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This is your tutorial on surveys. A survey is a method of collecting data about a group of individuals in order to make inferences about the population. Survey design is all of the methods and choices that you have in creating this survey in order to study the variables of interest.

Now, as a reminder, the variables of interest is some characteristic of your person or thing that you're studying that you're interested in. When you're designing your survey, it's really important to think about those basic questions. Who-- who are you serving? What-- what are you asking them? When-- when are you doing your study? Where-- where are you conducting your survey? Why-- what is your goal?

What is your purpose? Why are you doing this survey and how? Exactly how are you going to do it? Is it going to be via email, or mail, or in person? And what kinds of questions? How long is the survey going to be? Every single piece, every decision that you make, is part of the survey design and is really important to consider because each question and each decision you make has a significant outcome on the accuracy of your study.

With surveys, there's two main kinds. There's a sample survey and there is a census. A sample survey is one that takes information for just a small subset of the population, a sample of it. A census, on the other hand, is one where you get data about every single person in the population. The advantage of a census is that it's really accurate. You're talking to every single person so you can accurately record their opinions.

A sample survey-- the advantage there is that it saves a lot of time and money. Now, if you're doing a sample survey, in order to maintain the highest level of accuracy possible, it's really important to get a representative sample. A representative sample is one that reflects the population very well. So if the sample that you take, the characteristics of that sample are really similar to the population that it came from, then your survey is still going to retain a lot of accuracy.

Surveys can yield either qualitative or quantitative data. You can get information in pieces of words, like hair color or things like that, or you can get information in terms of numbers, like hair length. With this first example, an airline emails customers after travel to fill out an online satisfaction survey. It asks questions about age, income, departure and arrival cities, and the helpfulness of customer service.

Age and income are both quantitative pieces of information. They are numbers, whereas departure

and arrival cities and the helpfulness of customer service, those are going to be categorical. They're going to be words. They're going to be qualitative data. We have one more example.

In the second example, it's a real world one, too. It says the California Health Information Survey is a randomly dialed telephone survey of 50,000 adults, teens, and children every two years. Now, this particular survey is really careful to make sure that the people they pull are very representative of California. They make sure to get all the racial groups, they cover a variety of ages, a variety of locations, of incomes, because they want to make sure that their sample is representative so that they can make decisions for the whole state of California based on this small group of 50,000 people that they talk to.

Now, when these people are surveyed, they're asked a variety of questions they're asked about asthma, diabetes, obesity, mental health, child care-- pretty much anything that could affect the health of their citizens. So from this survey, this sample survey, Californian policymakers and medical centers are able to make accurately informed decisions about the population that they serve. This has been your introduction to surveys.