

Spring 2021 Pandemic Update

**Peter Frazier
Operations Research & Information Engineering
Cornell COVID-19 Mathematical Modeling Team**

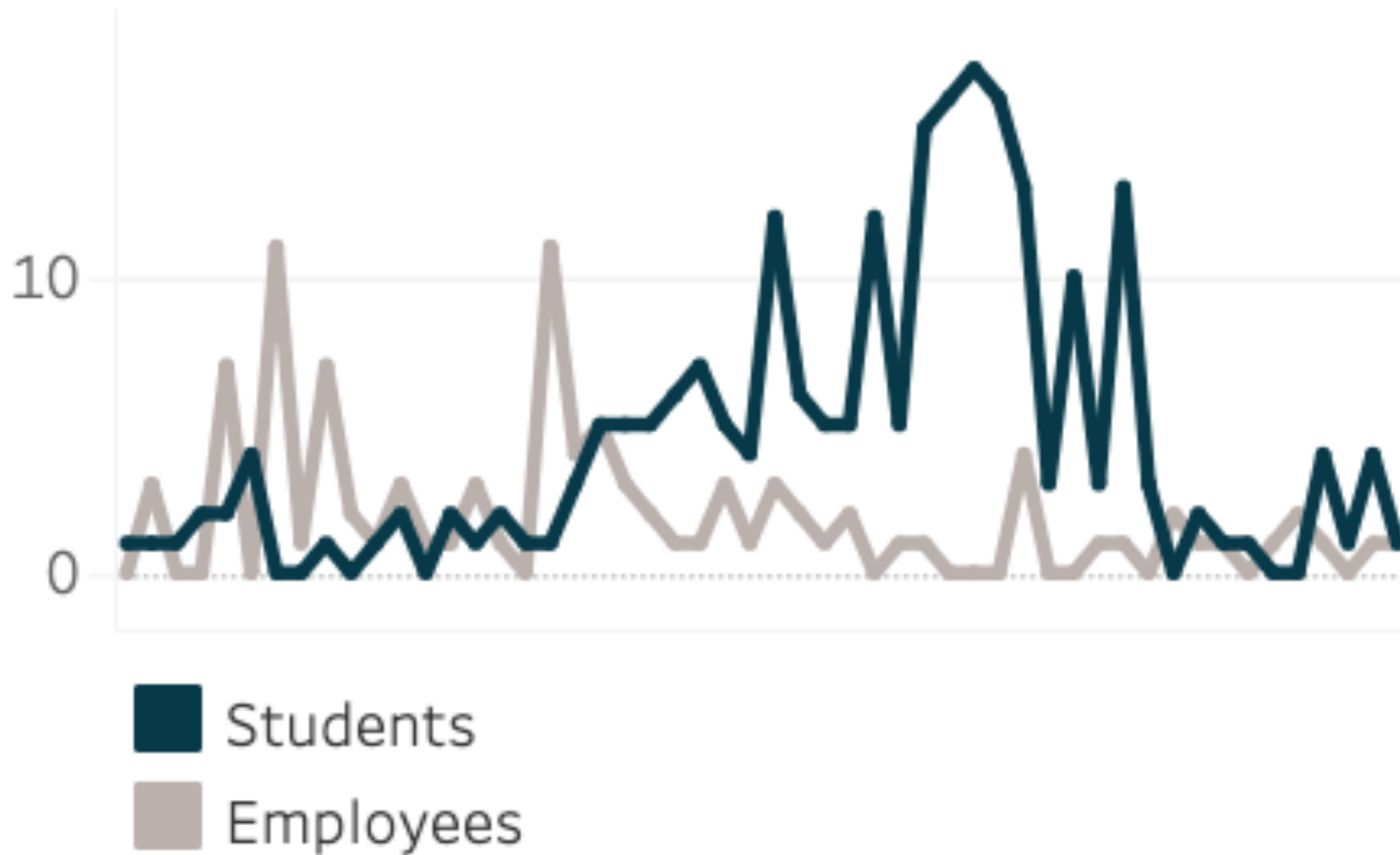
Additional targeted interventions for the Spring

- 3x / week testing for some undergraduate student groups
- New contact tracing + supplemental testing programs for employees
- Schedule changes for faster test results
- Less in-semester travel
- Genomic surveillance for variants

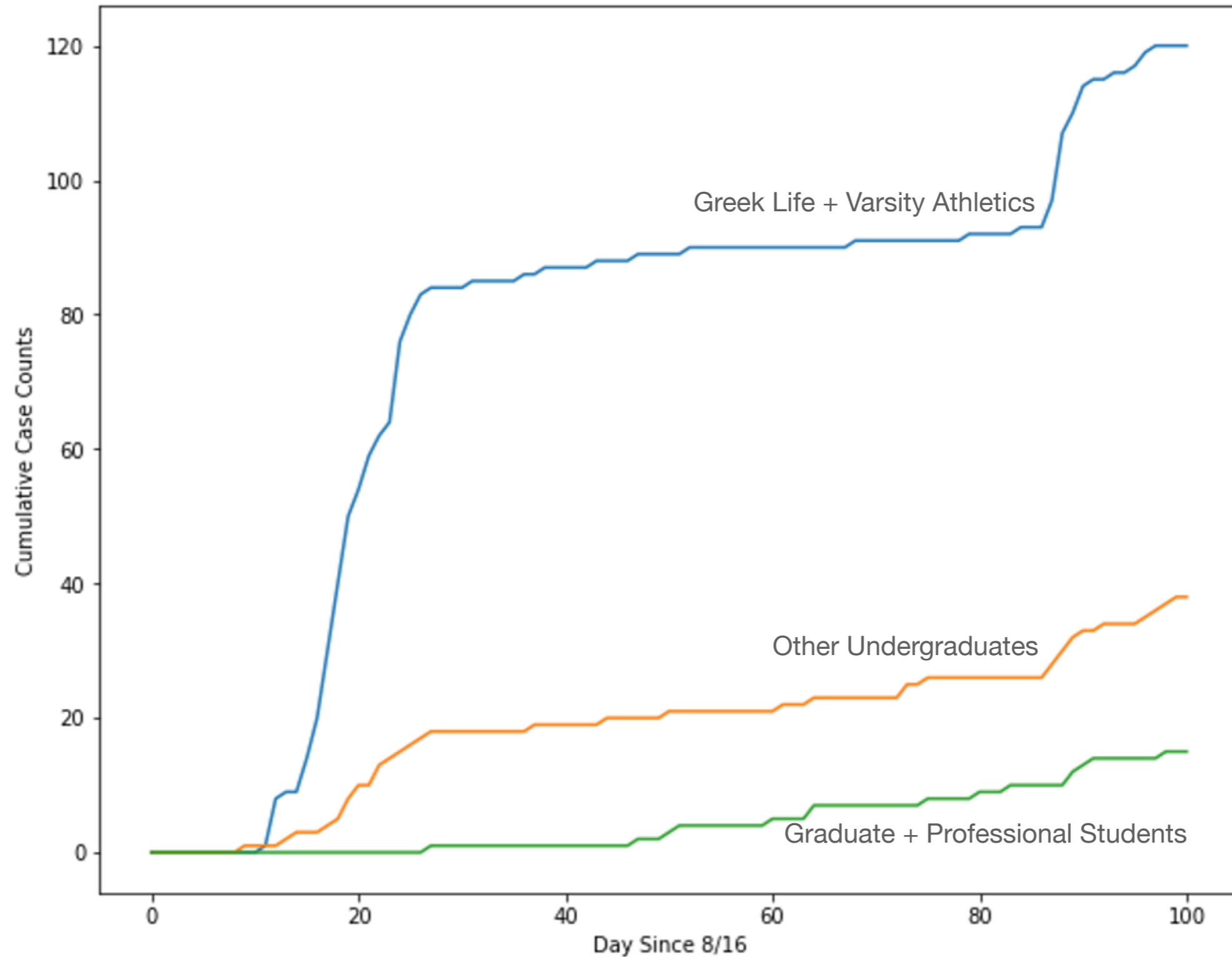
These were partially supported by mathematical modeling and respond to COVID fatigue and faster-spreading variants

What we've seen so far is consistent with spring modeling

Daily confirmed positives since Jan 1, 2021

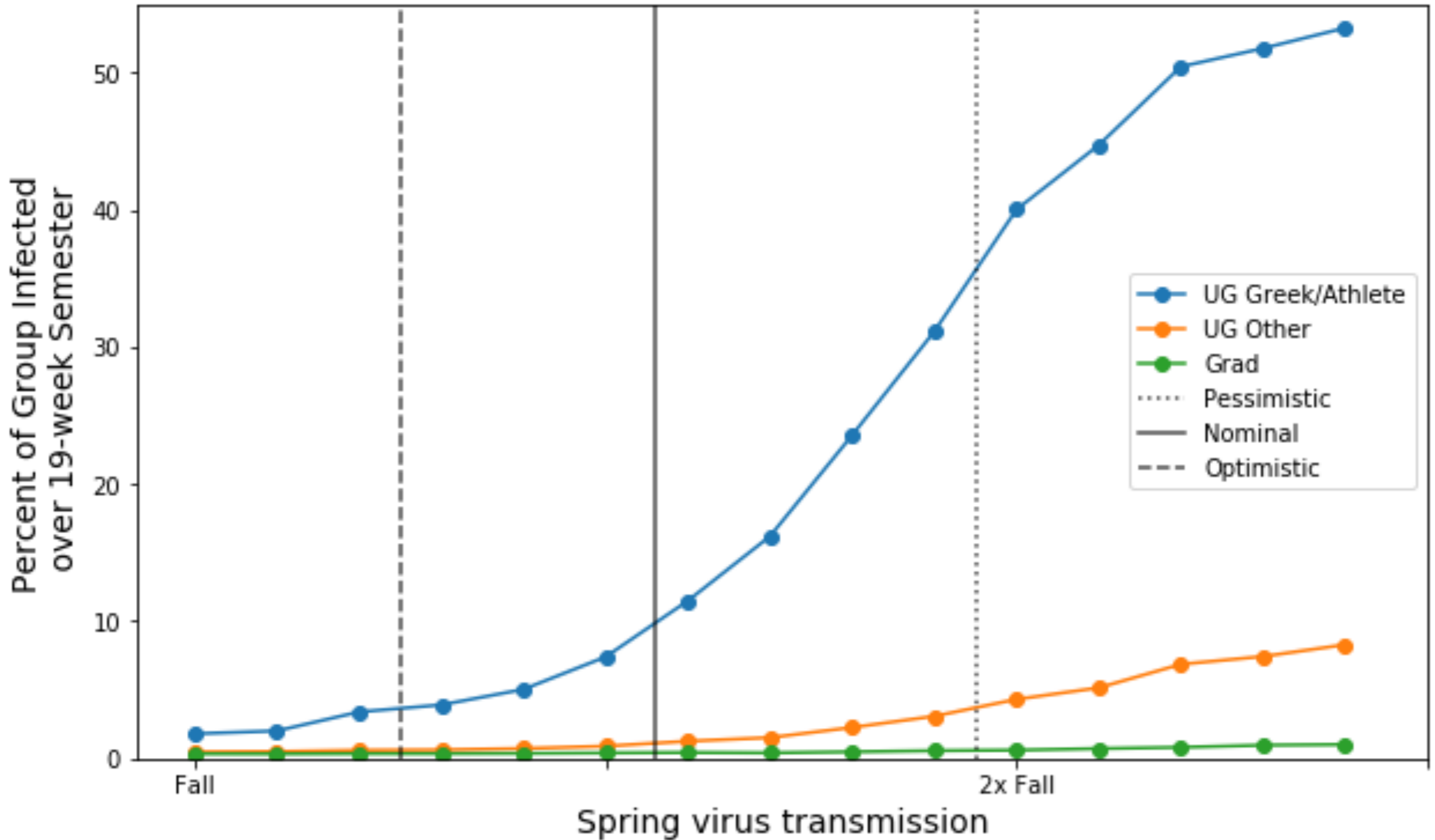


We calibrated our model to Fall data



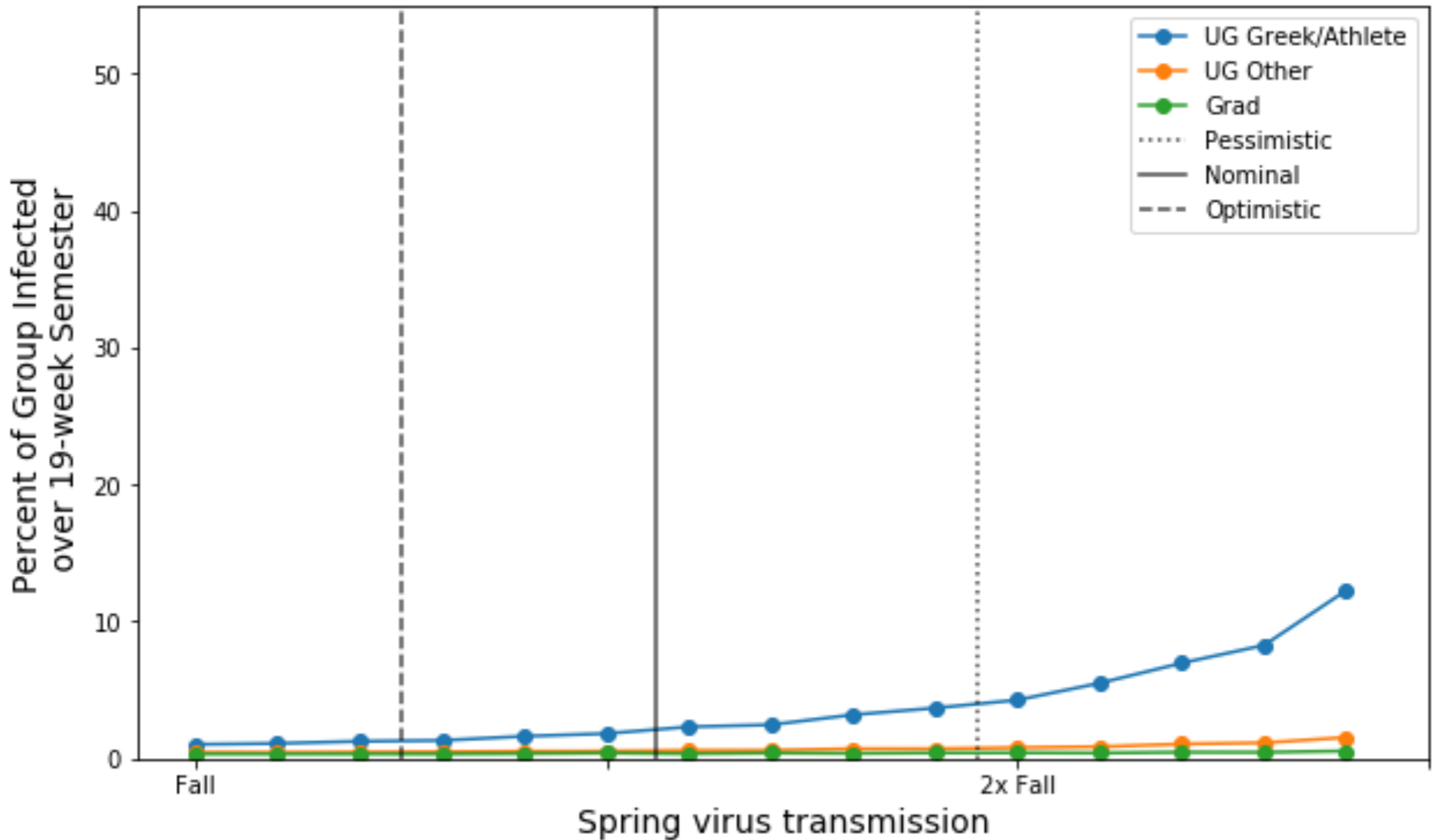
Elevated transmission due to variants poses a risk

Student Infections during Spring Semester (Testing all UGs 2x/wk)

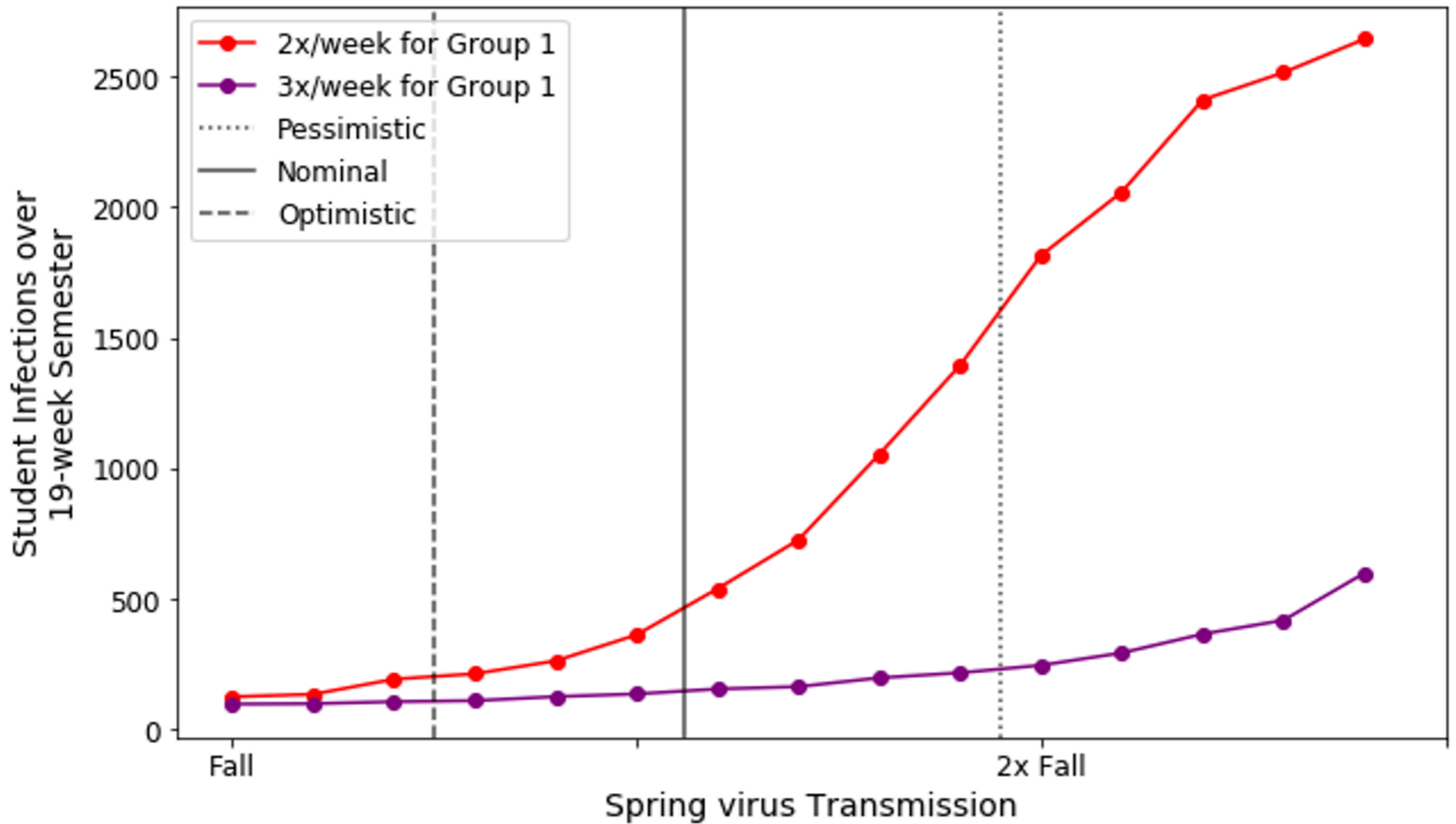


Testing Greek life participants + other student groups 3x / wk responds to this risk

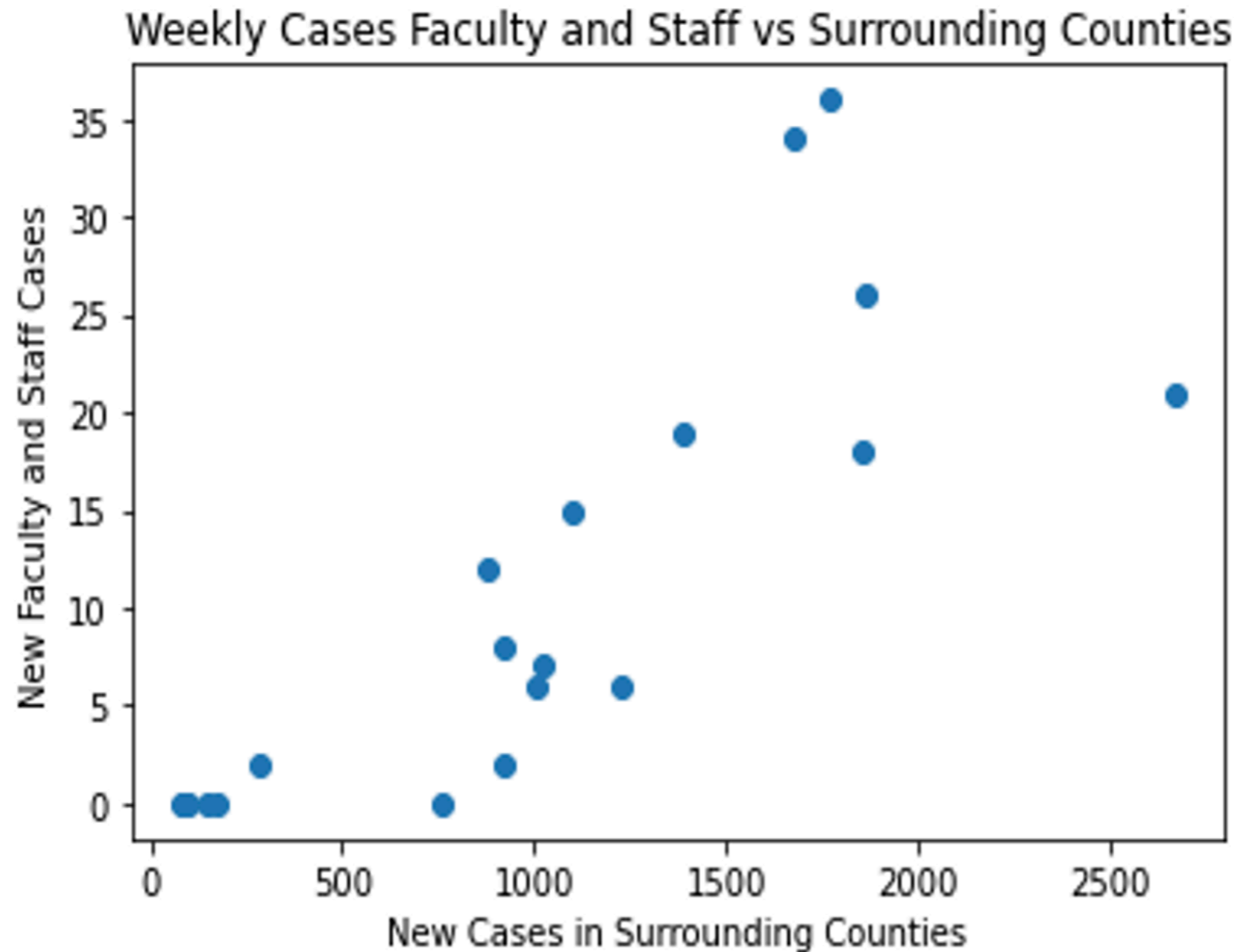
Student Infections during Spring Semester (Testing blue group 3x/wk)



We expect more cases than in the fall, but elevated testing provides substantial protection

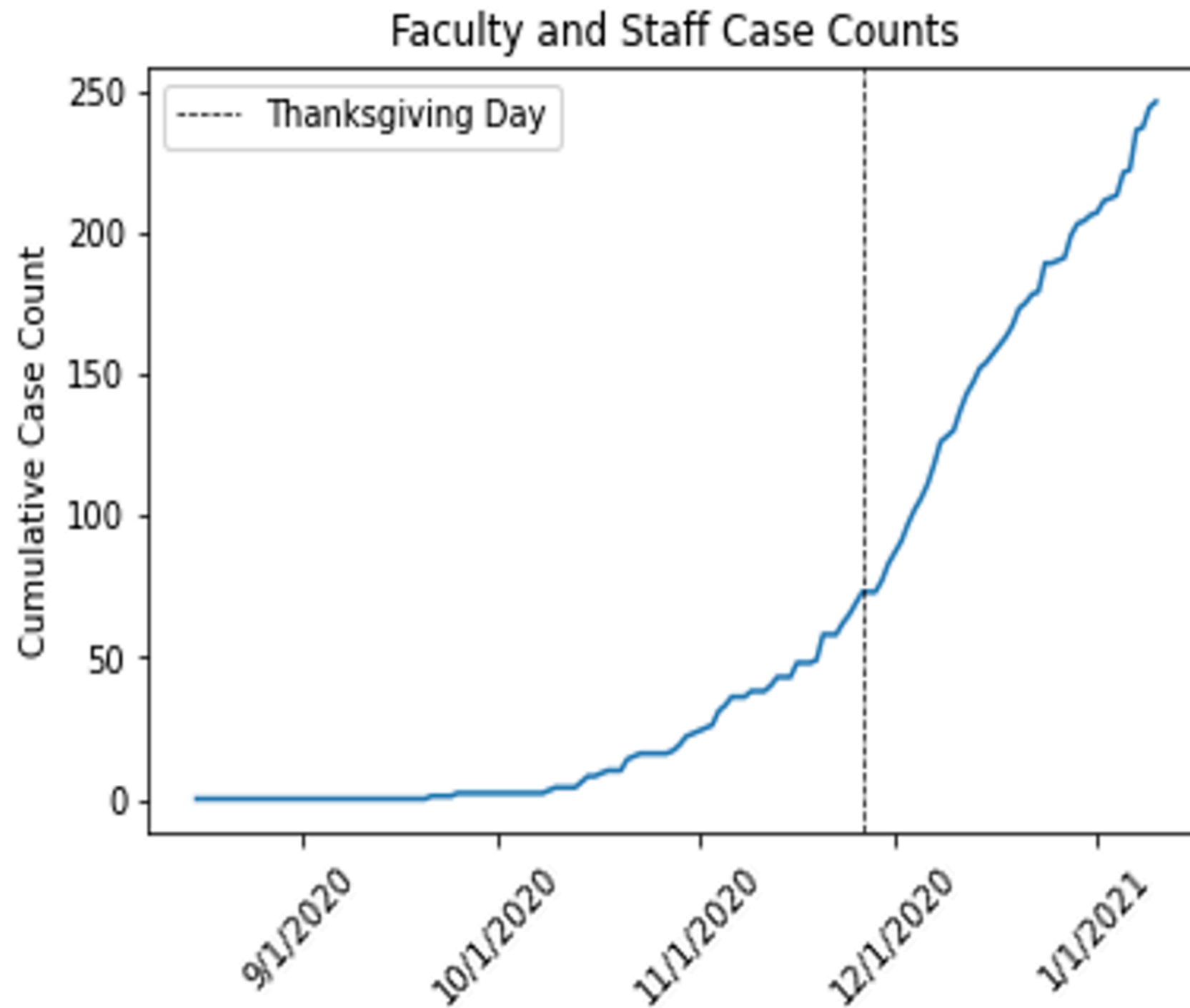


The biggest risk to employees is outside of work



- 75% of employee cases in the fall were from family members, social gatherings away from work, and travel
- New contact tracing efforts in the winter & spring respond to transmission at work
- No student to non-student employee transmission observed in the fall

The biggest risk to employees is outside of work



There is little interaction between students and the non-Cornell community

- No evidence of transmission from students into the community during the fall
- Little transmission from the community into the student population
- IC students may alter this, though are being tested 2x / wk
- Employees do interact with the non-Cornell community

Travel Elevates Risk

- In the fall, a student who traveled in the past 2 weeks has an **8x higher odds of testing positive**
- To discourage travel:
 - More students have a test scheduled on a weekend
 - Testing exemptions are reviewed with more rigor

Questions?