



Dental Services

NHS Dental Services

E Reporting Good Practice Guide

Building Reports: Creating a Variable

Supporting the NHS, supplying the NHS, protecting the NHS

NHS Dental Services is a service provided by the NHS Business Services Authority



Building reports

In E-reporting it is possible to build your own variables. As an example a simple report will be created showing the % of FP17s where patients were children

Techniques shown in earlier parts of the user guide will be used , if unsure of any please refer back

Copy the Activity Skeleton Report into your favourites and rename it "Child FP17s". Then click on modify on this new report



Even when building your own reports, it is recommended that the starting point is the Activity Skeleton Report, as this has been formatted and includes titles etc



Creating a Variable

Result Objects

Contract Health Body Code Contract Health Body Name Contract Number

Number of FP17s Schedule Month (YYYYMM) Patient Adult or Child

To the query add Patient Adult or Child, then run the query

Activity Skeleton Report

File Edit Query Edit Report

fx Variable Editor View Structure Drill Page 1

In Edit Report click on Variable Editor 



Creating a Variable

The Variable Editor window is now open enabling the creation of a new variable

The screenshot shows the 'Variable Editor' window. On the left, a tree view under 'Data' shows 'Child FP17s' with sub-items: 'Contract Health Body Code', 'Contract Health Body Name', 'Contract Number', 'Name or Company Name', 'Patient Adult or Child', 'Schedule Month (YYYYMM)', 'Date Range from Prompts', and 'Number of FP17s'. The 'Variable Definition' section on the right has three fields: 'Name:' (empty), 'Qualification:' (set to 'Dimension'), and 'Type:' (set to 'unknown'). Below these is a 'Formula:' section with a red 'X' and a green checkmark. Three callout boxes provide instructions: one points to the 'Data' tree, another to the 'Name' field, and a third to the 'Qualification' and 'Type' fields.

Data available to be used

Enter name you wish to call the new variable

Qualification and Type will change automatically depending on what is used

The formula is where the variable is defined. In this case a variable for Child FP17s will be created



Creating a Variable

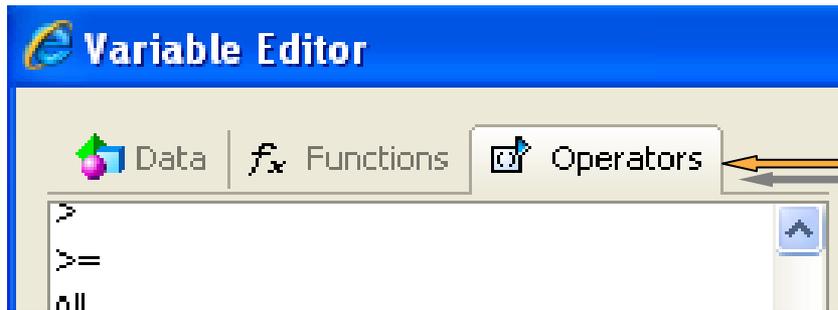
The screenshot shows the 'Variable Editor' window with a blue title bar and a close button (X) in the top right corner. The interface is divided into several sections:

- Data:** A tree view on the left showing a folder 'Child FP17s' containing several measures. The measure 'Number of FP17s' is highlighted with a blue background and a pink arrow pointing to it.
- Functions and Operators:** Two tabs are visible at the top of the data section.
- Variable Definition:** A section on the right with three fields:
 - Name:** A text box containing 'Child FP17s'. A pink arrow points to this field from a callout box.
 - Qualification:** A dropdown menu with 'Dimension' selected.
 - Type:** A text box containing 'unknown'.
- Formula:** A section on the right with a red 'X' and a green checkmark above a text box containing the formula '= [Number of FP17s]'. A pink arrow points to this field from a callout box.

Two orange callout boxes provide instructions:

- The first callout box, located at the bottom left, contains the text: "Drag or double click the measure Number of FP17s into the formula". A pink arrow points from this box to the formula field.
- The second callout box, located at the top right, contains the text: "Type in the name, for example 'Child FP17s'". A pink arrow points from this box to the Name field.

Creating a Variable



To calculate the number of FP17s only counted if the patient is a child, a condition needs to be applied by using an Operator which can be used to define a query



Scroll down to find the “Where” operator then double click so it appears in the formula

Description appears when the operator is highlighted

Description

[object] Where (boolean_expression)

Also a link to help with this function

 More on this function.



Creating a Variable

Data Functions Operators

Name: Child FP17s

Qualification: Dimension

Type: Unknown

Immediately after "Where" an open bracket needs to be placed

This is found in the list of operators, either double click or drag the "(" into the formula

And
Between
Block
Body

=[Number of FP17s]Where(

Creating a Variable

The screenshot shows the 'Variable Editor' window. On the left, a tree view under 'Child FP17s' lists several fields, with 'Patient Adult or Child' highlighted. An orange callout box above the tree says: "Patient Adult or Child" needs to be added to the formula, by clicking on the data tab. Below the tree, another orange callout box says: "Then double clicking or dragging the measure into the formula", with an arrow pointing to the formula field. The formula field contains the text: `= [Number of FP17s] Where ([Patient Adult or Child]`. Above the formula field, the 'Qualification' is set to 'Dimension' and the 'Type' is 'unknown'. A red 'X' and a green checkmark are visible above the formula field.

Variable Editor

Data

Child FP17s

- Contract Health Body Code
- Contract Health Body Name
- Contract Number
- Name or Company Name
- Patient Adult or Child
- Schedule Month (YYYYMM)
- Date Range from Prompts
- Number of FP17s

Qualification: Dimension

Type: unknown

Formula:

`= [Number of FP17s] Where ([Patient Adult or Child]`

Creating a Variable

Data Functions Operators

Name: Child FP17s

Qualification: Measure

Type: number

Formula:
X ✓
=[Number of FP17s]Where([Patient Adult or Child]="Child")

After "Patient Adult or Child" add
="Child" then a closed bracket

The = sign can be found
in the list of operators or
can be typed in manually

When creating a variable any text, such as
Child in the example above, must have
inverted commas (").

Creating a Variable

Formula:



=[Number of FP17s]Where([Patient Adult or Child]="Child")



Clicking on the green tick  allows a user to check to see if the formula is correct

The finished formula should read:

=[Number of FP17s]Where([Patient Adult or Child]="Child")

This formula will return the number of FP17s only where the Patient is a child

 More on this function.

Click OK to create the variable



OK

Cancel

Help



Creating a Variable

The screenshot shows a software interface with a menu bar (Data, Templates, Map, Properties) and a toolbar. On the left, a 'Data' pane lists variables under 'Child FP17s', including 'Contract Health Body Code', 'Contract Health Body Name', 'Contract Number', 'Name or Company Name', 'Patient Adult or Child', 'Schedule Month (YYYYMM)', 'Child FP17s' (highlighted), 'Date Range from Prompts', and 'Number of FP17s'. An arrow points from a callout box to 'Child FP17s'. The main area displays a table for 'February 2011' with the following data:

Contract Number	Name or Company Name	Number of FP17s	Child FP17s
XXXXXXXX0001	Anon Name	170,669	49,647
XXXXXXXX0002	Anon Name	15,003	4,004
XXXXXXXX0003	Anon Name	5,716	1,194
XXXXXXXX0004	Anon Name	102	97
XXXXXXXX0006	Anon Name	12,753	2,418
XXXXXXXX0012	Anon Name	15,334	2,542
XXXXXXXX0015	Anon Name	106	8
XXXX			

An arrow points from a callout box to the 'Child FP17s' column in the table.

The variable will now appear in the data available and can be added to the report

The table now shows Total FP17s and those that are for children only. From this we can create a further variable to show Child FP17s as a % of Total FP17s



Creating a Variable

To create Child FP17s as a % of Total FP17s we need to use the formula:

$$=[\text{Child FP17s}]/[\text{Number of FP17s}]$$

The operator / is used when dividing

Variable Definition

Name: Child FP17s as a % of Total FP17s

Qualification: Dimension

Type: unknown

Formula:



$$=[\text{Child FP17s}]/[\text{Number of FP17s}]$$



Child FP17s as a % of Total FP17s can be created in one step by using the formula, please note the brackets around the first part:

$$=[(\text{Number of FP17s})\text{Where}([\text{Patient Adult or Child}] = \text{"Child"})]/[\text{Number of FP17s}]$$



Creating a Variable

The screenshot shows a software interface with a table of data and a variable list on the left. The table is titled 'February 2011' and has five columns: 'Contract Number', 'Name or Company Name', 'Number of FP17s', 'Child FP17s', and 'Child FP17s as a % of Total FP17s'. The variable list on the left includes 'Child FP17s' and 'Child FP17s as a % of Total FP17s', with an arrow pointing to the latter. The table data is as follows:

Contract Number	Name or Company Name	Number of FP17s	Child FP17s	Child FP17s as a % of Total FP17s
XXXXXXXXXX0001	Anon Name	170,669	49,647	0.29
XXXXXXXXXX0002	Anon Name	15,003	4,004	0.27
XXXXXXXXXX0003	Anon Name	5,716	1,194	0.21
XXXXXXXXXX0004	Anon Name	102	97	0.95
XXXXXXXXXX0006	Anon Name	12,753	2,418	0.19
XXXXXXXXXX0012	Anon Name	15,334	2,542	0.17
XXXXXXXXXX0015	Anon Name	106	8	0.08
XXXXXXXXXX0019	Anon Name	293	215	0.73

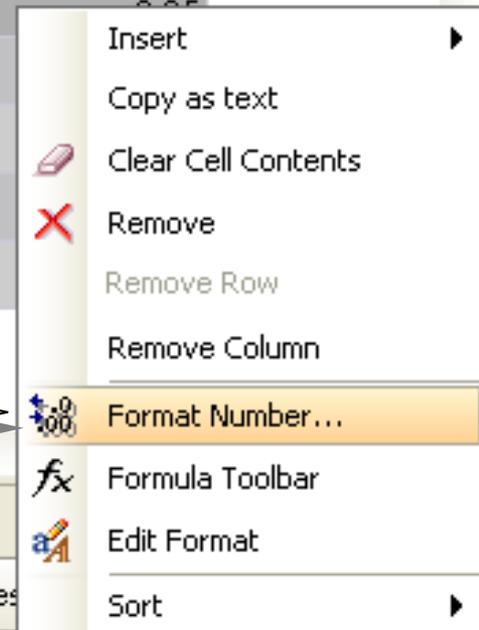
The new % variable can be added to the report

Note that the % appears as a decimal. To make it into a % figure the number can be formatted



Creating a Variable

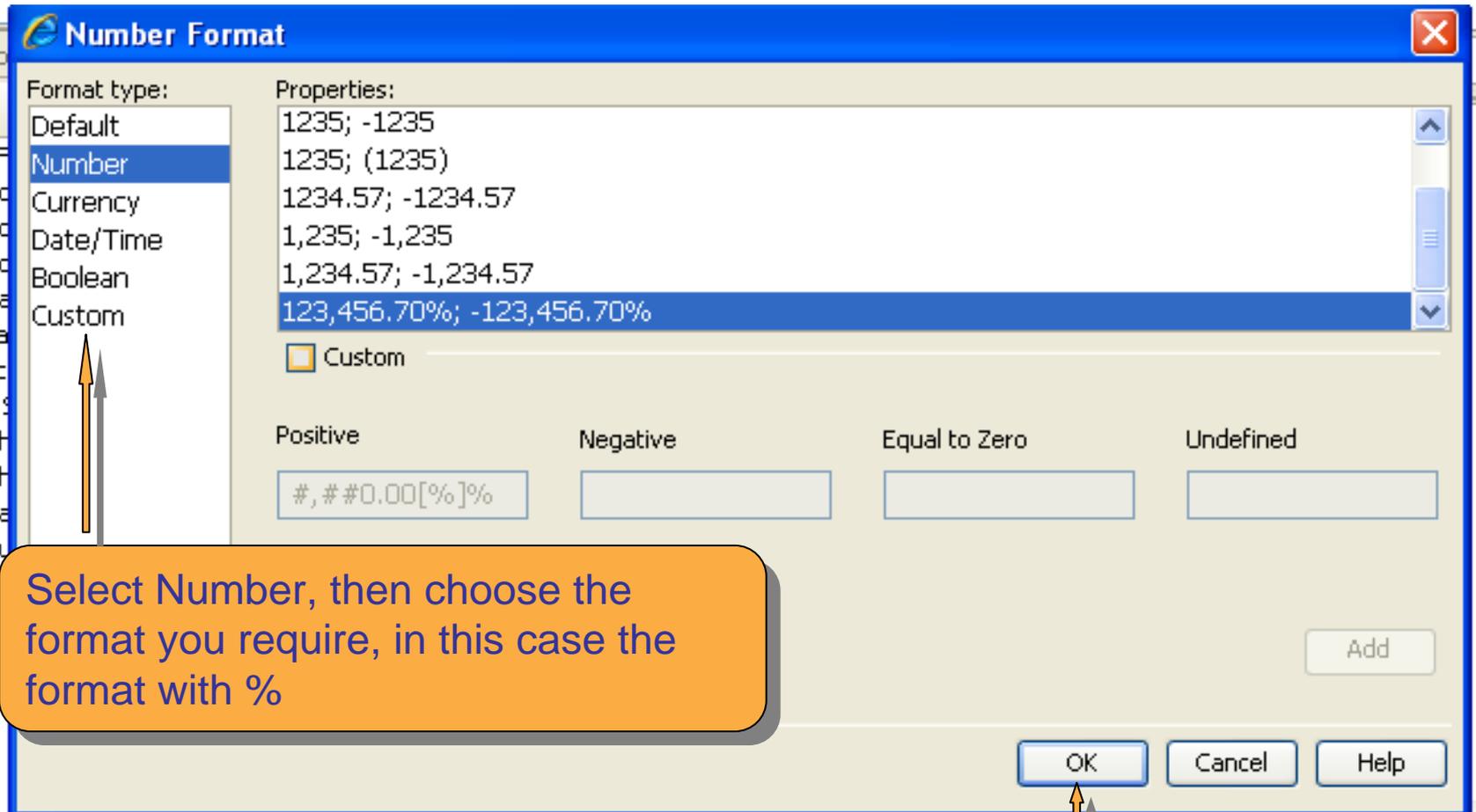
Contract Number	Name or Company Name	Number of FP17s	Child FP17s	Child FP17s as a % of Total FP17s
XXXXXXXX0001	Anon Name	170,669	49,647	0.29
XXXXXXXX0002	Anon Name	15,003	4,004	0.27
XXXXXXXX0003	Anon Name	5,716	1,194	0.21
XXXXXXXX0004	Anon Name	102	97	0.09
XXXXXXXX0006	Anon Name	12,753	2,418	0.19
XXXXXXXX0012	Anon Name	15,334	2,542	0.17
XXXXXXXX0015	Anon Name	106	8	0.08
XXXXXXXX0019	Anon Name	293	215	0.73



To format a number highlight the data then right click and select Format Number



Creating a Variable



Select Number, then choose the format you require, in this case the format with %

Click OK , then the number should be formatted as a % in the table



Creating a Variable

Contract Number	Name or Company Name	Number of FP17s	Child FP17s	Child FP17s as a % of Total FP17s
XXXXXXXX00001	Anon Name	170,669	49,647	29.09%
XXXXXXXX00002	Anon Name	15,003	4,004	26.69%
XXXXXXXX00003	Anon Name	5,716	1,194	20.89%
XXXXXXXX00004	Anon Name	102	97	95.10%
XXXXXXXX00006	Anon Name	12,753	2,418	18.96%
XXXXXXXX00012	Anon Name	15,334	2,542	16.58%
XXXXXXXX00015	Anon Name	106	8	7.55%
XXXXXXXX00019	Anon Name	293	215	73.38%

The number is now formatted as a %



An alternative to formatting the number is to multiply the figure by 100



Common Operators used in creating a variable

Between; as shown in the Child FP17 example

Where; as shown in the Child FP17 example

* multiply; e.g.: =[Child FP17s]*100
to turn a decimal fraction into a percentage

/ divide ; as shown in the Child FP17 example

<, >, <= , >= ; Smaller than, Greater than, Smaller than or equal to, Greater than or equal to

