Worked example Tutorial on using Health.one Template Analysis Editor

Health.one has a versatile and powerful, built-in editor that allows you to produce customised reports for within-patient analyses. This is really useful for practice management and for clinical care.

While the Template Analysis and Template Analysis Editor are functions which are designed to assist the customisation of reports on an individual, they are highly flexible. They could also assist those reporting population analyses by hijacking the mail-merge option in population analysis to produce a bespoke listing for a whole cohort of patients.

Many people may be put off by the apparent complexity of the TA Editor, but it really is worthwhile getting the hang of it. As ever, editing an existing analysis is a good way to get the feel for writing these analyses.

The methods overlap with the writing of Selection and Display Formulas, which are useful for scripting alerts, for example, so a facility with this aspect of Health.one is quite handy.

An Example

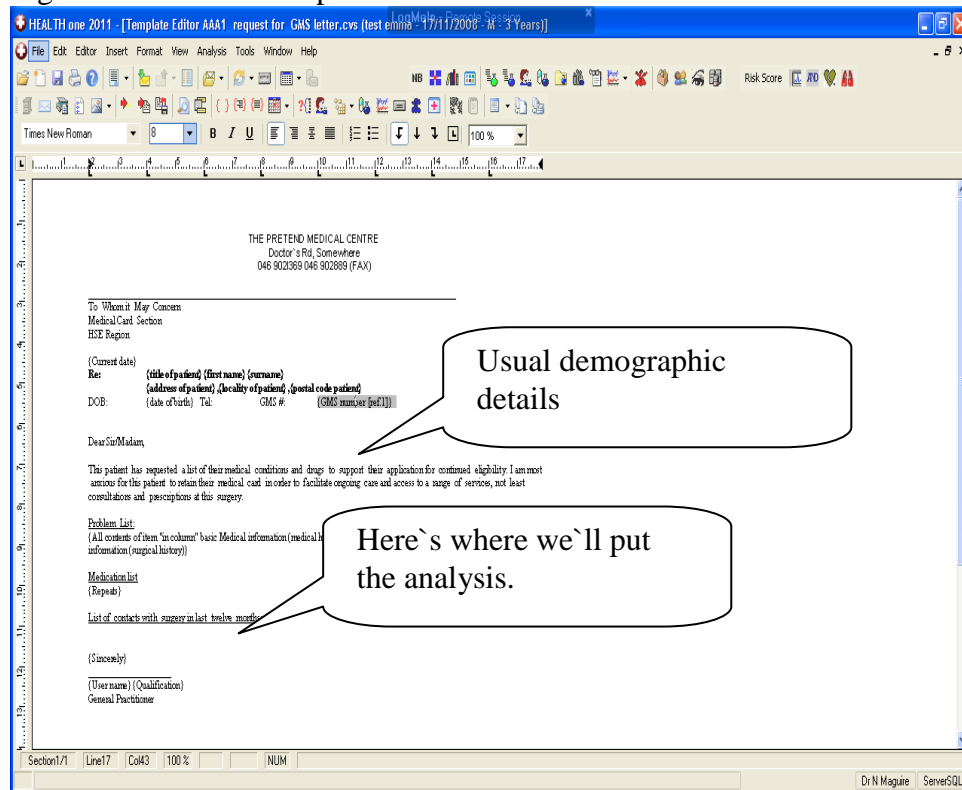The best way to learn how to edit template analyses is to work through an example.

Recently, we have been receiving a lot of requests from patients for letters supporting their application for medical card renewal. Invariably, the patient is told to make sure the GP includes, not only their past history, but also a listing of consultations for the past year.

STEP 1 Basic Template Document
Well, we have good letter templates for referrals, that can be edited using the File\Open\Template pathway to provide part of what is required. But how do you extract a list of all consultations over the past year? (Maybe you have a billing template that you could adapt, but, how do you do it from scratch?)
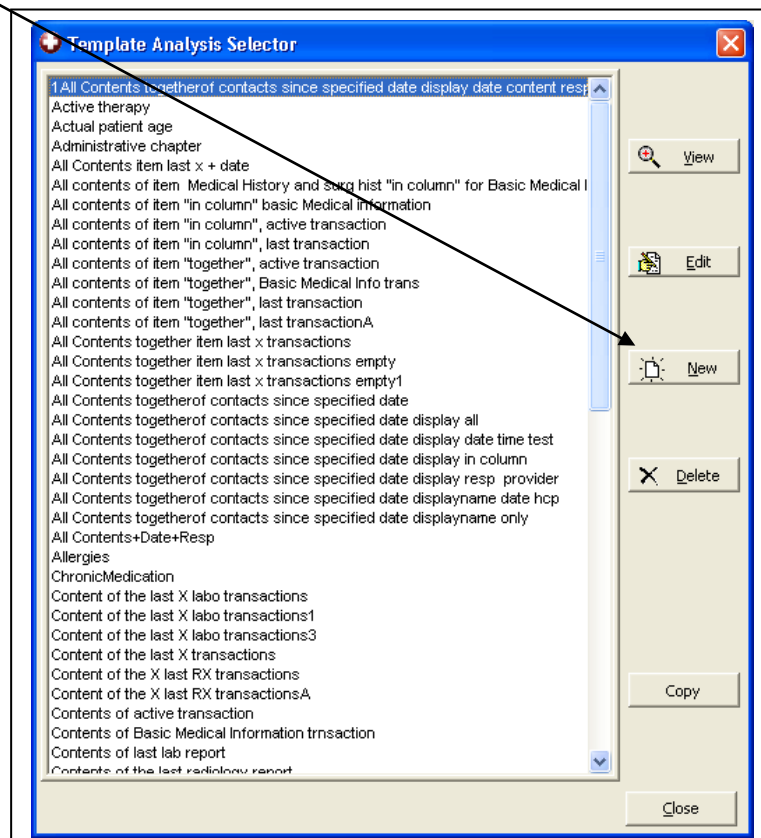
So, you might be starting with something like fig1.a basic letter format, to which you will add an analysis to extract a record of face-to-face consultations in a defined time period. (This would also be handy for designing a document to providing itemised list of visits for fee paying patients if you don`t already use the billing module.)

Fig 1: Basic Letter Template

STEP 2. Create the analysis

To design the analysis, we need to be in a patient file and open the Template Analysis dialogue under the Analysis tab on the main menu bar. Select a NEW analysis to open the Template Analysis Editor (TA Edr)
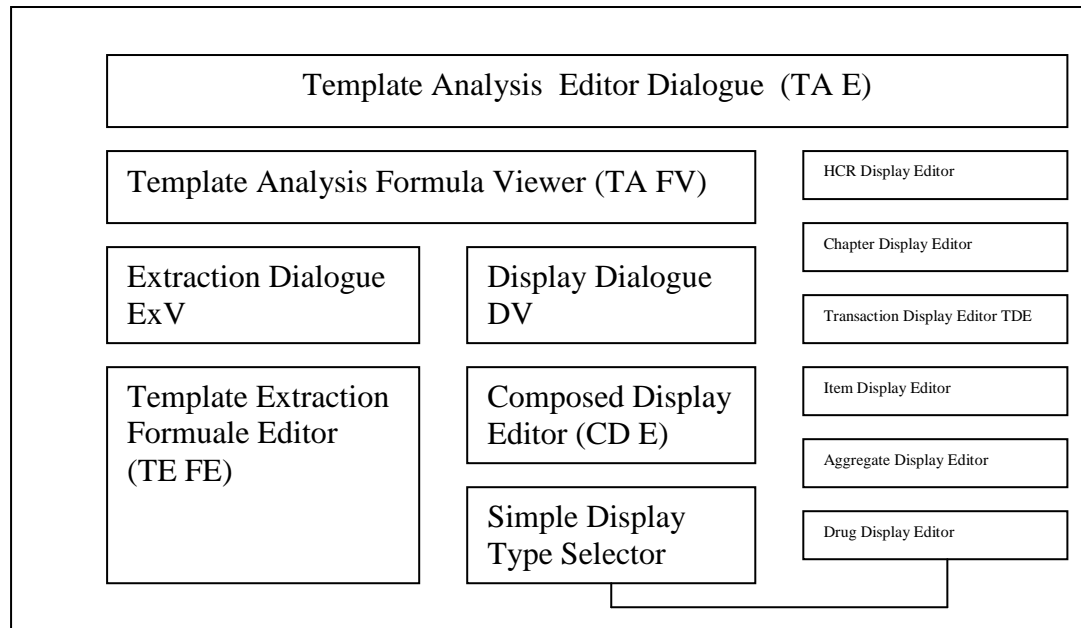
STEP 2 Design the analysis ctd.

Now you need to know about the hierarchy of dialogue boxes that you will have to navigate to design a data extraction and display for your analysis. Basically the dialogues divide down along the two branches of Extraction and Display.

Here it is:

Fig 3: Template Analysis linked Dialogues

STEP 3 Define the Extraction Formula

On the TA FV, look at the left lower side of the window to the pane entitled Extraction. This is the Extraction Dialogue (Ex V)(fig 4) Click on the NEW button.

This opens the Template Extraction Formula Editor (TE FE) (fig 5)

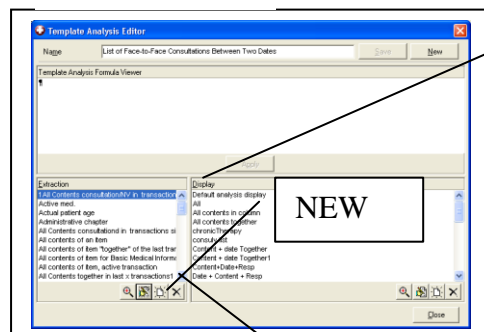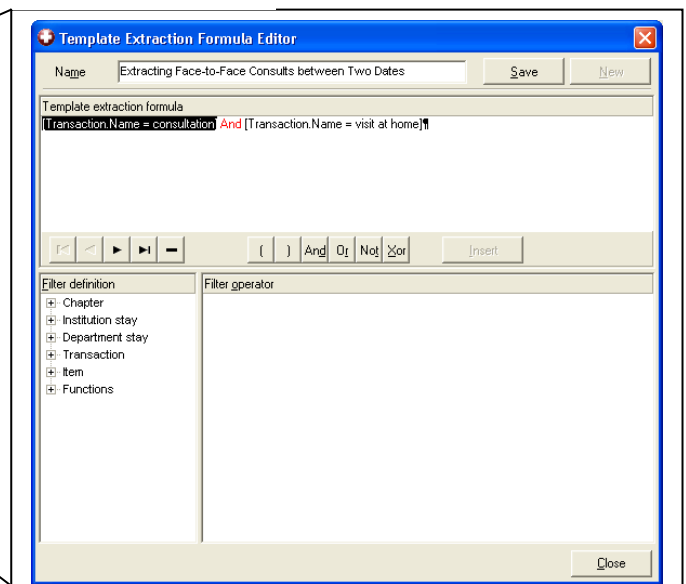Fig 4: Ex V   Fig 5: TE FE

To define the Extraction, you will need to list the determinants of what the search will retrieve by using the FILTER DEFINITION in the lower left pane and giving those filters values in the FILTER OPERATOR in the lower right pane.
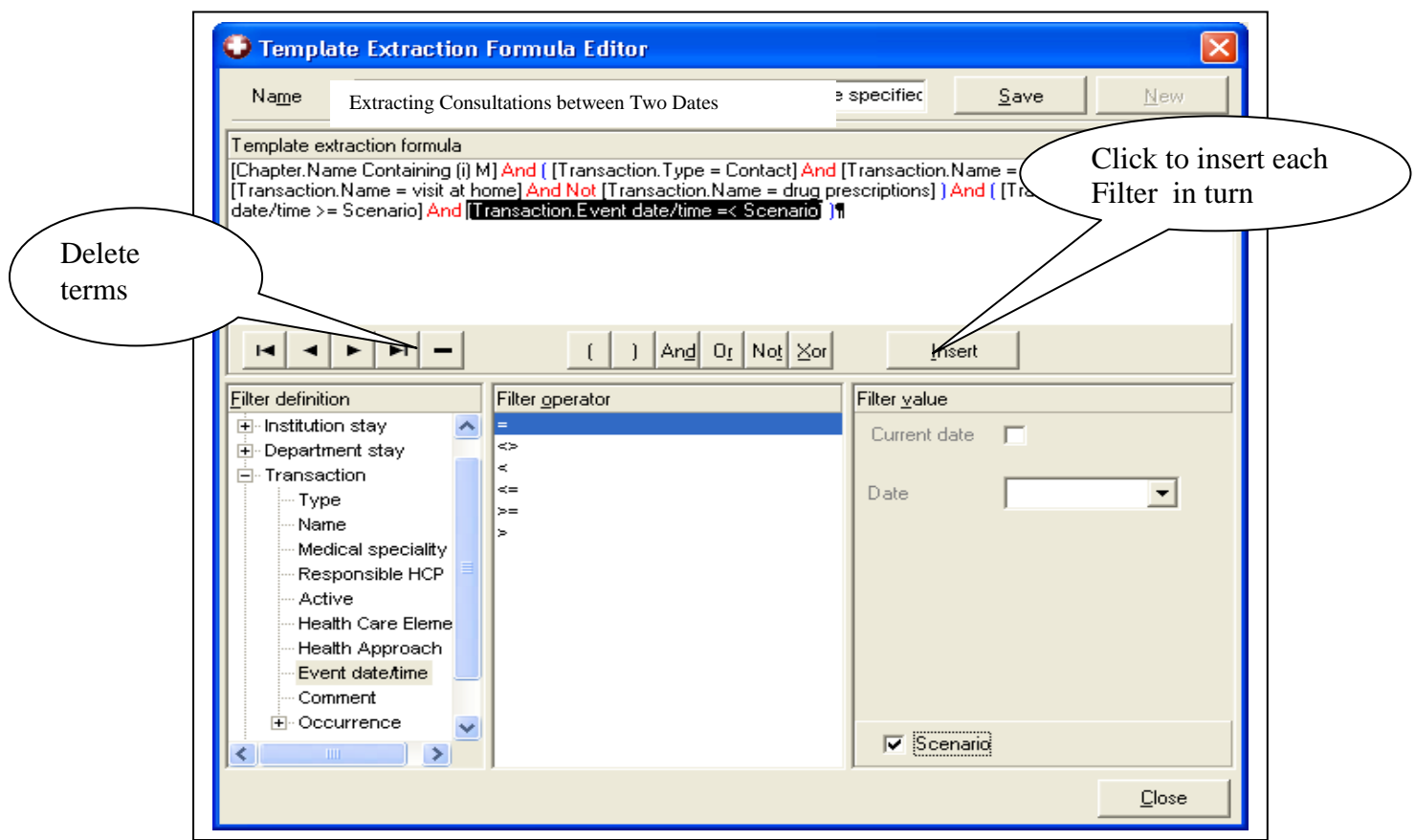
In our example:
We are restricting the search to the medical chapter.
We then need to extract all real consultations (that is excluding consultations-by-telephone, obstetrics, vaccinations.)
Then we need to extract these only between two dates, that we would like to be able to define each time we run the analysis.
Using the TE FE, the formula will look like this:

Fig 6: TE FE for data extraction in process of being defined in pictures.

Sequence of Filter terms to insert in the Template Extraction Formula in words:

Click "+" beside Chapter

Chapter\Name=Medical	AND
("+" Transaction\Type=Contact	AND
Transaction\Name= consultation	OR
Transaction\Name= visit at home	AND NOT
Transaction\Name= drug prescriptions)	AND
(Transaction\Event date/time >= scenario (ticked)	AND
Transaction\Event date/time =< scenario (ticked))	

nb I have included the phrase AND NOT drug prescription, but the positive term(name=consultation OR name=visit at home) is sufficient to exclude other types of consultation.

STEP 4 Defining the Display

Now that the extraction formula is complete, give it a name, save it and click CLOSE. Now look at the Display Pane (DV) in the TA FV in the bottom right corner. Just like for the TE FE click on NEW to open the CDE, the Composed Display Editor.

We need to produce a display for each transaction extracted of:
The date of the transaction, the type of consultation and the name of the healthcare provider.

Before going any further, ask yourself why is this Editor called a *Composed* Display Editor? Well, it is a script that is *composed* of each of the following Simple Displays: Display relating to the HCR, the Chapter, The Transaction, The Item, The Aggregate and the Drug prescription.

Note that *every* display is a composed display and the script in the CDE will include definitions for each of the simple displays.

In the case of our project, all of the items we need to display come from the attributes of the Transaction (as opposed to any of the other simple displays.) For this reason, all the other simple displays are set to "empty" and the only definition we script will relate to the simple display called Transaction.

Name of new display

Fig 8 CDE

Fig. 7: TA E

NEW Display

Other Simple Displays set to "empty"

Transaction Simple Display scripted

Fig 9: CDE
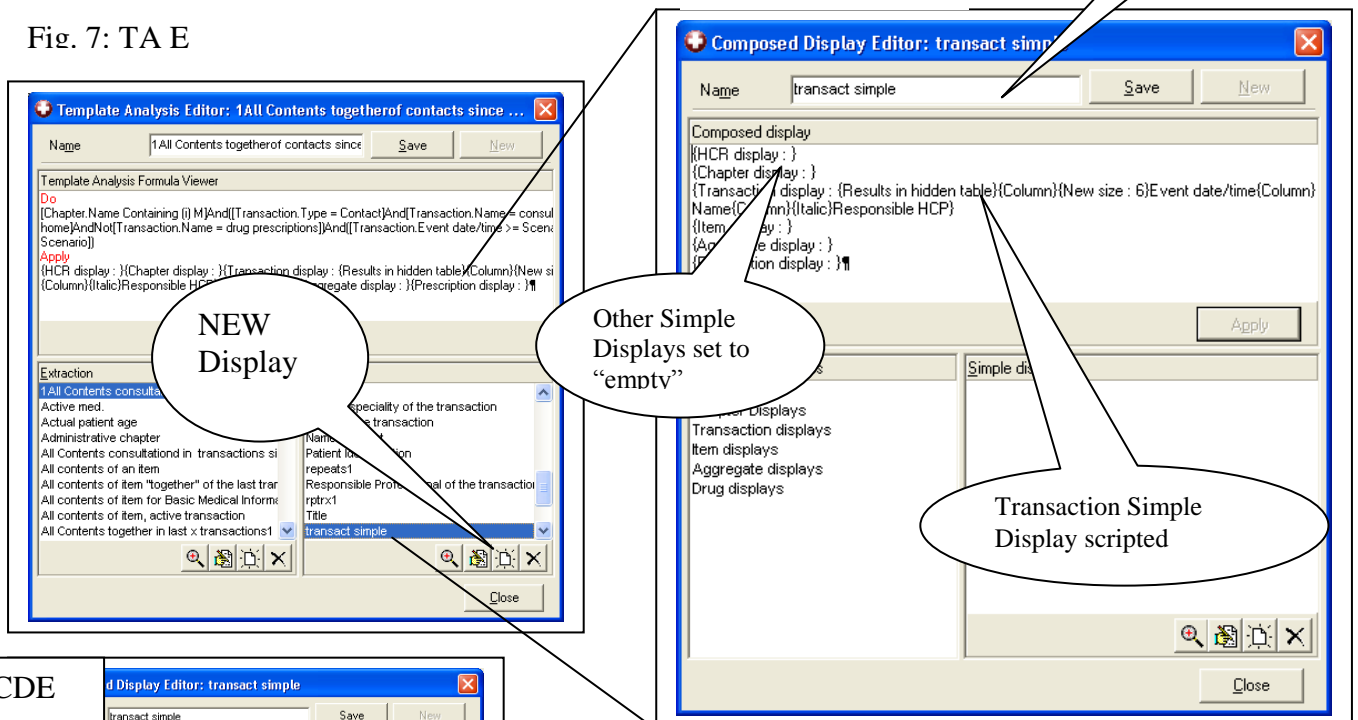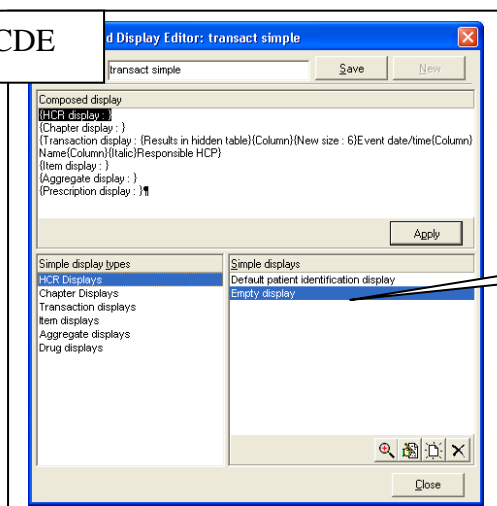
Setting each of the Simple displays that we don`t need to "empty".

STEP 4 in words: Sequence of stages in defining the Composed Display (see fig 7,8,9)

Open the CDE, Make a NEW display called "Transact Simple"
Highlight the Simple Display in Simple Display Types pane called HCR Displays
Highlight Empty Display in Simple Displays pane (fig 9)
Click Apply
Highlight the Simple Display in Simple Display Types pane called Chapter Displays
Highlight Empty Display in Simple Displays pane (fig 9)
Click Apply
do the same for Item Display, Aggregate Display, Drug Display…
Now, Highlight the Simple Display in Simple Display Types pane called Transaction Displays
(see fig 10,11) Make a NEW display, this opens a new editor dialogue called Transaction
Display Editor . Call this display " Transaction Header 1.1".
Select the attributes of the transaction dataset that you wish to display.
In this case: Event date/time; Name (i.e. kind of transaction); Responsible HC Provider.
Define each by adjusting font, column and any free text you require.
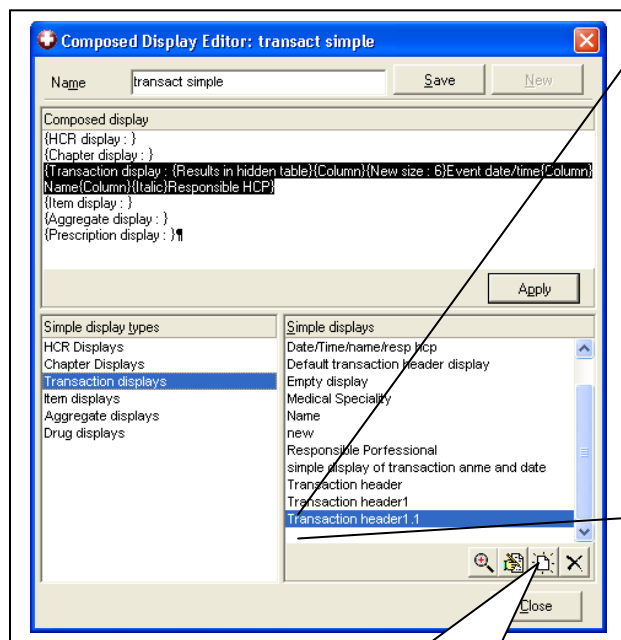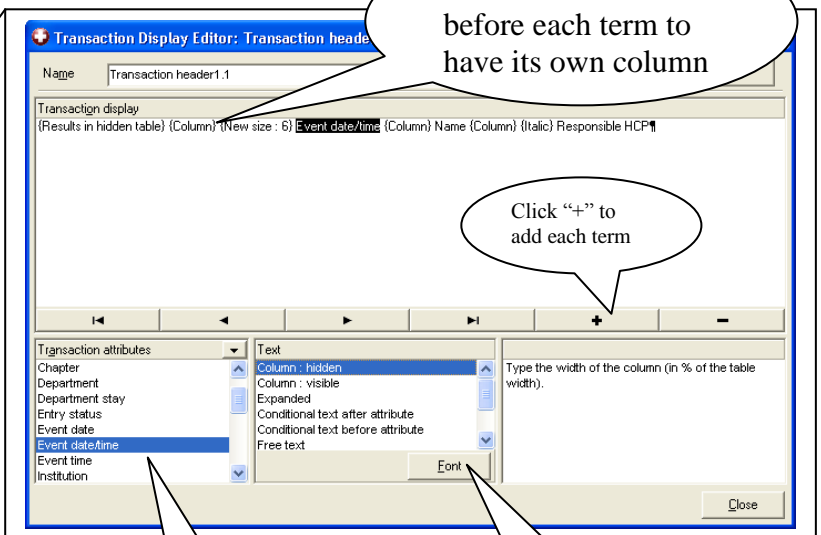
Fig 10 CDE

Fig 11 Transaction DE

"Column" inserted before each term to have its own column

Click "+" to add each term

We`ve created a NEW simple display option for Transaction Displays called "Transaction header 1.1"

Event date/time selected for scripting

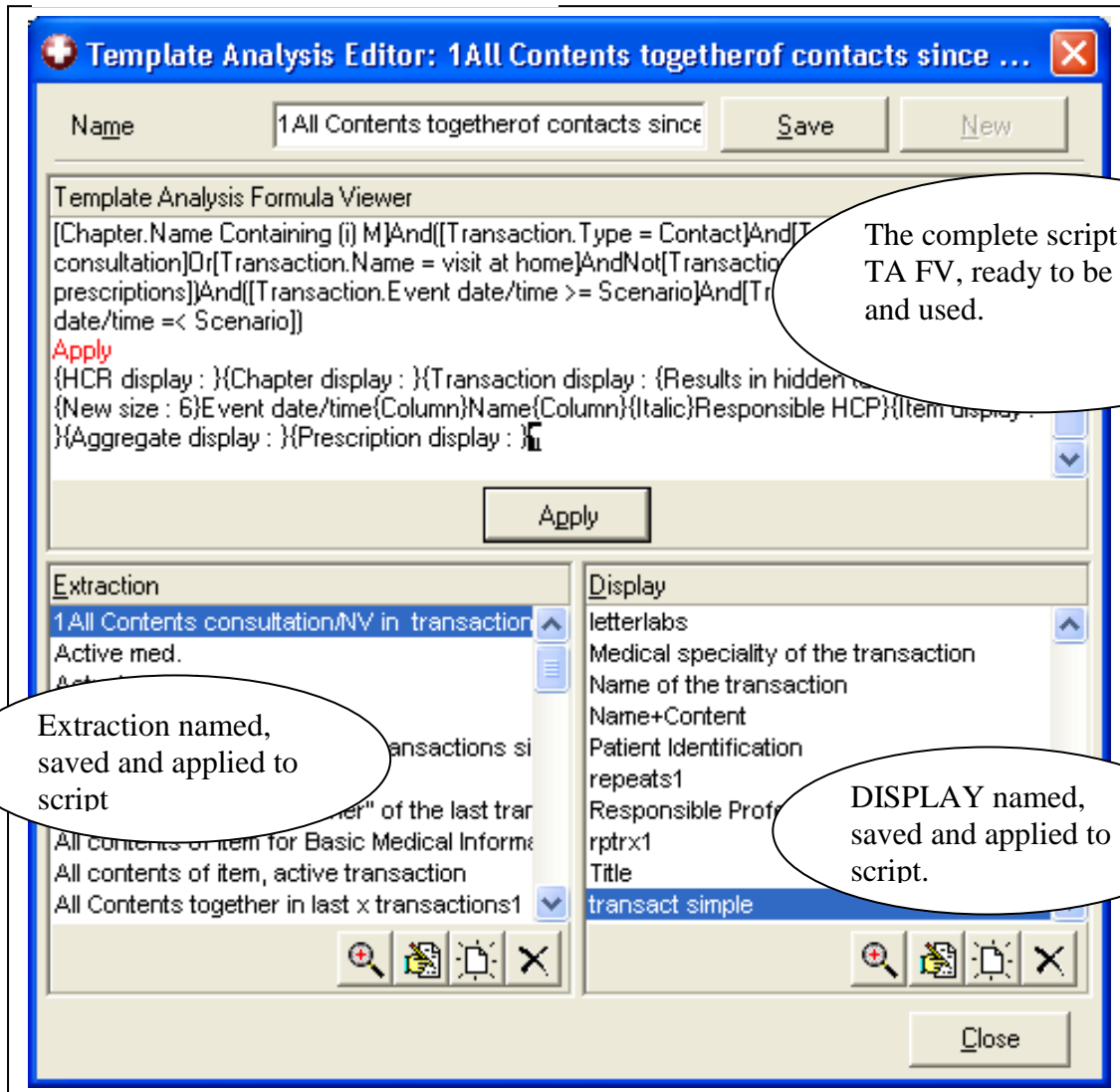Highlight Term in Transaction Display above and click here to edit font to display.

STEP 5 Save, Apply and & Complete the design of the Template Analysis (fig 12)

Make sure that you *NAME and SAVE* your work in each dialogue before clicking CLOSE and returning to the previous dialogue in the hierarchy.
Now make sure that you *APPLY* , name and save, you customised displays before highlighting them and clicking APPLY to insert them into the highest level dialogue the TA Editor.
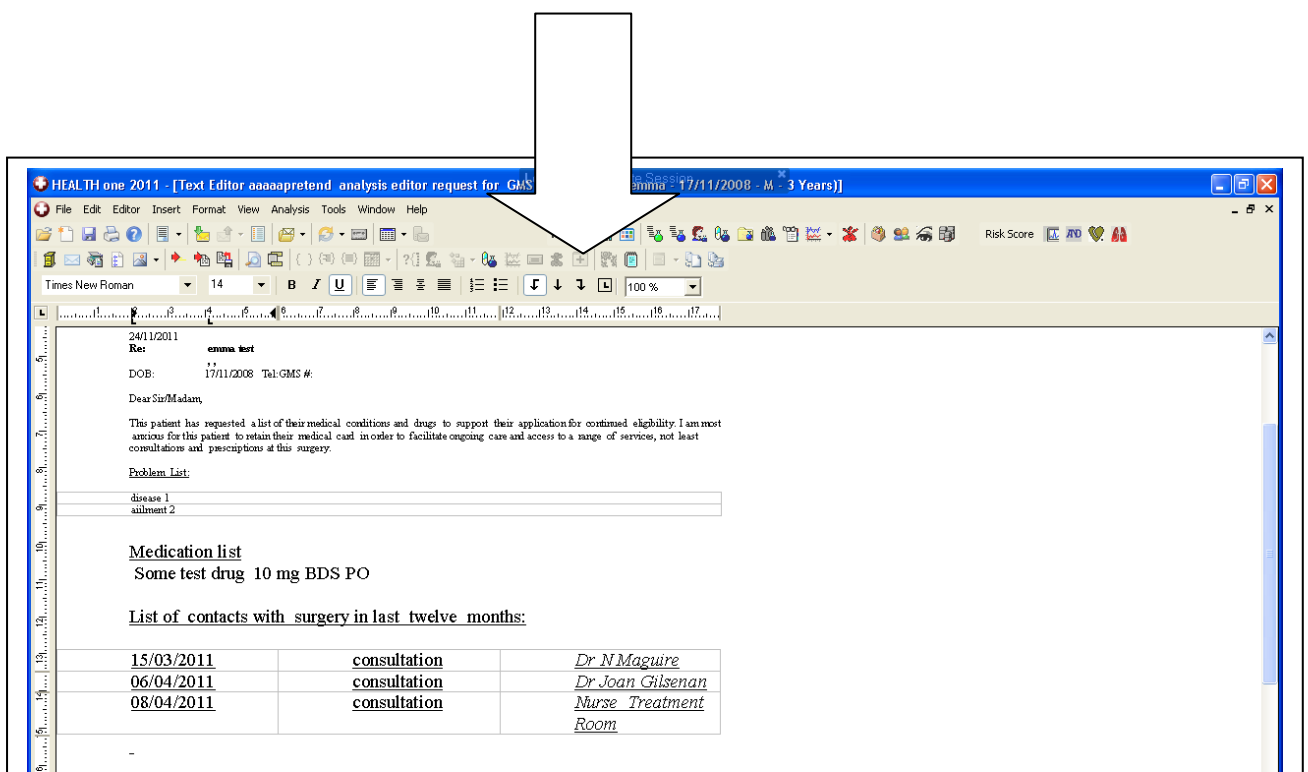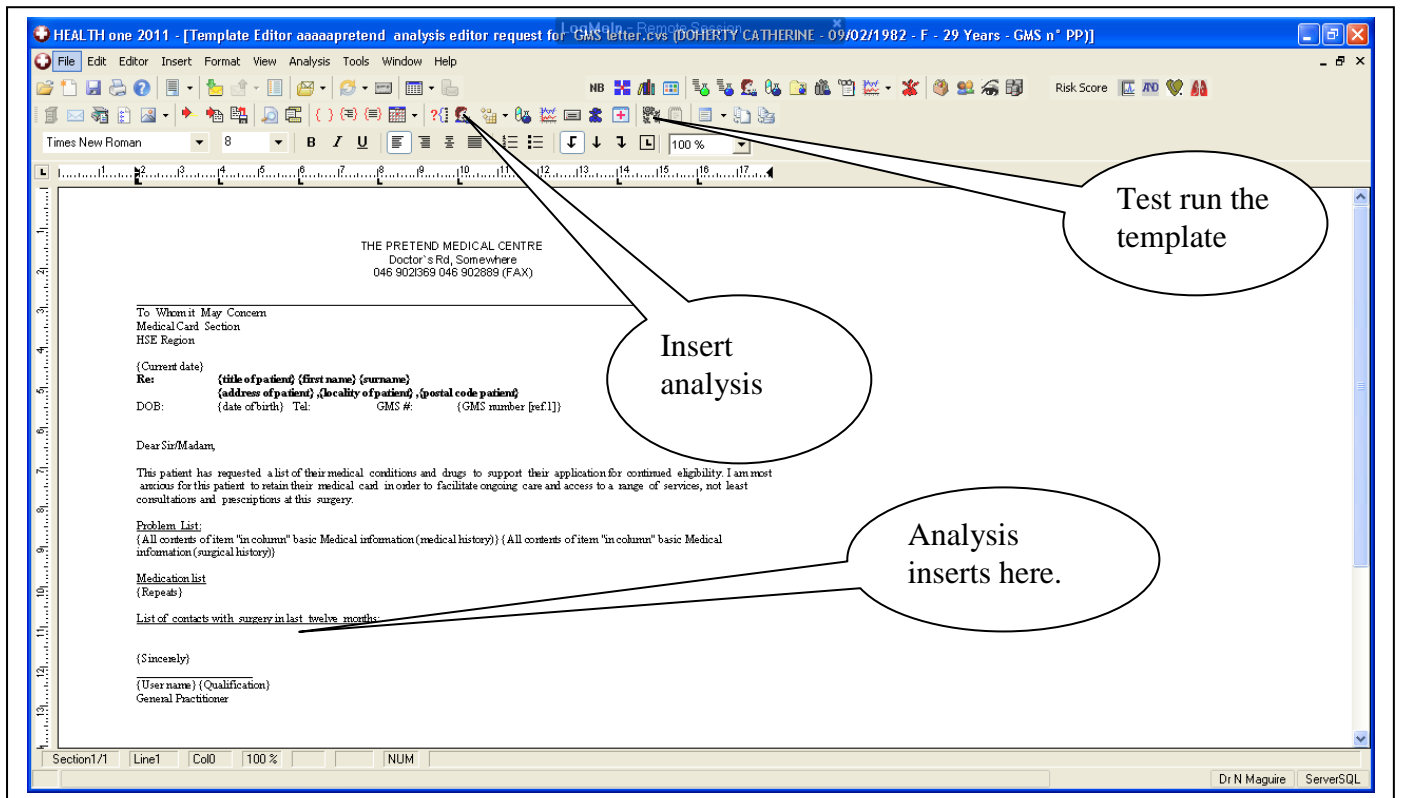Now name and save the analysis.

Fig 10 TA E Complete Script

STEP 6 Finishing (FIG 13)

Now you can save the Template Analysis and within the Open\Template or New\Template pathways, create letter templates such as at fig1 and insert (using head and blue jar icon) the newly created analysis to run each time the letter executes. You can test the function using the cogwheel icon.

Fig 13 Back to the letter template: Inserting the analysis and test run.output.

In short, there are the following steps to creating a template analysis

STEP 1: Make a template letter to host the analysis output
STEP 2: Create a new Template Analysis
STEP 3: Define the EXTRACTION formula
STEP 4: Define the DISPLAY script
STEP 5: Apply the Extraction and Display Formulas to the Analysis Script
STEP 6: Finishing off the template document

DON`T forget to Apply and Save each scripted dialogue before closing the dialogue. Look at the TA FV to check the script you are building is what you have specified, If not, you may have forgotten to apply a display or extraction.

DO note that if you insert an analysis into a template, then delete it to replace it with a better version, you may have to close the letter template editor and open afresh before the change will reliably "take".

Note You can change the appearance of an analysis output by highlighting it in the letter template editor and adjusting its font.

END