# Foundations for Statistical Inference on your research data

1. What variable are you going to use? Write the variable name and the English label.

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| Binary Categorical | Continuous |

State which of the two groups you are interested in analyzing.

What is your “event”?

1. What is your effective sample size? (Number of non-missing values for that variable in your data set)

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| n= | n= |

1. Calculate the point estimate for each variable.

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| --- | --- |
| Sample Proportion | Sample mean = **mean(data$var, na.rm=TRUE)** |

1. Calculate the standard deviation for each variable.

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| --- | --- |
| = | = **sd(data$var, na.rm=TRUE)** |

1. Calculate the standard error (SE) for each variable.

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1. Calculate an approximate 95% Margin of Error (MOE) for your estimate as 2\*SE

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| --- | --- |
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1. Construct a 95% confidence interval for your estimate.

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1. Interpret this confidence interval in context of your problem.

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| Binary Categorical | Continuous |

1. Construct a testable hypothesis – **using English words**. Do NOT conduct a statistical analysis here.

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| 1. Binary Categorical | Continuous |

1. Write your testable hypothesis **using symbols.** Do NOT conduct a statistical analysis here.

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| Binary Categorical | Continuous |

1. Based on your confidence interval generated in step 7 do you believe your research hypothesis will be supported? Explain why or why not. Do NOT conduct a statistical analysis here.

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| Binary Categorical | Continuous |