EuroKing Stats Builder – User Support Document

Training Department

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Introduction

Purpose

This is a support document designed to be used by those responsible for producing statistical reports from the EuroKing Maternity Information System. The software enables clinical and technical users to interrogate the EuroKing database, via a query structure similar to the Patient Care Pathways in order to analyse stored data in both questionnaires and tables. This guide covers the following functionality.

- Accessing and editing Saved Statistics
- Query Building
- Applying Filters to Selected Fields
- Manipulating the Results

Audience

This document is intended to be used by the EuroKing customers to assist them in producing statistical reports for performance monitoring and audit of maternity services.

1. System Overview

The Euroking Stats Builder is a separate application outside of the EuroKing Maternity Information System (MIS). It enables clinical, administrative, and staff responsible for data collection to interrogate the EuroKing database.

KEY BENEFITS OF USING EUROKING

- Reducing paper moving towards a paper-lite solution.
- Ability to collect payment by results and compliance with the Maternity services dataset (MSDS).
- Registering the birth and obtaining an NHS number for babies born.
- Offline working in the community negating the need for an internet connection.
- Collection of maternity services audit data/ statistics.

USER ROLES IN EUROKING

Stats Builder is designed to be used by those responsible for producing statistical reports from the EuroKing Maternity Information System.

Midwives & Maternity Support Workers	Workflows for several different care pathways including antenatal, delivery and postnatal care with a place to record all aspects of a pregnancy and any past medical history.
Anaesthetists	Includes workflows to record pre-assessment, anaesthetic procedures and follow-ups, the recording of adverse incidents and any relevant documentation. All information can be cross referenced against other data held in the system to collate NOAD statistics. (National Obstetric Anaesthetic Database).
Obstetricians	The Doctors Procedures care pathway provides the ability to record Obstetric procedures.
Support Staff & Healthcare Managers	EuroKing can provide detailed statistical reports for both local and national review and planning of maternity services using the Stats and Lists and Stats Builder parts of the application. (There are separate support documents for EuroKing MIS and EuroKing System Administration.)

2. Log in

LAUNCHING THE APPLICATION

The Stats Builder application can be launched via the START MENU or DESKTOP shortcut as applicable:

Original Euroking Stats Generator application icon

Next generation Euroking application icon

LOGGING IN TO THE APPLICATION

Enter your EuroKing username (not case-sensitive) and password (case-sensitive).

It is possible to run the Stats Builder application against any available EuroKing database. If there is a choice, they will be listed in the drop-down menu of the Login window.

Please note: Usernames and passwords for Stats Builder are not maintained within this application but within the main EuroKing application.

3. Viewing Saved Statistics

Once logged in, the initial screen displayed is the Saved Statistics tab. This screen displays all the statistical queries available to be used.

Name	Description	Last Run	Last Run by	Created By
Booking Query	Example for Training	15/03/2019 10:48:52	euroking	euroking
Birth List	Example for Training	08/03/2019 10:12:47	euroking	euroking
AN Contact	Example for training	15/01/2018 15:40:19	euroking	euroking
CO reading	CO reading at booking - Training Jenny	15/01/2019 15:39:29	euroking	euroking
AN Contact	+ Risks training Jenny	30/01/2019 11:16:06	xescotter	Jenny.Duffin
Training example for TGH	Alistair built this	27/02/2019 09:01:37	euroking	euroking
Birth Query Template	AR example	04/02/2019 13:28:56	xescotter	euroking
Instrumentals	AR example	22/01/2018 15:09:03	euroking	Alistair.Richards
Mothers Age between 35 and 45	Simple Mothers age query	04/02/2019 13:14:29		xescotter

At the bottom of this screen are the following function buttons.

Add	Edit	Copy	Refresh	Delete	Run
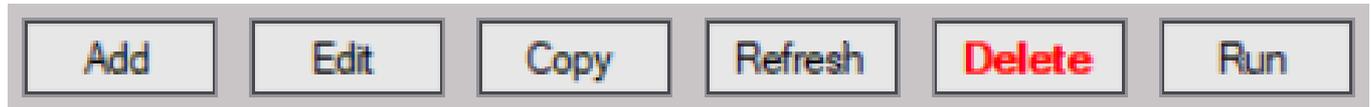
Function	Purpose
Add	Select this to add (create) a new query.
Edit	Highlight an existing query from the list and click [Edit] to open the query for editing.
Copy	Highlight an existing query from the list and click [Copy] to create a copy of the query.
Refresh	Refreshes the list of queries. If multiple users are editing queries this will refresh the list.
Delete	Highlight an existing query from the list and click [Delete] to remove the query.
Run	Highlight an existing query from the list and click [Run] to execute the query.
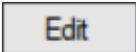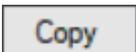
- Click in the Filter row (the row with the Filter symbol ![filter]).
- Enter the word you want to look for in the Name column.
- Add a wild-card character (asterisk) to either end of the word. For example *training* will bring back all stats with the word 'training' in any part of their title.
- Sort by any of the four columns by clicking on the column header.

- To remove a filter, click the [Remove] ![remove] button.

4.New Queries

EDIT A QUERY

- To edit an existing query, highlight the required query and click [Edit].

CREATE A QUERY

- To create a new query click [Add]. This will open the Query Builder tab with blank fields.

On the left, in the Fields panel, is a list of templates that can be used to construct a query. The top sets of templates contain patient information about mother and baby. Templates further down contain clinical information about Pregnancy and Baby. Other templates contain all available questionnaire information.

- Click the + sign to see the list of fields from that folder (database table) which can be used to build a query.
- Click the tickbox to the left of an item to add it to the 'Selected Fields' panel.
- To select **all** the fields within a folder click the tickbox by the title. Warning - in some tables there are many items!
- You must enter a name for the query in the Statistics Details panel. The query cannot be saved without it. A warning will be displayed if you try to save without a name.
- A description is optional but can be useful for locating a query as the number of saved statistics increases.

5. Filtering Queries

APPLY FILTERS TO A QUERY

Once the fields required for the query have been added to the list in the 'Selected Fields' panel then filters can be applied to those fields to provide more specific analysis of the data. For example, to add a filter to show mothers between the ages of 30 and 40 years:

- Click in the 'Where' column of the 'Mother Age' row. This will open a new window to apply the required criteria.
- Click to select the [Between Values] button.
- Enter 30 in the first box and 40 in the second box.
- If specific dates are required in a filter, select the 'Convert Value to Date' box. The filter criteria box will then change to allow for the selection of specific dates and times. The fields available become date pickers and time entry fields like those in the main EuroKing application.
- Click to select the [Between Values] button, then add dates and times.

More than one filter can be applied in this way to a field. Only data that satisfies all the chosen criteria will be returned when the query is run.
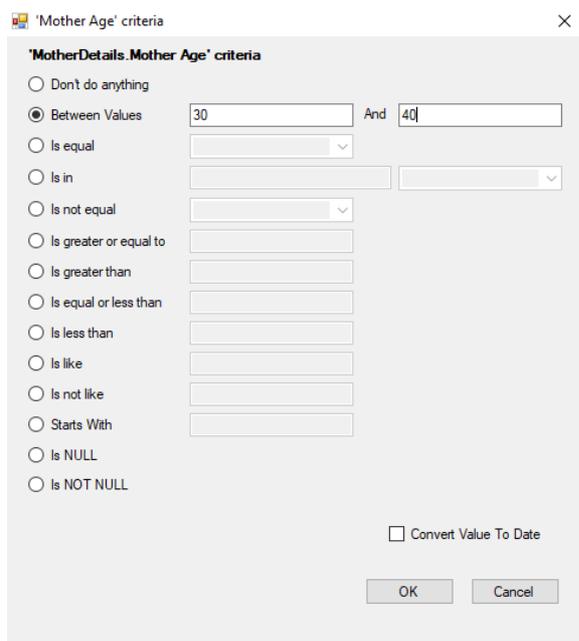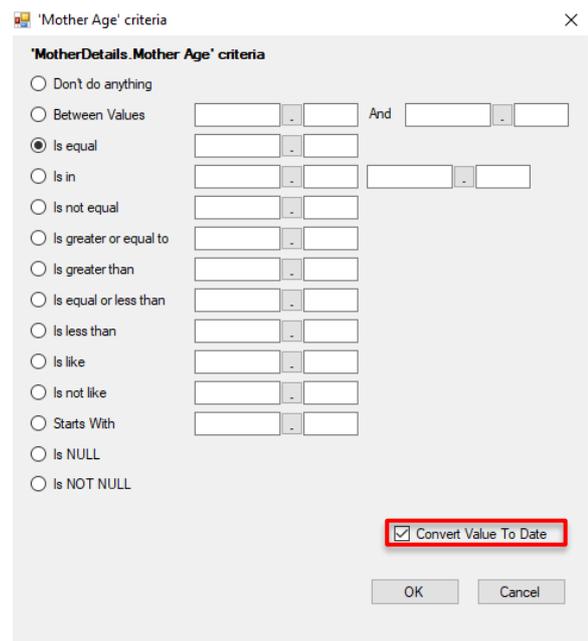
ORDERING FIELDS IN A QUERY

There are arrow buttons at the bottom of the screen to change the position of a column in the query result. To change the position of a field, select the appropriate field in the list and then use the arrows to move it up or down in the list. The double arrows will move it either straight to the top of the list or straight to the bottom.
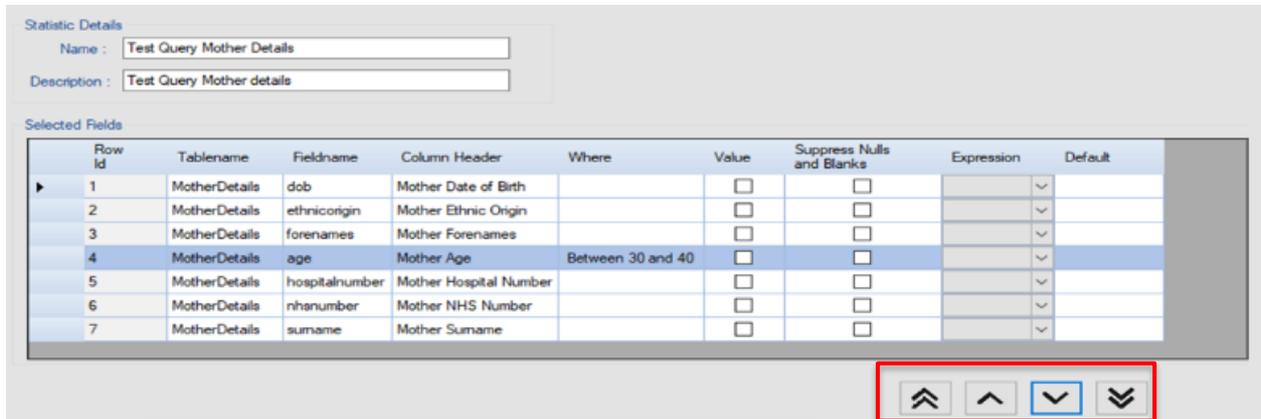
DISPLAYING RESULTS AS VALUES

Data in EuroKing can be stored as a combination of text and a numerical value in an answer. An example of this is the recording of Apgar scores. Query results are shown as a combination of text and numbers.

The individual scores (0-2) for each of the five categories are saved against a patient record, but for the collecting of data it is more appropriate to use the total of these scores. The Stats Builder would normally display the text answer. To force Stats Builder to show the numerical values check the 'Value' checkbox in the relevant field.
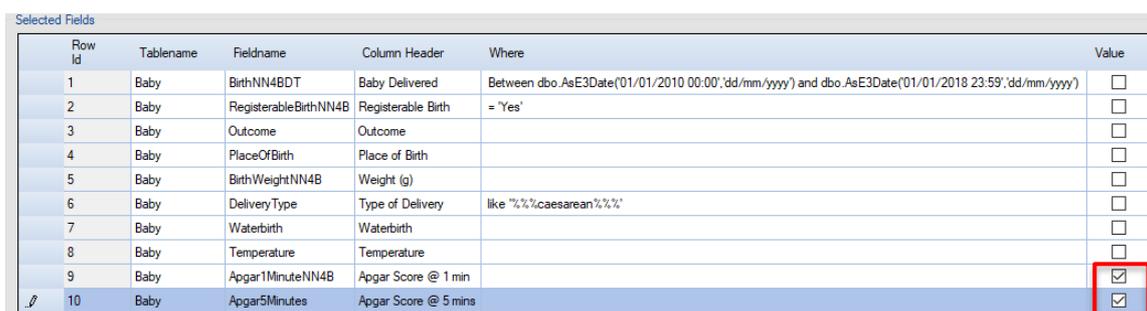
The Apgar scores are now displayed as numerical totals in each column.

SUPPRESSING NULLS AND BLANKS

It is sometimes necessary to only display results that contain a value, and not a blank or a 'No' answer. To do this there is a checkbox next to the selected field to exclude or suppress Null and Blank values. In this example the result would show only cases where Shoulder Dystocia was recorded.

	Row Id	Tablename	Fieldname	Column Header	Where	Value	Suppress Nulls and Blanks	
	1	Baby	ShoulderDystocia	Shoulder Dystocia		☐	☑	
▶	2	Baby	Outcome	Outcome		☐	☐	
	3	Baby	PlaceOfBirth	Place of Birth		☐	☐	

CONVERTING DISPLAY VALUES WITH AN EXPRESSION

There are two options available from the drop-down list in the Expression column:

IsDate will convert dates into a date format so they can be sorted appropriately in the query results.
IsNumber will convert text to a number.

	Row Id	Tablename	Fieldname	Column Header	Where	Value	Suppress Nulls and Blanks	Expression	De
	1	Baby	ShoulderDystocia	Shoulder Dystocia		☐	☑		
	2	Baby	Outcome	Outcome		☐	☐		
	3	Baby	PlaceOfBirth	Place of Birth		☐	☐		
▶	4	Baby	BirthWeightNN4B	Weight (g)		☐	☐	IsNumber	
	5	Baby	DeliveryType	Type of Delivery	like '%%%caesarean%%%'	☐	☐	IsDate / IsNumber	
	6	Baby	Waterbirth	Waterbirth		☐	☐		
	7	Baby	Temperature	Temperature		☐	☐		

For example, to get a list of all babies born above a certain weight a filter can be added as shown to the Birth Weight field as shown here.

		Baby							
	2	Baby	Outcome	Outcome		☐	☐		
	3	Baby	PlaceOfBirth	Place of Birth		☐	☐		
▶	4	Baby	BirthWeightNN4B	Weight (g)	> 3500	☐	☐		

This query will not run because Stats Builder cannot process Birth Weight responses that contain text such as 'Not weighed on delivery suite'. It will display this message if you try to run the query:

Error
Conversion failed when converting the nvarchar value 'Not weighed on Delivery Suite' to data type int.

OK
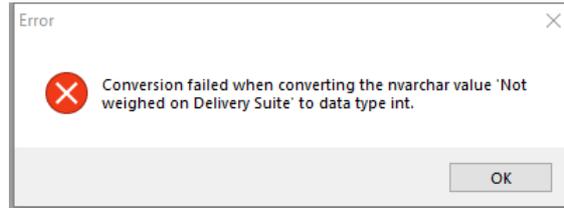
It is necessary to ignore all instances where the answer was recorded as 'Not weighed on delivery suite' by adding the IsNumber expression to that field. This will allow the query to run and only babies weighing over 3500g will be displayed.

3	Baby	PlaceOfBirth	Place of Birth		☐	☐		
4	Baby	BirthWeightNN4B	Weight (g)	> 3500	☐	☐	IsNumber	
5	Baby	DeliveryType	Type of Delivery	like '%%%caesarean%%%'	☐	☐		

Shoulder Dystocia	Outcome	Place of Birth	Weight (g)	Ty
Yes	Livebirth	Unplanned home...	4000	Fo
No	Livebirth	Delivery Suite	3780	Sp
No	Livebirth	Antenatal ward	4500	En
No	Livebirth	Delivery Suite	3800	Br
None	Livebirth	Delivery Suite	3733	Sp
None	Livebirth	Not known	4500	Br
No	Livebirth	Antenatal ward	4040	Br
No	Livebirth	Midwifery Led Unit	3600	Br
No	Early neonatal d...	Delivery Suite	5000	Sp
No	Livebirth	Delivery Suite	3600	Sp
No	Livebirth	Antenatal ward	4040	Fo
Yes	Stillbirth	Delivery Suite	3560	Sp
No	Livebirth	Antenatal ward	3600	Sp
No	Livebirth	Delivery Suite	4200	Sp
No	Livebirth	Antenatal ward	4000	Sp
No	Livebirth	Delivery Suite	4040	Sp
No	Livebirth	Antenatal ward	4040	Br
No	Livebirth	Delivery Suite	3600	En

DEFAULT VALUE

The default value is what will be displayed in the results if no value is available from the questionnaire. For example, if Symphysis Fundal Height has not been recorded in a patient's record a blank field will be displayed. This can be replaced by a set text entered in the Default Value column of Selected Fields.

Row Id	Tablename	Fieldname	Column Header	Where	Value	Suppress Nulls and Blanks	Expression	Default
1	PregnancyContact	SyphysisPubisFundalHeight	Symphysis Fundal Height		☐	☐		Not Recorded
2	Baby	ShoulderDystocia	Shoulder Dystocia		☐	☑		
3	Baby	Outcome	Outcome		☐	☐		

Date and Time o...	Date Booked	Symphysis Fund...
Referral		Not Recorded
11/07/2008 09:00		Not Recorded
30/06/2008 17:22		Not Recorded
01/07/2008 15:35		Not Recorded
01/07/2008 19:28		Not Recorded
04/07/2008 10:00		Not Recorded
07/07/2008 15:12		Not Recorded
07/07/2008 16:35		Not Recorded
08/07/2008 10:27		Not Recorded
16/04/2008 10:00		Not Recorded
08/07/2008 15:59		Not Recorded
08/07/2008 17:01		Not Recorded
09/07/2008 09:16		Not Recorded
09/07/2008 10:43		Not Recorded

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SAVING A QUERY

A query can be saved at any time by clicking on the Save button on the Query Builder screen or the Results screen. It must have a title; the description is optional.

REMOVING FIELDS FROM A QUERY

There are three ways to remove a field from the Selected Fields list:

1. Uncheck the relevant checkbox on the Fields list on the left.
2. Highlight the field to be removed from the Selected Fields list and press the Delete key on the keyboard. A confirmation window will be displayed.
3. Right-click the field and select Delete Field.

6. Formatting Results

RESULTS TAB

From the Query Builder tab clicking the [Run] button will execute the query. The resulting report will be displayed on the Results tab.

The Results list can be re-formatted as follows:

- Columns can be resized by dragging the relevant column header's right-hand separator character.
- A column can be dragged by the header and dropped into a new position.
- Change the column title that appears in the header by clicking in the column header and changing the text.
- The entire list can be sorted by clicking on the column header - once for ascending and again for descending.

In order to analyse data more effectively it can prove useful to organise the data in groups. For clinical data in EuroKing this means showing data in order of questions that have been answered.

For example, when analysing a Delivery List when the point of interest is Caesarean Section deliveries it would be easier to have all the Caesarean Section deliveries in one group to examine further. This data needs to be ordered by Type of Delivery. Emergency Caesarean Section and Elective Caesarean Section are examples of Type of Delivery answers for this question.

- To group results by a particular field, left-click on the column header and drag it into the "Drag a column header here to group by that column" area at the top left of the Results tab.

This will group this data by Type of Delivery, in this case first by Elective Caesarean Section and then by Emergency Caesarean Section. Groups will initially be displayed collapsed but can be expanded by clicking on the + button on the left.

AGGREGATING THE RESULTS LIST

When the Results list is first displayed there is only one aggregate count shown (in brackets after the word "Results" on the Results tab).
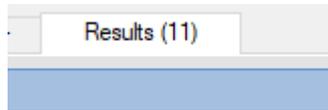
In order to make the data more meaningful you can also show a count for any groups of data. Right-clicking a column header will allow you to apply the following functions to that column – for each group/sub-group and overall for the column: Sum, Count, Average, Minimum, Maximum, and Value Count (the number of rows with non-blank values).

Please note: Any Grouping or Aggregate changes made to the formatting in the Results screen will be lost if the query is modified in the Query Builder screen.

EXPANDING/COLLAPSING THE RESULTS LIST

The Expand All and Collapse All buttons will be activated when any grouping is applied. Clicking on them will expand or collapse all groups.

SAVING THE FORMATTING OF THE RESULTS LIST

Clicking on the Save button on the Results tab will save all the formatting associated with these query results in addition to the Query Builder details.

EXPORTING RESULTS TO EXCEL

If only **some** lines from the Results list are needed:
- Click to select those lines.
- Click the [Export to Excel] button on the Results screen.
- Click [No].

To export **all** lines:
- Click the [Export to Excel] button on the Results screen.
- Click [Yes].
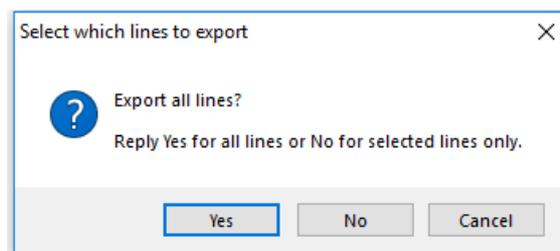
A window will then pop up for you to choose a location to save the Excel file.

Document Control

Title	EuroKing Stats Builder User Support Document		
Owner	Wellbeing Training Manager	Date Created	12/07/2019
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D2.0	26/11/2019	Emma Brown	Formatting, minor edits.
V1.0	10/12/2019	Emma Savage-Mady	Review and publish
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