

## 4. Sharp bounds and the limits of assumption-free inference

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Cornell Info 6751: Causal Inference in Observational Settings  
Fall 2022

1 Sep 2022

# Responding to feedback

- ▶ Preference for group work
- ▶ Good to state class goals at beginning and end
- ▶ Audio issues
- ▶ Notation is still difficult

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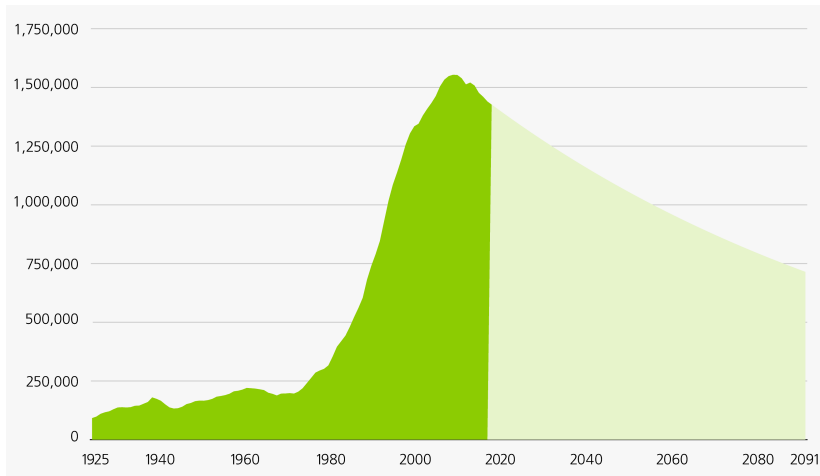
You will get an interval.

It might be a very wide interval.

A running example:

The effects of mass incarceration

# U.S. federal and state prison population<sup>1</sup>



<sup>1</sup>Source: [The Sentencing Project](#). Estimates use data from the Bureau of Justice Statistics.

# Lifetime Likelihood of Imprisonment of U.S. Residents Born in 2001

All Men



1 in 9

White Men



1 in 17

Black Men



1 in 3

Latinx Men



1 in 6

All Women



1 in 56

White Women



1 in 111

Black Women



1 in 18

Latinx Women



1 in 45



Source: [The Sentencing Project](#). Life table estimates from 2001 Bureau of Justice Statistics data.

# Running example: Mass incarceration<sup>2</sup>

Mass incarceration has enormous societal consequences

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## Group exercise

[Group Exercise]  
[Solutions]

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Let me know what you are thinking

[tinyurl.com/CausalQuestions](https://tinyurl.com/CausalQuestions)

Office hours TTh 11am-12pm and at  
[calendly.com/ianlundberg/office-hours](https://calendly.com/ianlundberg/office-hours)  
Come say hi!