Goal
Demonstrate FLHealthCHARTS.com's key features

Audience
Public health professionals who want to use FLHealthCHARTS data to better understand their county's health status.

Key Messages
FLHealthCHARTS.com has lots of health statistics data to offer. This overview will show some key features and functions including:
- Basic CHARTS facts – data update frequency and sources
- Key features and functionality – from profile reports to query systems
- An overview of interpreting the statistical information in CHARTS reports (quartiles, types of rates, MOV).
- Specific data and information of interest to those providing public health.

What is CHARTS?

CHARTS stands for **Community Health Assessment Resource Tool Set.**
It was developed to help counties and communities get the data they need to work on community health plans and issues.

Our vision is to deliver *C*ommunity focused *H*ealth statistics that are *A*vailable to everyone and which are *R*elevant, *T*imely and *S*tatistically sound.

CHARTS was launched in 2005 and has been growing since.
You probably know that FloridaCHARTS.com provides data, but here is some data about FloridaCHARTS.com! Each year, there are about a quarter of a million visitors, 4 million page views, and 12 million hits on the site. Around 400 different web sites have links to CHARTS.

More than 1/3 of the pages viewed are in the maternal and child health section. Communicable disease, chronic disease and BRFSS are also very popular sections of CHARTS, together accounting for about 83% of CHARTS' use in 2016.
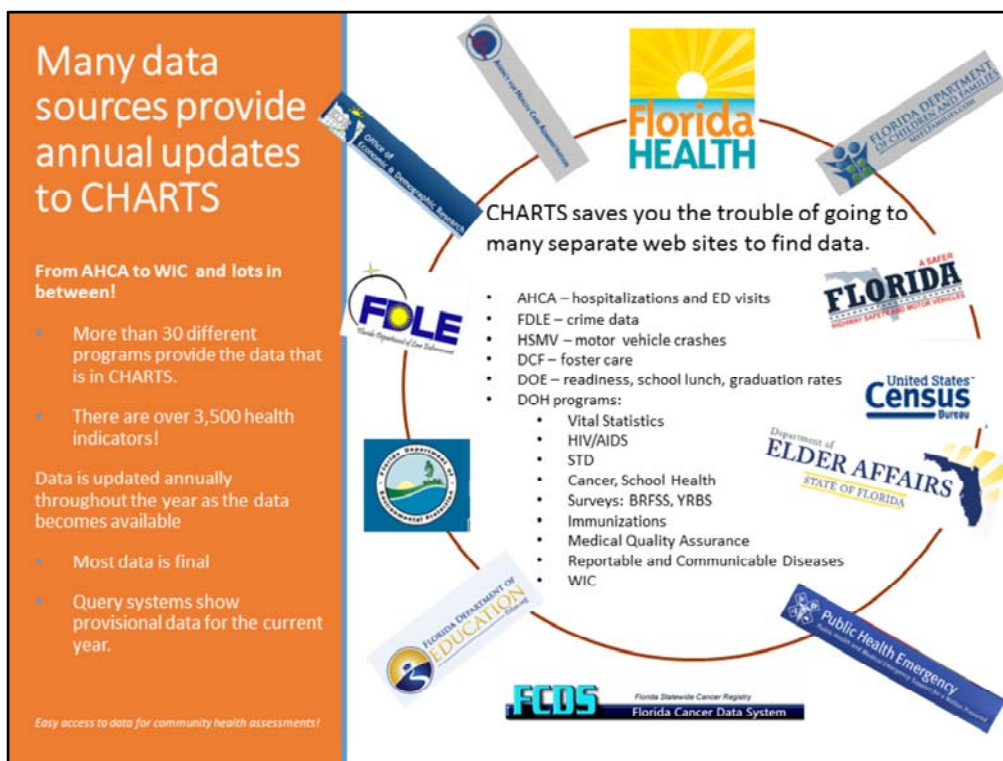
CHARTS is a single source for health and health-related data that comes from many different programs and agencies.

From AHCA to WIC and lots in between!   More than 30 different programs or agencies provide data that is in CHARTS.

Hospitalizations, births, deaths, population behavioral risk factors, health care providers, reportable diseases and more – there are over 3,500 indicators! CHARTS saves you the trouble of going to many separate web sites to find data.

Each data source has its own schedule for providing data, so CHARTS is updated year around with different types of data. You can even find provisional data that is updated weekly in the query systems of CHARTS!
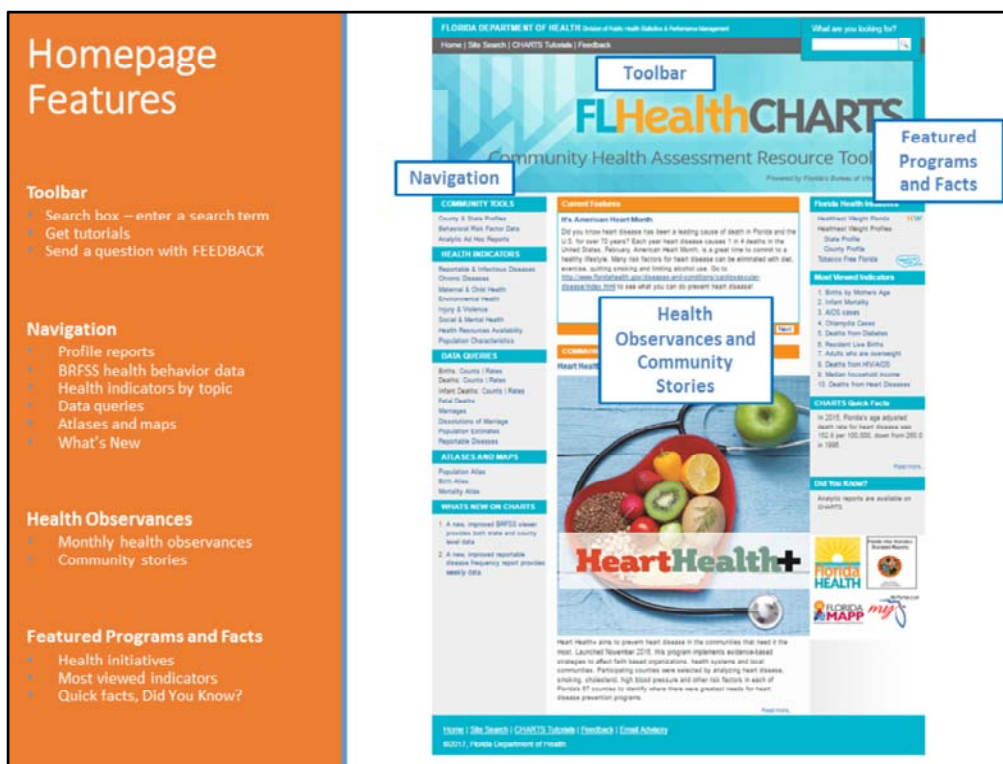
Major components on the homepage help you find what you need and provide a way to ask questions or give us feedback.

1. **Look at the Toolbar** at the top: it gets you to the SEARCH, Tutorials and Feedback.

   - If you don't see what you need, type it in the search box.
   - You can ask a question through the Feedback button or tell us what you like or don't like about CHARTS.
   - Tutorials provide quick instructions about how to use different parts of CHARTS.

2. On the left is the key **navigation** by topic. Use this menu to quickly get profile reports or data about a particular topic

3. In the center are **health observances and community spotlights** showcasing the good work that is happening.

4. The right side features **health initiatives, most viewed indicators, and quick facts**.

CHARTS has **three different presentations of data**. From the simplest to the complex, these are:

1. Standard one-click **profile reports**
2. Individual **health indicators** that show health data with trend graphs, quartile maps and data tables
3. **Query systems** that let you select the data using the filters that you want to use

Let's take a look at each of these and see how they work.

First, let's look at profile reports.
These reports were developed with teams of program experts including health department and other public health professionals who recommended the most useful measures to include.

- Most profiles include data from other agencies and a variety of health programs. There are currently 19 different profile reports to choose from.
- Each one focuses on a health issue or a specific population.
- With just one click, you'll get a whole collection of data.
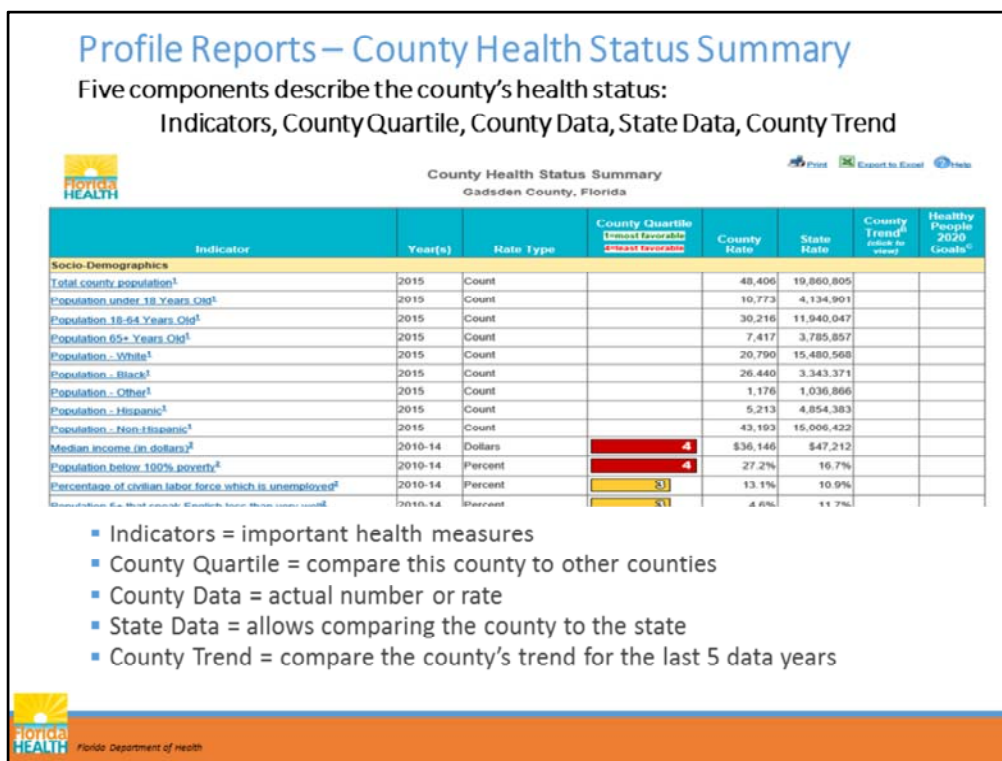
Here's an example of a profile report -- the County Health Status Summary Profile. Most profiles are set up similarly.

1. A list of measures on the left, followed by the type of measure (rate, percent, etc.).
2. Most profile reports present a quartile.
3. The county data -- counts, percents and rates -- is given for the list of measures.
4. You'll also see the state data
5. On the County Health Status Summary you will find a comparison of the county trend for the five latest data years
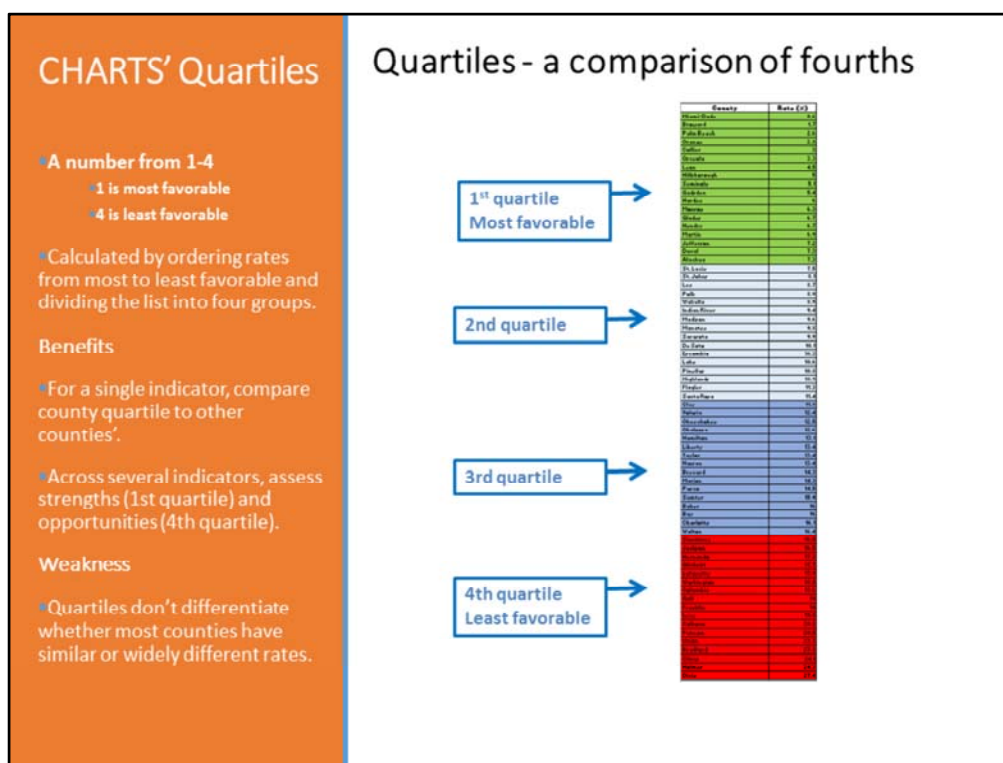
Quartiles are a simple tool we use to make comparisons. If we put data in order, then divide the list into four groups, we will have the "upper-most" (1st quarter or quartile of the), "middle" and "lowest" fourths of the data. and least favorable situations. The most favorable 25% are called quartile 1. The least favorable are called quartile 4.

Here is how quartiles are calculated and presented to you in CHARTS:

Example 1: births to mothers who smoked
We want fewer births to mothers who smoke, so less is good.

> We take the data for all the all counties and put them in order, lowest to highest, based on their percents/rates. Then we divide that list into four groups.
> The first group has the lowest percents/rates and they are assigned quartile 1. The next group will be quartile 2, and so on. So counties with the highest percents/rates are in quartile 4.

Example 2: Mothers who initiate breastfeeding.
This time, more is better. The more mothers who are breastfeeding their infants, the better.

> So now we order the data from highest to lowest.
> The first group of counties would be called quartile 1 – the counties with the highest/best rates. The last group will be called quartile 4, counties with the lowest rates.

The take home point is this: the 1st quartile always represents favorable health situations and the 4th quartile represents less favorable situations.

On CHARTS, you will see quartiles on profile reports displayed as numbered color bars. You'll also see them on the maps where the darker color will represent the less favorable outcome.

It may be helpful to review profile reports for the quartiles that are 4s. Look into those indicators to learn about the demographic or other characteristics of the issue or to identify root causes related to the problem.

If you don't see a quartile, that means it isn't appropriate for that indicator. Sometimes not enough counties have data (we require data in at least 51 counties), or we don't feel it is applicable (population data for example).

The trend shows county status

Calculation of the trend is based on single-year rates or percents occurring in the last 5 data years

Better = Trend is getting better and the improvement is statistically significant

Worse = Trend is getting worse and the change is statistically significant

No Trend = Trend is not statistically significant

Unintentional Injury Age-Adjusted Death Rate
Leon County 2011-2015
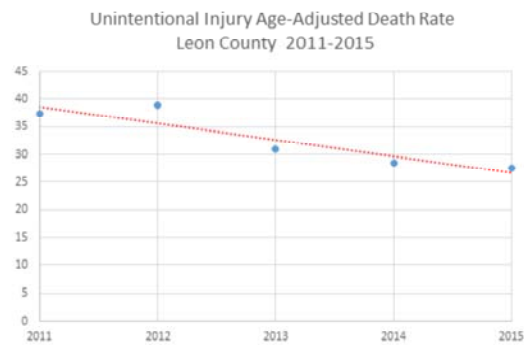
2011	2012	2013	2014	2015
37.5	38.9	31	28.4	27.6

Statistical testing has been applied making it possible to state whether a change is statistically significant. For the data years shown in the graph and table, this county's trend is significantly better at the 95% confidence level.

CHARTS provides information about county trends and assesses whether the trend for single-year rates or percents are better, worse, or no trend could be determined for the last 5 data years.

Statistical testing has been applied making it possible to determine if a change is statistically significant at the 95% confidence level.

You can also get more information about the measures in the profile reports.

If you click on a health indicator, it will open with a detailed view of that measure. Select the county you are interested in. You'll see a trend graph, a quartile map, and data tables with the trend and county data in them.

Let's look at the individual health indicators now. Indicators are health measures.

You might have reached them by clicking a row in a profile report, or by using the search, or by clicking on the health indicator topics.

Let's look at navigating through the topic section:

Just click the dropdown arrow to see the options. If you prefer, use the A-Z list to get quick links to all the health indicators in this section.

This brings us to a 4 panel viewer in CHARTS.

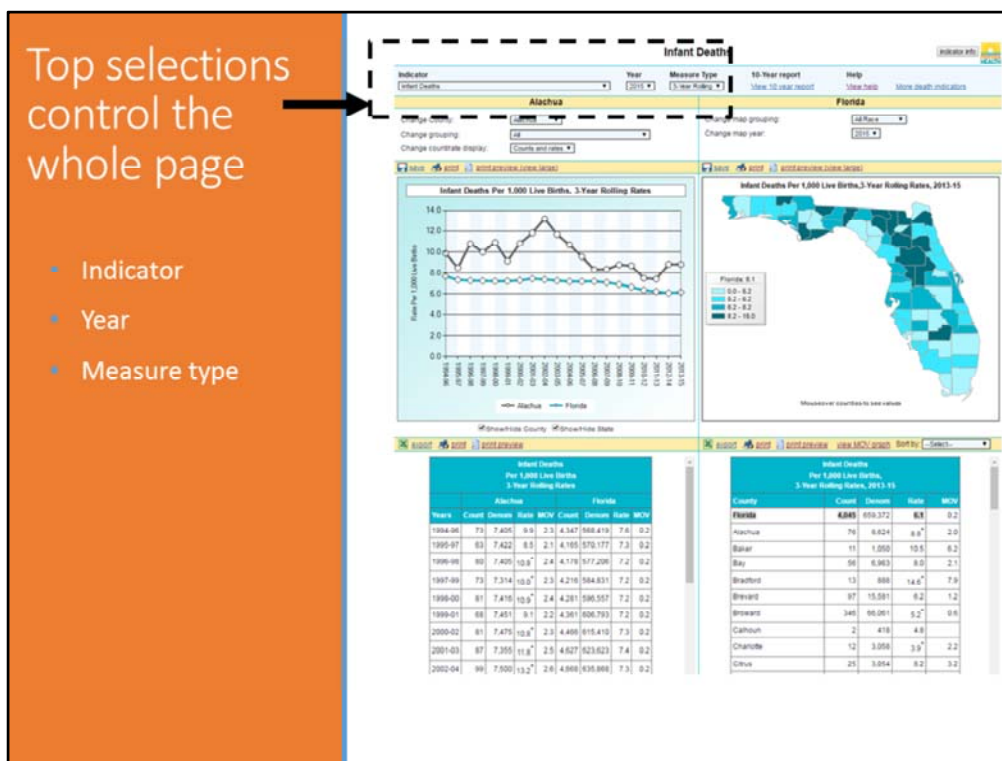The four panel viewers have lots of features!

Not only can you change the county and year of data, but you have many other options.

Let's look at what you can do on an indicator page.
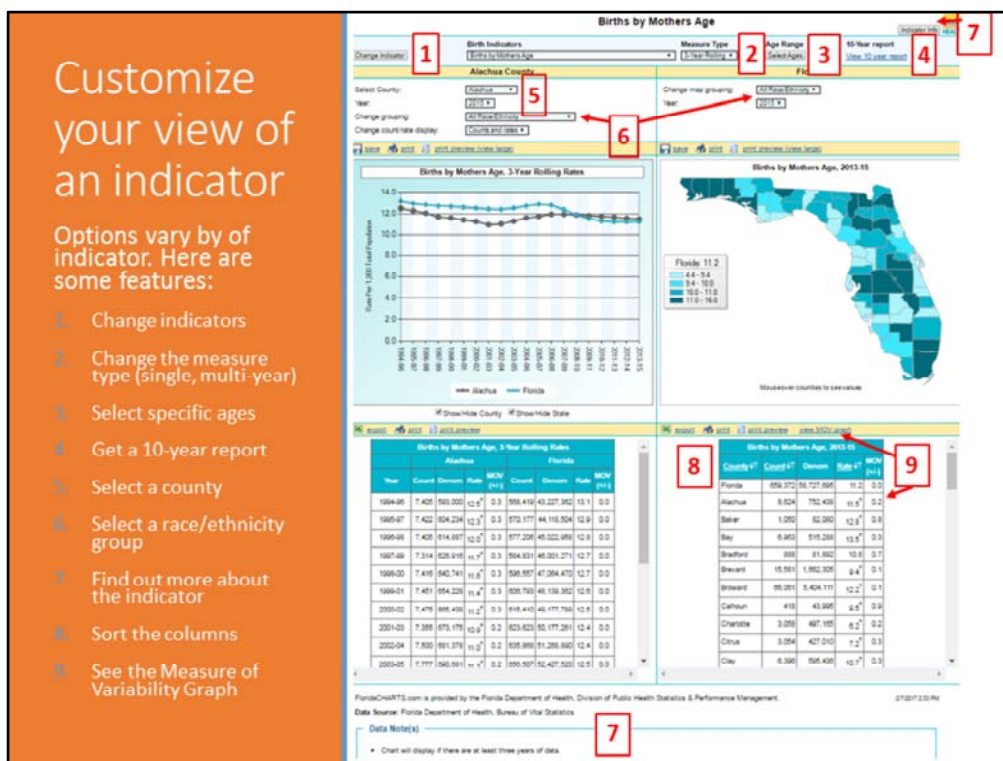
The indicator, year and measure type selections impact the whole view of the indicator. In the measure type, we have 3 year rolling rates and also single year. Why would we select one over the other?

> Let's look at Births by mother's age.
> I will remove the state rate from the trend graph so we can more clearly see the county rate.
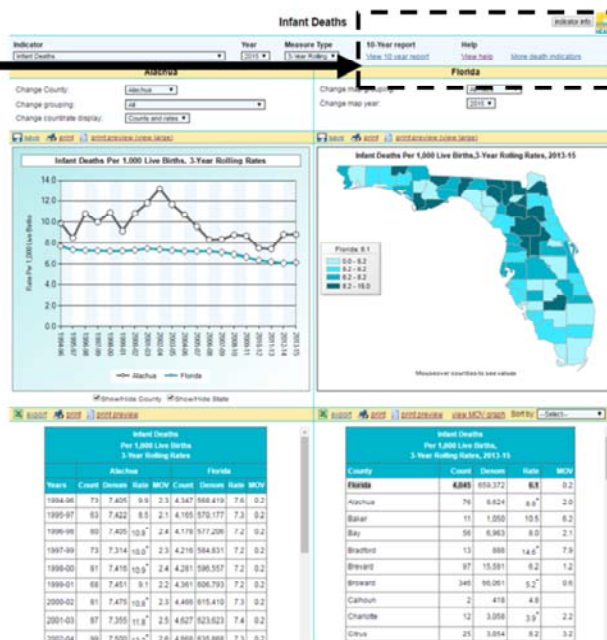>
> If there aren't many births in a count, I might look at the 3 year rolling rate rather than a single year rate. Let's look at a county with small numbers of births as an example:
>> 1. Small Counties: Lafayette, Liberty, Glades, Franklin
>>   - View the trend graph using both the 3year rolling and the single year trend which illustrates smoothing.
>> 2. Large Counties: Miami-Dade, Broward, Hillsborough, Orange
>>   - View the trend graph and rates for 3 yr rolling vs single year; observe differences in the trend line compared to the single year.
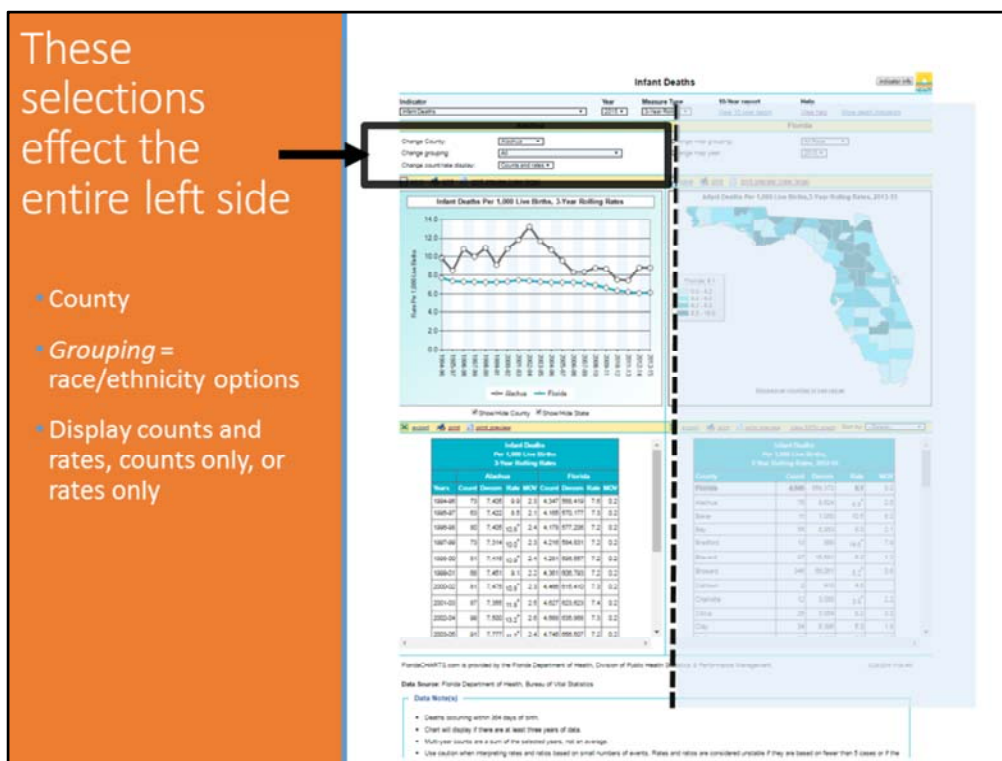>> Observe that in large counties, where there are larger numbers of births, the differences in the trend line are not as variable over time as with the small counties, especially when using the single year rate.
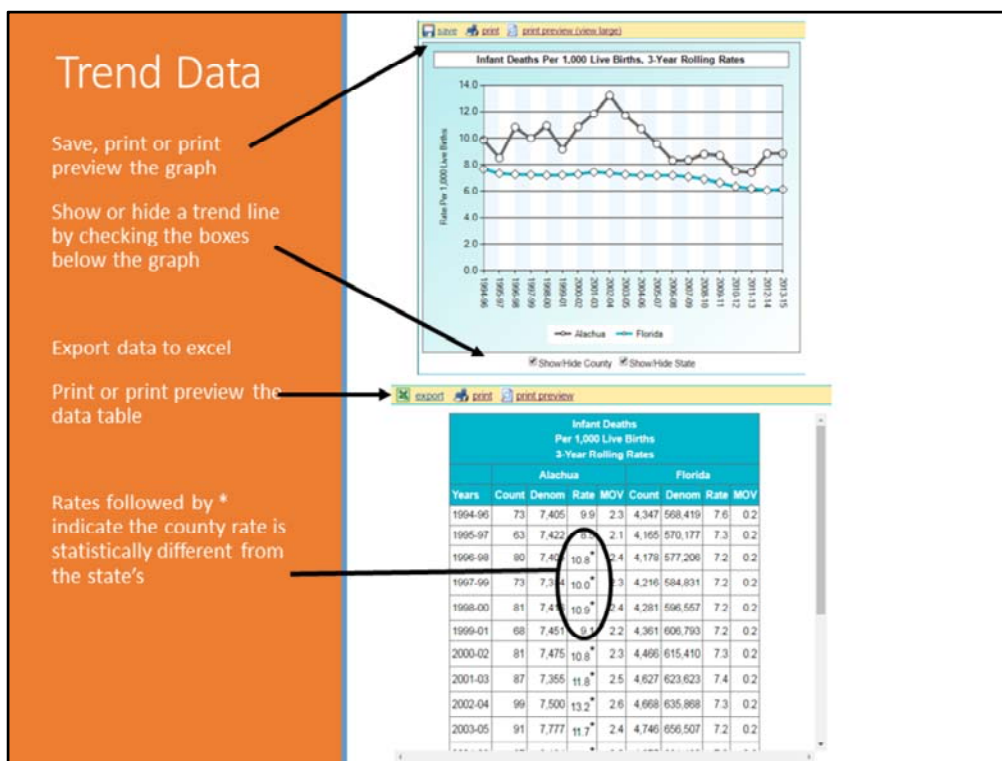
At the top we see links to a 10-year report, help document, more indicators and indicator info.

On the left are trend data. If we make changes here, they impact the left side of the viewer – the trend graph and the trend table will change.

We can change the county, the grouping, and the type of data we see.

Some features here include

- the ability to print and export

- checkboxes to turn on or off the trend line for either the state or the county

- and in the table, we can see if the county rate is statistically, significantly different than the state rate by looking for an asterisk.
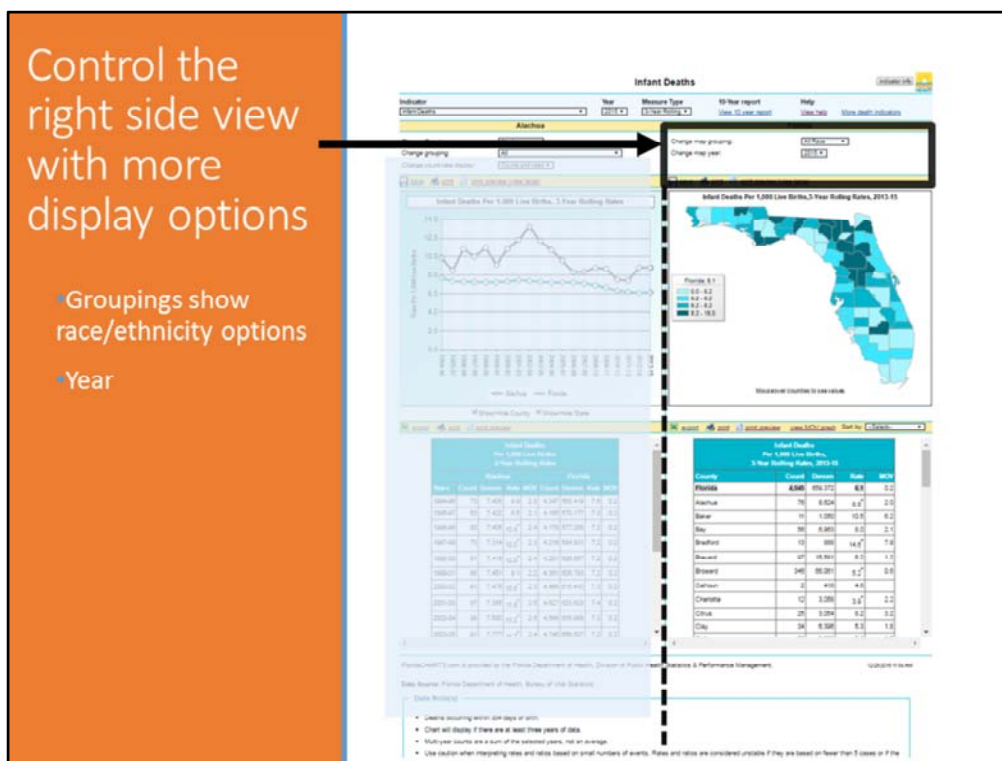
The right side shows statewide data for the year selected.
With the tools at the top of that section, we can control the right side of the display too.

- We can Save, print or print preview the quartile map
- In the map, the dark colored counties represent the least favorable outcomes (quartile 4).
- Move your mouse over any county on the map to see its numeric value.

Below the map, we see each county's data.
The Quartile Map and table can show
- Race/ethnicity and sometimes gender (depending upon the indicator)
- Year

Below the map, the data table displays the corresponding data.
We can sort the data by clicking on the column headings.

If we see an asterisk * beside a rate, we know that that rate is statistically significantly different than the state's rate. How is this measured? Let's look at the measure of variability (MOV) now.
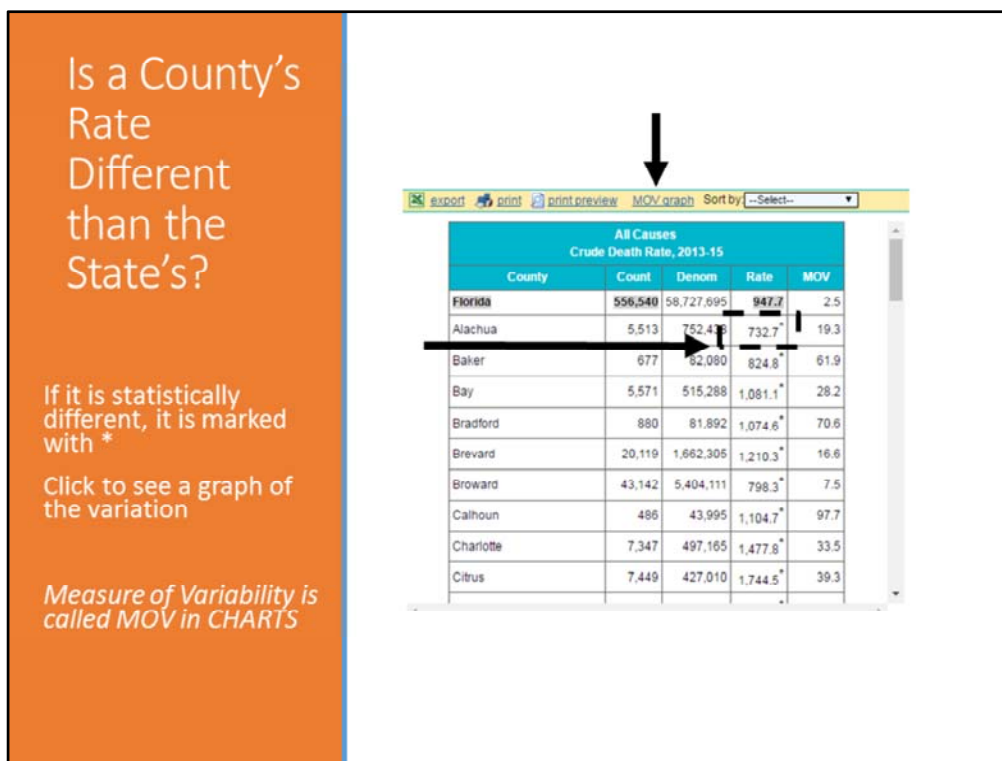
Measure of Variability is called MOV in CHARTS.
It addresses the question: *Is the county's rate statistically significantly different from the state's rate?*

MOV is calculated for crude rates in FLHealthCHARTS.com

> Select CRUDE rate from the Rate Type dropdown to view the table.
> The MOV is not calculated when numerator is below 5 or denominator is below 20 because the statistical formulas are not valid for very low numbers.

In this example, the probable crude death rate for Alachua County is 732.7 plus or minus 19.3, which would mean the crude death rate could be expected to be between 713.4 and 752.0.

<u>Technical notes:</u>
The MOV is the probable range of values resulting from random fluctuations in the number of events.

• If the absolute difference between the county rate and the statewide rate is less than the MOV, the county rate is not considered to be significantly different from the statewide rate (alpha level = 0.05).
• When the absolute difference between the county rate and the statewide rate is greater than the MOV, the county rate is significantly different from the statewide rate.
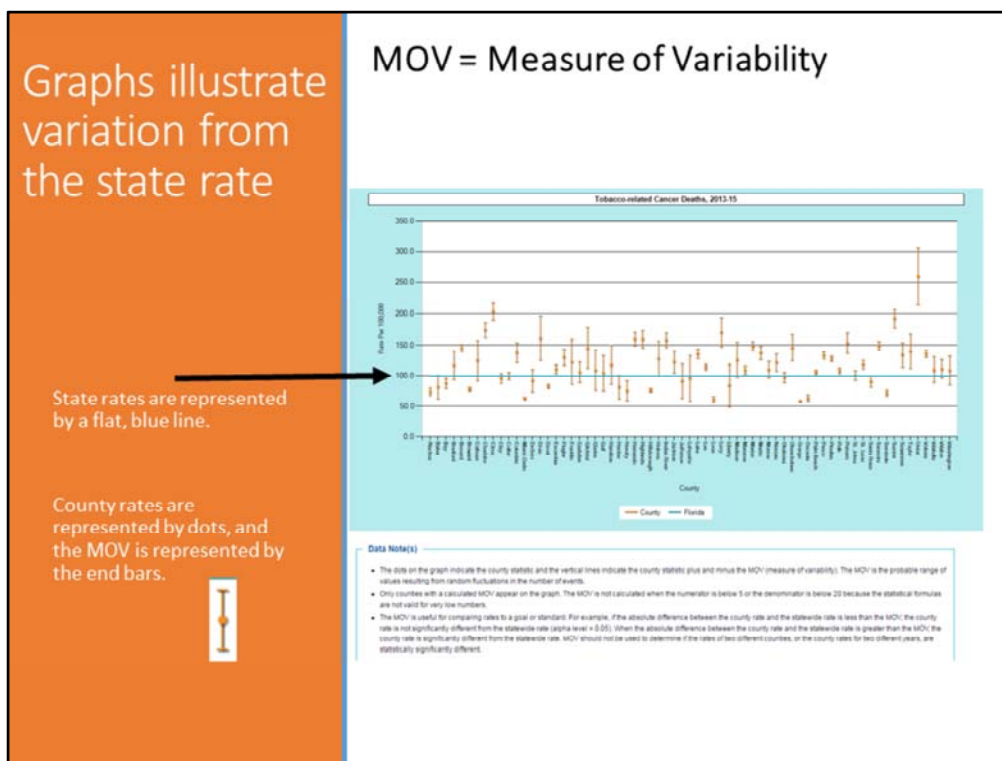
On the MOV graph, we see the numbers displayed in a picture.

The state's rate is represented by a horizontal blue line. Each county's rate is also graphed. The dot represents the actual rate and the upper and lower boundaries represent the plus/minus measure of variability.

Where the lines overlap the state rate, there is NOT a statistically significant difference between the county and state rates. If they don't overlap the state rate, they are statistically different than the state's.

If you don't find your county on the MOV graph, it is because there were too few events (<5 events or denominator <20) for it to be tested for significance.
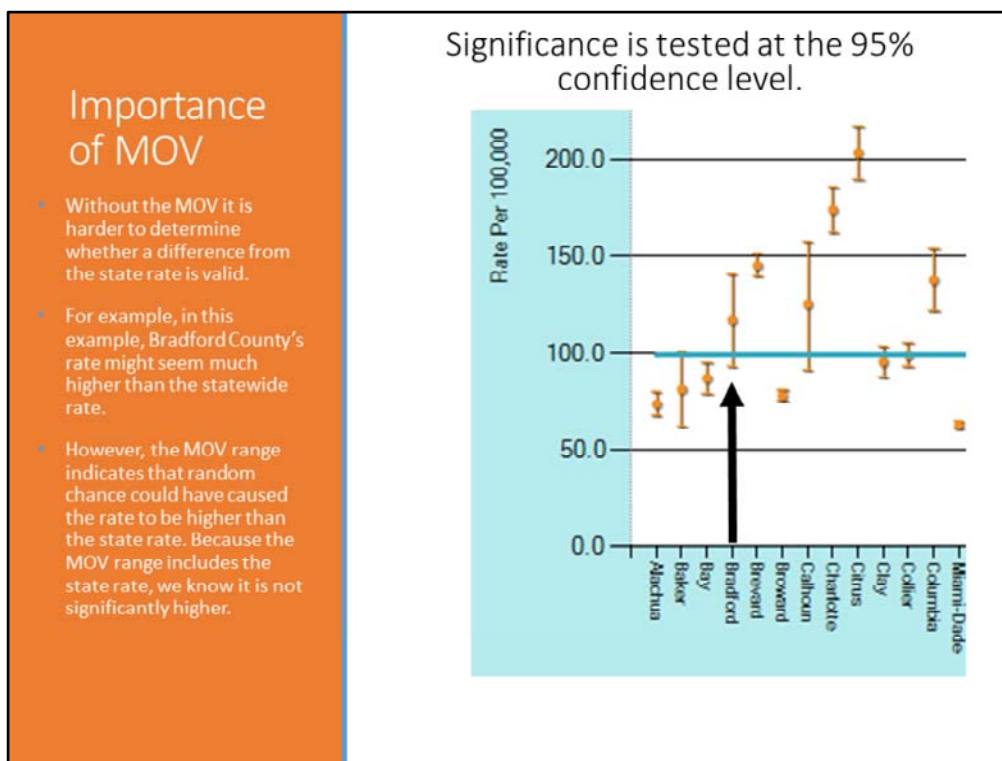
Here's a closer look.
- In this example, Bradford's rate overlaps the state rate while Broward's does not. We may think that Bradford's rate is high, but the MOV tells us it is not statistically different from the state. However, we can see several counties where rates are different: Alachua, Bay, Brevard, Broward and more.

- To summarize: for counties where the MOV range does not include the statewide percentage (these are indicated with * in the table), the difference between the county percentage and the statewide percentage may be due to factors other than random fluctuation.

- If this continues for more than one year it may warrant further investigation to determine what factors are associated with unusually high or low percentages/rates.

There are several different query systems in CHARTS.

Query systems let you get specific information you need.
Provisional data is available in query systems if you select the current year. Provisional data are updated weekly.

Just click the navigation link to open the query system you are interested in.

Common features of all the query systems include

(Section 1) Feedback link, a data dictionary that tells you what data is available in the query system, and a help document are common links across the top. The data dictionary gives definitions and data years for the fields included in the query system.

(Section 2) There are several standard reports listed. These are commonly requested data components. Click them to easily get that report. You can modify standard reports or filter to get specific data you need.

(Section 3) More options for you to customize data are available through the rows, columns and filters selections. Note that there are a set limit to the number of measures that can be included in each area.

(Section 4) At the bottom is the report resulting from your selections.

This example uses the first standard report and we will change the year.

Once you open a dropdown, you'll see a "select all" and "unselect all" icon. Click on the unchecked box at the top to unselect all.

If we select the year 2015, then we will only see the data for 2015.

Select different years or multiple years by checking the boxes.

Similarly, we can change the county.

Unselect all, then select the county you want. In this example, we've selected Miami-Dade.

When a filter is applied, only the data that meet the condition specified will get displayed. For example, if we filter by race and select "Black", we will not see the total or data for any other race except "Black".

In this example, we will filter to see only data for those ages 15-19. Note that sometimes the detail is nested in larger groups. You simply click the + to get to more detail.

You can use the Rows, Columns and Filters at the upper right side of the query window to add or remove fields.

Also you can move selected fields by dragging and dropping them (in the center section of the query window).

Be sure to limit number of fields that can be used in each area according to what is displayed on the screen.

You can even get city, zip code or census tract data using the query systems.
If you do, you will need to first select only one county.

This ends our overview of CHARTS.

Remember the feedback link when you have questions or comments.