Welcome!

CAREWare Quick Start guides will walk you through the basics of setting up, managing and using the main CAREWare functions. It is intended for non-technical users who just need to get basic information in and out of CAREWare.

About This Guide #8:
Creating More Advanced Custom Reports

PLEASE NOTE: The client data you see is purely fictional.

Guides in this series:

1. *Downloading and installing CAREWare*
2. *Creating contracts and services*
3. *Entering Clients and their Service and Clinical Data*
4. *Customizing tabs and fields*
5. *Customizing clinical data*
6. *Working with CAREWare's prebuilt reports (including the RSR)*
7. *Creating basic custom reports*
8. *Creating more advanced reports*
9. *User and System Administration*

For additional information:

Please refer to the **Frequently Asked Questions** page on the CAREWare programmers' website:

http://www.jprog.com/wiki/

Or contact the help desk at cwhelp@jprog.com.

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First Things First
## What do I need to get started?

You must have the appropriate user privileges to run reports.

You should have a number of clients entered in the system so you can see how your reports will look.

Please see Quick Start guide #7, "Creating Basic Custom Reports," before moving on to this guide . This manual assumes basic knowledge on creating basic custom reports.

Creating an advanced custom report

As you get comfortable with custom reports, you can create more complex reports. We will start by creating a 'client list' report from the Central Administration domain.

1.   From the **Reports** menu, select **Custom Reports**.
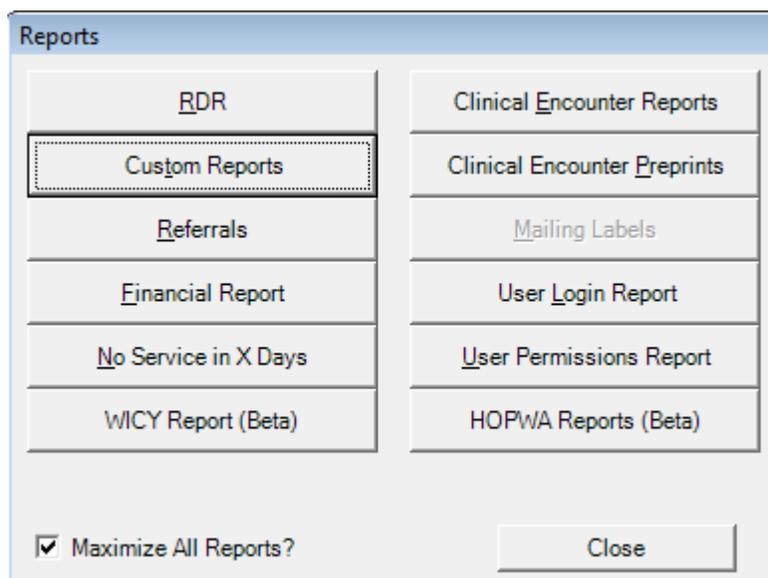
2.   Click **New Report** to add a new report.
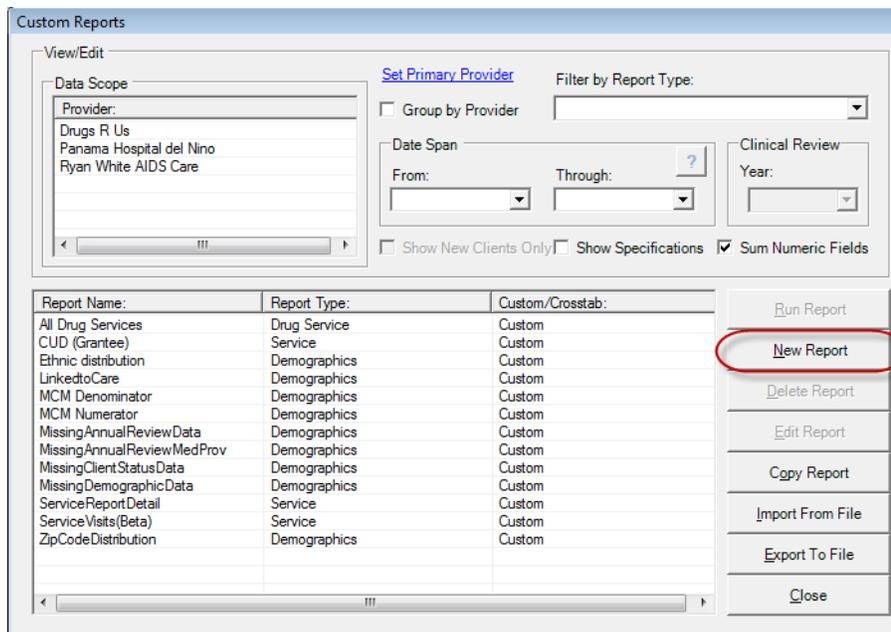
3.   Name it "Client List" and choose Report Type: Demographics.
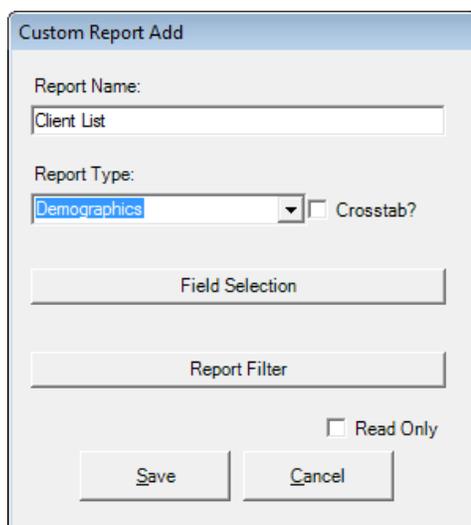
4.   Click on **Field Selection** to choose the fields to display on the report.

5.   Click **Add Field** – 'Name', note we have chosen to sort this field in 'Ascending' order to display the report names alphabetically.
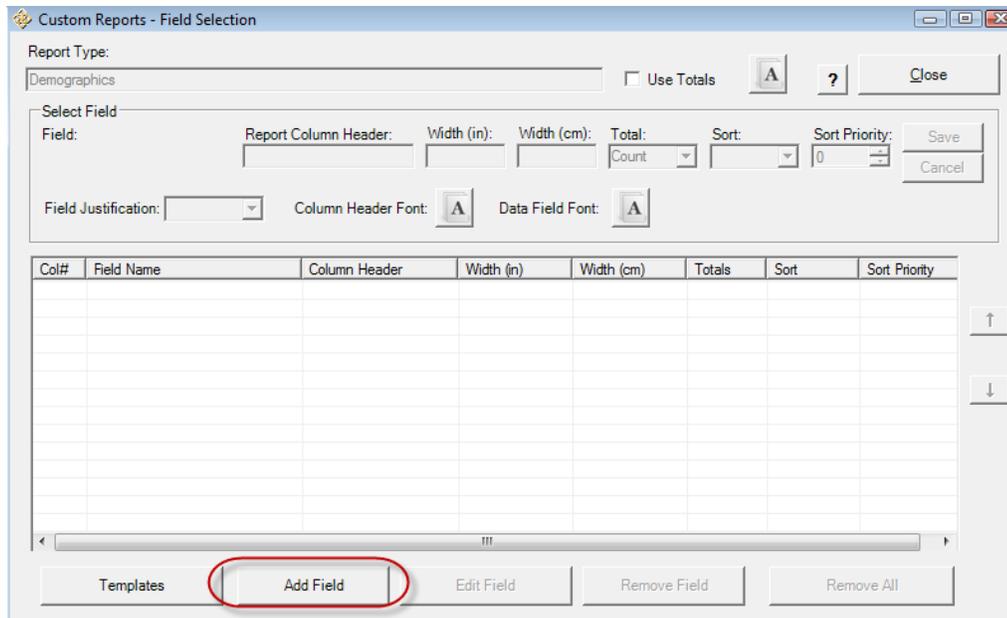
6. The Field Dictionary for Demographics Report will appear. Narrow the field search by typing the following field names in the search bar.
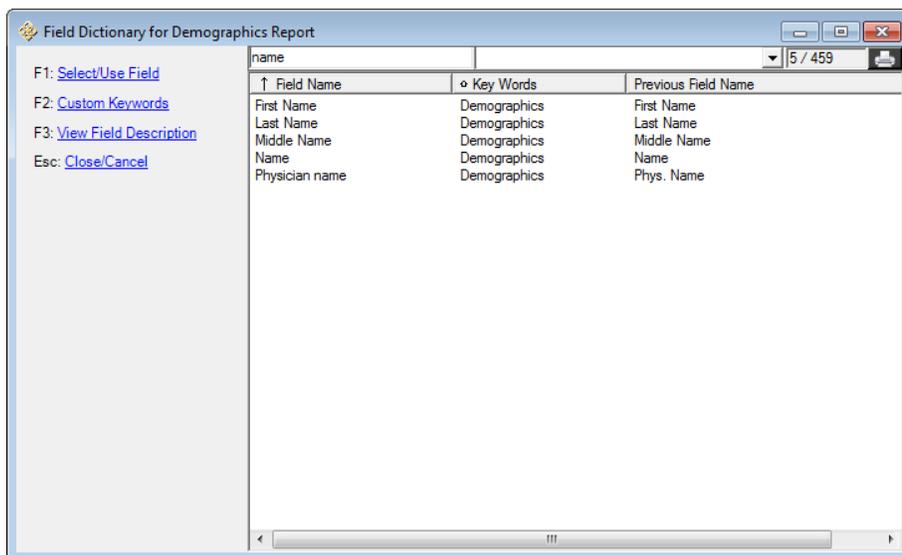
7. In order, add the fields "Name", "DOB", "Gender" and "Race/Ethnicity". Your selection will look like this:
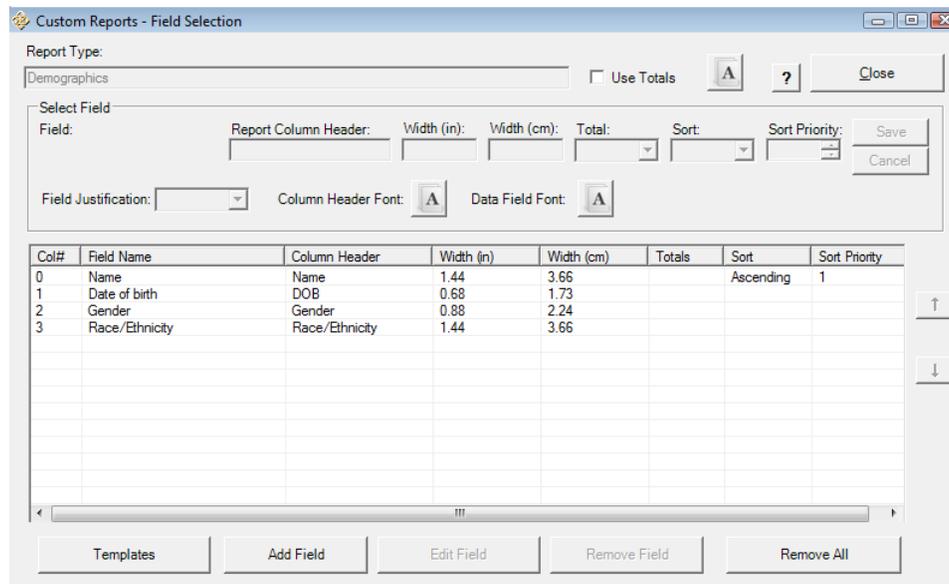
8.   Click **Close**, then **Save** report.
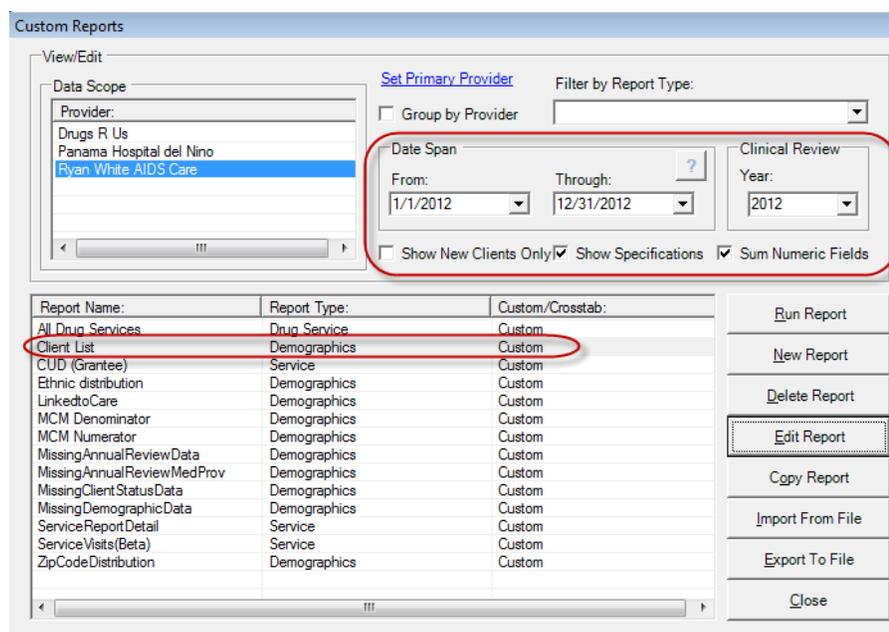
9.   Set the Data Scope to a Provider (in this case, Ryan White AIDS Care), with the date span **From:** 1/1/2012 **Through:** 12/31/2012. Ensure the **Sum Numeric Fields** and **Show Specifications** boxes are checked before running the report.

PLEASE NOTE: Clients need to have at least one service visit during the date span to be included in the report. If no date span were entered, you would get a list of ALL your clients.

Client List

Data Scope: Ryan White AIDS Care

> **Report Criteria:**
>
> **Report Start Date:**   01/01/2012
>
> **Report End Date:**   12/31/2012
>
> *A service visit must exist during the reporting period to be counted on this report.*

Name:	DOB:	Gender:	Race/Ethnicity:
Allen, Al	9/25/1956	Male	Black or African-American
Doe, Jane	9/20/1979	Female	White (non-Hispanic)
James, Jim k	2/20/1962	Male	Black or African-American
Josephs, Joe	12/5/1945	Male	Asian
Patrick, Patty	12/23/1947	Female	White (non-Hispanic)
Roberts, Rob	7/20/1967	Male	White (non-Hispanic)
Smith, John C	1/10/1947	Male	Hispanic
Stevens, Steve	2/18/1958	Male	Hispanic
Windy, Wendy	3/19/1963	Female	Am. Indian/Alaska Native

Number of Records   9

(Count is unduplicated across providers)

* - Restricted Field

10.   Close the report using the "X" in the upper right hand corner.

11.   Now we will add some filters to the report. Highlight the 'Client List' report name and click **Edit**.
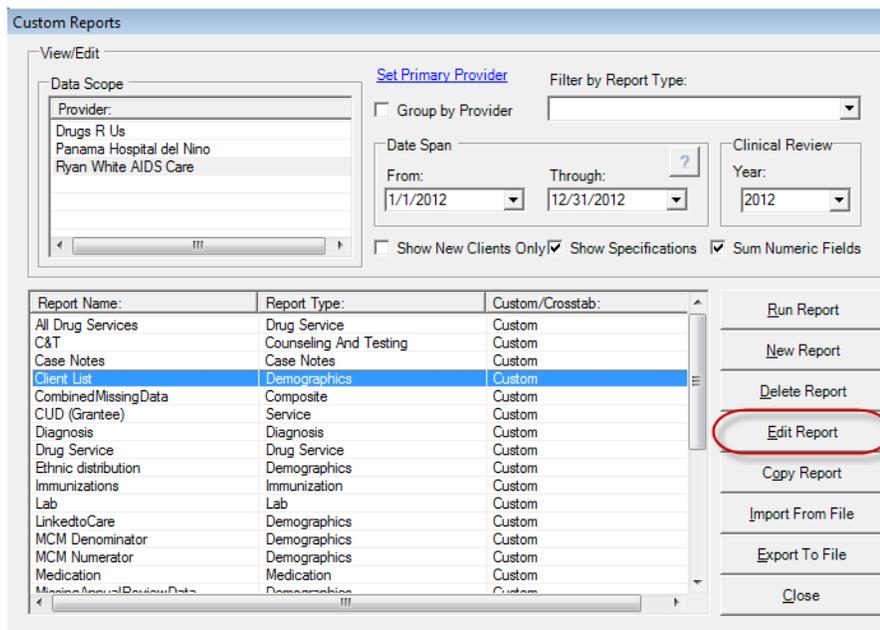
12.   Click on the **Report Filter**, then **Add Criterion**.
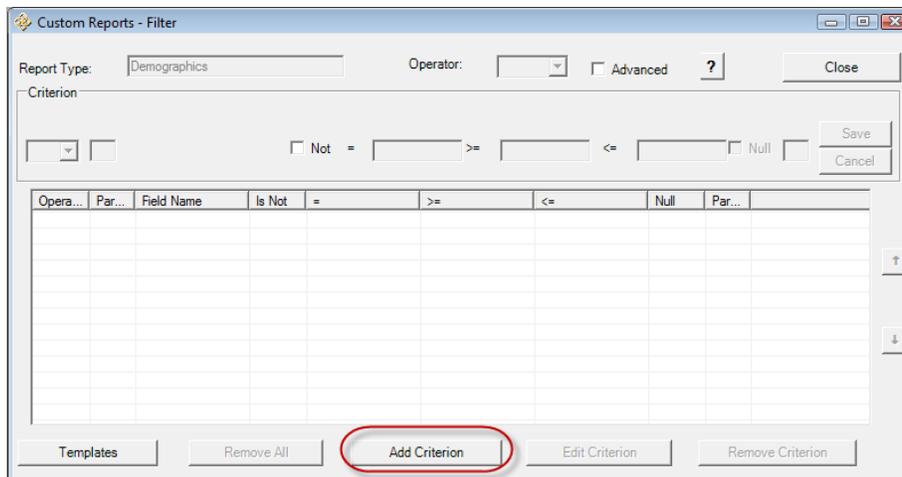
13.   The Field Dictionary will appear as shown above.

14.   Add the field "Gender." In the drop-down box choose Male, then **Save** the filter selection and **Close**. Click **Save** again to apply the report changes and click **Run Report**.
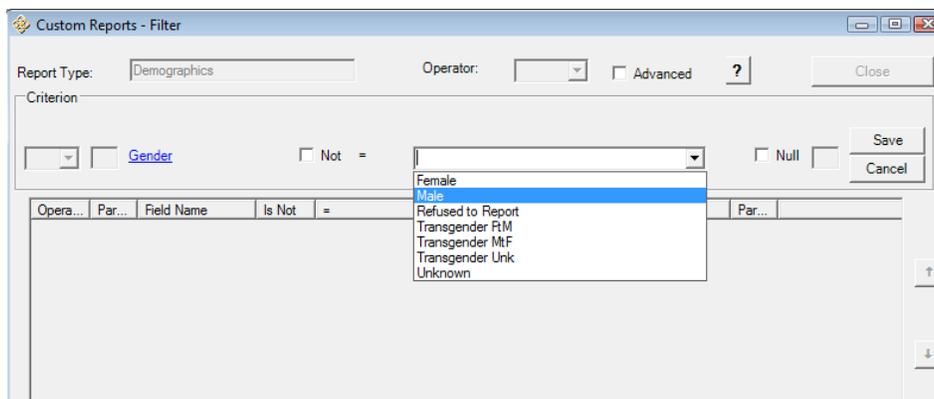
15.   The report now only lists the 6 male clients.

Client List

Data Scope: **Ryan White AIDS Care**

Report Criteria:

Report Start Date:	01/01/2012
Report End Date:	12/31/2012
Gender:	**Male**

A service visit must exist during the reporting period to be counted on this report.

Name:	DOB:	Gender:	Race/Ethnicity:
Allen, Al	9/25/1956	Male	Black or African-American
James, Jim k	2/20/1962	Male	Black or African-American
Josephs, Joe	12/5/1945	Male	Asian
Roberts, Rob	7/20/1967	Male	White (non-Hispanic)
Smith, John C	1/10/1947	Male	Hispanic
Stevens, Steve	2/18/1958	Male	Hispanic

Number of Records   6

(Count is unduplicated across providers)

* - Restricted Field

16.   We will now use the AND / OR operators in our filter.

17.   Open the Report Filter and click on the **Advanced** checkbox. If you use the Operator: instead, all your statements will be OR statements or AND statements. Using Advanced allows you to combine/mix them.

18.   Click **Add Criterion** and choose "Race/Ethnicity."
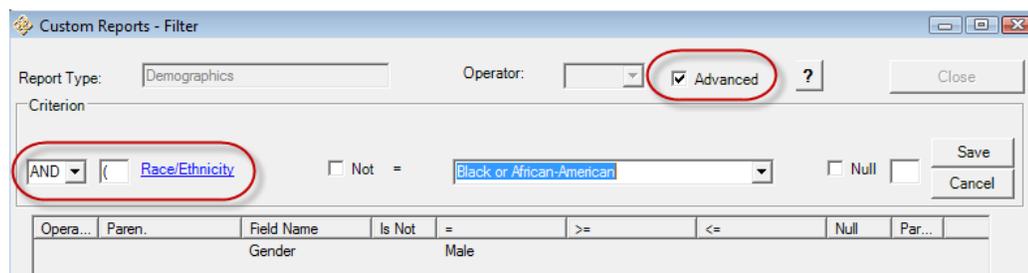
19.   The AND/OR drop down menu will be activated. Choose the **AND** statement.

20.   Next to the **AND** statement, insert a beginning parenthesis.

21.   From the drop down menu, choose **Black or African-American**. The content of these menus will reflect the options for the field selected.

22.   Click **Save**.
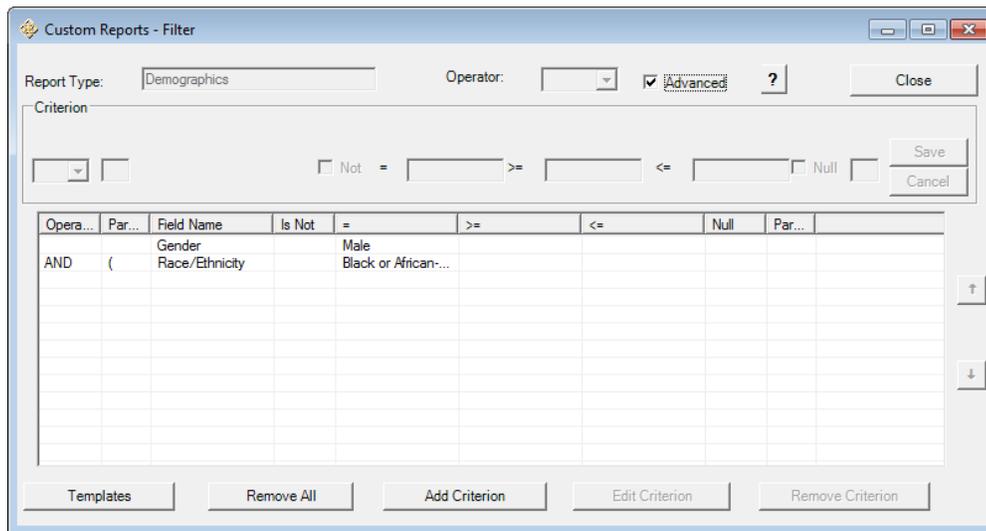
23.   Add another criterion by selecting **Race/Ethnicity** again.

24.   Then, choose the **OR** statement from the drop down, select "Asian" as the criteria, and enter the closing parenthesis in the last box on the line. The parenthesis lets CAREWare know the criteria to look for in the 2nd and 3rd parts.
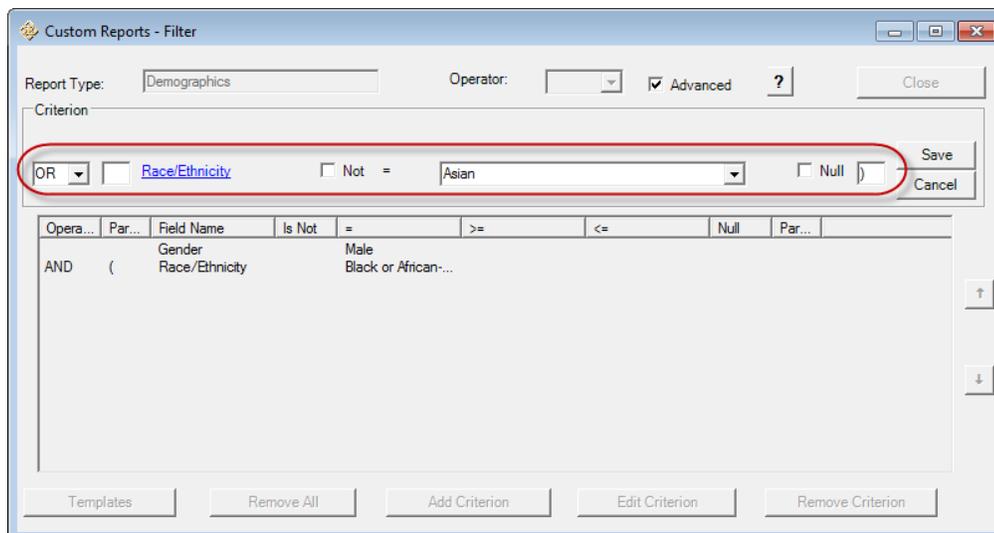
25.   Click **Save** to see the final product.
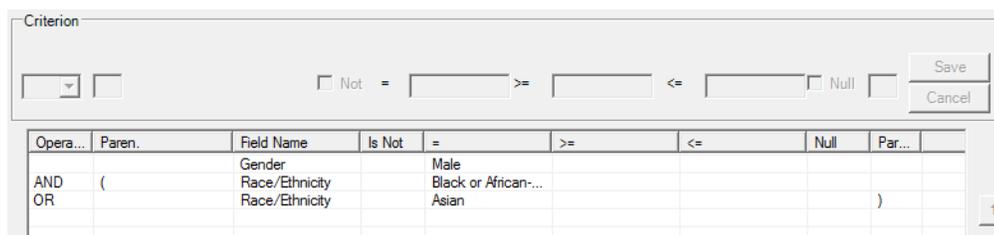
26.   The result is a search for all Male clients who have received a service visit in 2012, AND are either Black/African American OR Asian. Here are the results:

Client List

Data Scope: **Ryan White AIDS Care**

Report Criteria:	
Report Start Date:	01/01/2012
Report End Date:	12/31/2012
Gender:	Male
AND Race/Ethnicity:	Black or African-American
OR Race/Ethnicity:	Asian

A service visit must exist during the reporting period to be counted on this report.

Name:	DOB:	Gender:	Race/Ethnicity:
Allen, Al	9/25/1956	Male	Black or African-American
James, Jim k	2/20/1962	Male	Black or African-American
Josephs, Joe	12/5/1945	Male	Asian

* - Restricted Field

Number of Records   3
(Count is unduplicated across providers)

Using Totals

NOTE: This and following sections assume you are now comfortable creating field selections and filters. We will show you what your field selections and filters should look like, but we'll now skip walking through each step to create them.

If you need to sum certain values, or group the report in a specific way (e.g. over clients or service categories), you can check the **Use Totals** button box at the top of the Field Selection screen. Use Totals also includes new functions to calculate the minimum or maximum or average of a group of observations, such as CD4 counts or viral loads.

We'll do two examples of the Use Totals function, one for a **service** report where there are often multiple services per client, and one for a custom **lab** report, where there are often multiple lab tests per individual.

Service Report:

Here's the top portion of a basic service report (fields "Name", "Srv Category", "Srv Short Name", and "Srv Date"), sorted by client; *Use Totals* was checked. You can see that some clients appear multiple times because they've received multiple services in the date range.

Service Report

Data Scope: **Ryan White AIDS Care**

Report Criteria:

Report Start Date:	01/01/2012
Report End Date:	12/31/2012
Srv Date:	between 01/01/2012 AND 12/31/2012

A service visit must exist during the reporting period to be counted on this report.

Name:	Srv Category:	Srv Short Name (Group By):	Srv Date (Group By):
Allen, Al	Medical Case Management	MCM Face-to-face	2/5/2012
Allen, Al	Medical Case Management	MCM Face-to-face	3/8/2012
Allen, Al	Medical Case Management	MCM Non Face-to-face	2/3/2012
Allen, Al	Outpatient/Ambulatory Medical Care	Labs	3/7/2012
Doe, Jane	Outpatient/Ambulatory Medical Care	Labs	5/30/2012
James, Jim k	Medical Case Management	MCM Face-to-face	1/1/2012
James, Jim k	Medical Case Management	MCM Face-to-face	3/8/2012
James, Jim k	Outpatient/Ambulatory Medical Care	Labs	3/7/2012

Now we change the **Use Totals** option, to **Count** for the **Subservice name** and **Service date** fields:
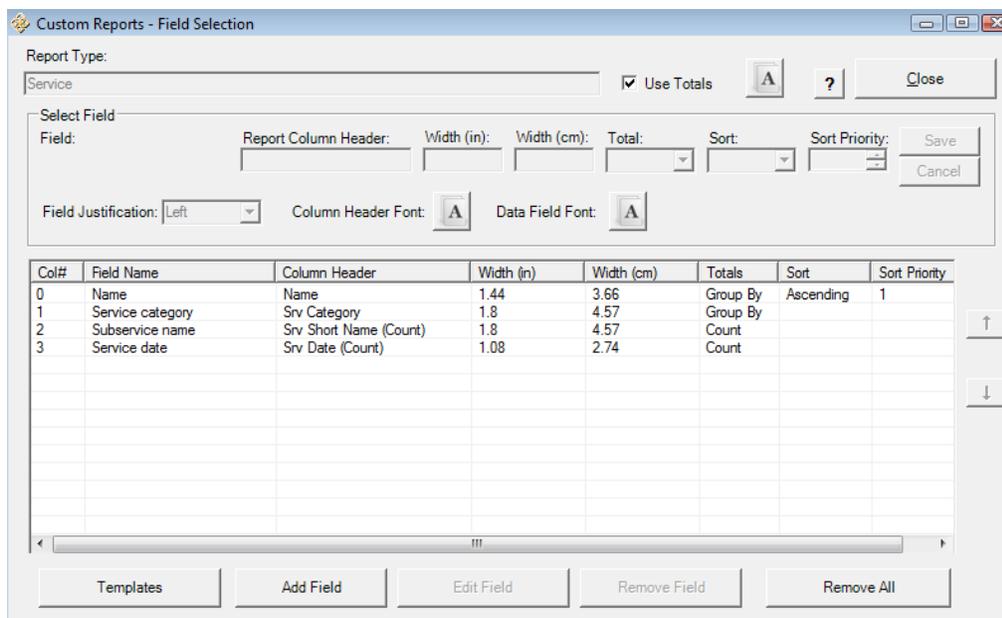
The report now returns the total subservices a client receives within a service category. Notice for the client Al Allen, there's now only one line for Medical Case Management, with the number 3 in the column indicating how many of those services he received in the date span.

Service Report

Data Scope: **Ryan White AIDS Care**

Report Criteria:

Report Start Date:	01/01/2012
Report End Date:	12/31/2012
Srv Date:	between 01/01/2012 AND 12/31/2012

A service visit must exist during the reporting period to be counted on this report.

Name:	Srv Category:	Srv Short Name (Count):	Srv Date (Count):
Allen, Al	Medical Case Management	3	3
Allen, Al	Outpatient/Ambulatory Medical Care	1	1
Doe, Jane	Outpatient/Ambulatory Medical Care	1	1
James, Jim k	Medical Case Management	2	2
James, Jim k	Outpatient/Ambulatory Medical Care	1	1
Josephs, Joe	Health ed./risk reduction/prevention	1	1
Josephs, Joe	Medical Case Management	4	4
Josephs, Joe	Outpatient/Ambulatory Medical Care	1	1

Lab Report:

In the next example we will select the 'Use Totals' option to show the minimum or lowest CD4 count for a client over a specified date range.

1.   First, without using totals, we create a report as seen below:

Field selection:
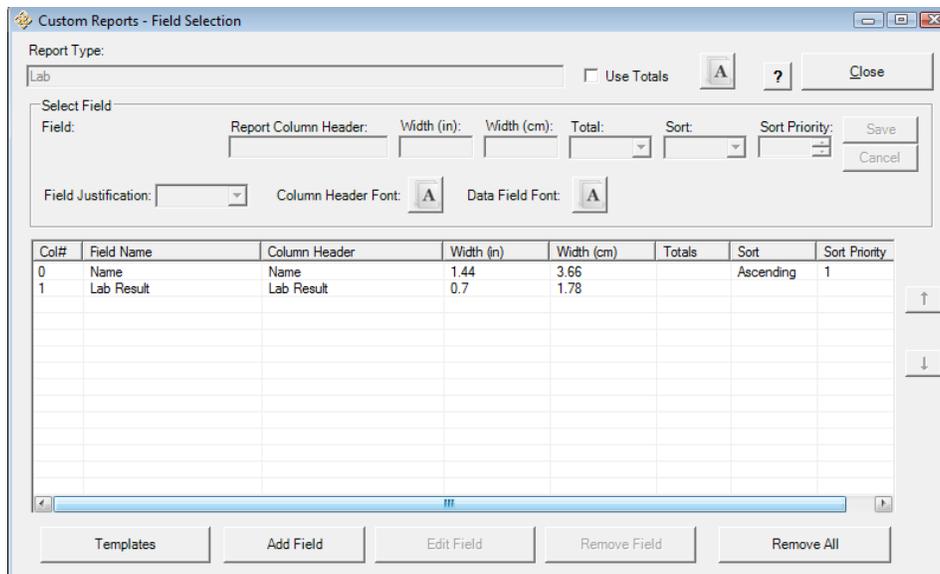
Filter:
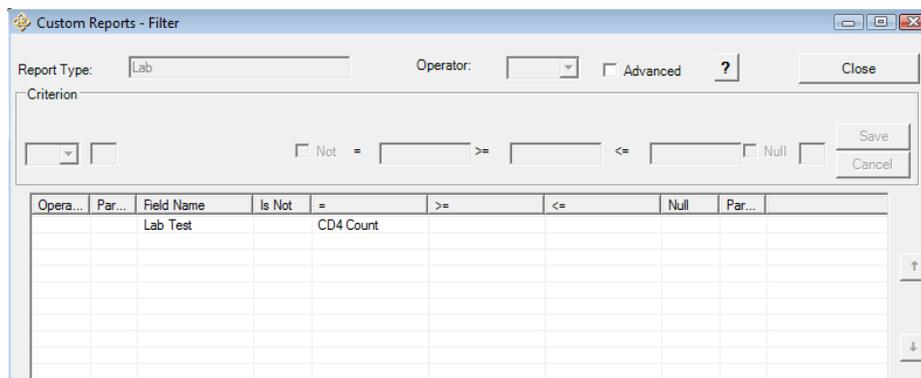
We will set the date span from 1/1/2012 – through 12/31/2012:
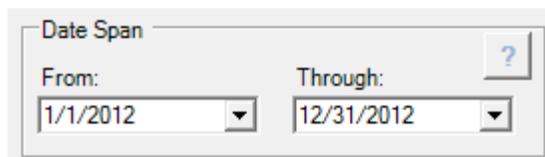
2.   Run the report this way and you'll get all CD4 results in that time frame:

CD4 Count

Data Scope: Ryan White AIDS Care

Report Criteria:

Report Start Date:	01/01/2012
Report End Date:	12/31/2012
Lab Test:	CD4 Count
AND Lab Date:	between 01/01/2012 AND 12/31/2012
AND Test Type:	Lab

A service visit must exist during the reporting period to be counted on this report.

Name:	Lab Result
Allen, Al	600
Allen, Al	450
Allen, Al	225
Allen, Al	300
Doe, Jane	200
Doe, Jane	450
James, Jim k	510
James, Jim k	325
James, Jim k	650
Josephs, Joe	210

Numeric Totals:

3920

Number of Records   10
(Count is unduplicated across providers)

* - Restricted Field

3.   Now we'll rerun the same report, but this time we'll check **Use Totals** in the field selection screen and choose the following settings: **Group By** Name and **Min** for Lab Result:
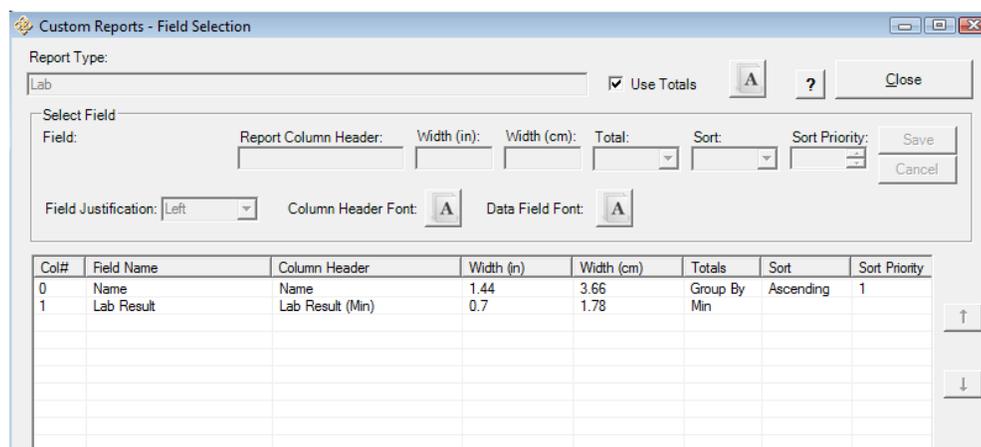
4.   Each client's lowest CD4 value in that time frame is shown. (The **Show Specifications** box is unchecked, so the search formula is hidden).

CD4 Count

Data Scope:	Ryan White AIDS Care

Name:	Lab Result (Min):
Allen, Al	225
Doe, Jane	200
James, Jim k	325
Josephs, Joe	210

Using Calculated Objects in Custom Reports

The ability to analyze changes in lab results and other indicators has been expanded considerably in CAREWare with the addition of calculated objects in Custom Demographic Reports.

There is an extensive list of calculated fields. Some examples of particular interest allow you to determine:

- The highest and lowest quantitative lab value within a specified date range

- The change in lab values from one period to the next (e.g., how much did a client's CD4 count or viral load rise or fall?)

- If a client had a change in ARV drug class

Calculated objects are available in demographic custom reports, but require some additional steps not found in a typical custom report setup.

Setting up date ranges for comparison:

Say you want to look at how long your clients have been receiving services. There is a calculated object that will look at the first service date and compare that to the last service date and calculate the difference between them.

Here, in custom demographic reports, we select one of the calculated objects as one of our report fields.

1. Create a **New Report**. We have named the report 'Length of Care' in this example.

2. Create the following field selections ("Name", "1st Service", "Last Service", "Date Diff").

There is an important difference from regular custom report field selection setup. When any of the calculated objects are selected as a field, ***an ellipsis appears to the right of the field*** (the box with three dots…), meaning that CAREWare requires you to provide additional details.

3. After selecting **Date Diff**, click on the ellipse [...] button next to it. The filter for this field is automatically created without parameters. (You may wish to edit the column header name from "Date Diff" to display a more descriptive name.)

This calculated field draws from additional information in other fields in the record. Each of these needs to be configured as follows:

a. Select the first **DateColumn** field, click **Edit Criterion** and select "1st Service" in the pull-down menu, then **Save**.

b. Select the second **DateColumn** field, click **Edit Criterion** and select "Last Service" then **Save**.

c. Select the **Diff Type,** select "Months," then **Save**.

d. <u>For a report on a single provider</u>, select "No" for **domain wide.** (Domain wide only applies if there are multiple provider domains configured in CAREWare.)

IMPORTANT INFORMATION SECURITY NOTE:

This reporting features <u>overrides</u> your cross-provider information sharing preferences. For example, you may not be sharing clinical data between providers, but when a provider runs a report with a calculated object where the domain wide field is set to "Yes," it may include data from other providers for shared clients.

This can be solved by:

1. Restricting provider report permissions.

2. Creating reports for these providers at the Central Admin domain, marking them "read only," and copying them to the provider.

e.   Click **Save**.

5.   Click **Save Field** and then **Save** again on the Field Selection.

6.   **Close** and **Save** the report.

7.   Select the report and click **Run Report**.
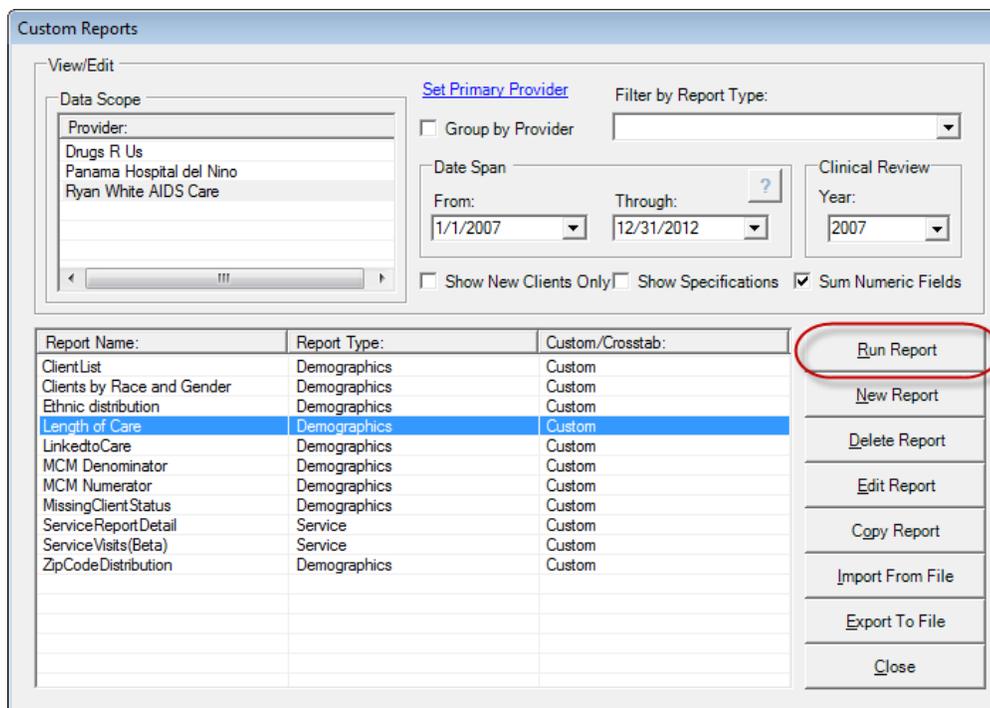
8. The following results were obtained when clicking **Run Report**. Notice in the **Date Diff** column for client Al Allen, 26, the number of months elapsed between the first and last service dates.

Length of Care

Data Scope: **Ryan White AIDS Care**

Report Criteria:
  Report Start Date: 01/01/2012
  Report End Date: 12/31/2012
A service visit must exist during the reporting period to be counted on this report.

Name:	1st Service:	Last Service:	Date Diff:
Allen, Al	1/1/2010	3/8/2012	26
Doe, Jane	1/1/2012	6/15/2012	5
James, Jim k	9/1/2000	3/8/2012	138
Josephs, Joe	1/1/2007	5/30/2012	64

For a result to appear on this report, a client must have a least 2 services, as well as at least one service within the selected date span, in this case for the year 2012.

9. Now let's look at the same report, except changing the domain wide field to "Yes". Click **Edit Report** and highlight **Date Diff** and then **Edit Field**.

10.   **Close** and **Save** the report.

11.   Select the report and click **Run Report**.

12.   Notice the results under the **Date Diff** column for client Al Allen, now 29, and Joe Josephs, changing from 64 to 67, as the number of months elapsed between the first and last service dates, with domain wide, set to "Yes".

Applying filters to calculated objects

As with any other report, you can apply a filter – for instance, restricting this report to only those clients whose last service occurred during the 2nd Quarter of 2012, (April 1 – June 30, 2012).

1. Open the report you just created, and add a filter.

2. Add the same field you used when adding the Field Selections ("Last Service") for the report. Click on the 'Change to Months' option.
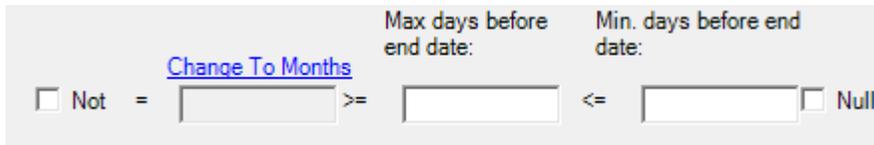
3. Now click on the 'Change to Dates' option.
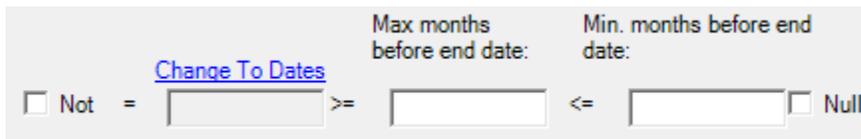
4. Enter the date April 1, 2012 in the >= (greater than or equal to) field, either using the date picker or manual data-entry of the date.
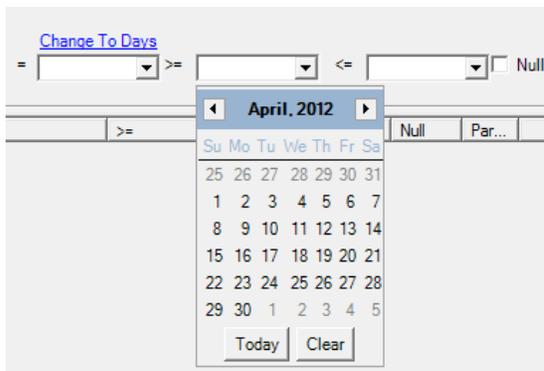
5. Then enter the end date of June 30, 2012 in the <= (less than or equal to) equality field, then Close and Save.
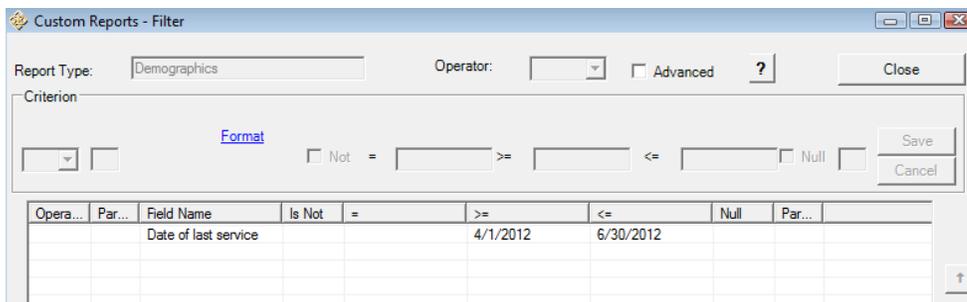
6. Now we will re-run the report with the filter, domain wide set to "No", obtaining the following results.

Length of Care

Data Scope: **Ryan White AIDS Care**

Name:	1st Service:	Last Service:	Date Diff:
Doe, Jane	1/1/2012	6/15/2012	5
Josephs, Joe	1/1/2007	5/30/2012	64

Other similar reports can be configured, such as the length of time between a client's First Service and First Medical Visit, or the length of time between a client's Enrollment Date and First Medical Visit or Lab result.

PLEASE NOTE: For networked providers, CAREWare allows the same advanced custom reports to be run for one or ALL provider domains. This can be most helpful when analyzing specific client sub-groups and/or service utilization within a 'system of care'.