

# ePACT2 User Guide

## Including variance calculations in an analysis

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## Variance

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It is possible to show variance in several different ways, for the purposes of this guide we will be using the method employed in the previous ePACT system.

To show variance we will be creating a 'Estimate' figure for the organisation based on the prescribing of its parent organisation. The variance will then be the difference between the estimated and actual figures.

For example, if the estimated items for a practice were required the formula below would be used.

$$\text{CCG Items/CCG List Size} \times \text{Practice List Size} = \text{Estimated Practice Items}$$

The estimated figure will be calculated using the list size for the organisation and its parent. As we will need to show information at multiple organisational levels in the same report we will first be aggregating data within the analysis.

Including variance calculations in an analysis

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## Aggregating columns

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

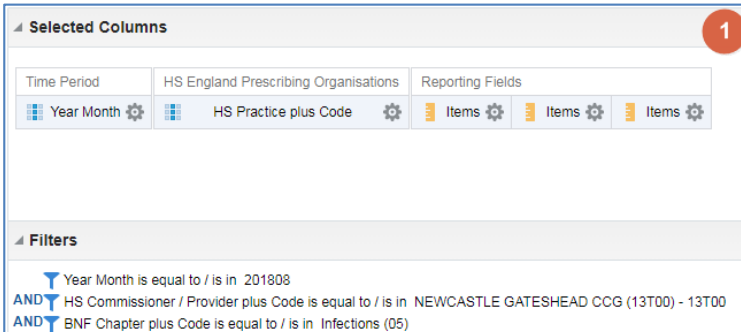
In the following example I will show how to aggregate data up to CCG or National level. In this example 'Items' is being used however it is possible to use any fact column, such as 'Actual Cost'.


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

 CCG level formula:  
AT "England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level"

 National level formula:  
AT "England Prescribing Organisations"."Prescribing Organisation"."Country Level"

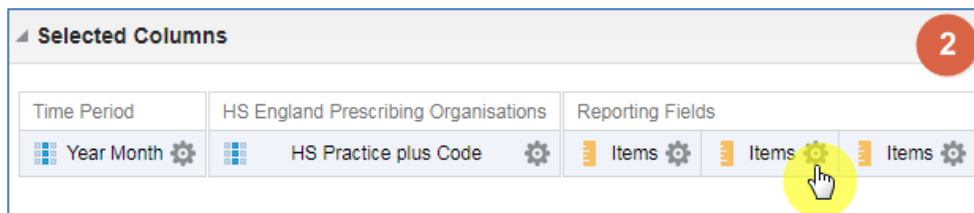
1. Set up your analysis, in my example I am bringing the data back at practice level for Newcastle Gateshead CCG, and bringing back Items for Chapter 5.



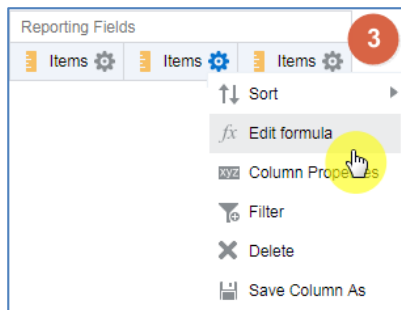
 You will notice I have included 3 items columns; this is because I am going to aggregate two of the columns, one to show CCG items and the other to show National Items.

## Including variance calculations in an analysis

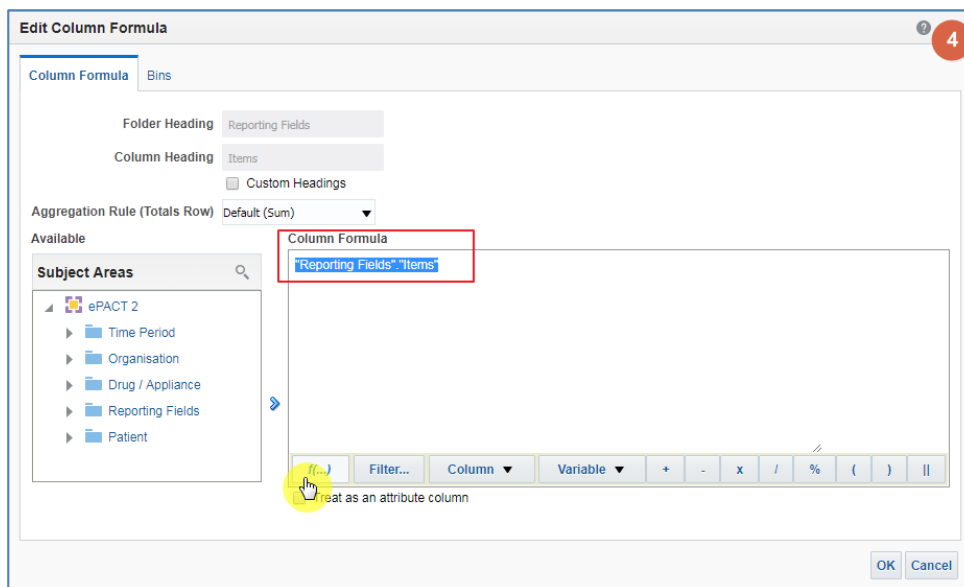
2. Select the Cog icon on a column you want to aggregate



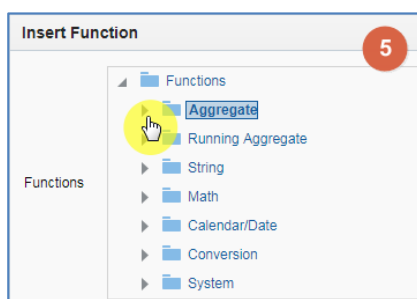
3. Select 'Edit formula'



4. Ensuring the 'Column Formula' is highlighted select the 'Insert Function' icon

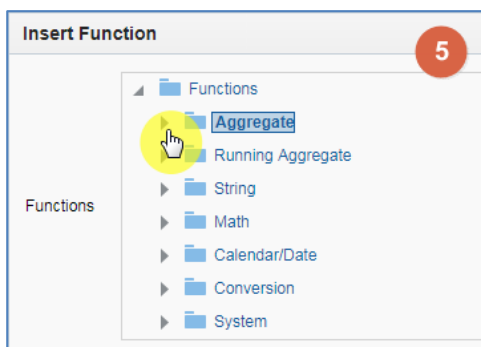


5. Select the drop down arrow to open the 'Aggregate' folder

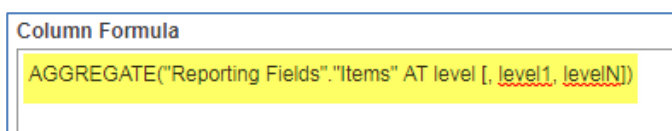


Including variance calculations in an analysis

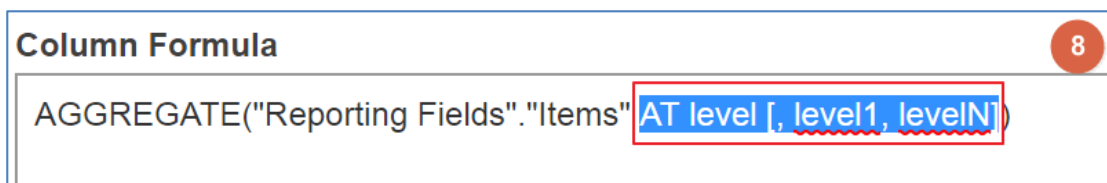
6. Select 'Aggregate At' by double clicking the function icon



7. The column formula will now update as per below image



8. Highlight the following in your 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

9. 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 CCG level formula or the National level formula from below:



HS England Prescribing Organisations CCG Level formula:

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



England Prescribing Organisations CCG level formula:

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

Including variance calculations in an analysis



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")

10. Paste the copied formula into the highlighted section of the column formula pane, the formula in your column should now look like this:

**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'

11. Select 'Customer Heading' check box to enable you to give the column an appropriate name

The screenshot shows the 'Column Formula' pane with the following settings: Folder Heading: Reporting Fields; Column Heading: Items; Custom Headings: (checkbox being checked); Aggregation Rule (Totals Row): Default (Sum). A red circle with the number 11 is in the top right corner.

12. Name column using the 'Column Heading' box

The screenshot shows the 'Column Formula' pane with the following settings: Folder Heading: Reporting Fields; Column Heading: Comm / Provider Items; Custom Headings: (checkbox checked); Aggregation Rule (Totals Row): Default (Sum). A red circle with the number 12 is in the top right corner.

## Including variance calculations in an analysis

13. Select 'OK' to create your new column

**Edit Column Formula** 13

Column Formula | Bins

Folder Heading: Reporting Fields

Column Heading: **Comm / Prov Items**

Custom Headings

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

Criteria **Results** Prompts Adv. 14

Your report will look similar to this:

Year Month	HS Commissioner / Provider plus Code	HS Practice plus Code	Items	CCG Items
201901	NEWCASTLE GATESHEAD CCG (13T00)	108 RAWLING ROAD(RAWLING ROAD PRACTICE) (A85609)	2,688	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	AVENUE MEDICAL PRACTICE (A86007)	2,441	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEACON VIEW MEDICAL CENTRE (A85026)	11,394	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENFIELD PARK MEDICAL GROUP (A86023)	23,102	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENSHAM FAMILY PRACTICE (A85002)	9,609	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BETTS AVENUE MEDICAL GROUP (A86030)	30,959	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEWICK ROAD SURGERY (A85017)	12,146	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BIDDLESTONE HEALTH GROUP (A86010)	15,950	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BIRTLEY MEDICAL GROUP (A85008)	40,245	1,126,091
201901	NEWCASTLE GATESHEAD CCG (13T00)	BLAYDON GP LED PRACTICE (Y02658)	2,766	1,126,091

Including variance calculations in an analysis

We will now repeat the process to include 'List Size' columns at Practice and CCG level.

Once complete our results will look similar to this:

Year Month	HS Commissioner / Provider plus Code	HS Practice plus Code	Items	CCG Items	List Size	CCG List Size
201901	NEWCASTLE GATESHEAD CCG (13T00)	108 RAWLING ROAD(RAWLING ROAD PRACTICE) (A85609)	2,688	1,126,091	1,583	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	AVENUE MEDICAL PRACTICE (A86007)	2,441	1,126,091	2,772	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEACON VIEW MEDICAL CENTRE (A85026)	11,394	1,126,091	4,796	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENFIELD PARK MEDICAL GROUP (A86023)	23,102	1,126,091	8,929	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENSHAM FAMILY PRACTICE (A85002)	9,609	1,126,091	4,211	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BETTS AVENUE MEDICAL GROUP (A86030)	30,959	1,126,091	11,298	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEWICK ROAD SURGERY (A85017)	12,146	1,126,091	6,267	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BIDDLESTONE HEALTH GROUP (A86010)	15,950	1,126,091	9,936	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BIRTLEY MEDICAL GROUP (A85008)	40,245	1,126,091	16,141	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BLAYDON GP LED PRACTICE (Y02658)	2,766	1,126,091	2,388	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BROADWAY MEDICAL CENTRE (A86035)	4,457	1,126,091	2,597	531,152
201901	NEWCASTLE GATESHEAD CCG (13T00)	BRUNTON PARK (A86033)	7,963	1,126,091	5,727	531,152



Including variance calculations in an analysis

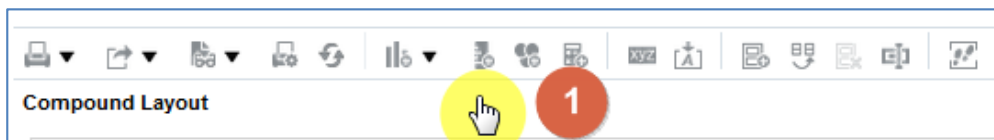
## Variance calculations

Now that we have aggregated the columns to show data at different organisational levels we can use these columns to perform the 'Variance' calculations.

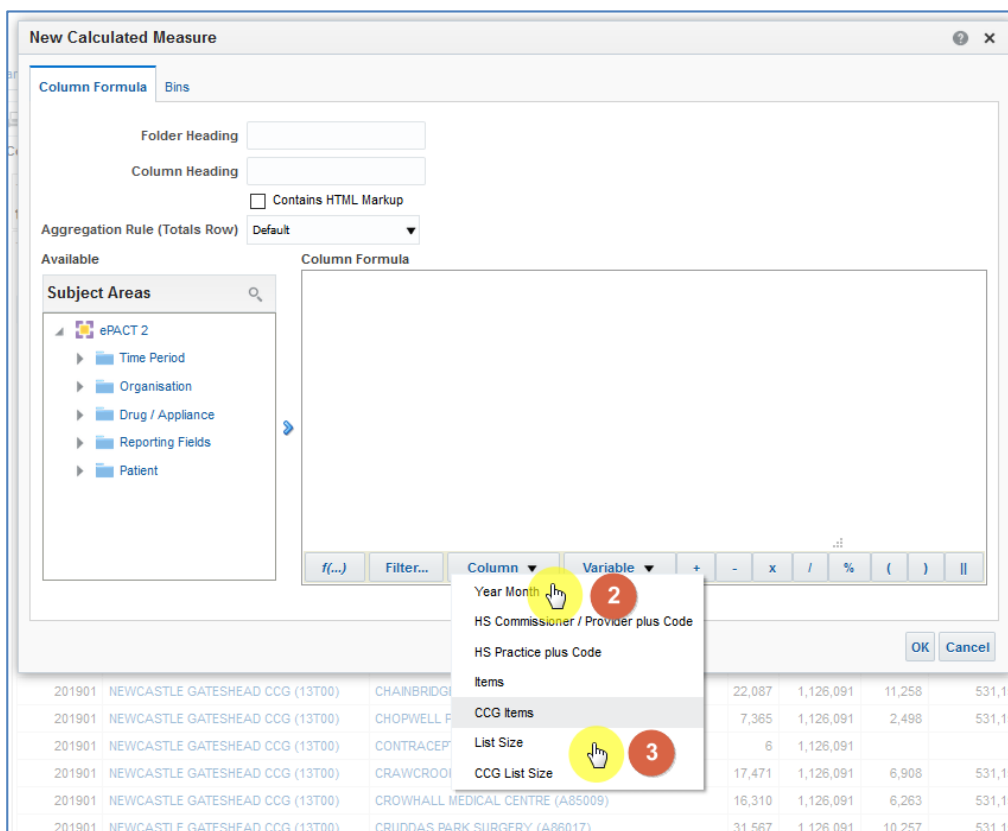
We will use the 'New Calculated Measure' function to create columns to show the 'Estimate' and 'Variance'.

Using this process to create calculations to show the CCG items divided by the CCG List Size and then multiplied by the Practice List Size, as below.

1. In the 'Results' tab, select the 'New Calculated Measure' icon:

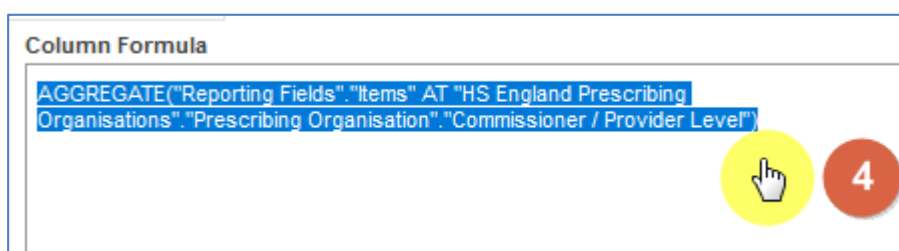


2. Select the 'Column' icon
3. This will display all available columns to include in your analysis, select the column you want to include, in this example I am going to select 'CCG Items'.

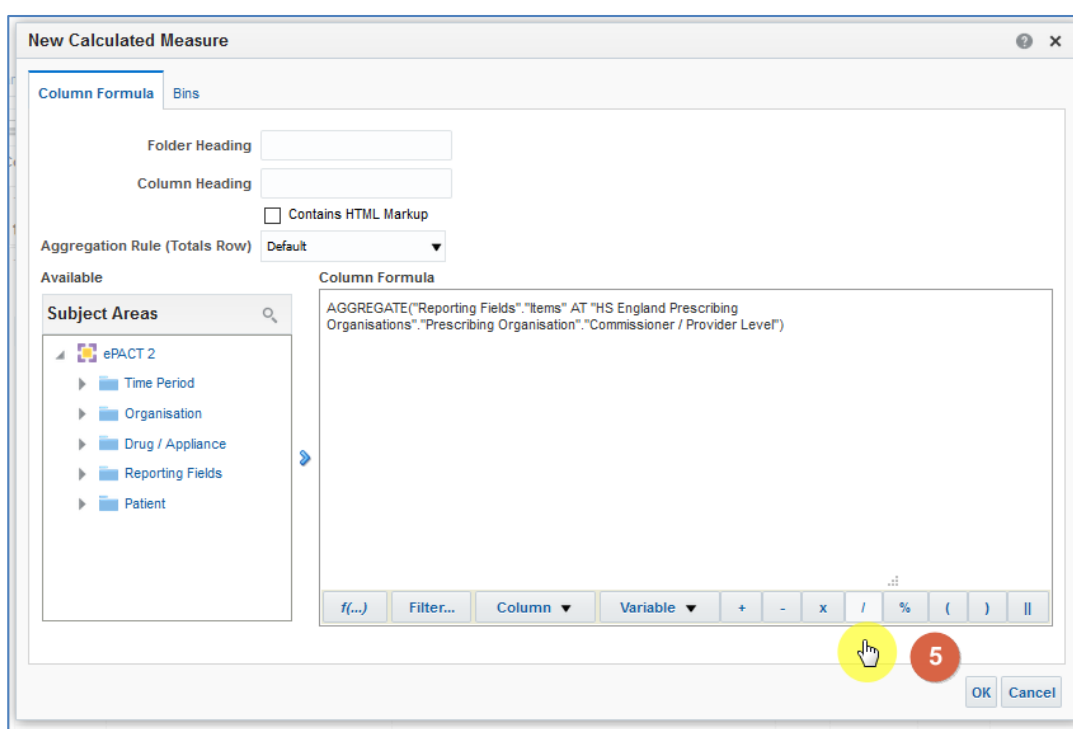


## Including variance calculations in an analysis

4. Click at the end of the formula that has populate the 'Column Formula' pane

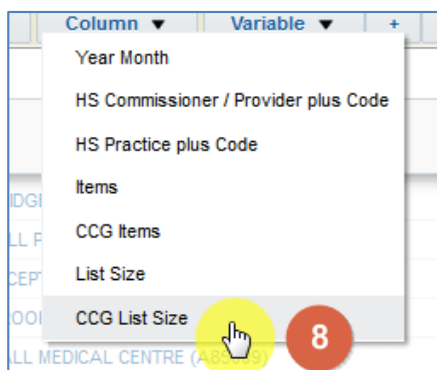


5. Ensuring your cursor is at the end of the formula, and the formula is no longer highlighted, select the divide symbol from the formula taskbar:

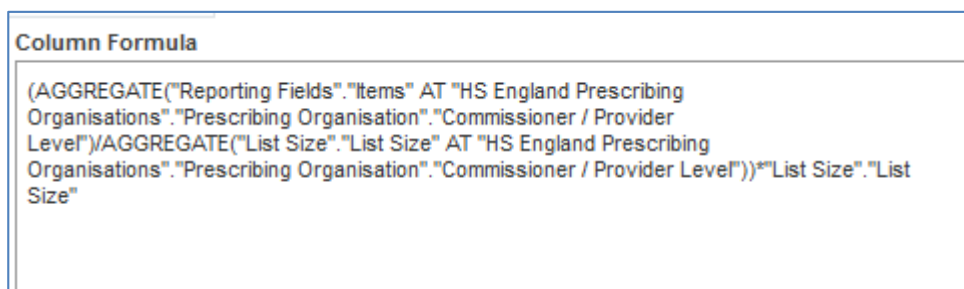


6. The divide symbol will now be input into the formula, again click at the end to ensure the divide symbol is no longer highlighted:
7. From the 'Column Formula' taskbar select the 'Column' icon:
8. Select the appropriate column from the list, in this example I am choosing 'CCG List Size':

## Including variance calculations in an analysis



9. Click at the end to un highlight column formula:
10. Select the multiply symbol from the 'Column Formula' taskbar:
11. From the 'Column Formula' taskbar select the 'Column' icon:
12. Select the appropriate column from the list, in this example I am choosing 'List Size':



13. Name the column as 'Estimate' and then select 'OK' to create your calculated column:

## Including variance calculations in an analysis

**New Calculated Measure**

Column Formula    Bins

Folder Heading:

Column Heading: Estimate

Contains HTML Markup

Aggregation Rule (Totals Row): Default

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")/AGGREGATE("List Size"."List Size" AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level"))\*"List Size"."List Size"

13

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

OK    Cancel

Your new calculated column will now be included in the results:

Year Month	HS Commissioner / Provider plus Code	HS Practice plus Code	Items	CCG Items	List Size	CCG List Size	Estimate
201901	NEWCASTLE GATESHEAD CCG (13T00)	108 RAWLING ROAD(RAWLING ROAD PRACTICE) (A85609)	2,688	1,126,091	1,583	531,152	3,356
201901	NEWCASTLE GATESHEAD CCG (13T00)	AVENUE MEDICAL PRACTICE (A86007)	2,441	1,126,091	2,772	531,152	5,877
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEACON VIEW MEDICAL CENTRE (A85026)	11,394	1,126,091	4,796	531,152	10,168
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENFIELD PARK MEDICAL GROUP (A86023)	23,102	1,126,091	8,929	531,152	18,930
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENSHAM FAMILY PRACTICE (A85002)	9,609	1,126,091	4,211	531,152	8,928

- Repeat the process to create a new calculation to show the 'Variance', this will be the actual minus the estimate.

**New Calculated Measure**

Column Formula    Bins

Folder Heading:

Column Heading: Variance

Contains HTML Markup

Aggregation Rule (Totals Row): Default

Available

**Subject Areas**

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

**Column Formula**

"Reporting Fields"."Items"-(/AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level")/AGGREGATE("List Size"."List Size" AT "HS England Prescribing Organisations"."Prescribing Organisation"."Commissioner / Provider Level"))\*"List Size"."List Size"

14

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

OK    Cancel

Including variance calculations in an analysis

15. Name the column as 'Variance' and select 'Ok' to confirm the column. The column will then be shown in the data.

Year Month	HS Commissioner / Provider plus Code	HS Practice plus Code	Items	CCG Items	List Size	CCG List Size	Estimate	Variance
201901	NEWCASTLE GATESHEAD CCG (13T00)	108 RAWLING ROAD(RAWLING ROAD PRACTICE) (A85609)	2,688	1,126,091	1,583	531,152	3,356	-668
201901	NEWCASTLE GATESHEAD CCG (13T00)	AVENUE MEDICAL PRACTICE (A86007)	2,441	1,126,091	2,772	531,152	5,877	-3,436
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEACON VIEW MEDICAL CENTRE (A85026)	11,394	1,126,091	4,796	531,152	18,930	1,226
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENFIELD PARK MEDICAL GROUP (A86023)	23,102	1,126,091	8,929	531,152	8,928	4,172
201901	NEWCASTLE GATESHEAD CCG (13T00)	BENSHAM FAMILY PRACTICE (A85002)	9,609	1,126,091	4,211	531,152	23,953	681
201901	NEWCASTLE GATESHEAD CCG (13T00)	BETTS AVENUE MEDICAL GROUP (A86030)	30,959	1,126,091	11,298	531,152	13,287	7,006
201901	NEWCASTLE GATESHEAD CCG (13T00)	BEWICK ROAD SURGERY (A85017)	12,146	1,126,091	6,267	531,152	21,065	-1,141
201901	NEWCASTLE GATESHEAD CCG (13T00)	BIDDLESTONE HEALTH GROUP (A86010)	15,950	1,126,091	9,936	531,152		-5,115

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## Getting Help

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### Additional training material and user guides

The NHSBSA has developed a number of how to guides to help you get the best out of ePACT2. These can be found at: [Additional User Guides](#)

### WebEx sessions

WebEx will be provided on a number of different topics and features. More information about these can be found here: [WebEx Training](#)