

ePACT2 user guide

Including Variance Calculations in an Analysis



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Variance

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 an '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:

Comm/Provider Items / Comm/Provider List Size x Practice List Size = 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.

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. 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:

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).

Selected Colum	ns						
Time Period	Engla	nd Prescribing Organisa	tions	Reporting Fie	ds		
Year Month 👸		Practice plus Code	ø	🚦 Items 👸	Items 👸	🚦 Items 👸	
Filters							
🍸 Year Month is	equal t	o/is in 202303					
ND T Commissione	r / Prov	ider is equal to / is in N	HS NO	RTH EAST AND	NORTH CUMB	RIA ICB - 13T - 1	L3T00



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. Ensuring the 'Column Formula' is highlighted.
- 5. Select the 'Insert Function' icon.

Edit Column Formula		9	×
Column Formula Bins			
Folder Heading	Reporting Fields		
Column Heading	Items		
	Custom Headings Contains HTML/JavaScript/CSS Markup		
Aggregation Rule (Totals Row)	Default (Sum)		
Available	Column Formula		
Subject Areas	e "Reporting Fields"."Items" 4		
 Depart 2 Time Period Organisation Drug / Appliance Reporting Fields Patient 	5 7() Filter Column ▼ Variable ▼ + - x / % ()	II	4
4	Treat as an attribute column		_
	ОК	Canc	el

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

Insert Fund	ction	@ >	<
	Functions	•	
Functions	Running Aggregate		
	String		
	🕨 🛅 Math		
	Calendar/Date		
	Conversion		
	System	-	

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

Insert Fun	ction Ø	×
Functions	 Functions Aggregate [Aggregate At] Avg AvgDistinct Bin BottomN 	•
Selected	Aggregate At	
Syntax Where	AGGREGATE(measure AT level [, level1, levelN]) measure is the name of a measure column. level is the level at which you want to aggregate. You can optionally specify more than one level.	
Example	AGGREGATE(sales AT month, region)	
Description	This function aggregates columns based on the level or levels you specify.	

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

Column Formula

AGGREGATE("Reporting Fields"."Items" AT level [, level1, levelN])

9. Highlight the following in your column formula.

Column Formula AGGREGATE("Reporting Fields"."Items' AT level [, level1, levelN])



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")



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 <u>Organisations</u>"."Prescribing <u>Organisation</u>"."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	
Fo	lder Heading	Reporting Fields
Colu	umn Heading	Items
		Custom Headings

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

Column Formula	Bins	
Fo	lder Heading	Reporting Fields
Colu	ımn Heading	Comm / Provider Item 13
		Custom Headings

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

Edit Column For	mula			?	×
Column Formula	Bins				
Fo	older Heading umn Heading	Reporti Comm	ng Fields / Provider Item		
Aggregation Rule	(Totals Row)	Default (Sum)		
Available			Column Formula		
Subject Areas		0	AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing <u>Organisations</u> "."Prescribing		
Climeter PACT 2 Partiel Drug Patiel	Period nisation / Appliance rting Fields nt	•	f() Filter Column ▼ Variable ▼ + - x / % ()	1
				K Can	cel

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



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

Table			[A] 🔤 💉 🗙
Year Month	Practice plus Code	Items	Comm / Provider Item
202303	second data to the first parents	2,555	1,183,487
202303	COMPANY OF A DESCRIPTION OF A DESCRIPTIO	11,870	1,183,487
202303	NUMBER OF THE PARTY OF THE PARTY OF	24,242	1,183,487
202303	interesting the first participation of	9,461	1,183,487
202303	With a dealer with the database	33,017	1,183,487
202303	THE REPORT OF THE STREET	13,679	1,183,487
202303	and a strength of the strength	15,652	1,183,487
202303	Manufacture and an excitor	42,587	1,183,487

- 17. Repeat the process to include 'List Size' column at SICB level. The 'List Size' column is located within the 'Patient' folder.
- 18. Once complete your results will look similar to this:

Table					[A] 🚾 💉 🗙
Year Month	Practice plus Code	Items	Comm / Provider Item	List Size	Comm / Provider List Size
202303	ARRAN MERCAL PRACTICE (ARRANGE)	2,555	1,183,487	2,765	547,798
202303	Reactive of the Alexandra (Marcard)	11,870	1,183,487	5,388	547,798
202303	BORR DIRECTED ALCOUR PARCE	24,242	1,183,487	9,430	547,798
202303	and a second design of the second sec	9,461	1,183,487	3,998	547,798
202303	ACTIVATION REPORT MONTHAIN	33,017	1,183,487	11,313	547,798
202303	DONOR ROOT VIRGON (ROOT)	13,679	1,183,487	7,421	547,798
202303	ADD FOR THE CASE OF A DATE	15,652	1,183,487	10,167	547,798
202303	BRUDNEDLA, ORDERADORE	42,587	1,183,487	15,650	547,798

Including drug information

If drug information is to be included in the report the analysis should be set to show values for all measures on unrelated dimensions.

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



- 2. Scroll down to the 'Advanced SQL Clauses' section.
- 3. Select 'Show Total value for all measures on unrelated dimensions'.

<u>Criteria</u> Results	Prompts Advanced
Advanced SQL Clar Use the following fi Important: You	uses elds to include additional clauses in the SQL code for this analysis and to change the Subject Area or FROM clause. To add items to the projection list, use the Criteria tab. cannot use the fields in this section, except for the enabled fields, if the analysis includes hierarchical columns, member selections, or groups.
DISTINCT	Ssue an explicit Distinct
DIMENSIONALITY	Show Total value for all measures on unrelated dimensions.
FROM	Enter the name of the Subject Area

4. The 'Results' tab can now be selected.

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 SICB level items divided by the SICB level List Size and then multiplied by the Practice List Size.

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



- 2. Select the 'Column' icon.
- 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 'Comm / Provider Items'.

lew Calculated Measure			0	×
Column Formula Bins				
Folder Heading Column Heading				
A	Conta	ins HTML/JavaScript/CSS Markup		
Aggregation Rule (lotals ROW) Available	Default	▼ Column Formula		
Subject Areas	o, m per ent ₹ ▼	Year Month Practice plus Code Items Comm / Provider Items List Size Comm / Provider List Size f() Filter Column ▼ Variable ▼ + - x / % () 2 ℃	II	() :el

- 4. Click at the end of the formula that has populated the 'Column Formula' pane.
- 5. Ensuring your curser is at the end of the formula, and the formula is no longer highlighted, select the divide symbol from the formula taskbar.

olumn Formula
AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing <u>Organisations</u> "."Prescribing Organisation"."Commissioner / Provider Level")
f() Filter Column ▼ Variable ▼ + - x / % ()

- 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.
- Select the appropriate column from the list, in this example we are choosing 'Comm / Provider List Size':



- 9. Click at the end of the formula that has populated the 'Column Formula' pane.
- 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 we are choosing 'List Size'.

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 <u>Organisations</u> "."Prescribing <u>Organisation</u> "."Commissioner / Provider Level")*												
Year Month												
Practice plus Code												
	Items											
	Comm / Provider Items											
	List Size 12											
	Comm / Provider List Size											
<i>f()</i> Filter	Column ▼ Variable ▼ + - x / % () II											

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

New Calculated Me	asure																		?	×
Column Formula	lins																			
Folde	er Heading	Estim	ate			1	3													
			ontai	ins HTML/J	avaScrip	t/CSS	Markup													
Aggregation Rule (T	otals Row)	Default	t		•															
Available				Column For	mula															
Subject Areas		o,		AGGREGAT	E("Repo	rting	Fields"."I ioner / P	tems" A rovider	T "H	S Engla I")/AGG	nd Pres REGAT	scribing F("List	g Orgar Size"."	nisation List Siz	ns"."Pr 'e" AT	escribi 'HS Fr	ng Igland	Presci	ibing	
ePACT 2 image of the second	riod ation Appliance ng Fields		>	f()	Filter.		Colum	n v	Co	Variabl	e V	+	er Leve	LIST SIZ	st <u>Size</u>	WIList	Size")		"
																(4	ОК	Can	cel

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

Year Month	Practice plus Code	ltems	Comm / Provider Items	List Size	Comm / Provider List Size	Estimate
202303	ADREMODAL MACHEMISTS	2,555	1,183,487	2,765	547,798	5,974
202303	INCOMENTATION, CARD PRIME	11,870	1,183,487	5,388	547,798	11,640
202303	CONTROL MAKING DOCUMENTS	24,242	1,183,487	9,430	547,798	20,373
202303	contract ways have been been as	9,461	1,183,487	3,998	547,798	8,637
202303	of Transmit with a drive whether	33,017	1,183,487	11,313	547,798	24,441
202303	and the state of the second second	13,679	1,183,487	7,421	547,798	16,033

16. Repeat the process to create a new calculation to show the 'Variance', this will be the actual (in this example 'Items') minus the estimate.

New Calculated M	easure				?	×
Column Formula	Bins					
Fold Colun	ler Heading nn Heading	Variar	nce	ins HTML/JavaScript/CSS Markup		
Aggregation Rule (Available	Totals Row)	Default	t	▼ Column Formula		
Subject Areas	eriod 3 Months Din sation Appliance s Attributes ing Fields ing Field (Disp ing Fields (De	o, n Der nta ▼	>	"Reporting Fields"."Items"-AGGREGATE("Reporting Fields"."Items" AT "HS England Prescribing <u>Organisations</u> "."Prescribing <u>Organisation</u> "."Commissioner / Provider Level")/AGGREGATE("List Size"."List AT 'HS England Prescribing <u>Organisations</u> "."Prescribing <u>Organisation</u> "."Commissioner / Provider Level")*"List <u>Size"."List</u> Size"] <u>f()</u> Filter Column ▼ Variable ▼ + - x / % ()	e" t II	~
				ОКС	anc	el

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17. The column will then be shown in the data.

Year Month	Practice plus Code	Items	Comm / Provider Items	List Size	Comm / Provider List Size	Estimate	Variance
202303	AND ADDRESS PROTECTION OF ADDRESS	2,555	1,183,487	2,765	547,798	5,974	-3,419
202303	BOACTA AND AND ON TOTAL PARTY OF	11,870	1,183,487	5,388	547,798	11,640	230
202303	INTERVIEW REPORT OF ANY INTERVIEW	24,242	1,183,487	9,430	547,798	20,373	3,869
202303	Sciences Restoration (16.3 provide);	9,461	1,183,487	3,998	547,798	8,637	824
202303	KTS KOST KEDLA DRUP DAVEN	33,017	1,183,487	11,313	547,798	24,441	8,576
202303	NAMES ADDRESS ADDRESS	13,679	1,183,487	7,421	547,798	16,033	-2,354
202303	NAME OF A DESCRIPTION OF A	15,652	1,183,487	10,167	547,798	21,965	-6,313
202303	An or a second second particular	42,587	1,183,487	15,650	547,798	33,811	8,776

Getting more help



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 <u>ePACT2 user guides page</u>

Webinar sessions

We offer a free webinar training service to all our users and you can book as many sessions as you need.

Our webinar sessions are booked as 1hour slots and we offer a number of different sessions covering a range of topics.

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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