How to use TableBuilder

2018

Hi everyone
In this session we will walk through how to use TableBuilder using a few examples. The notes from these presentations will be available afterwards on the community grants hub website for your reference, so please don't feel that you need to remember everything!

This presentation has been designed as a 'how to' to enable you to get the data from TableBuilder that you need for your grant application.

Access to Priority Investment Approach (PIA) Data

TableBuilder holds over 50 datasets other than PIA. There is an open version of the Census data that you are able to go in and play with as a 'Guest' without needing to register. This might be good to do if you would like to get a feel for what you can do in TableBuilder before getting access to the PIA dataset.

1. To apply for access to TableBuilder go to the ABS registration page (www.abs.gov.au/registration) and select Register

If your organisation hasn't registered for data access with ABS before, you will need to provide some additional information about your organisation as part of the registration process.

1. This is the email address you need to write to with any access questions you might have.

Once you have registered you can log in to the PIA dataset using this "All other datasets" button on the right.
The first two buttons will take you to the Census data.

Access to Priority Investment Approach (PIA) Data
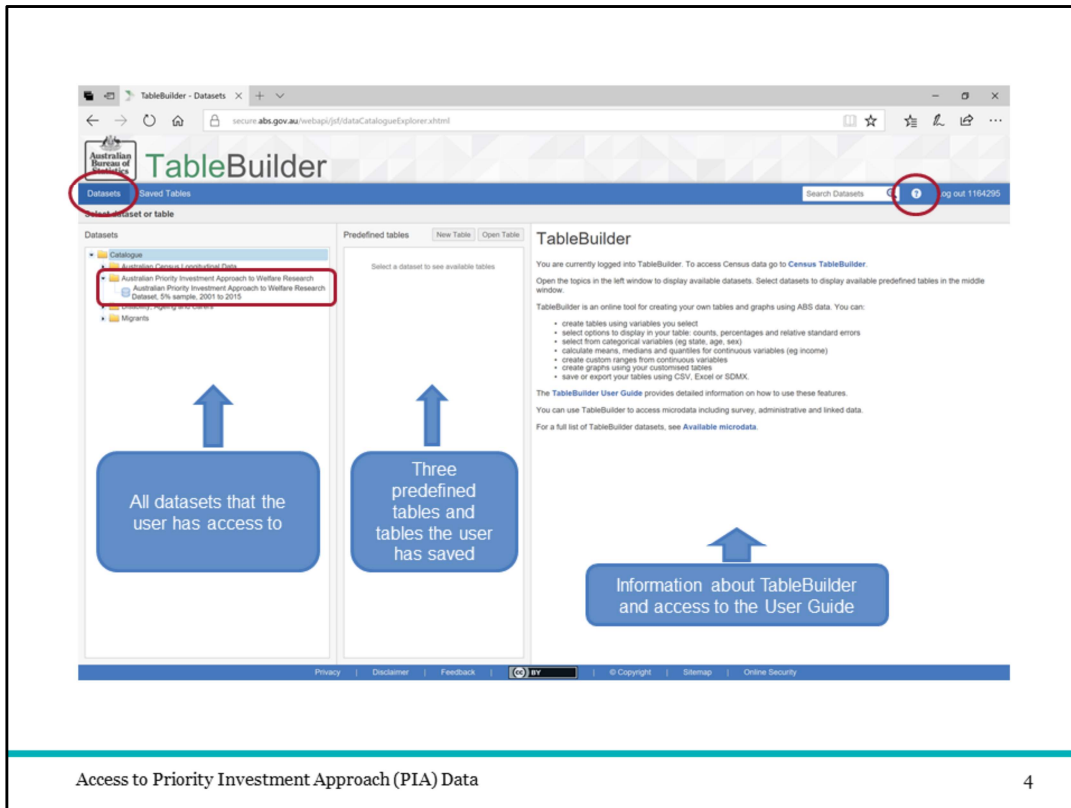
Once you have registered with TableBuilder and have logged in, this is the first screen you will see.

1. The datasets you have access to will be listed here in the left column and this will depend on the datasets that your organisation has access to. For this reason it is important to register using your organisation email, not a personal email account like bigpond or gmail.
2. You should see the Priority Investment Approach, or PIA, dataset listed here. If you don't see it, please write to the email I highlighted in the previous slide to ask for access.
3. The middle column will display the predefined tables and any tables you save over time (we will go into this later).
4. When no dataset has been selected on the left, the right hand column provides background information to TableBuilder and links to the User Guide.
5. You can also access the TableBuilder User Guide at any time by this Help button at the top right.
6. And you can come back to these pages anytime by selecting the Datasets tab.

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As a side note, this is the TableBuilder User Guide
1. Use the navigation links on the left to move through the topics.
2. The tutorials link will take you to a selection of videos created by ABS using the Census TableBuilder.

Access to Priority Investment Approach (PIA) Data

1. Now that I have selected the PIA dataset on the left,
2. the information on the right now provides background information to this dataset and links to more detailed information.
3. To get started, you can select one of the existing tables and then 'Open Table'
4. Or you can start a New Table. We will create a new table for this demonstration.
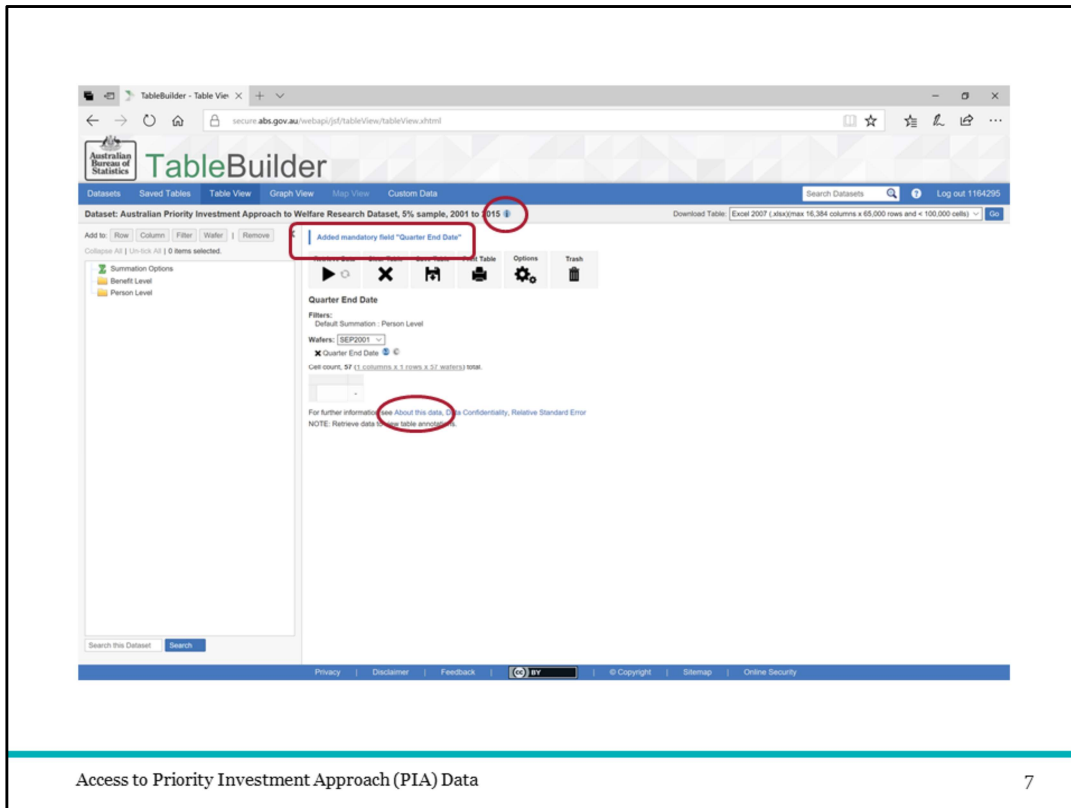
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When you go in to a new table you will see this screen.

1. At all times when using TableBuilder you are able to select either the '*i*' icon at the right of the title or the 'About this data' link at the bottom of the main screen. These will both take you to the background information about the Priority Investment Approach data and how it has been applied to TableBuilder.

As described in the previous session, the PIA dataset includes 56 separate quarterly snapshots over 14 years. The table has been designed so that the variable that identifies which of these quarters you are looking at is

2. a mandatory field and must be included somewhere in your table. You can have it in the columns or rows of your table, but by default it is in the wafer. Adding any variable to the wafer will turn a 2D table (with rows and columns) into a 3D cube. That is, the categories you add to the Wafer become the layers of your table
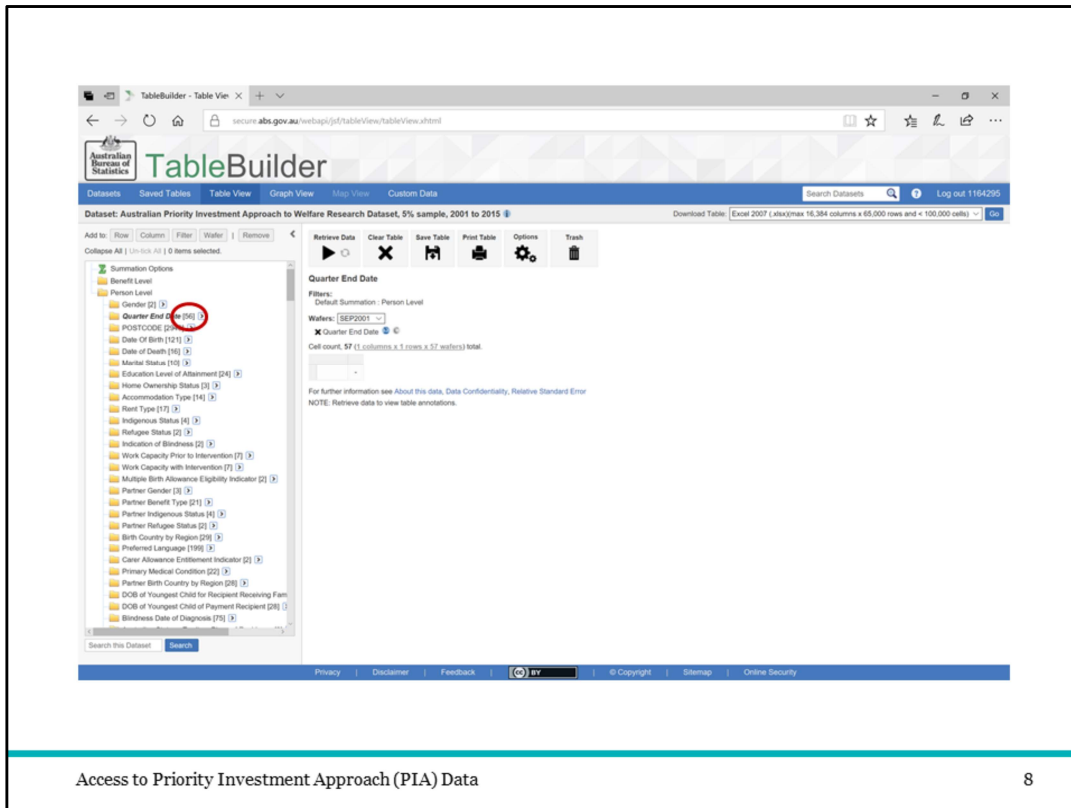
By expanding the Benefit level and Person level folders, all 38 variables will be displayed. The number at the end of each variable title describes the number of categories available in that variable.

1. Here you can see there are 56 quarters in the Quarter End Date. By default, all 56 quarters are added to the wafer.

Having your table retrieve data for all 56 quarters for every table design you create, will increase the size of your table and slow down the time it takes to retrieve data. To make your table smaller and faster, you can remove those quarters that you are not interested in.

Play: You can see all the quarters listed in the Wafer to start. To select many categories at a time, you can tick the first and then hold shift and tick the last, and it will include all categories in between. Here I have removed all quarters except for the latest one. Now my table will include only the data from the most recent time period.

How many Carers are in each age group?

Let's say I want to use TableBuilder to look at the age distribution of people who are receiving Carer Payment.

By expanding the Benefit Type variable you can see all benefit types available.
1. Selecting the particular benefit you are interested in
2. allows you to use the buttons across the top. We will add Carer Payment as a Filter. Using the filter means that only those records (or people) who are on Carer Payment will be added to the table.

So far we can see that
1. In June 2015,
2. there were 12,876 recipients of carer payment. Remember this is a 5% sample so for population estimates we would multiply this by 20.

To find out *"How many Carers are in each age group?"*, we can add all the age groups to the table.

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PLAY: When you click and hold a variable, the pop up menu of Row, column and Wafer appears. You can then drag and drop your variable into the one of these to have the whole variable added to the table. In this case we have added Date of Birth to Row to have the years listed vertically.

By selecting 'Retrieve Data' we will see how many people who were receiving Carer Payments in June 2015 were born in each year of our data.

By scrolling up and down we see that the earliest date of birth is **1925** and the latest is **1997**. That is, our oldest carer for that quarter (June 2015) was **90** years old and our youngest was **18**.

To see a graphic representation of this data you simply select the
1. Graph View from the tabs across the top.

How many Carers are in each age group?
How does this change over time?

Let's see how the age of Carer Payment recipients has changed across time.
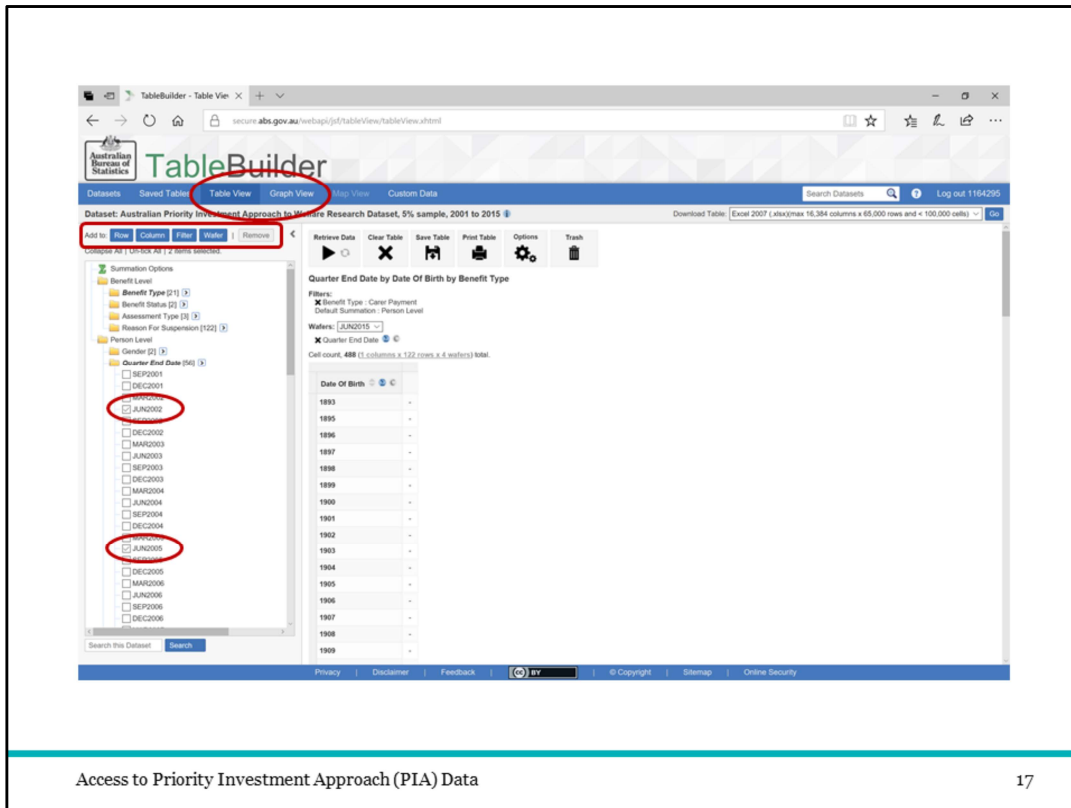
1. I select 'Table View' from the tabs at the top to make changes to the table. To be able to look at age distributions over time,
2. I added four more quarters I was interested in by ticking the categories
3. And then adding them to the Wafer

To compare quarters alongside each other I have moved them from the Wafer to the Column. Because Quarter End Date is a mandatory field, it cannot be removed entirely from the table and can only be moved around between Wafer, Row and Column.

PLAY: To do this you can simply click and drag the title and drop to the position in the table you'd like it to be.
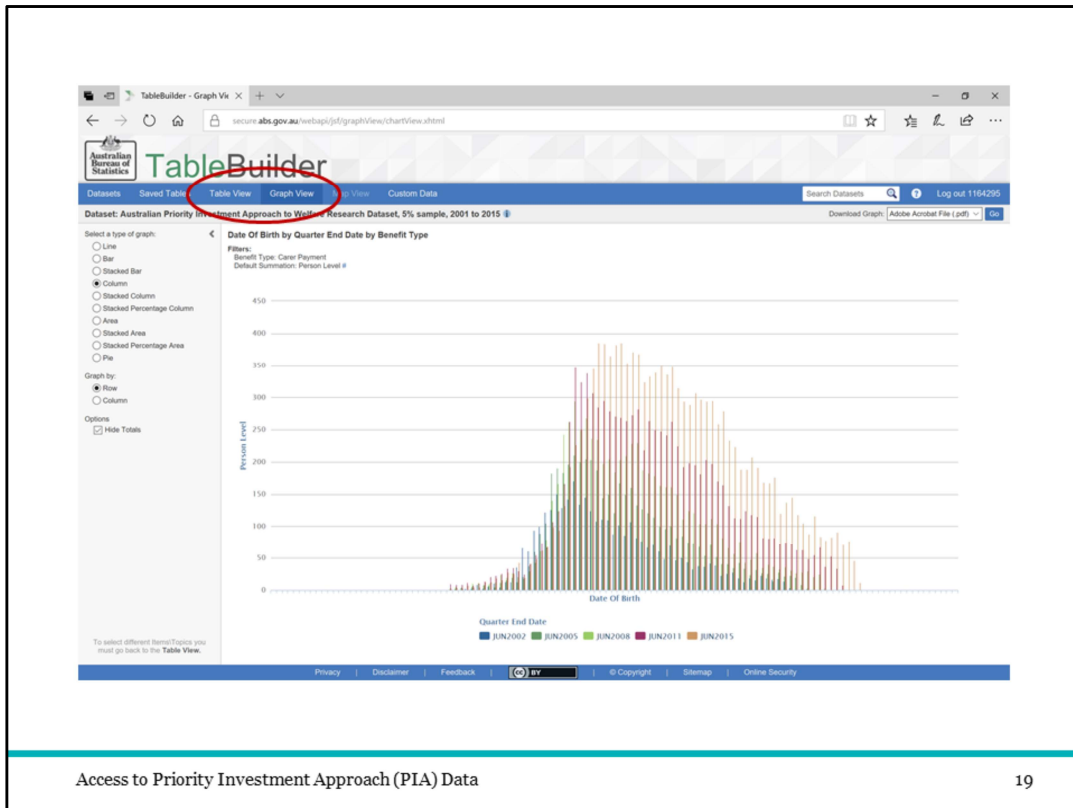
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By selecting
1. Graph View we can see the distribution of age groups for each of the four time periods.
In this display it is difficult to see the change in shape across time periods because they are displayed on top of each other.
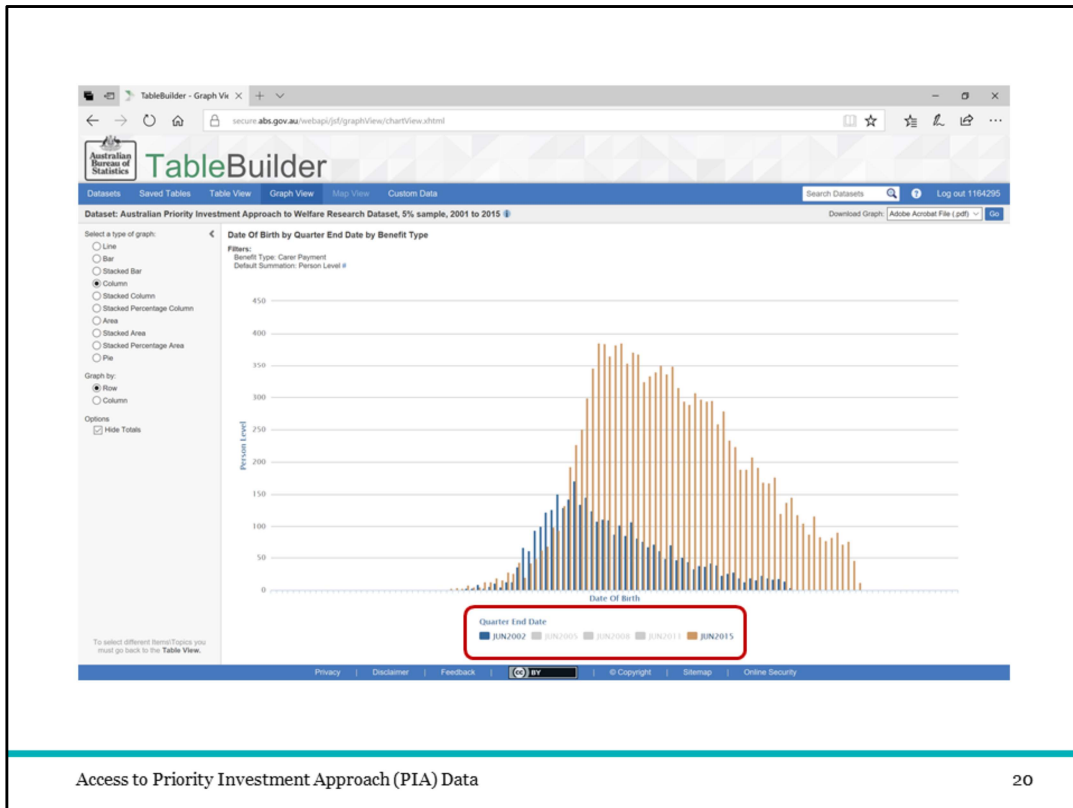
You can hide parts of the graph by
1. clicking on the categories at the bottom
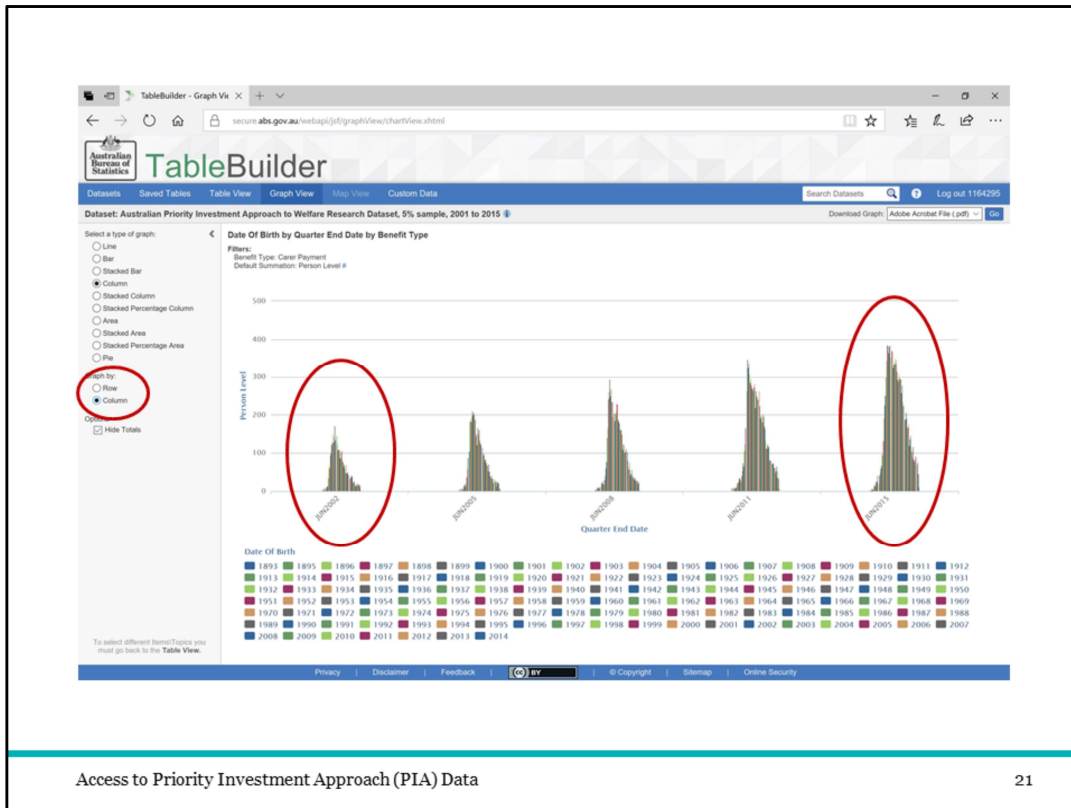
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Alternatively you can display the results by

1. Column rather than Row. In our table we had the five time periods as the headings across the Columns and so now this is how the data is grouped here.

Now you can see not only the growth in numbers but also the change in shape across the time periods. In particular you can see that there are more young carers in the

2. 2015 time period than there were in the

3. 2002 time period. That is the shape of the 2002 distribution is leaning to the left (more older aged carers) whereas the shape of the 2014 distribution has a slight lean to the right (there are more younger aged carers).

How many Carers are in each age group?
How does this change over time?

How does this differ by geographic region?

Let's see how the age of the carers might be different across geographic regions.

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Again, to change the table simply

1. select 'Table View' from the tabs at the top. To compare across geographic regions, I have put the quarter dates back into the Wafer. For geographic information we have three variables available: State, Postcode or region.
2. In this case we will use 'Region of Residence'.
3. We will select the Snowy Mountains, Kiama – Shellharbour and Broken Hill. Let's say we want to compare these areas to an Inner Sydney region.
4. There are 319 different regions so it might be quicker and easier
5. to use the Search bar. Simply type in 'Sydney' and the search will return all categories and variables that have that word in them. Tick the one you want and
6. use the buttons at the top to add these regions into the Columns of the table.

Now we have a table with the regions next to each other in the Column, the quarters in the Wafer and Date of Birth in the Rows

By selecting the

1. small 'c' next to any variable in a table, you will toggle between the codes and the label. You might want to see the codes used in variables to compare to other data or information sources. In this case you will see the SA3 region codes.
2. In this case the table has been suppressed. This is one of the privacy measures built into TableBuilder. That is, where there are low numbers in any cells and there is the possibility of people being identified, the information in the table is suppressed and zero values are returned.

Lets look at another way of defining by geographic region.

PLAY: To remove a whole variable from the table simply grab the variable title and drag and drop over the Trash icon

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We might look at the age distribution of Carers by State. In this case I have selected only NSW, Victoria and Queensland. I will select these states by

1. ticking the box and then using the
2. Column button at the top.

Due to the larger geographic regions, we now have data in our table
1. Please note that the order the categories are displayed in is determined by the order that they are ticked. In this case I selected
2. Victoria before I selected
3. Queensland. And as such,
4. Victoria is listed before
5. Queensland in the table.
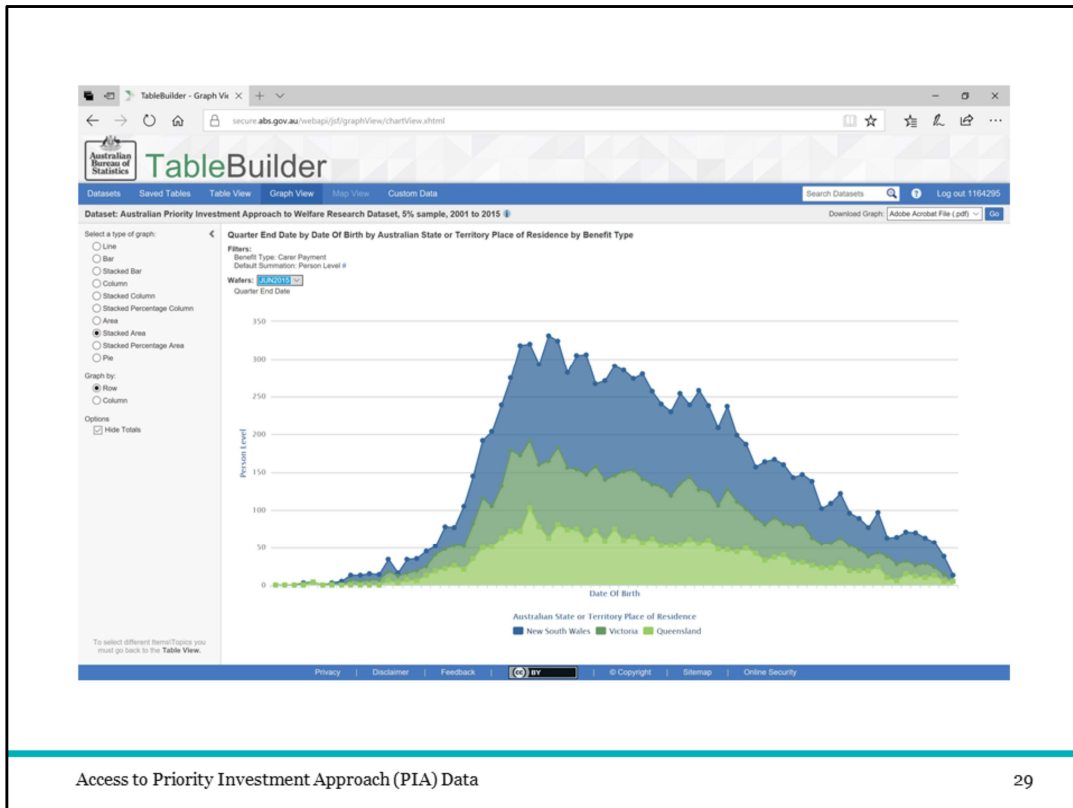
By selecting Graph View we can see the distribution of age groups for each state.
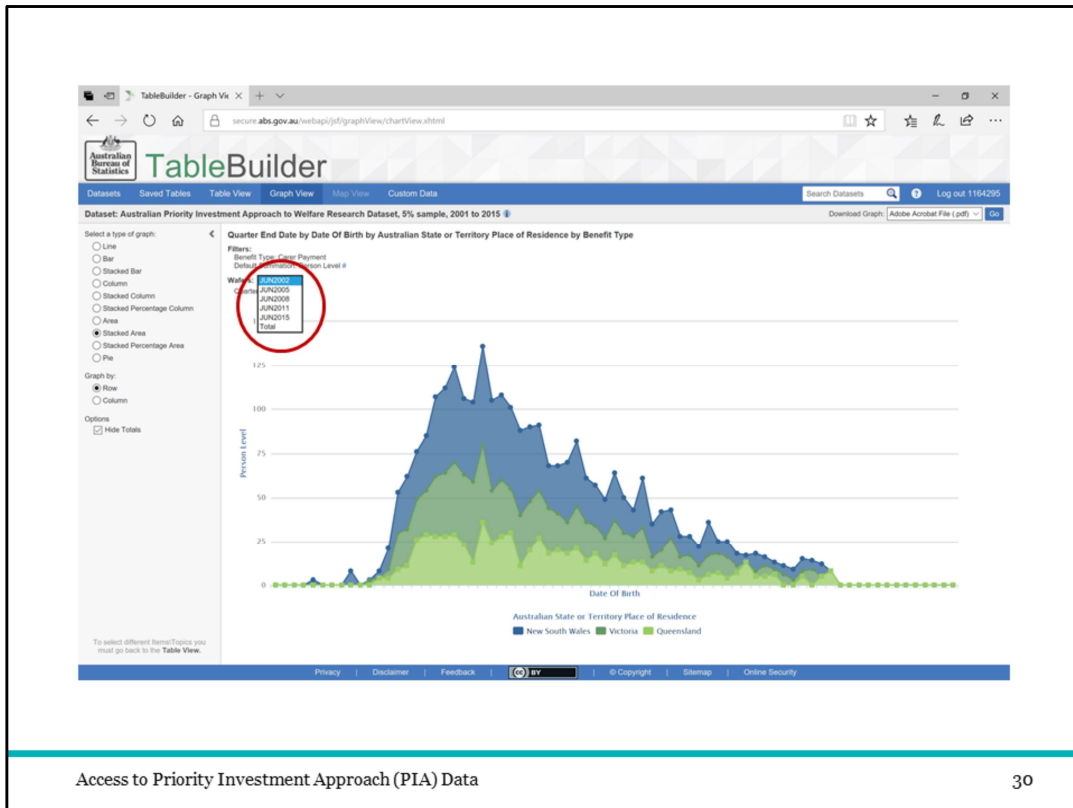
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And we can easily switch between graphs of the different quarters that we have in the Wafer by using the
1. drop down box

How many people aged 50 and over are receiving Newstart?

Now let's look at a different question. Say we would like to know information about people who are 50 years or older and receiving Newstart Allowance.
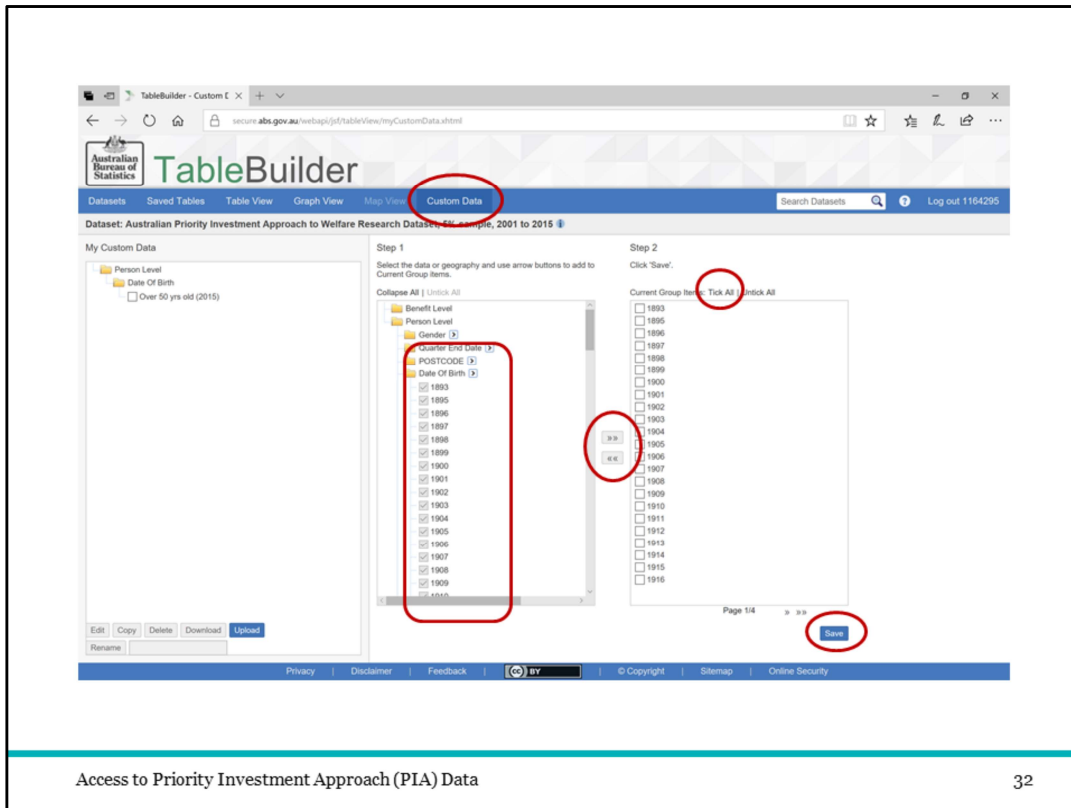
You can't add multiple categories (or years) as a filter to a table. To create a table that only includes information about people who are 50 years and over, I will use Custom Data to create an age group category. This method can also be used if you were looking to select 'young people' defined by a certain age range or to combine a number of postcodes or geographic regions to create your own geographic category.

Details on how to use Custom Data are available in the TableBuilder User Guide however briefly,
1. go into Custom Data using the tabs at the top
2. Select the categories you want to include. In this case, I only interested in the latest information which is the June 2015 quarter. As I want everyone aged 50 and over, I am interested in all Date of Birth years from the earliest up to 1965.
3. Move these years over to the right column
4. Tick all of these and then
5. Select Save
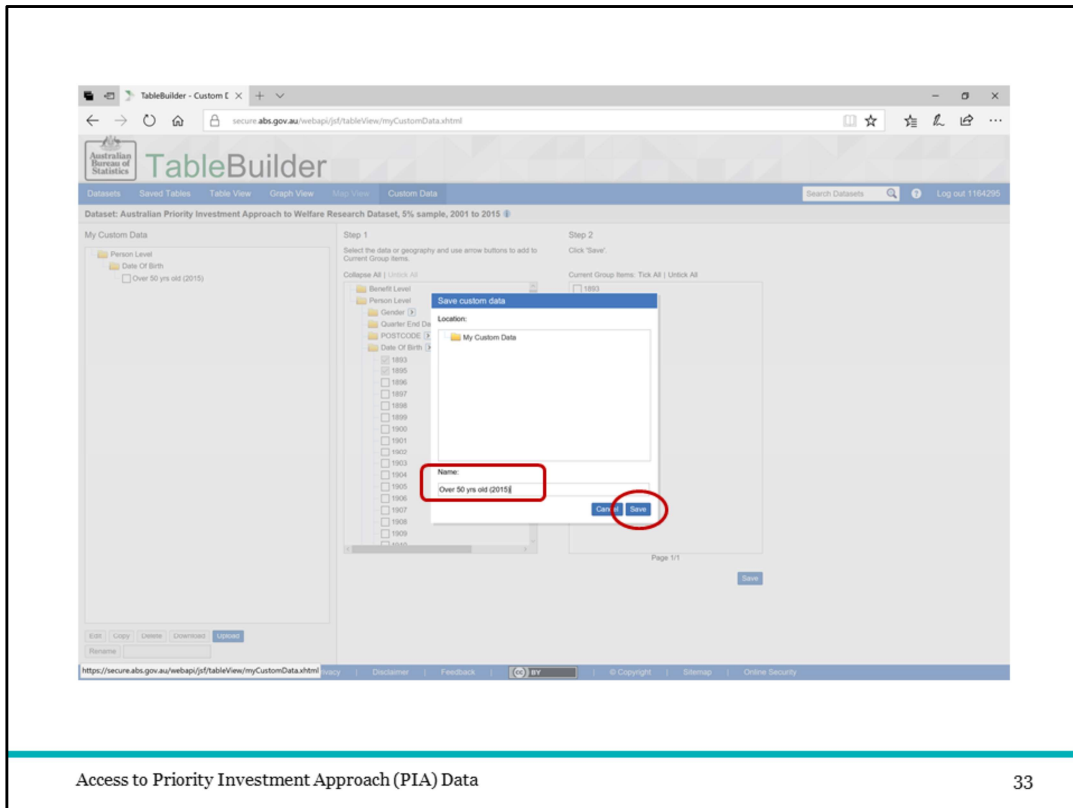
1. You will need to give a name to your new category.
2. Then Save again.

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This new category will be added under the variable in your TableBuilder.
1. To add this age group as your filter select the new category
2. And select Filter
3. I have June 2015 in the Wafer so only information from this quarter will be displayed.

1. I am also only looking at those receiving Newstart allowance so I need to add this Benefit Type to the filter. Now, the table will only present the count of those people who were aged 50 and over and were receiving Newstart Allowance in June 2015.
2. In this case, there were 12,522 recipients (again, multiply by 20 for a population estimate)

How many people aged 50 and over are receiving Newstart?

What is their highest level of education? How is this different by Gender?

Let's look at what we know about these recipients regarding their level of education and gender.

1. To look at this question I have added 'Education Level of Attainment' to the Row and
2. Gender to the Column by dragging the variable title.
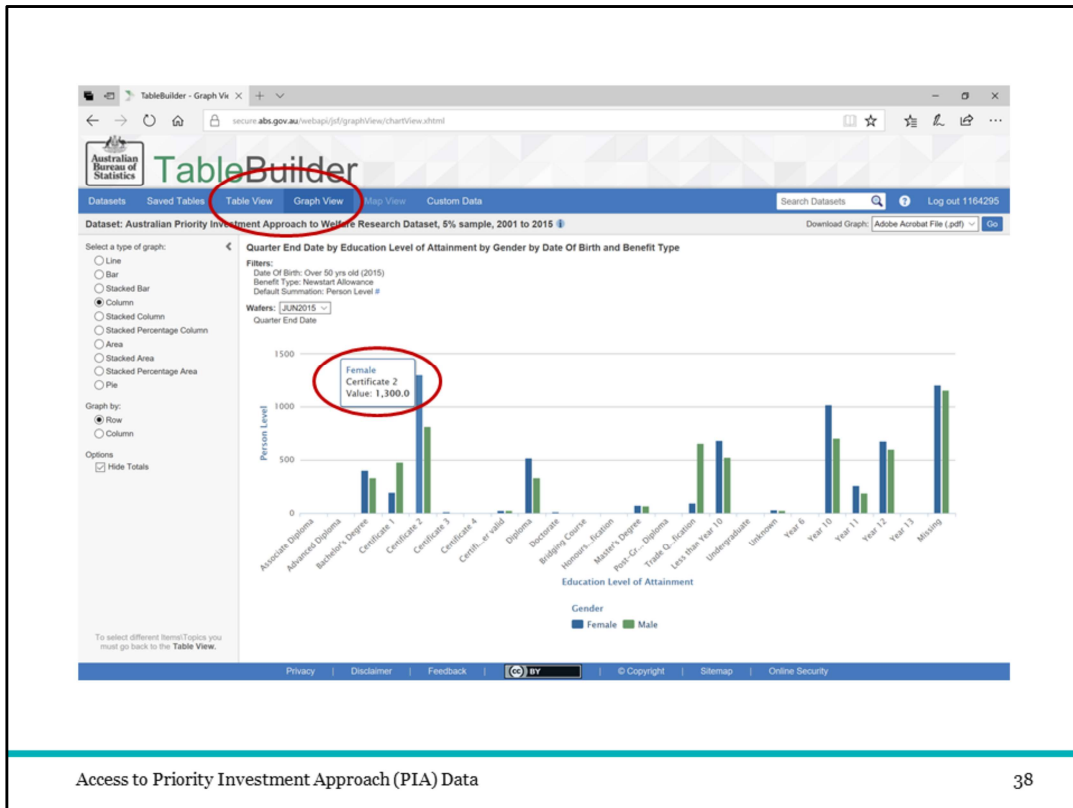
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1. Using the Graph View I can look at the distribution of the Newstart Recipients by their highest level of education.
2. To see more detailed information, I can hover over any of the graph elements
You can see the information is quite spread out here and is not in any sensible order.

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To make this table (and graph) make a little more sense, I have removed the Education variable and then selected only the categories I am interested in, in an order that makes sense.
1. You can see education is now listed from "Less than Year 10" through to "Master's Degree".
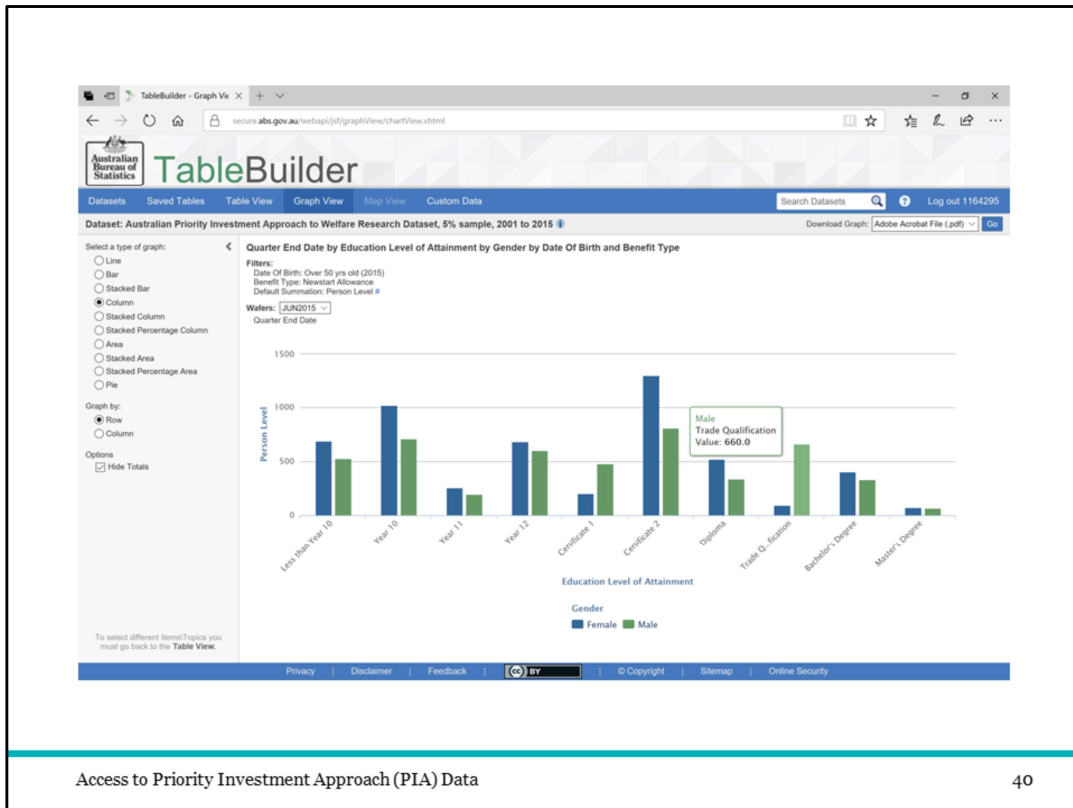
Now the graph also presents the information in this same order and as such is easier to read.

How many young people aged 50 and over are receiving Newstart?
What is their highest level of education? How is this different by Gender?

How is this different by Indigenous Status?

Let's look at how this is different for indigenous and non-indigenous recipients.

1. To add Indigenous Status we simply pull the 'Indigenous Status' Variable across to add it to the Column information.

This will display the information for Gender by Indigenous Status.

We might decide that we don't want to include 'Unknown' and 'Missing'.
1. To change this we tick these categories, and then
2. Select 'Remove'

The table is now more easily read with only the two categories for Indigenous Status.
1. We can also display the results by percentage. We can choose between percentage by Row or percentage by Column. Here we have selected by Row and as such see the distribution across the groups for each education level.
2. Here we can see that 8.76% of this group who had not completed Year 10, were indigenous.
3. Over 80% who had a Trade Qualification were non-indigenous men.

1. If you want to be able to come back to this table in a different session, you will need to Save the Table.

1. By selecting the 'Save Table' button, you will be asked to name the table. Here I have called it 'Education x Gender x Indigenous Status'
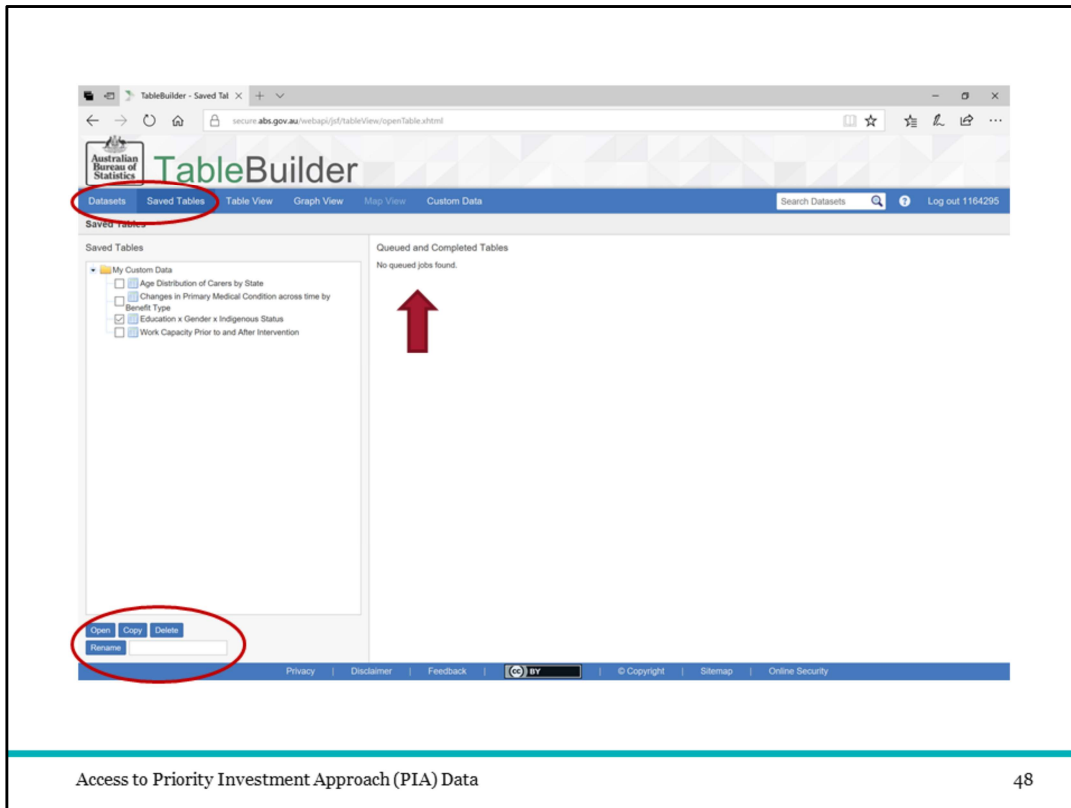
1. You will now see your table in the Datasets tab (in the middle column) as well as the Saved Tables tab.
2. In the Saved Tables tab you can Open, Copy, Delete and Rename your table.
• As a side note, if you design a table that has too many cells, it will be converted to a Large Table. There is information about this in the TableBuilder User Guide but put simply this means that you won't be able to view your table in the TableBuilder tool but it will be available for download
3. here in your 'Queued jobs'.

You can also download the tables you build in TableBuilder.
1. To do this, select the type of file format and
2. then select 'Go'.
• Before downloading this table I have added a number of other quarters to the Wafer.

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1. When there are multiple categories in the wafer of your table (such as we have now with the multiple quarters), the excel worksheet you download will contain the data for each wafer on a separate tab.
2. You can identify the wafer that each tab refers to by the category identified in the cell above the table.
3. You can also see the Filters that have been applied
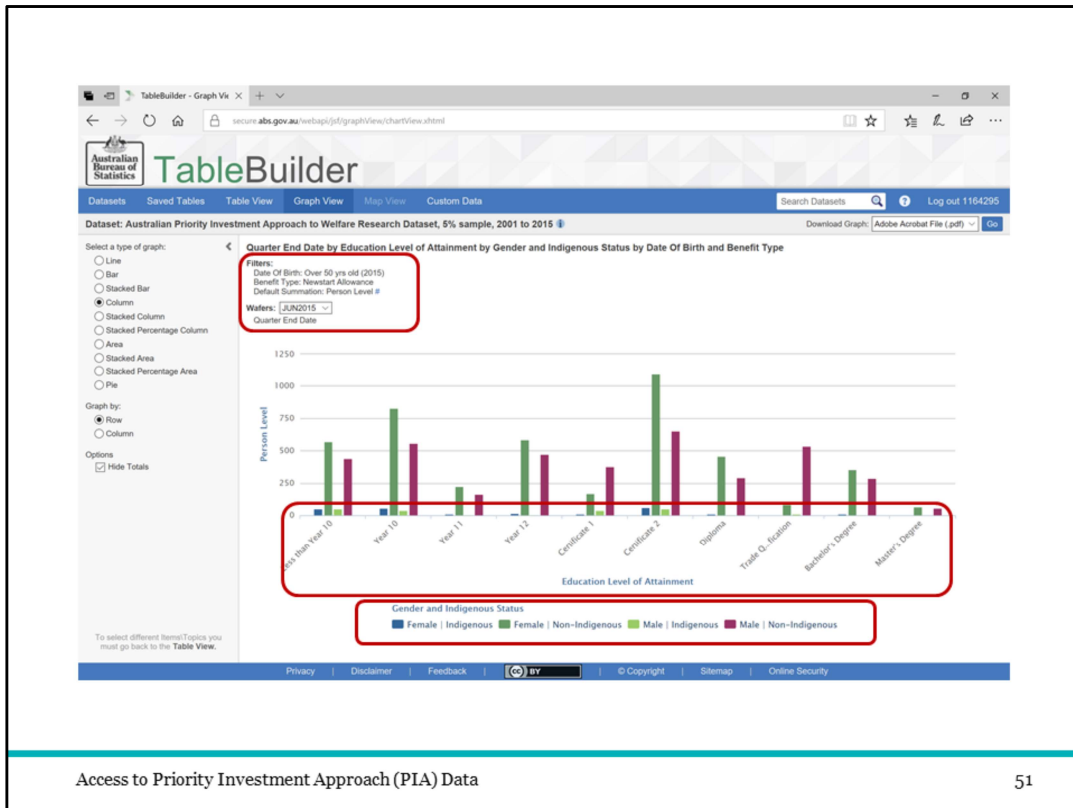
Access to Priority Investment Approach (PIA) Data

1. The Graph View of this table shows the number of Newstart recipients aged over 50 in the June 2015 quarter
2. for each education level
3. for each group by gender and indigenous status

You can reorder the nested variables.
PLAY: To do this just click, drag and drop to place Indigenous Status above Gender

1. Now the data will show as Indigenous Status split by Gender
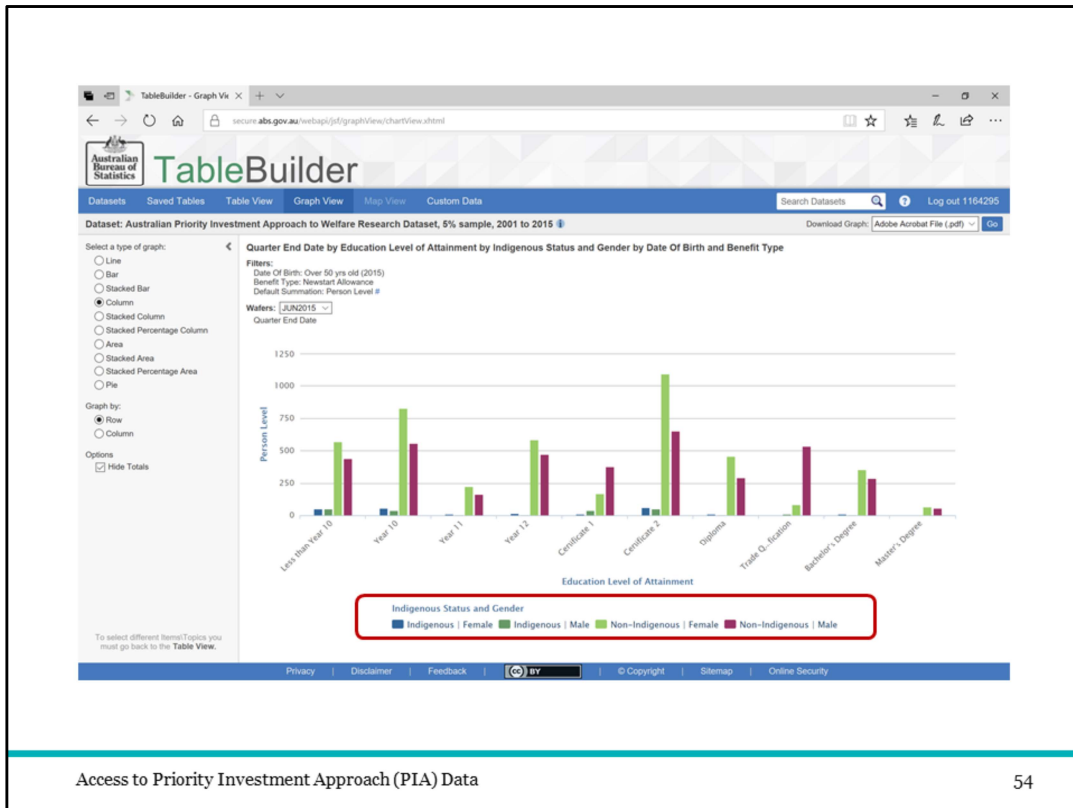
1. Now the graph has female and male indigenous presented next to each other and then female and male non-indigenous next to each other.
The presentation order is a matter of which data you want to compare.

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Sometimes the order will be particularly important for a particular style of graph.
1. You can present the data in a number of ways using the options on the left.
2. When you have a graph you like, you can download using the 'Go' button at the top right.

Any Questions?

Thank you.

Tara Spokes, PhD
Policy Research Officer
tara.spokes@dss.gov.au

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A lot of this functionality will be things you can discover with use. Please make use of the ABS TableBuilder User Guide and the PIA background information available on the TableBuilder site.

At this stage, are there any questions?