

8.1: Why It Matters- Inference for One Proportion

Learning Objectives

- Recognize situations that call for testing a claim about a population proportion or estimating a population proportion.

Why learn to make inference about population proportions?

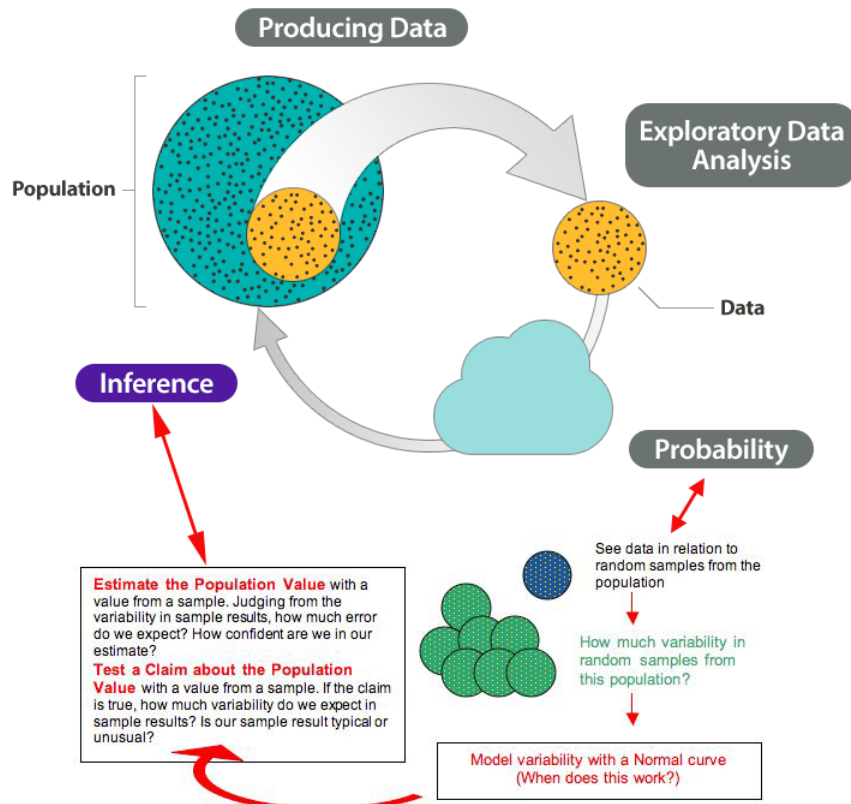
In *Inference for One Proportion*, we focus on making inferences about population proportions. The types of research questions we focus on in this module are bolded in the text below. Notice that we are working with categorical variables again.

Type of Question	Examples	Variable Type	Unit
Make an estimate about the population	What proportion of all U.S. adults support the death penalty?	Categorical variable	Inference for One Proportion
	What is the average number of hours that community college students work each week?	Quantitative variable	Inference for Means
Test a claim about the population	Do the majority of community college students qualify for federal student loans?	Categorical variable	Inference for One Proportion
	Has the average birth weight in a town decreased from 3,500 grams?	Quantitative variable	Inference for Means
Compare two populations	Are teenage girls more likely to suffer from depression than teenage boys?	Categorical variable	Inference for Two Proportions
	In community colleges do female students have a higher average GPA than male students?	Quantitative variable	Inference for Means

We will build on what we learned in in the previous module with two additions.

- We use more formal vocabulary and notation for hypothesis testing.
- We will not know the population proportion, so we make some minor adjustments to the model of the sampling distribution that we developed in *Linking Probability to Statistical Inference*. The adjustments affect how we calculate the standard error.

Here again is the Big Picture. We highlighted ideas new to *Inference for One Proportion* in purple.



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<https://assessments.lumenlearning.co...sessments/3591>

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