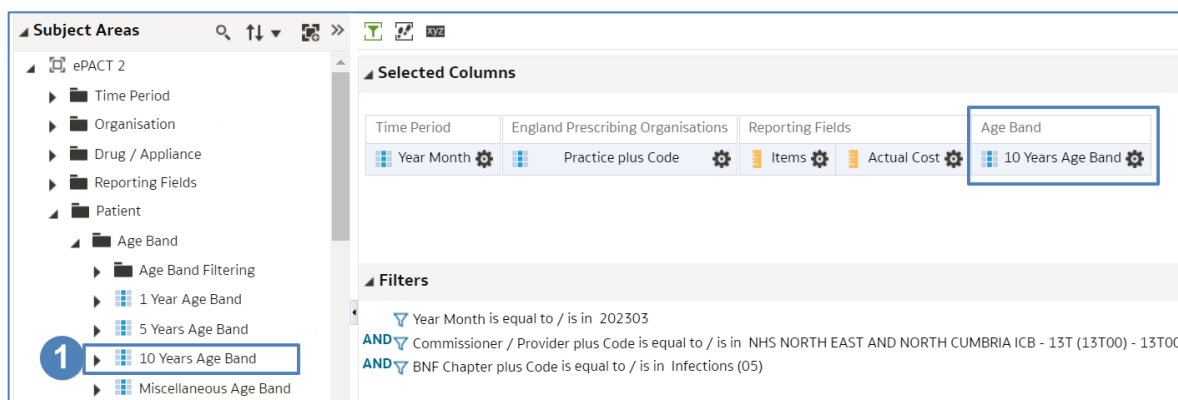
You can use [the age logic summary flowchart](#) for information on how patient age is determined in ePACT2.

The age band columns can be found via the 'Patient' folder.

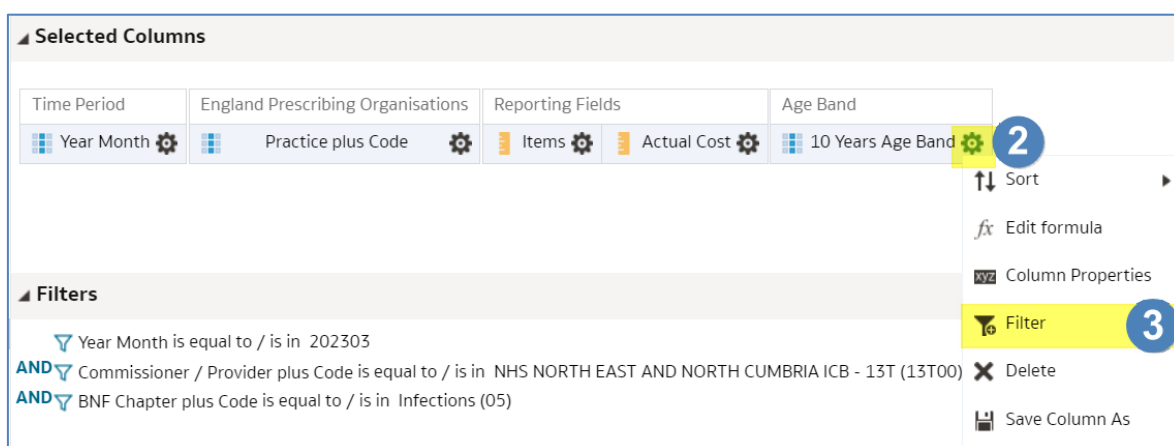


In this example we are going to use the '10 Year Age Band' column to filter our analysis to bring back data for everyone over the age of 70.

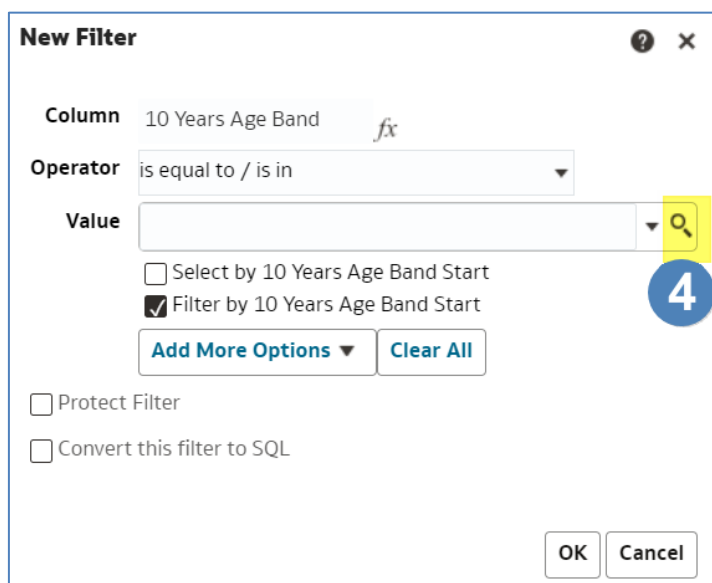
1. Double click, or drag and drop your age band column to the 'Selected 'Columns' pane to include the column into your analysis:



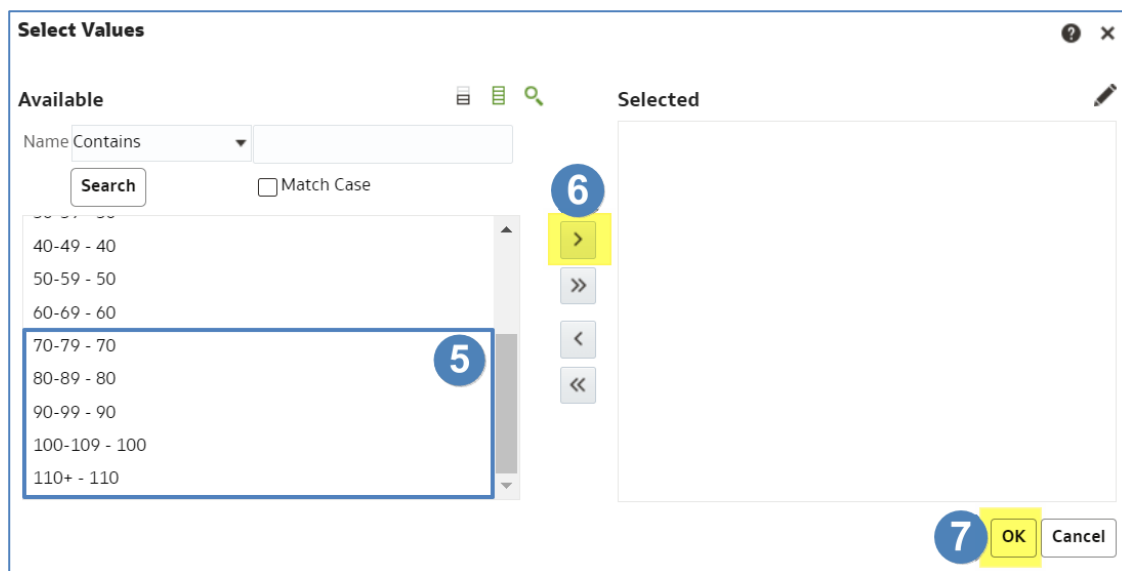
2. Select the cog icon of the '10 Year Age Band' column.
3. Select 'Filter'.



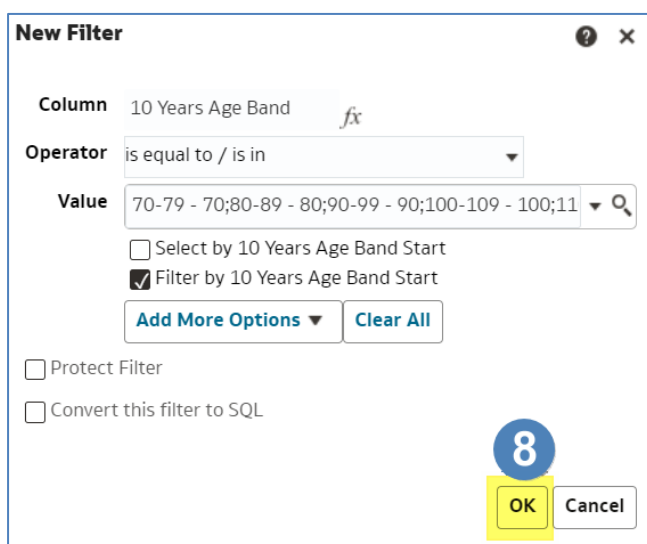
4. In the 'New Filter' pane select the magnifying glass from the 'Value' box.



5. Select the values you want to filter on. In this example we are selecting everyone 70 and over.
6. Select the single arrow icon to move the values to the 'Selected' box.
7. Select 'OK'.



8. Select 'OK' on the 'New Filter' pane.





9. The filter will now be applied to your analysis.

**Selected Columns**

|             |                                   |                  |                   |
|-------------|-----------------------------------|------------------|-------------------|
| Time Period | England Prescribing Organisations | Reporting Fields | Age Band          |
| Year Month  | Practice plus Code                | Items            | Actual Cost       |
|             |                                   |                  | 10 Years Age Band |

**Filters**

Year Month is equal to / is in 202303  
AND Commissioner / Provider plus Code is equal to / is in NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) - 13T00  
AND BNF Chapter plus Code is equal to / is in Infections (05)  
AND 10 Years Age Band is equal to / is in 70-79 - 70; 80-89 - 80; 90-99 - 90; 100-109 - 100; 110+ - 110



If the '10 Year Age Band' column is left in your 'Selected Columns' the results will be broken down by 10 year age bands.

If you delete the column from your 'Selected Columns' the data will return aggregated. In our example this means we would get a total items and actual cost for each practice for the over 70's.



## Calculated Items

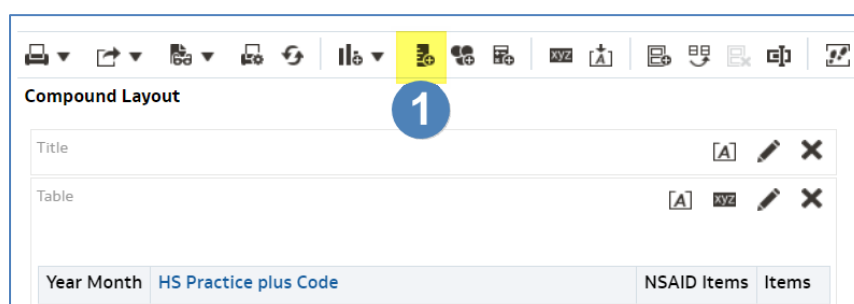
It is possible to perform calculations within ePACT2, you can do this using the 'New Calculated Measure' icon available via the analysis results pane:



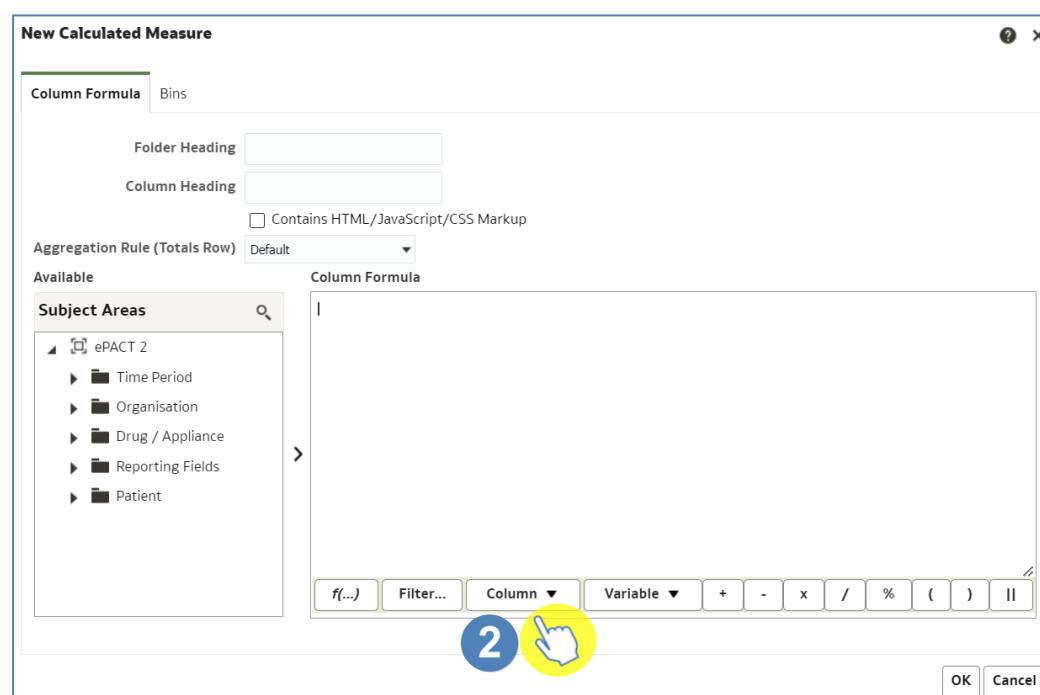
As a result, you do not need to export data from the system to third party software to perform calculations.

In this example we are going to work out the percentage of items for NSAID's. We have one column showing the total items for the practice and one column showing the total for the practice.

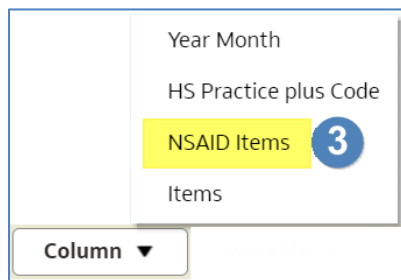
1. From the results pane of your analysis select the 'New Calculated Measure' icon.



2. Select the 'Column' icon.



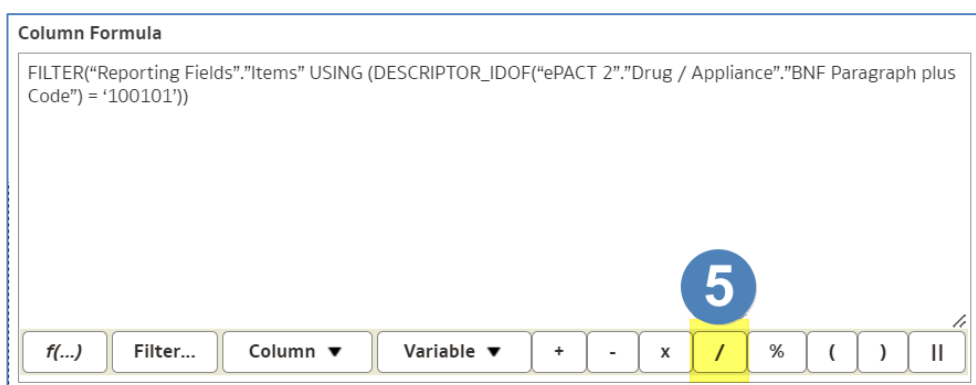
3. This will display all available columns to include in your analysis, select the column you want to include, in this example we are going to select NSAID Items.



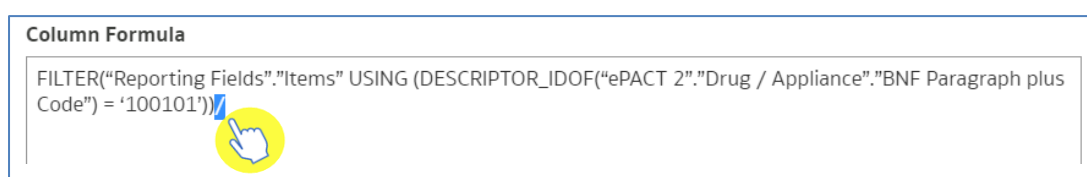
4. Click the end of the formula that has been populated in the 'Column Formula' pane.



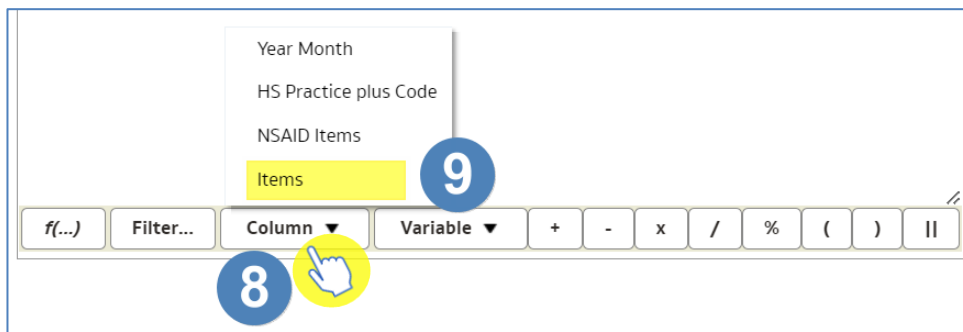
5. Ensuring your cursor is at the end of the formula, and the formula is no longer highlighted, select the divide symbol from the formula taskbar.



6. The divide symbol will now be input into the formula.



7. Again, click at the end of the formula to ensure the divide symbol is no longer highlighted.
8. Select the 'Column' icon.
9. Select the appropriate column from the list, in this example we are choosing 'Items'.



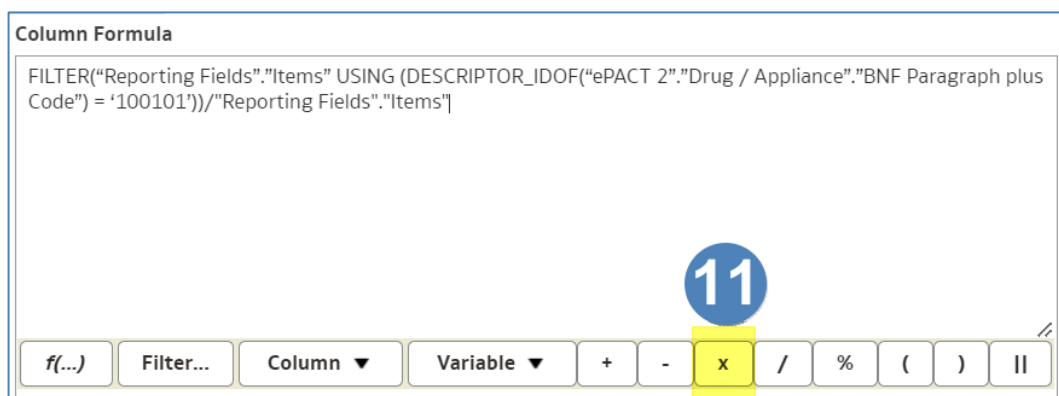
The formula has now updated to show NSAID Items ÷ Items.



#### Column Formula

```
FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))/"Reporting Fields"."Items"
```

10. Click the end of the formula to ensure no part of the formula is highlighted.
11. Select the multiply symbol from the 'Column Formula' taskbar.



12. Again, click at the end of the input symbol and type 100 to complete the percentage calculation.

**Column Formula**

`FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))/"Reporting Fields"."Items"*100`



13. Name the column.
14. Select 'OK' to create your calculated column.

**New Calculated Measure**

**Column Formula** | Bins

Folder Heading

**Column Heading** NSAID percentage from total **13**

☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row) Default

Available

**Subject Areas**


- ePACT 2
  - Time Period
  - Organisation
  - Drug / Appliance
  - Reporting Fields
  - Patient

**Column Formula**

`FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))/"Reporting Fields"."Items"*100`

f(...) Filter... Column Variable + - x / % ( ) ||

**14** OK Cancel



15. Your new calculated column will now be included in the results.

| Year Month | HS Practice plus Code  | NSAID Items | Items | NSAID percentage from total |
|------------|--|-------------|-------|-----------------------------|
| 202303     | <code>FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))</code> | 2           | 1,725 | 0                           |
| 202303     | <code>FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))</code> | 9           | 291   | 3                           |
| 202303     | <code>FILTER("Reporting Fields"."Items" USING (DESCRIPTOR_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))</code> | 14          | 790   | 2                           |

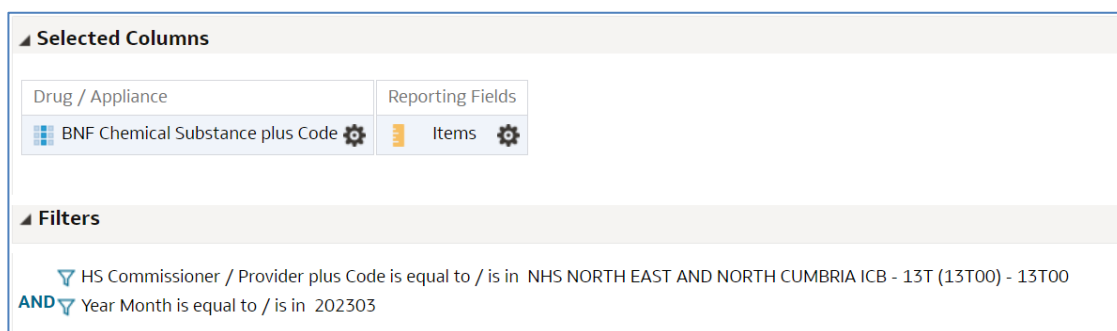
## Using Bins

Binning a measure creates a new column based on the value of that measure; this means you are able to create groups of specific measures within a column.

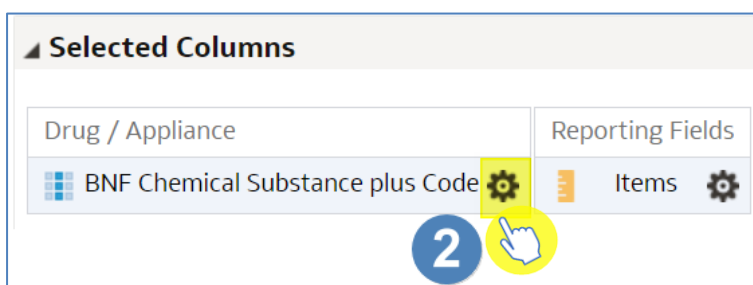
It is possible to create bins on most columns such as for groups of practices, groups of presentations, groups of months, etc.

In this example we are going to create a report with bins for groups of chemical substances.

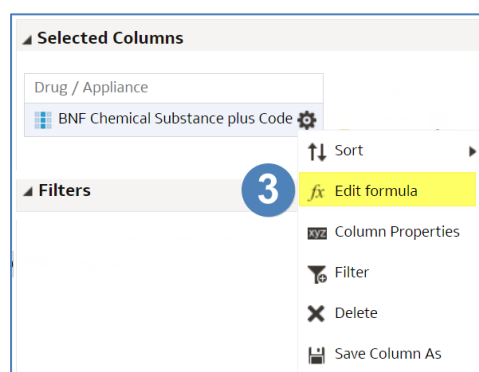
1. Create your analysis and include the columns you want to return data for. In this example, we are returning data for March 2023, NHS North East and North Cumbria ICB and we are returning the number of items for chemical substances.



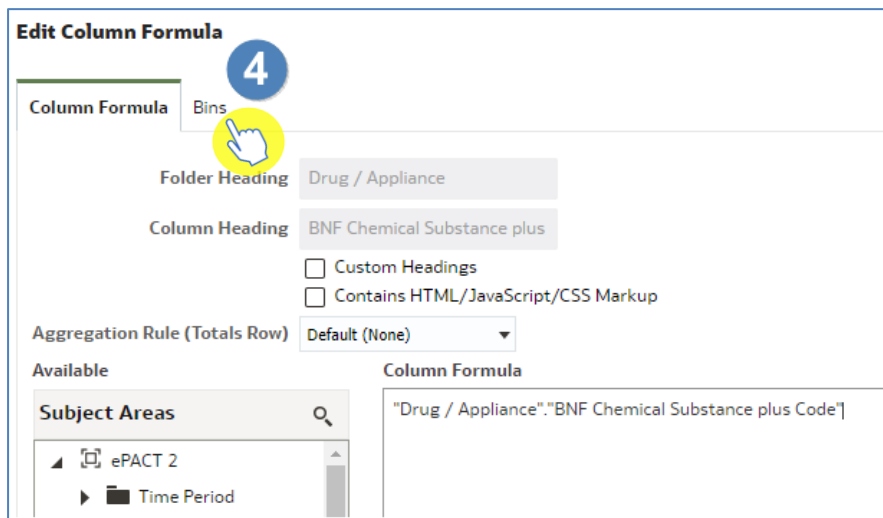
2. Select the cog icon for the column you want to add 'Bins' to.



3. Select 'Edit formula'.



4. Select 'Bins'.



**Edit Column Formula**

Column Formula    **Bins**

Folder Heading: Drug / Appliance


Column Heading: BNF Chemical Substance plus



☐ Custom Headings

☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row): Default (None)

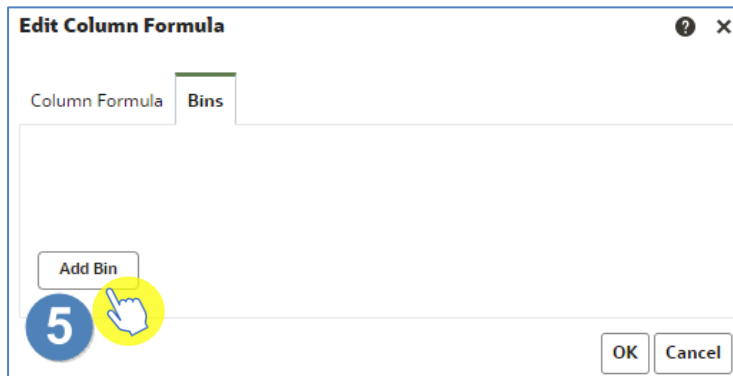
Available



Subject Areas 

- ▲  ePACT 2
- ▶  Time Period

Column Formula: "Drug / Appliance".BNF Chemical Substance plus Code]


5. Select 'Add Bin'.



**Edit Column Formula**  

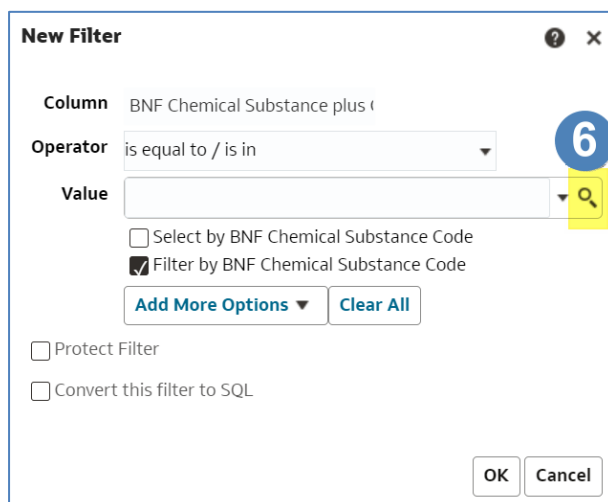
Column Formula    **Bins**



Add Bin

**5** 

OK Cancel


6. Select the magnifying glass icon to search for the values you want to include in your bin.



**New Filter**  

Column: BNF Chemical Substance plus t

Operator: is equal to / is in

Value: 

☐ Select by BNF Chemical Substance Code

☒ Filter by BNF Chemical Substance Code

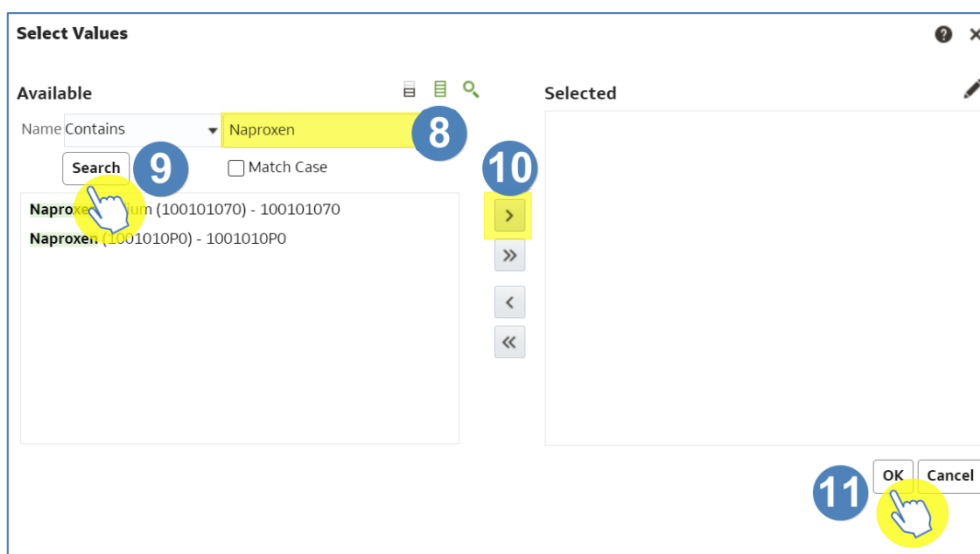
Add More Options Clear All

☐ Protect Filter

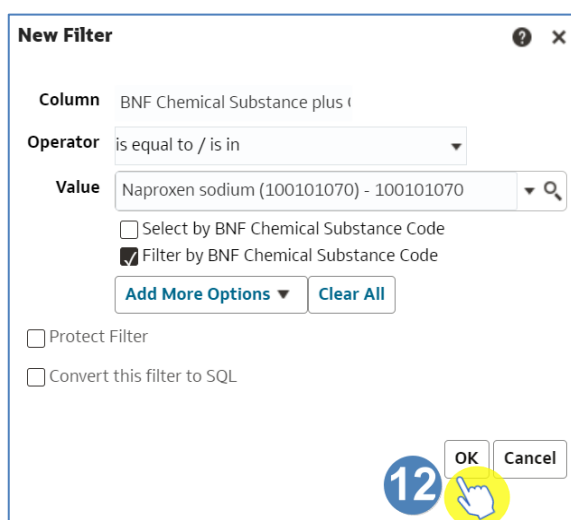
☐ Convert this filter to SQL

OK Cancel

7. Search for your values using the search box. In this example, we are going to create a bin for all Naproxen chemical substances.
8. Type the name of the item in the search box.
9. Select 'Search'.
10. Use the single arrow to move items into selected.
11. Select 'OK'.



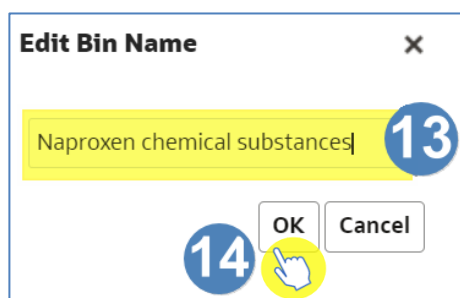
12. Select 'OK'.



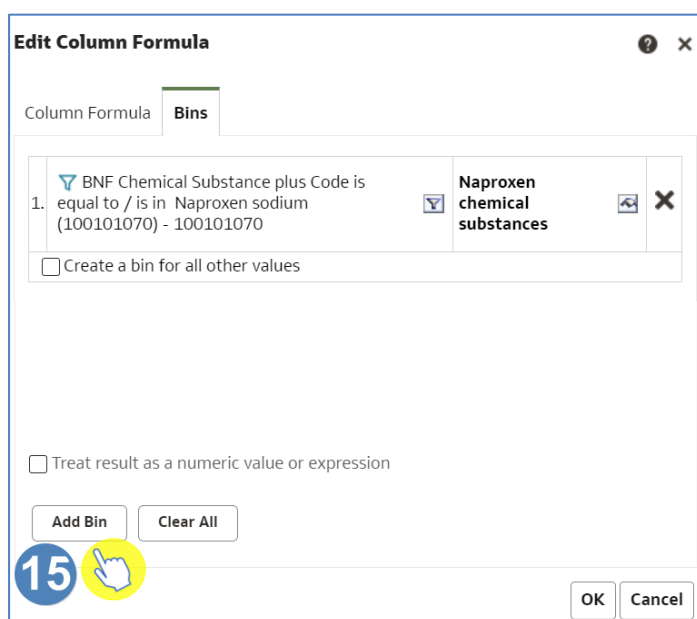
13. Give the bin an appropriate name.



14. Select 'OK'.



15. To add additional bins to the column select 'Add Bin' again.



16. Follow the same process to create multiple bins.



If you do not create a bin for all other values, your data will return with a line for all other chemical values in the column.

17. Once you have created all the bins you want to include in the column, select 'Create a bin for all other values'.

**Edit Column Formula**

Column Formula **Bins**

|   |                                     |                               |  |     |
|---|-------------------------------------|-------------------------------|--|-----|
| 1. BNF Chemical Substance plus Code is equal to / is in Naproxen sodium (100101070) - 100101070           | <input checked="" type="checkbox"/> | Naproxen chemical substances  |  | X v |
| 2. BNF Chemical Substance plus Code is equal to / is in Paracetamol and ibuprofen (0407010AD) - 0407010AD | <input checked="" type="checkbox"/> | Ibuprofen chemical substances |  | X ^ |
| <input type="checkbox"/> Create a bin for all other values <b>17</b>                                      |                                     |                               |  |     |

☐ Treat result as a numeric value or expression

Add Bin Clear All

OK Cancel

18. Give an appropriate name.

19. Select 'OK'.

**Edit Bin Name**

Others **18**

**19** OK Cancel

20. Select 'OK'.

**Edit Column Formula**

Column Formula **Bins**

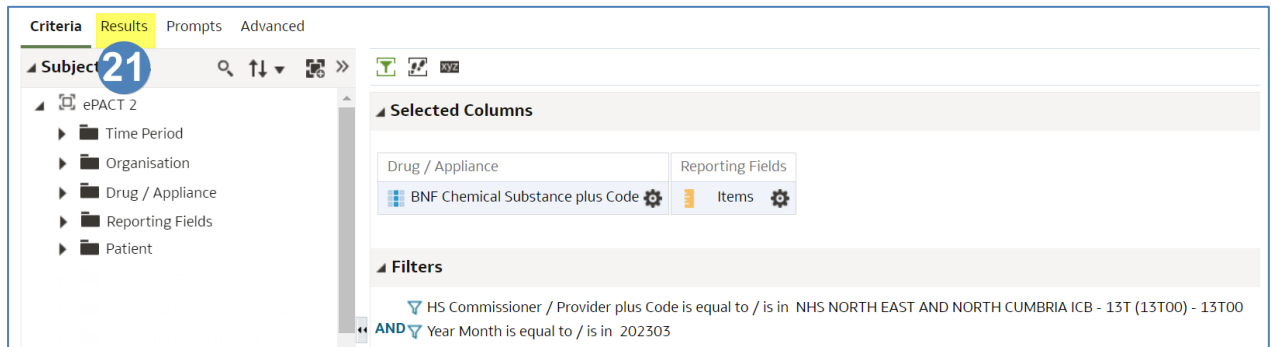
|                     |                                     |        |   |
|---------------------|-------------------------------------|--------|---|
| 3. All other values | <input checked="" type="checkbox"/> | Others | X |
|---------------------|-------------------------------------|--------|---|

☐ Treat result as a numeric value or expression

Add Bin Clear All

**20** OK Cancel

21. Select 'Results' to run your analysis.



22. Your results will now show data split into bins, similar to the example below.

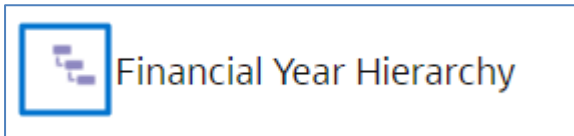
| Table   |           |
|---|-----------|
| BNF Chemical Substance plus Code              | Items     |
| <a href="#">Ibuprofen chemical substances</a> | 5,749     |
| <a href="#">Naproxen chemical substances</a>  | 5,648     |
| Others  | 1,097,575 |

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## Hierarchy Columns

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There are numerous 'Hierarchy' columns within ePACT2; the columns are indicated with the hierarchy symbol as shown in the example below:



'Hierarchy' columns can be used in conjunction with selection steps within your analysis results to display different levels of data within the same report.

The benefit of using 'Hierarchy' columns is that this allows you to navigate down to lower levels of data within the same analysis. Normal columns do not allow you to do this.



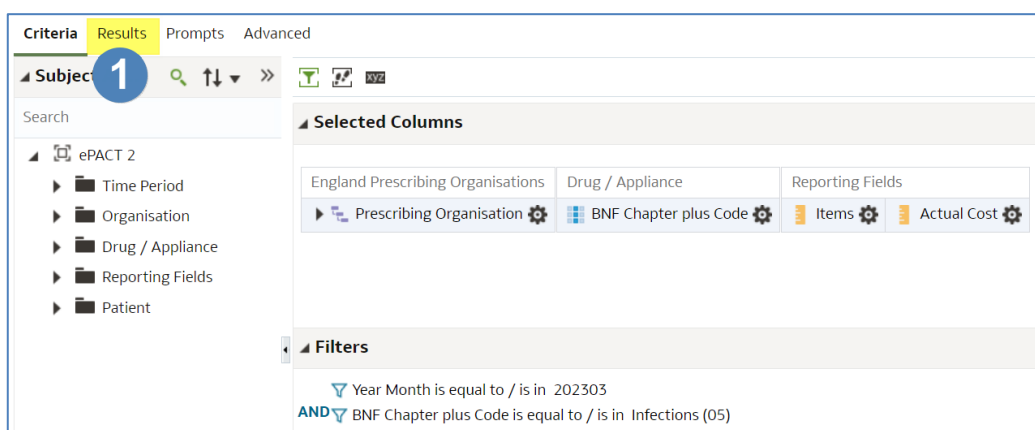
Results will return slower for analysis containing selection steps.

## Selection Steps

### Using Selection Steps to limit the data displayed

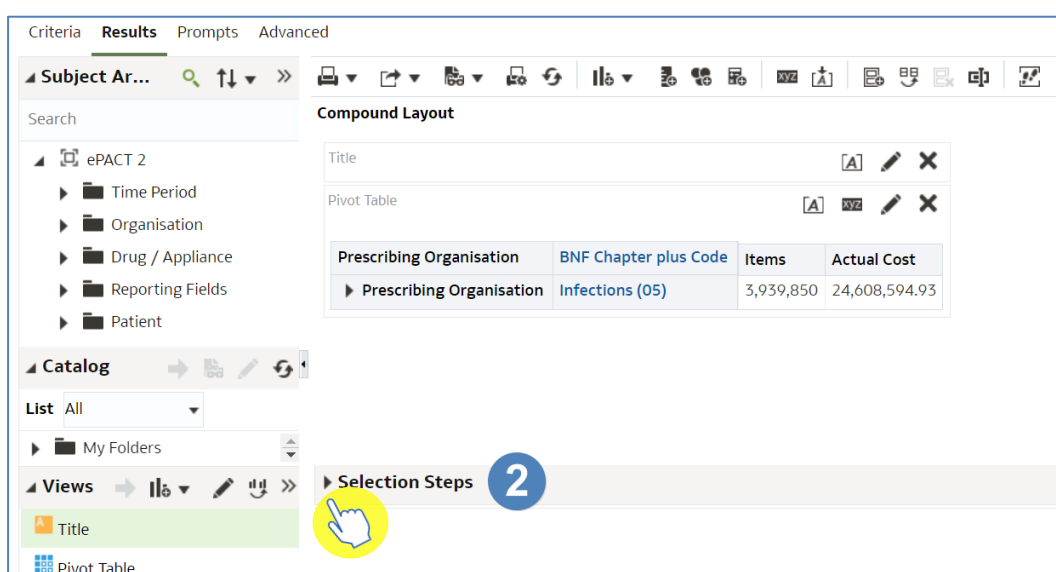
When you have used a 'Hierarchy column' within your analysis, 'Selection Steps' can be used to limit the data to only the organisation/BNF level required. The results can then be expanded to show data at multiple levels.

1. Set up your analysis with the required columns of data and the required hierarchy column, then navigate to the results pane via the 'Results' tab.

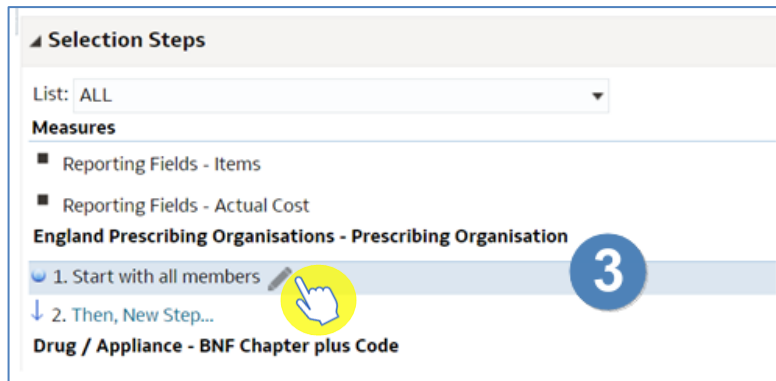


In this example we are running the data for March 2023 and Chapter 5, returning data for Items and Actual Cost.

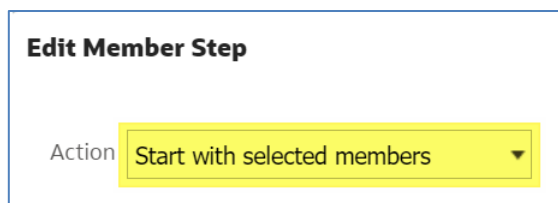
2. Click the arrow to expand the 'Selection Steps' pane.



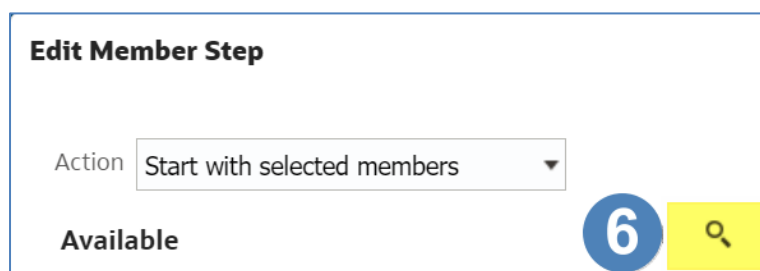
3. The default 'Selection Steps' for the Organisation hierarchical column or BNF hierarchical column will be displayed.
4. Hover the cursor over 'Start with all members' to bring up the 'pencil' icon and select this icon to allow you to edit the field.



5. You will now be prompted with the 'Edit Member Step' pane. Ensure the 'Action' is set to 'Start with selected members'.



6. Select the search icon to expand the search pane.



7. Search for the required overall organisation or BNF.



In this example the top-level organisation will be NHS North East and North Cumbria ICB 13T (13T00).

**Edit Member Step**

Action Start with selected members

**Available**

Name Starts NHS north east and north

Children of Root

At Level Commissioner / Provider Level

**7** Search ☐ Match Case

8. Highlight the organisation or BNF required in the search results.

9. Use the single arrow icon to select the organisation or BNF.

**Available**

Name Starts NHS north east and north

Children of Root

At Level Commissioner / Provider Level

**9** Search ☐ Match Case

England Prescribing Organisations.Prescribing Org

**8** NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T

NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T

NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T

NHS NORTH EAST AND NORTH CUMBRIA ICB - 84H

NHS NORTH EAST AND NORTH CUMBRIA ICB - 99C

NHS NORTH EAST AND NORTH CUMBRIA INTEGRAT

**9** > >> < <<

**Selected**

10. The organisation or BNF will be displayed in the 'Selected' section.

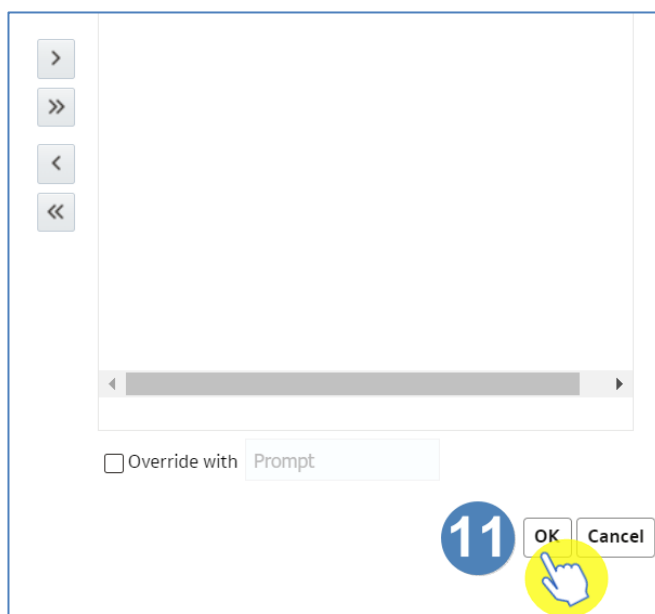
**Selected**

**10** NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T)

> >> < <<



11. Click 'OK'.



12. The total figure will now display the organisation selected.

| Prescribing Organisation                             | BNF Chapter plus Code | Items  | Actual Cost |
|--|-----------------------|--------|-------------|
| ▶ NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) | Infections (05)       | 32,481 | 230,837.98  |

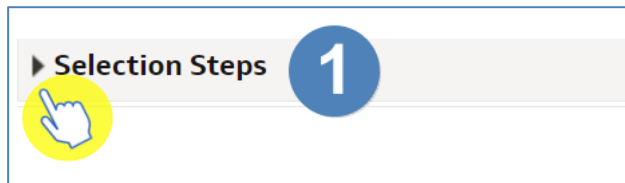
13. Select the 'arrow' icon to expand the organisation to view individual practices.

| Prescribing Organisation                              | BNF Chapter plus Code | Items  | Actual Cost |
|---|-----------------------|--------|-------------|
| ▲ NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00)  | Infections (05)       | 32,481 | 230,837.98  |
| ▶ Airedale and Don Valley Health Foundation (primary) | Infections (05)       | 112    | 1,378.56    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 316    | 2,610.68    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 654    | 4,018.89    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 250    | 1,662.24    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 857    | 5,232.04    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 415    | 2,784.93    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 597    | 3,488.43    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 783    | 7,175.24    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 296    | 3,019.96    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 553    | 4,497.73    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 605    | 4,220.48    |
| ▶ BARNES HILL MEDICAL CENTRE (primary)                | Infections (05)       | 150    | 1,094.52    |

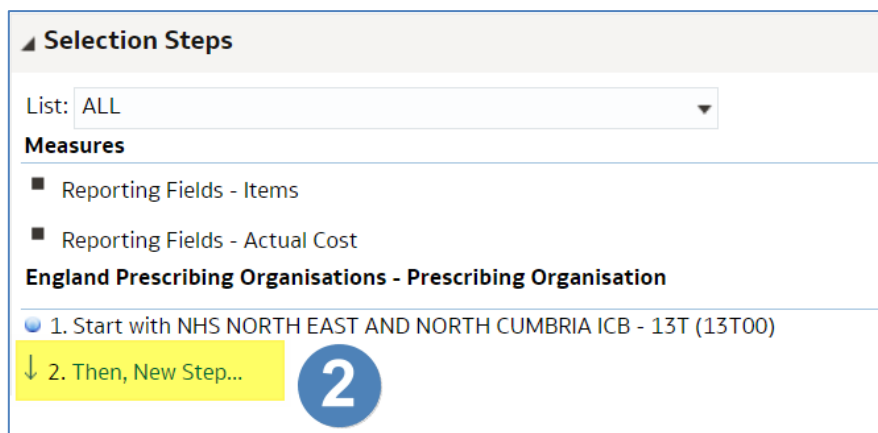
## Including total for groups of organisations/BNF

Selection Steps can also be used to include totals figures for groups of organisations or multiple BNF selections.

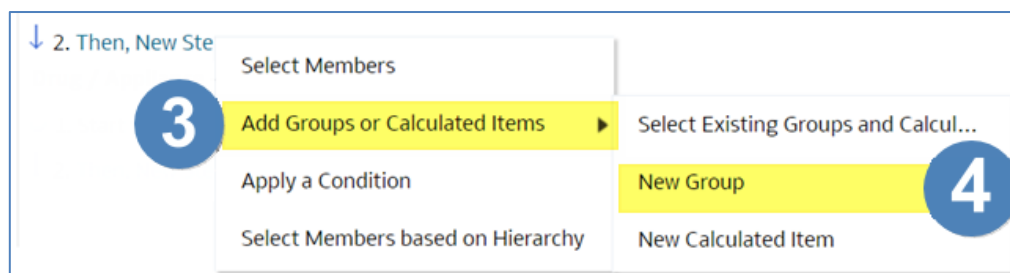
1. From the results pane select the arrow to expand the 'Selection Steps'.



2. Select the 'Then, New Step' link to add a further step.



3. From the drop-down list select 'Add Groups or Calculated Items'.
4. From the next drop-down list select 'New Group'.




5. You will now be presented with the 'New Group' pane, select the search icon to expand the search pane.


**New Group**

Display Label

Values From

Available 5 

6. Search for the required organisation or BNF.

**Available** 


Name Starts

Children of

At Level

6  ☐ Match Case

7. Highlight the organisations or BNF required in the search results.  
(Organisations or BNF's can be expanded within the search results).
8. Once selected use the arrow key to move the organisations/BNF to selected.

| Available  | Selected   |
|--|--|
| <p>Name Starts <input type="text" value="nhs north east"/></p> <p>Children of <input type="text" value="Root"/></p> <p>At Level <input type="text" value="&lt;Any&gt;"/></p> <p><input type="button" value="Search"/> <input type="checkbox"/> Match Case</p> <p>▲ England Prescribing Organisations.Prescribing Org</p> <ul style="list-style-type: none"> <li>▲ <input checked="" type="radio"/> NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T</li> <li>▶ <input checked="" type="radio"/> AVENUE MEDICAL PRACTICE (A86007)</li> <li>▶ <input type="radio"/> BEACON VIEW MEDICAL CENTRE (A85026)</li> <li>▶ <input checked="" type="radio"/> BENFIELD PARK MEDICAL GROUP (A86023)</li> <li>▶ <input type="radio"/> BENSHAM FAMILY PRACTICE (A85002)</li> <li>▶ <input checked="" type="radio"/> BETTS AVENUE MEDICAL GROUP (A86030)</li> <li>▶ <input type="radio"/> BEWICK ROAD SURGERY (A85017)</li> <li>▶ <input type="radio"/> BIDDLESTONE HEALTH GROUP (A86010)</li> </ul> | <p><span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; font-weight: bold;">8</span> </p> <p>&gt; &gt;&gt; &lt; &lt;&lt;</p> |

7

9. The organisations will be displayed in the 'Selected' section.

10. Enter an appropriate name in the 'Display Label' section.
11. Click 'OK'.

12. The group created will now be displayed in the selection steps pane.

**Selection Steps**

List: ALL

**Measures**

- Reporting Fields - Items
- Reporting Fields - Actual Cost

**England Prescribing Organisations - Prescribing Organisation**

1. Start with NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00)
2. Then, Add Practice Group 1 to specific view
3. Then, New Step...

13. The group created will now be displayed in the results.

| Prescribing Organisation                             | BNF Chapter plus Code | Items  | Actual Cost |
|--|-----------------------|--------|-------------|
| ▶ NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) | Infections (05)       | 32,481 | 230,837.98  |
| ▶ Practice Group 1                                   | Infections (05)       | 1,623  | 10,629.49   |

14. The steps above can then be repeated to include all groupings required.

## Saving Groups for use in future analysis

Once created, groups can be saved and then reused in future analyses.

1. Click the link for the group.

**Selection Steps**

List: ALL

**Measures**

- Reporting Fields - Items
- Reporting Fields - Actual Cost

**England Prescribing Organisations - Prescribing Organisation**

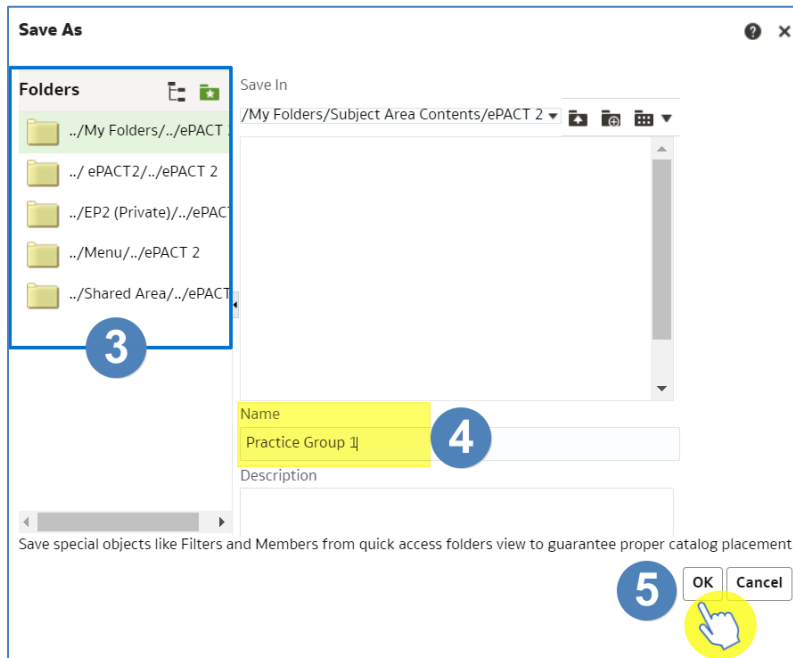
1. Start with NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00)
2. Then, Add Practice Group 1 to specific view
3. Then, New Step...

2. Select 'Save Group As' from the drop-down list.

2. Then, Add Practice Group 1 to specific view

- Edit Group
- Save Group As ...

3. Select an appropriate folder to save the group in.
4. Enter an appropriate name for the group.
5. Click 'OK'.



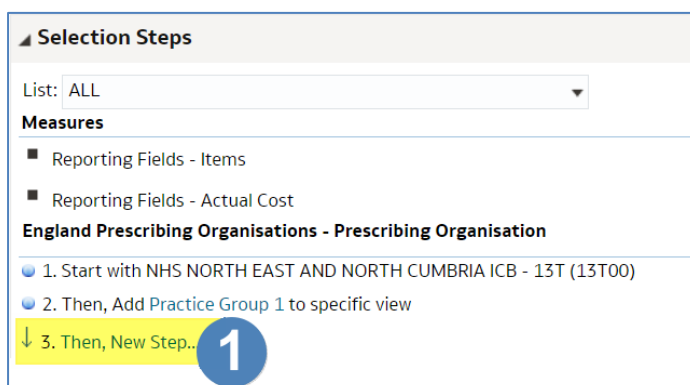
## Re-using Saved Groups

It is possible to use saved groups in other analysis, enabling you to create the group once and use in multiple reports.

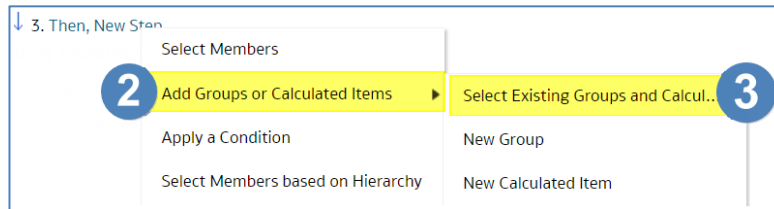


You can only use a saved group for the column it has been created and saved under i.e. you can only use a group of practices you have created in the 'England Prescribing Organisation' column, in this column on other analysis.

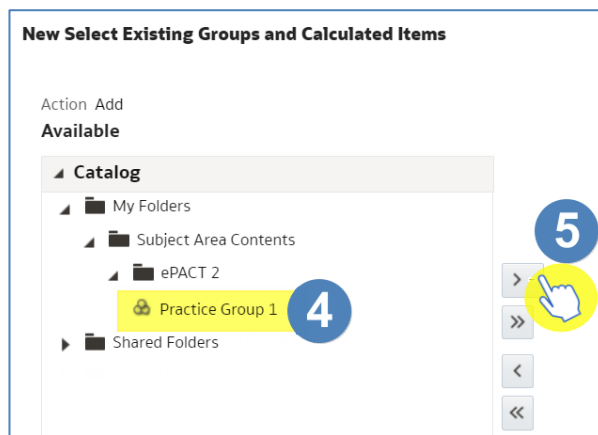
1. Select the 'Then, New Step' link to add a further step.



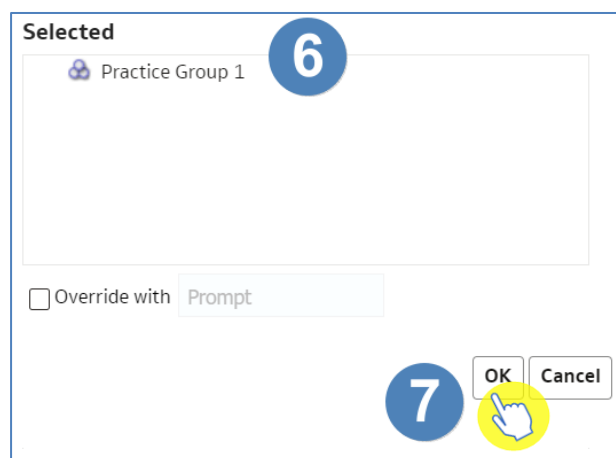
2. From the drop-down list select 'Add Groups or Calculated Items'.
3. From the next drop-down list select 'Select Existing Groups and Calculated Items'.



4. Select the group from the saved location.
5. Use the arrow icon to select the group.



6. The group selected will be displayed in the 'Selected' section.
7. Click 'OK'.



8. The new group added will now be displayed in the selection steps pane, and your results pane.



## Aggregating columns

It is possible to aggregate columns within ePACT2, this enables you to show different levels of data within the same report.

In the following example we will show how to aggregate data up to SICB level or National level.

For this you will need one of the following formulas, depending on the level you want to aggregate to:



### SICB level formula:

AT "England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level"



### National level formula:

AT "England Prescribing Organisations"."Prescribing Organisation"."Country Level"

1. Set up your analysis, in this example we are bringing the data back at practice level for NHS North East and North Cumbria ICB (13T00) and bringing back Items for BNF Chapter 5.

Selected Columns

| Time Period | England Prescribing Organisations | Reporting Fields  |
|-------------|-----------------------------------|-------------------|
| Year Month  | Practice plus Code                | Items Items Items |

Filters

Year Month is equal to / is in 202303

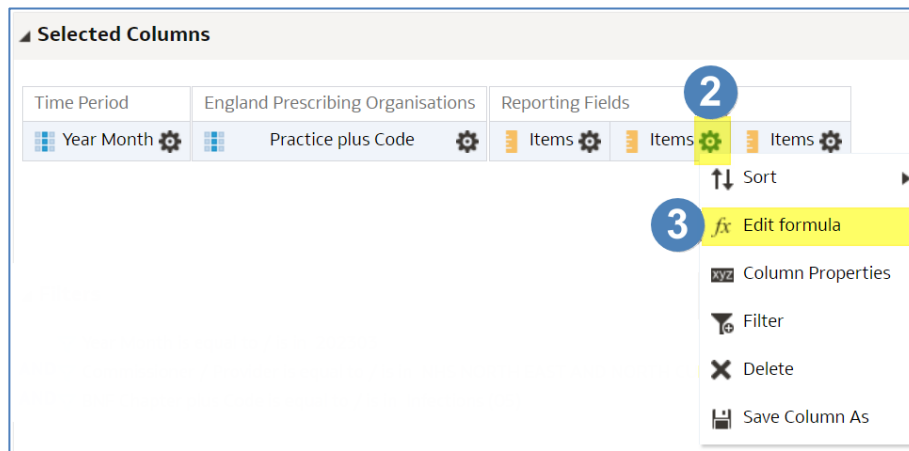
AND Commissioner / Provider is equal to / is in NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T - 13T00

AND BNF Chapter plus Code is equal to / is in Infections (05)

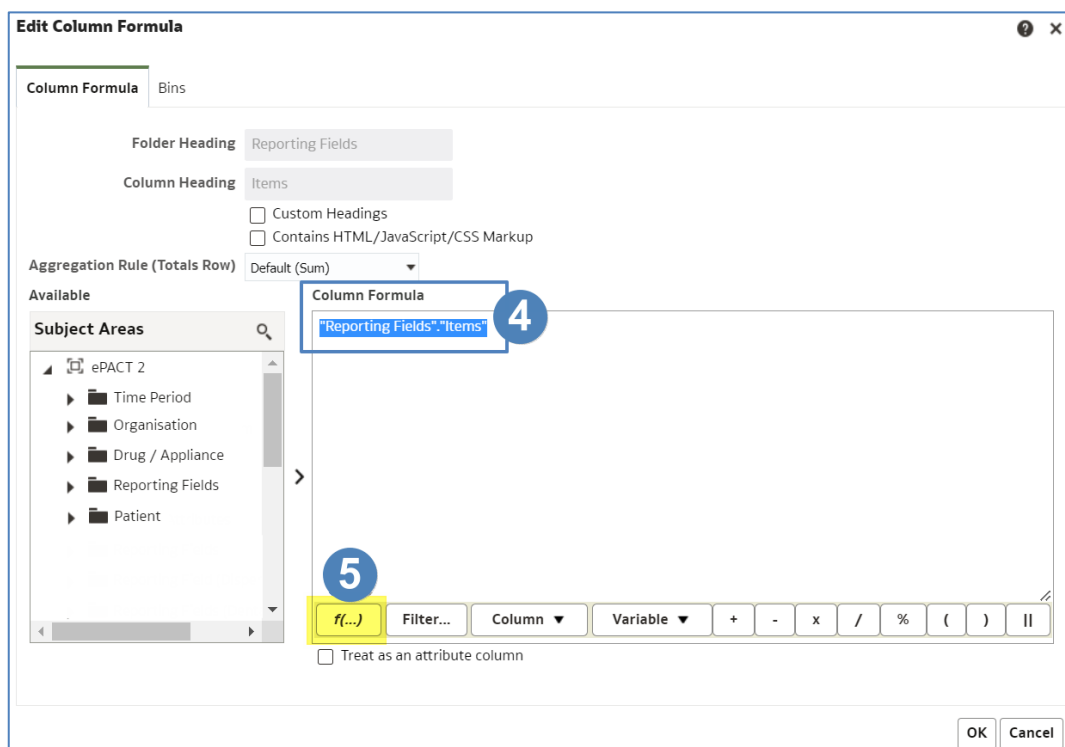


You will notice we have included 3 items columns; this is because we are going to aggregate two of the columns, one to show SICBL items and the other to show National Items.

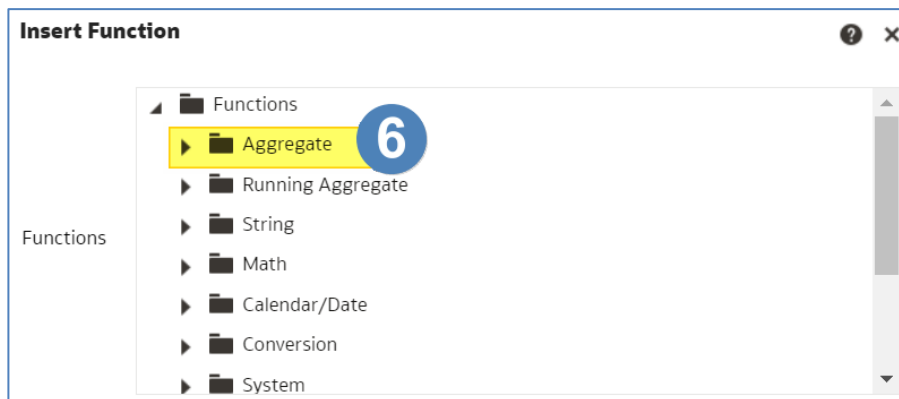
2. Select the Cog icon on a column you want to aggregate.
3. Select 'Edit formula'.



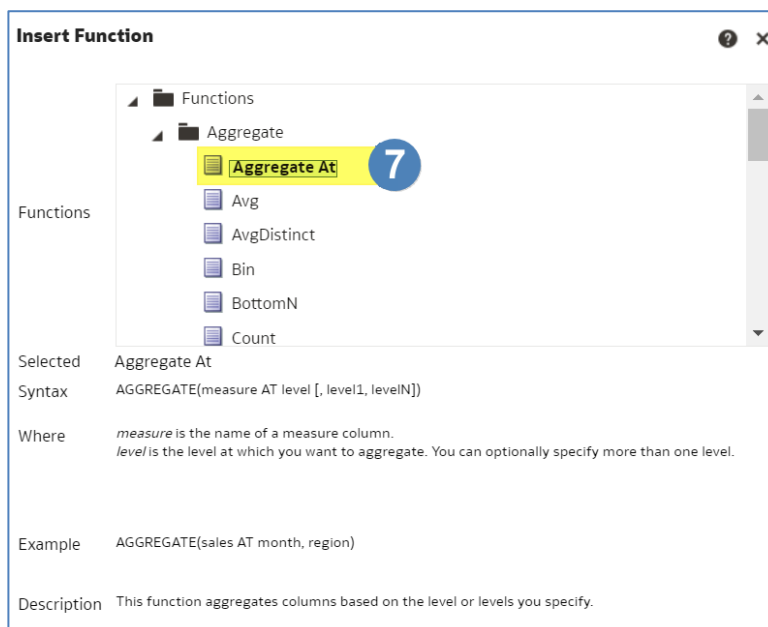
4. Ensure the 'Column Formula' is highlighted.
5. Select the 'Insert Function' icon.



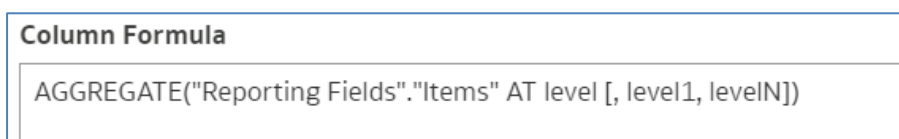
6. Select the drop-down arrow to open the 'Aggregate' folder.



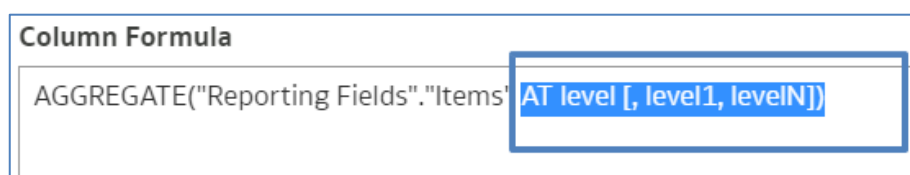
7. Select 'Aggregate At' by double clicking the function icon.



8. The column formula will now update as per the image below.



9. Highlight the following in the column formula.





The part we have highlighted is the section of the formula the system will look at to decide what level the column will be aggregated to.

10. Depending on the level you want to aggregate the column to and whether you are using HS England or England prescribing organisation columns, copy either the SICB level formula or the National level formula from below:



HS England Prescribing Organisations SICB level formula:

AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level")



England Prescribing Organisation SICB level formula:

AT "England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level")



England Prescribing Organisations National level formula:

AT "England Prescribing Organisations"."Prescribing Organisation"."Country Level")



HS England Prescribing Organisations National level formula:

AT "HS England Prescribing Organisations"."Prescribing Organisation"."Country Level")

11. Paste the copied formula into the highlighted section of the column formula pane, the formula in your column should now look similar to the example below:

Column Formula

AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level")



The column is now saying aggregate 'Items' to 'Commissioner / Provider Level'.

12. Select the 'Customer Headings' check box to enable you to give the column an appropriate name.

Column Formula Bins

Folder Heading Reporting Fields

Column Heading Items

☒ Custom Headings 12

☐ Contains HTML/JavaScript/CSS Markup

13. Name the column using the 'Column Heading' box.

Column Formula Bins

Folder Heading Reporting Fields

Column Heading Comm / Provider Item 13

☒ Custom Headings

☐ Contains HTML/JavaScript/CSS Markup

14. Select 'OK' to create your new column.

Edit Column Formula

Column Formula Bins

Folder Heading Reporting Fields

Column Heading Comm / Provider Item

☒ Custom Headings

☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row) Default (Sum)

Available

Subject Areas

ePACT 2

- Time Period
- Organisation
- Drug / Appliance
- Reporting Fields
- Patient

Column Formula

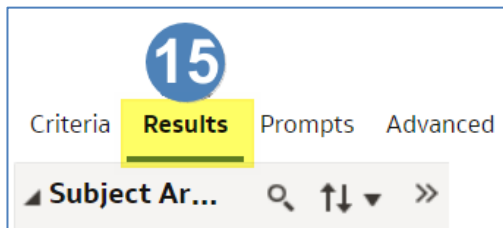
AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level")

f(...) Filter... Column Variable + - x / % ( ) ||

☐ Treat as an attribute column

OK Cancel 14

- Once you have completed your aggregated columns select 'Results' to generate your report.



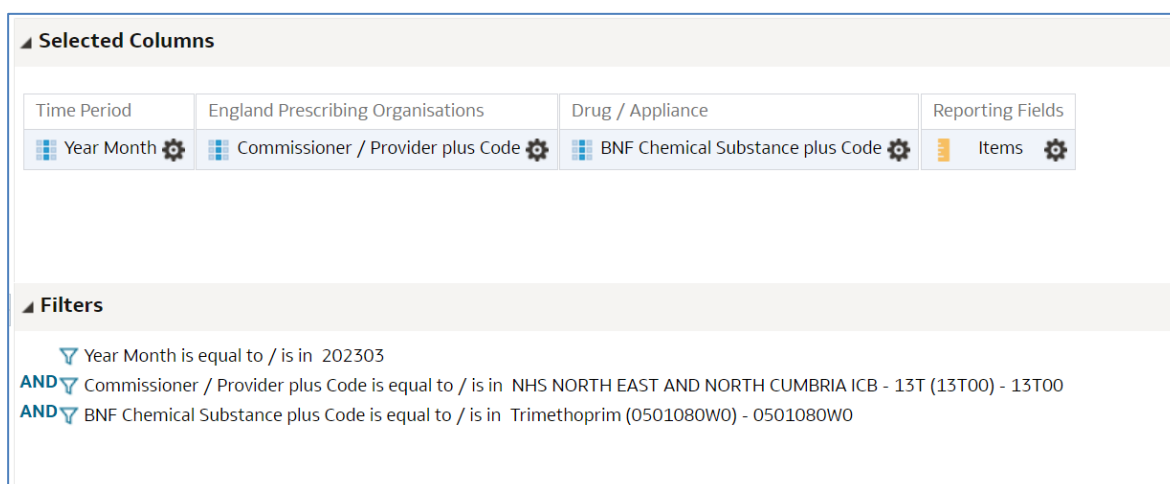
16. Your report will look similar to the example below:

| Table      |  |       |                      |               |
|------------|--|-------|----------------------|---------------|
| Year Month | Practice plus Code ▲▼                          | Items | Comm / Provider Item | Country Items |
| 202303     | Medicare - General Practice - GP Services      | 112   | 32,481               | 3,917,617     |
| 202303     | Mental Health - General Practice - GP Services | 316   | 32,481               | 3,917,617     |
| 202303     | Maternity - General Practice - GP Services     | 654   | 32,481               | 3,917,617     |
| 202303     | Paediatrics - General Practice - GP Services   | 250   | 32,481               | 3,917,617     |
| 202303     | Respiratory - General Practice - GP Services   | 857   | 32,481               | 3,917,617     |
| 202303     | Skin - General Practice - GP Services          | 415   | 32,481               | 3,917,617     |
| 202303     | Urology - General Practice - GP Services       | 597   | 32,481               | 3,917,617     |
| 202303     | Vaccinations - General Practice - GP Services  | 783   | 32,481               | 3,917,617     |
| 202303     | Wound Care - General Practice - GP Services    | 296   | 32,481               | 3,917,617     |
| 202303     | Cardiology - General Practice - GP Services    | 553   | 32,481               | 3,917,617     |
| 202303     | Dermatology - General Practice - GP Services   | 605   | 32,481               | 3,917,617     |
| 202303     | Gynaecology - General Practice - GP Services   | 150   | 32,481               | 3,917,617     |
| 202303     | Oncology - General Practice - GP Services      | 1,122 | 32,481               | 3,917,617     |

## Using Patient Count

ePACT2 enables you to return patient count data in your results; this means you can see the number of unique identified patients that are receiving specific items.

1. Set up a basic analysis with the following columns and filters, (in this example I am running data for NHS North East and North Cumbria ICB (13T00), March 2023 and bringing back the number of Items for Trimethoprim.)



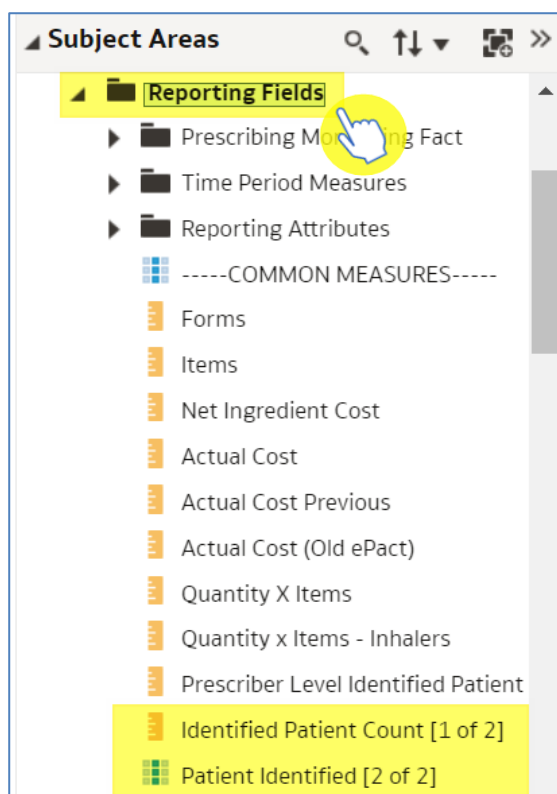
**Selected Columns**

| Time Period | England Prescribing Organisations | Drug / Appliance                 | Reporting Fields |
|-------------|-----------------------------------|----------------------------------|------------------|
| Year Month  | Commissioner / Provider plus Code | BNF Chemical Substance plus Code | Items            |

**Filters**

- Year Month is equal to / is in 202303
- AND Commissioner / Provider plus Code is equal to / is in NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) - 13T00
- AND BNF Chemical Substance plus Code is equal to / is in Trimethoprim (0501080W0) - 0501080W0

2. Apply the 'Identified Patient Count [1 of 2]' and 'Patient Identified [2 of 2]', these can be found in the 'Reporting Fields' folder.



**Subject Areas**

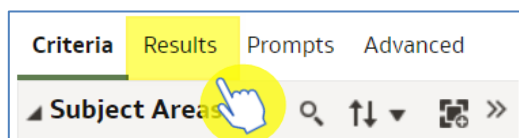
- Reporting Fields
  - Prescribing Monitoring Fact
  - Time Period Measures
  - Reporting Attributes
  - COMMON MEASURES-----
  - Forms
  - Items
  - Net Ingredient Cost
  - Actual Cost
  - Actual Cost Previous
  - Actual Cost (Old ePact)
  - Quantity X Items
  - Quantity x Items - Inhalers
  - Prescriber Level Identified Patient
  - Identified Patient Count [1 of 2]
  - Patient Identified [2 of 2]



3. The 'Selected' columns should look like this:

| Selected Columns |                                   |                                  |                  |                                   |                             |
|------------------|-----------------------------------|----------------------------------|------------------|-----------------------------------|-----------------------------|
| Time Period      | England Prescribing Organisations | Drug / Appliance                 | Reporting Fields |                                   |                             |
| Year Month       | Commissioner / Provider plus Code | BNF Chemical Substance plus Code | Items            | Identified Patient Count [1 of 2] | Patient Identified [2 of 2] |

4. Select the 'Results' tab.



5. Your results should look like this:

| Year Month | Commissioner / Provider plus Code                  | BNF Chemical Substance plus Code | Items | Identified Patient Count [1 of 2] | Patient Identified [2 of 2] |
|------------|--|----------------------------------|-------|-----------------------------------|-----------------------------|
| 202303     | NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) | Trimethoprim (0501080W0)         | 13    | 0                                 | N                           |
| 202303     | NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) | Trimethoprim (0501080W0)         | 1,256 | 1009                              | Y                           |



'Identified Patient Count [1 of 2]' – this will give the number of unique identified patients; patients identified by the NHS number printed on the prescription. This column needs to be used when running data at practice level or above.



'Patient Identified [2 of 2]' – this will separate the results into identified and unidentified patients. 'N' indicates not identified and 'Y' indicates identified patients and gives the count.



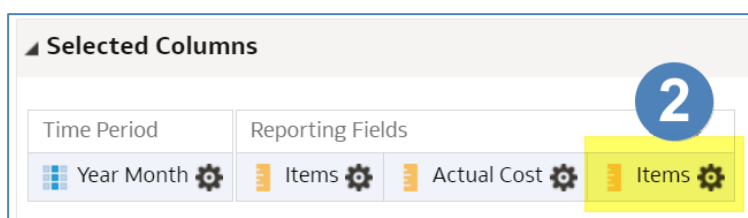
If you are running the analysis at prescriber level and would like to bring the patient count data down, you will need to include the Prescriber level identified Patient Count [1 of 2] column. **You only see this column if you have prescriber level access to ePACT2.**

## Creating and using a saved column

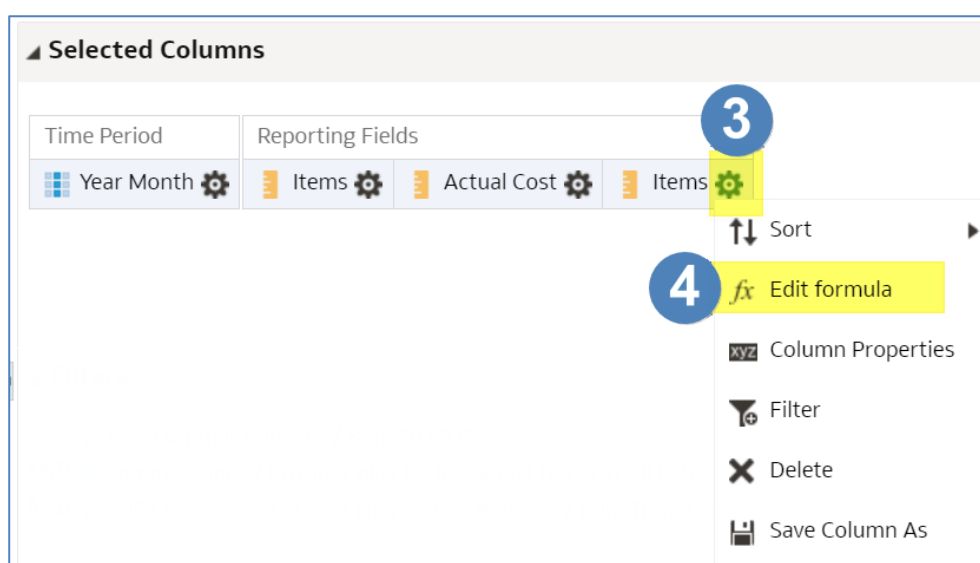
The increased functionality of ePACT2 allows you to create columns which you can then save to use in subsequent analysis.

In this example we are going to create a column that shows the cost per item, i.e. Actual costs ÷ Items.

1. Insert the columns you would like to use in your analysis to create your new column.
2. Insert an additional column (this can be anything as we are going to delete the column formula and edit it).



3. Select the cog icon on the additional column you have included in your report (in this example it is the 'Items' column).
4. Select 'Edit formula'.



5. Delete the content of the 'Column Formula' pane.

**Edit Column Formula**

Column Formula Bins

Folder Heading Reporting Fields

Column Heading Items

☐ Custom Headings

☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row) Default (Sum)

Available

Subject Areas

ePACT 2

Column Formula

"Reporting Fields"."Items"

5 DELETE

6. Select the 'Column' icon in the column formula toolbar.
7. From the available list choose the first column you want to input. In this example we are choosing 'Actual Cost' first.

Column Formula

Year Month

Items

Actual Cost

7

6

f(...)

Filter...

Column

Variable

+

-

x

/

%

( )

||

8. Click at the end of the formula to ensure it is no longer highlighted.
9. Using the tool bar select the mathematic symbol you require, in this example we are choosing divide.

Column Formula

"Reporting Fields"."Actual Cost"

8

9

f(...)

Filter...

Column

Variable

+

-

x

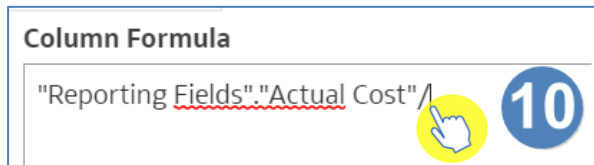
/

%

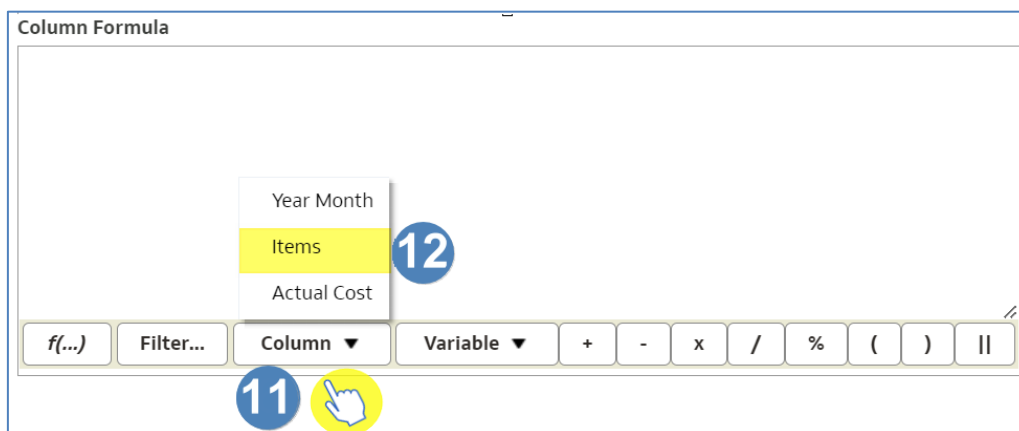
( )

||

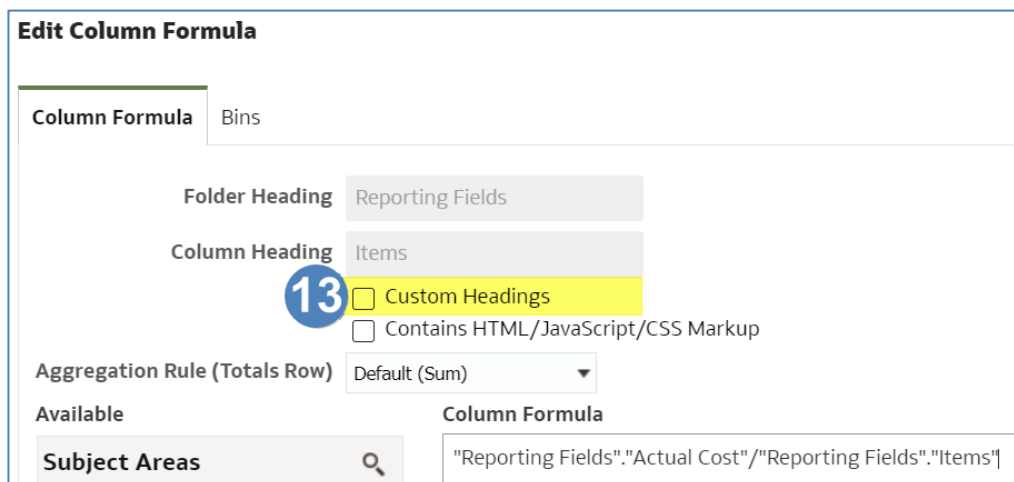
10. Click at the end of the formula to ensure your mathematic symbol is no longer highlighted.



11. Select the column icon.
12. Select the other column you wish to use, in this example we are choosing 'Items'.



13. Select 'Custom Headings'.



14. Give your column an appropriate name, in this example we are naming the column 'Actual Cost per Item'.

**Edit Column Formula**

Column Formula Bins

Folder Heading Reporting Fields

Column Heading **Actual Cost Per Item** 14

☒ Custom Headings  
☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row) Default (Sum)

Available

Subject Areas

Column Formula  
 "Reporting Fields"."Actual Cost"/"Reporting Fields"."Items"

15. Select 'OK'.

**Edit Column Formula**

Column Formula Bins

Folder Heading Reporting Fields

Column Heading **Actual Cost Per Item**

☒ Custom Headings  
☐ Contains HTML/JavaScript/CSS Markup

Aggregation Rule (Totals Row) Default (Sum)

Available

Subject Areas

Column Formula  
 "Reporting Fields"."Actual Cost"/"Reporting Fields"."Items"

☐ Treat as an attribute column

15 OK Cancel

16. Your new column will now be created.

**Selected Columns**

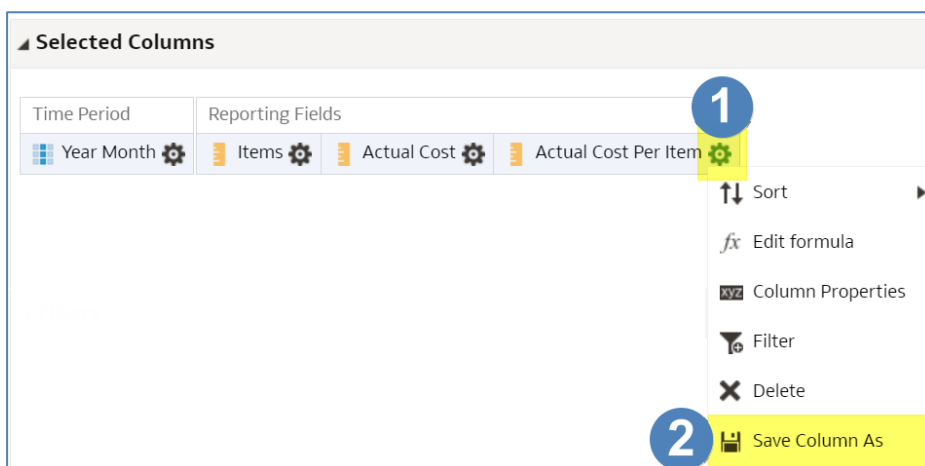
Time Period Reporting Fields

Year Month Items Actual Cost **Actual Cost Per Item** 16

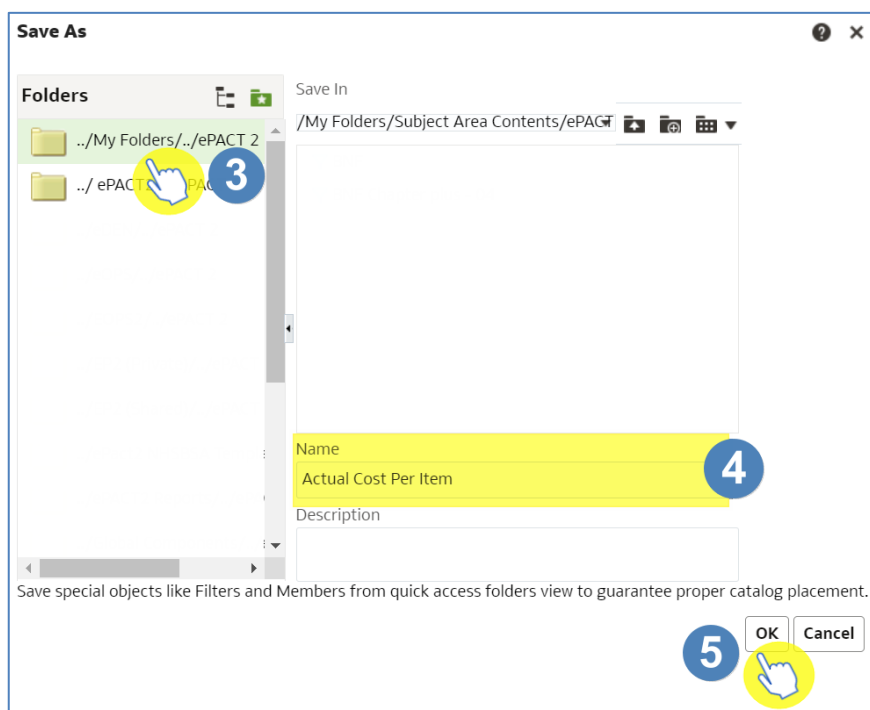
## Saving a column

Once you have created a new column in ePACT2 it is possible to save it for future use in other analysis.

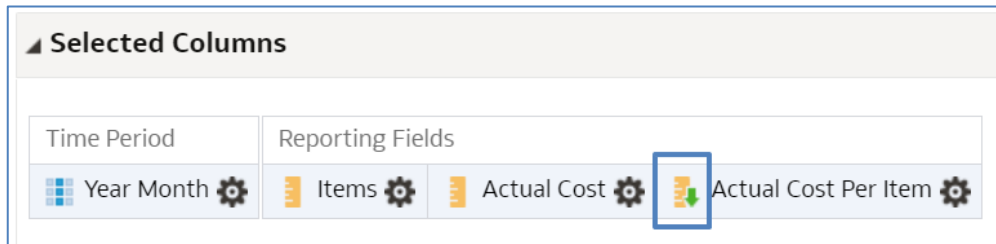
1. Select the cog icon of the column you wish to save.
2. Select 'Save Column As' from the available list.



3. Select an appropriate location to save your column.
4. Give the column an appropriate name.
5. Select 'OK'.



6. Your column will now show a downwards green arrow, this indicates it is a saved column.

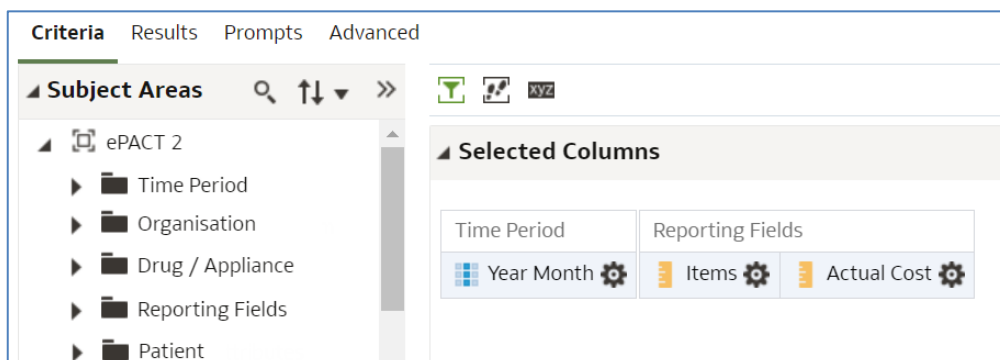


## Using a saved column in your analysis

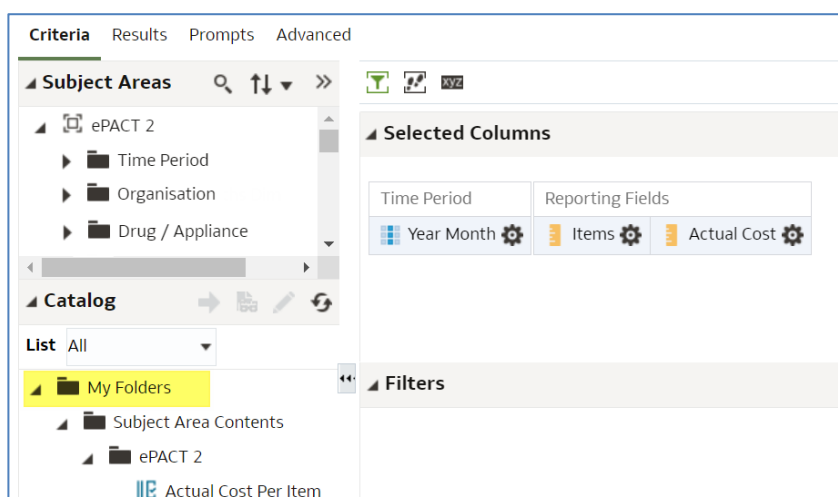
If you want to use a column you have previously created and saved use the following steps.

All content you create and save will be held in your 'My Folder'.

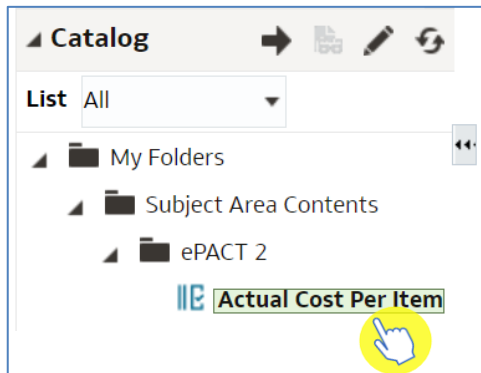
1. Open up the analysis you want to add your saved column to and navigate to the criteria pane.



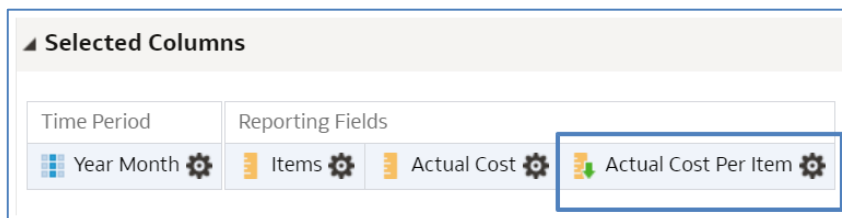
2. Select the drop-down on 'My Folders' in the Catalog pane and navigate to where you have saved your column.



3. Double click on the column you want to add. In this example we are adding the 'Actual Cost Per Item' column.



4. The column will now be included in your analysis.





## Filtering individual columns

It is possible within ePACT2 to filter individual columns instead of the whole analysis; this enables you to run multiple sets of data within the same analysis.

In this example I am going to run a report at practice level with one field showing total items for all NSAID's and one showing all items attributed to the practice.

1. Open a blank analysis.
2. Include the following columns:

| Selected Columns |                                   |                  |       |
|------------------|-----------------------------------|------------------|-------|
| Time Period      | England Prescribing Organisations | Reporting Fields |       |
| Year Month       | Commissioner / Provider plus Code | Items            | Items |

3. Include the following filters:

| Filters |  |
|---------|--|
|         | Year Month is equal to / is in 202303  |
| AND     | Commissioner / Provider plus Code is equal to / is in NHS NORTH EAST AND NORTH CUMBRIA ICB - 13T (13T00) - 13T00 |



At the moment, this analysis would return two columns, with both showing the number of items attributed to each practice under NHS North East and North Cumbria ICB for March 2023.

## Filter the column

We are now going to filter one of the 'Items' columns to show the NSAID items.

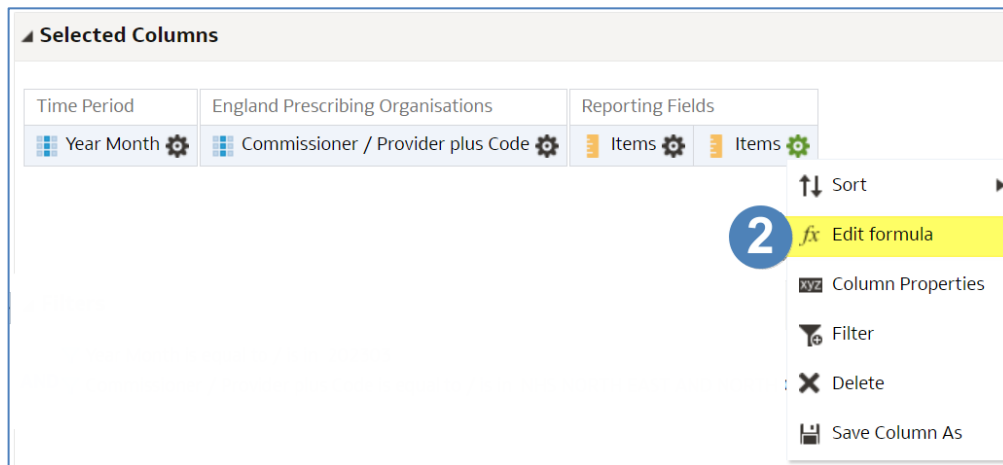
1. Select the cog icon on the column you intend to filter.

| Selected Columns |                                   |                  |       |
|------------------|-----------------------------------|------------------|-------|
| Time Period      | England Prescribing Organisations | Reporting Fields |       |
| Year Month       | Commissioner / Provider plus Code | Items            | Items |

1

- Sort
- Edit formula
- Column Properties
- Filter
- Delete
- Save Column As

2. Select 'Edit formula'.

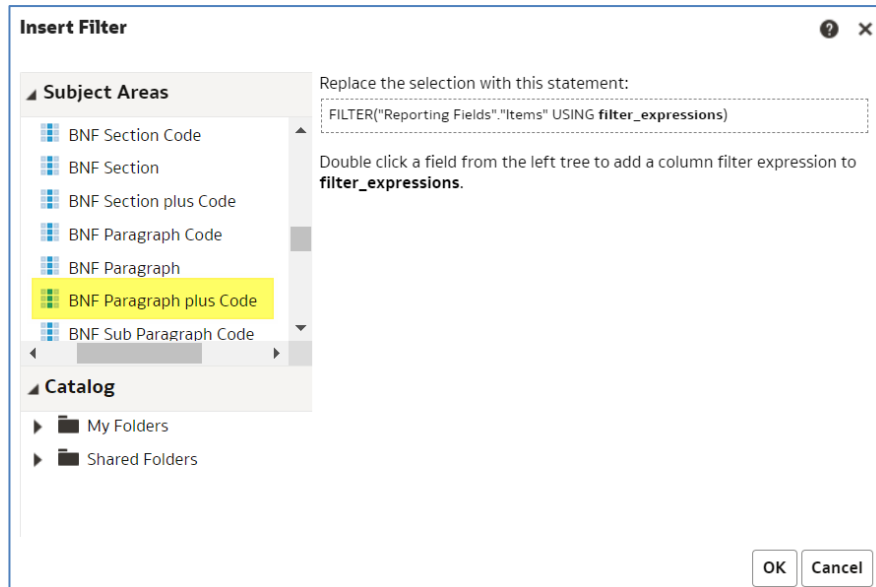


3. Within the 'Column Formula', ensure that the formula is highlighted.
4. Select 'Filter'.

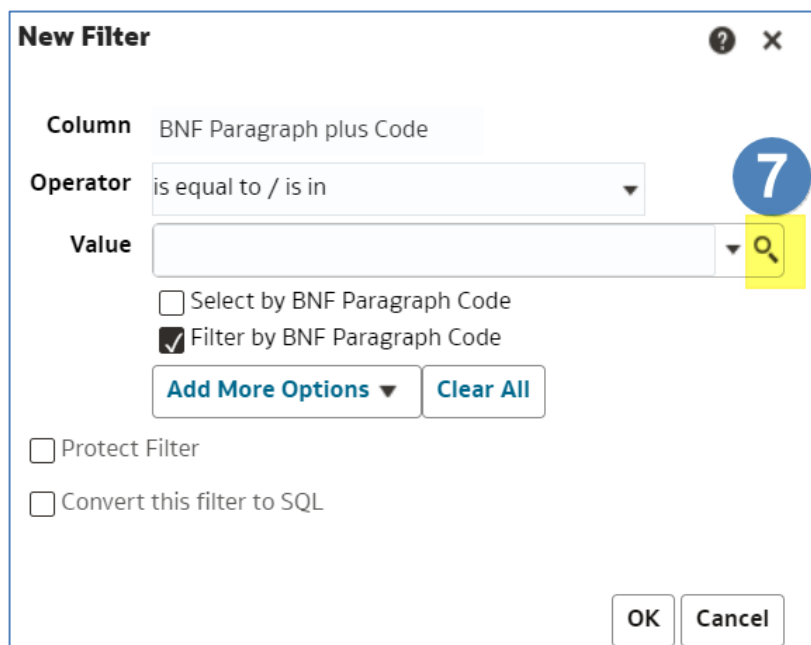


You must ensure the 'Column Formula' is highlighted when filtering a column. If it is not highlighted, the formula will not update correctly.

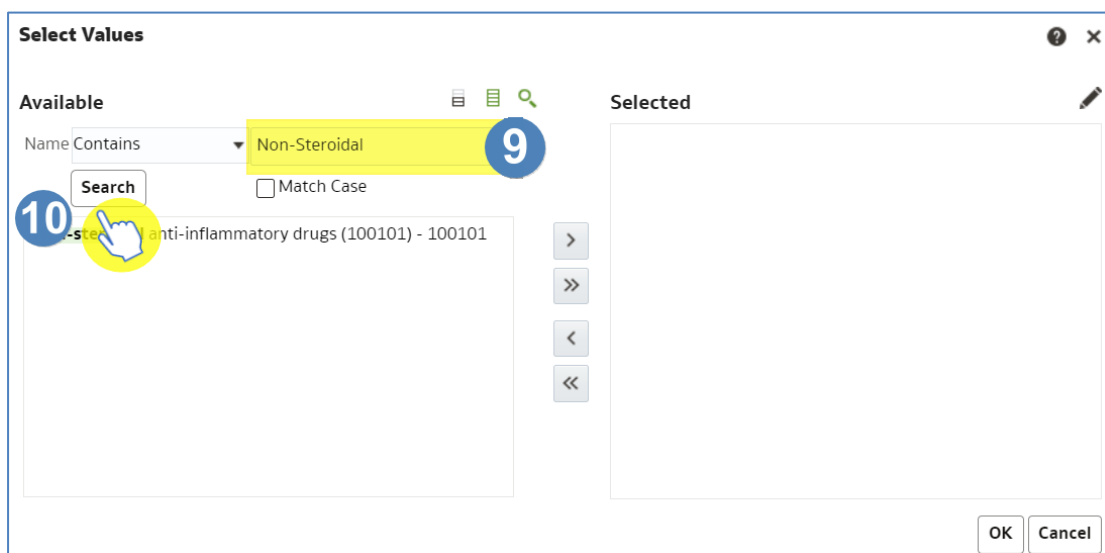
5. You will now be presented with the 'Insert Filter' pane. From here, navigate through the 'Subject Areas' to the column you want to filter on. In this example we will be filtering on the 'BNF Paragraph plus code' column.



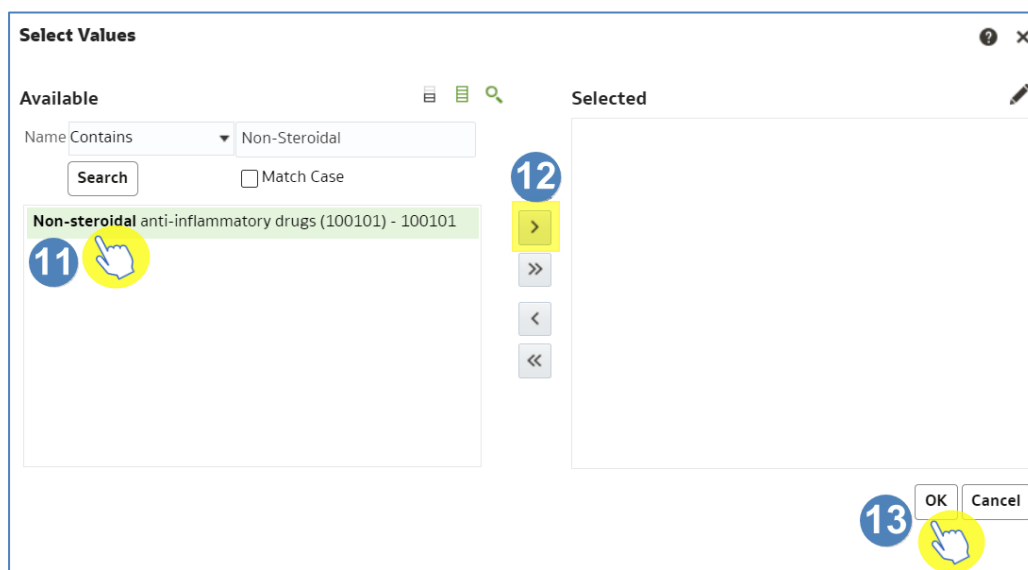
6. Double click on the column to open the 'New Filter' pane.
7. Select the Magnifying glass icon to search the column for the value you want to filter on.



8. You will now be presented with the 'Select Values' pane. From here search for your value, in this example we are searching for 'Non-Steroidal Anti-Inflammatory Drugs'.
9. Type a keyword/phrase in the search box.
10. Select 'Search'.



11. Select the value you want to filter the column on from your search results.
12. Select the single arrow icon to move the value into the selected box.
13. Once the value is showing in the 'Selected' box, select 'OK'.



14. You will now be returned to the 'New Filter' pane. The 'Value' box will now be populated with your selected value.
15. Select 'OK'.

**New Filter**

Column: BNF Paragraph plus Code

Operator: is equal to / is in

14 Value: Non-steroidal anti-inflammatory drugs (100101) - 1

☐ Select by BNF Paragraph Code

☒ Filter by BNF Paragraph Code

Add More Options Clear All

☐ Protect Filter

☐ Convert this filter to SQL

OK Cancel

15

16. You will now be presented with the 'Insert Filter' pane; this indicates the filter you are going to apply to the column.
17. Select 'OK'.

**Insert Filter**

Replace the selection with this statement:

FILTER("Reporting Fields"."Items" USING filter\_expressions)

Double click a field from the left tree to add a column filter expression to filter\_expressions.

BNF Paragraph plus Code is equal to / is in Non-steroidal anti-inflammatory drugs (100101) - 100101 16

Subject Areas

- BNF Section Code
- BNF Section
- BNF Section plus Code
- BNF Paragraph Code
- BNF Paragraph
- BNF Paragraph plus Code
- BNF Sub Paragraph Code

Catalog

- My Folders
- Shared Folders

OK Cancel

17

18. The 'Column Formula' will now be updated to show the filter applied.

**Column Formula**

FILTER("Reporting Fields"."Items" USING (DESCRIPTOR\_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))

f(...) Filter... Column ▼ Variable ▼ + - x / % ( ) ||

19. Select 'Custom Headings', this enables you to update the 'Column Heading' and give it an appropriate name.
20. Give an appropriate name, in this example we are naming the column 'NSAID items'.
21. Select 'OK'.

**Edit Column Formula**

Column Formula Bins

Folder Heading Reporting Fields

Column Heading NSAID items 20

19 ☒ Custom Headings

Aggregation Rule (Totals Row) Default (Sum)

Available

Subject Areas

- ePACT 2
  - Time Period
  - Rolling 3 Months Dim
  - Organisation
  - Drug / Appliance
  - Various Attributes
  - Reporting Fields
  - Reporting Field (Disper
  - Reporting Fields (Denta

Column Formula









FILTER("Reporting Fields"."Items" USING (DESCRIPTOR\_IDOF("ePACT 2"."Drug / Appliance"."BNF Paragraph plus Code") = '100101'))

f(...) Filter... Column ▼ Variable ▼ + - x / % ( ) ||

☐ Treat as an attribute column

21 OK Cancel

22. Your 'Selected Columns' will now reflect the changes you have made.

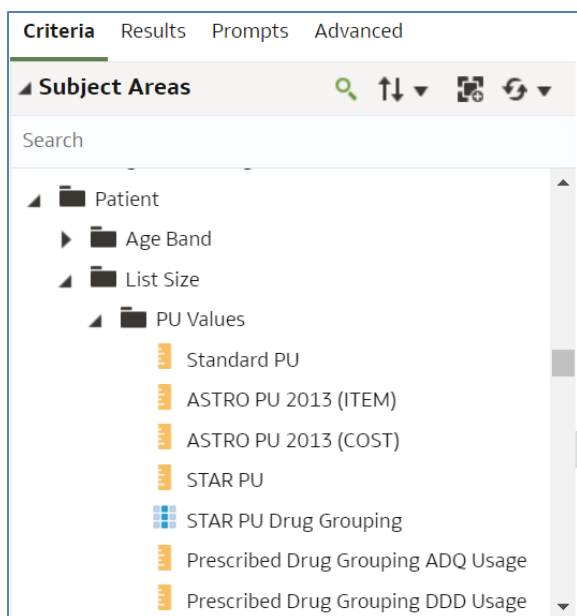
| Selected Columns   |   |  |   |
|--|---|--|---|
| Time Period  | England Prescribing Organisations   | Reporting Fields   |   |
|  Year Month  |  Commissioner / Provider plus Code  |  NSAID items  |  Items  |



This concept works for all columns in the subject area, for example, you could filter on columns to show items broken into different age groups.

## ASTRO and Standard PU Reports

The Standard PU and ASTRO PU 2013 columns can be found in the following folder:

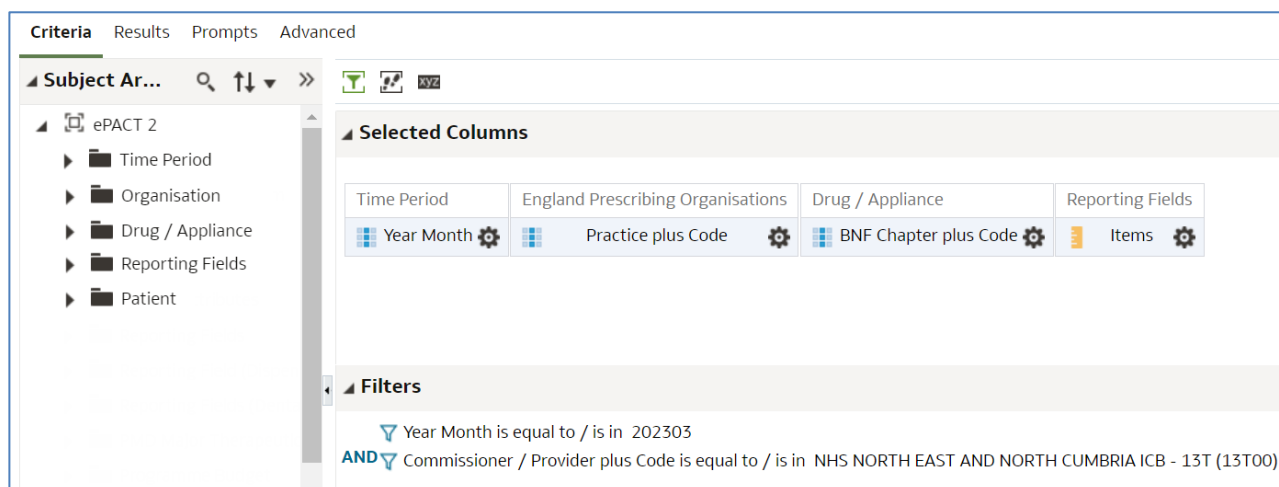


To run analyses with these columns in use the following steps:

1. Include the columns and filters you wish to return data for.

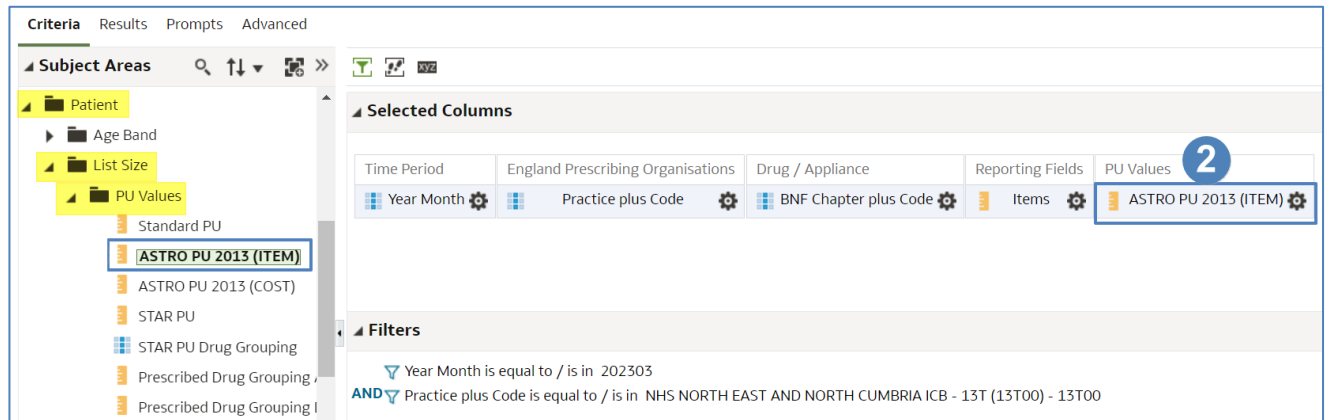


In this example we are running the data for March 2023 and 'NHS North East and North Cumbria 13T (13T00)'. The data will be returned at practice level showing Items for each BNF Chapter and the 'ASTRO PU 2013 (Item)' figure for each practice.

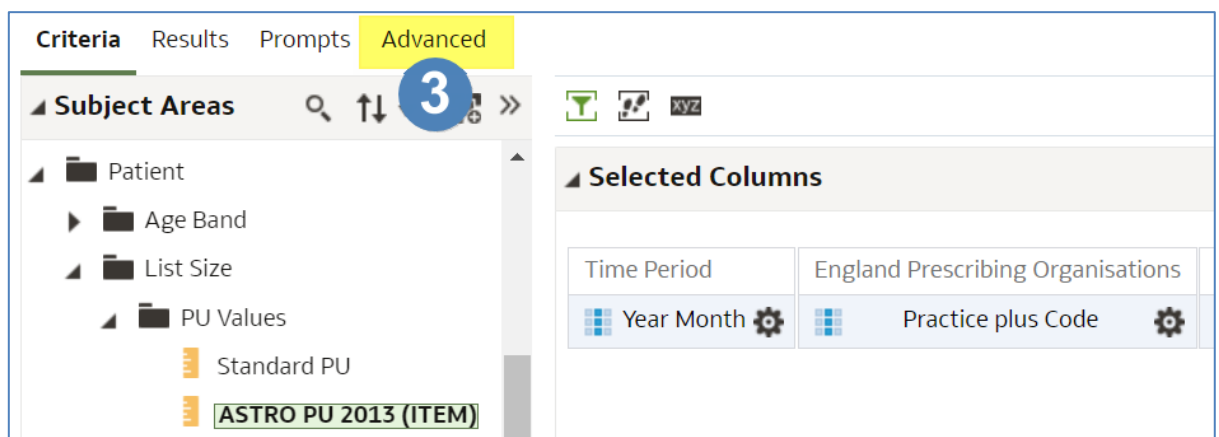




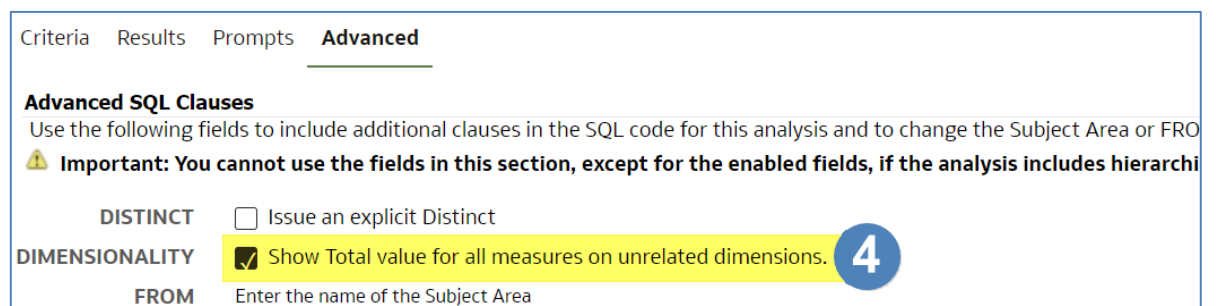
- Expand the subject area to the location – Patient > List Size > PU Values > and select the PU Measures column required. In this example we'll use the 'ASTRO PU 2013 (Items)' column.



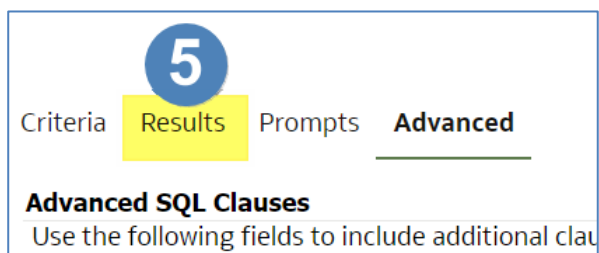
- Select the 'Advanced' tab from the top left-hand corner of the analysis builder.



- Scroll down to the 'Advanced SQL Clauses' section and from here select 'Show Total value for all measures on unrelated dimensions'.



5. Select the 'Results' tab.



6. Your results will then return to show 'ASTRO PU 2013 (ITEM)'.

Table

| Year Month | Practice plus Code                                | BNF Chapter plus Code                                    | Items | ASTRO PU 2013 (ITEM) |
|------------|---|--|-------|----------------------|
| 202303     | <a href="#">Advanced Molecular Pathology (01)</a> | Gastro-Intestinal System (01)                            | 247   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (02)</a> | Cardiovascular System (02)                               | 805   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (03)</a> | Respiratory System (03)                                  | 130   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (04)</a> | Central Nervous System (04)                              | 530   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (05)</a> | Infections (05)  | 112   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (06)</a> | Endocrine System (06)                                    | 222   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (07)</a> | Obstetrics, Gynaecology and Urinary-Tract Disorders (07) | 76    | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (08)</a> | Malignant Disease and Immunosuppression (08)             | 12    | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (09)</a> | Nutrition and Blood (09)                                 | 173   | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (10)</a> | Musculoskeletal and Joint Diseases (10)                  | 47    | 29,350               |
| 202303     | <a href="#">Advanced Molecular Pathology (11)</a> | Eye (11)   | 37    | 29,350               |

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## Getting more help

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### **Additional training material and user guides**

The ePACT2 training team has developed several how to guides to help you get the best out of ePACT2. These can be found on our [ePACT2 user guides page](#)

### **Webinar sessions**

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We also offer bespoke sessions which are delivered just to you or your invited colleagues. You can let us know if you have any specific topics or reports you'd like to cover or if you would prefer an introductory tour of the system.

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