Data Tips

This resource sheet provides a basic guide to understanding “number” data, such as surveys, graphs, and charts. While this information may not apply to all of the data you review, it will provide a general overview of how to interpret and understand the data you’re looking at and decide if the data are useful for your strategic planning process. You want data that are reliable (representative) and valid (measures what you actually want to know).

# Understanding your data source

As you review the data, consider the questions below. If you get the data from someone, be sure to ask them for these answers. If you’re getting the data from an online source, look for answers in the database or report – the information is usually presented somewhere, either with the data figures themselves or in a separate “notes” section.

You may not be able to fully answer all of these questions, but any information can help you better decide how well the information explains the issues you’re looking at. This information will help you decide how much weight to give the data in your strategic planning. **There isn’t a “right” answer and you do not need to use every piece of data you find!**

## Who and what do the data represent?

Look at who the data were collected from to see how closely the information matches your focus population. **The closer the data sample is to your community, the more relevant the data are for your needs.** You may be able to find some sources that match your community exactly (like census data) but most often it won’t. That’s okay. The important thing is to consider who the data represent, and then decide if it’s “close enough.”

Look to see:

* Are the demographics the same as or similar to the population we’re interested in (school grades, age ranges, race or ethnicities, gender, etc.)?
* Is the geographic location the same as or similar to our community?
* Who *isn’t* represented in the data? For example, if you’re looking at car crashes to see how big a problem drinking and driving is, note that the data does not include people who drink and drive but don’t get into a crash.

## How large is the data set?

For surveys, it is important to know how large the sample size is (how many people were surveyed). **The larger the sample size, the more accurate the results are.** However, there isn’t a magic cut-off.

A problem you may run into is that the number of incidences reported is so small it could identify the specific individuals who gave the information. In this case, you’ll see those numbers are not reported (suppressed) and may be reported in combined ways (such as across multiple years or for a larger geographic area).

## When were the data collected?

Data that are repeatedly collected over a few years allow you to see changes (trends) over time. These are especially useful for strategic planning because you can look at them again the next time you update your strategic plan. **In general, you want to try to find data that are less than 5 years old.**

**Tip:** The report publication date is not the same as the data collection date. Reports for many sources lag a year or two behind when the data was actually collected. Always check to see when the data itself was collected.

# Interpreting your data

What are the data actually telling you? Focus on one source at a time and consider things like overall averages, demographic or geographic results, what is happening over time (trends), etc. As you look at the numbers, focus on how they answer (or don’t) your data need questions.

**How the information is presented will impact how you interpret the findings.** Data is most often presented in a chart or table, either as frequencies (a number) or percentages. It’s important you look at both the frequencies and the percentages, if available. For example, you interpret a death rate increase of 50% differently if the raw numbers increase from 2 to 3 deaths (50% but an increase of 1 death) versus an increase from 200 to 300 deaths (50% but an increase of 100 deaths). This also highlights how small sample sizes can make differences appear more significant.

You may also see “rates” used to compare communities or provide more context to raw numbers (for example, the number of DUI deaths to the number of total DUIs provides you with more information than just knowing the number of DUI deaths). You’ll often see data between populations at a rate per 100,000 (so that you can compare directly between places with different population sizes – 10 people out of 1,000 is very different than 10 people out of 10,000).

**You are not responsible for interpreting the data alone.** Do your best in preparation for Meeting #3, but the workgroup as a whole will look at the data and determine together what the data means and what weight to give each data source.