SECTION OVERVIEW

9.1: Inference for Numerical Data

Chapter 4 introduced a framework for statistical inference based on con dence intervals and hypotheses. In this chapter, we encounter several new point estimates and scenarios. In each case, the inference ideas remain the same:

1. Determine which point estimate or test statistic is useful.
2. Identify an appropriate distribution for the point estimate or test statistic.
3. Apply the ideas from Chapter 4 using the distribution from step 2.

Each section in Chapter 5 explores a new situation: the difference of two means (5.1, 5.2); a single mean or difference of means where we relax the minimum sample size condition (5.3, 5.4); and the comparison of means across multiple groups (5.5). Chapter 6 will introduce scenarios that highlight categorical data.

9.1.1: One-Sample Means with the t Distribution

9.1.2: Paired Data

9.1.3: Difference of Two Means

9.1.4: Power Calculations for a Difference of Means (Special Topic)

9.1.5: Comparing many Means with ANOVA (Special Topic)

9.1.6: Exercises

Contributors

David M Diez (Google/YouTube), Christopher D Barr (Harvard School of Public Health), Mine Çetinkaya-Rundel (Duke University)