Causal Inference in R: Introduction

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```
> who_are_we(c("lucy", "malcolm"))
```

https://www.lucymcgowan.com/

https://www.malco.io/

The three practices of analysis

1. **Describe**
2. **Predict**
3. **Explain**

Normal regression estimates associations. But we want **counterfactual, causal** estimates:

What would happen if **everyone** in the study were exposed to x vs if **no one** was exposed.

For causal inference, we need to make sometimes unverifiable assumptions.

Today, we'll focus on the assumption of **no confounding**.

Tools for causal inference

1. **Causal diagrams**
2. **Propensity score weighting**
3. **Propensity score matching**

Other tools for causal inference

1. **Randomized trials**
2. **G-methods & friends**
3. **Instrumental variables & friends**

Let's head to RStudio Cloud:
https://bit.ly/causalcloud

Resources

Causal Inference: Comprehensive text on causal inference. Free online.

The Book of Why: Detailed, friendly intro to DAGs and causal inference. Free online.

Mastering 'Metrics: Friendly introduction to IV-based methods