Offspeed Pitches and the “Sticky Situation”

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Pitch doctoring

- Rapid rise in foreign substance use (illegal)
- Increases spin rate \( \rightarrow \) more misses
- Lax enforcement by MLB until…
- June 3, 2021: league announces future re-enforcement of rules
- June 21, 2021: policy takes effect
- Natural experiment
Literature Review

• High negative correlation b/w FB spin rates and wOBA (Fink, 2021)
• Hitters improved wOBA by 13 points after the ban was announced (Fink, 2021)
• Effect of spin on FBs is clear
• No work has discussed effect on offspeed pitches
Methodology

• Effect of ban on CUs, SLs, and CHs
• Data: scraped from Baseball Savant
• \( Spin_i = Day \times Period + \varepsilon \)
• \( SwS\%_i = Day \times Period + \varepsilon \)
• \( xwOBA_i = Day \times Period + \varepsilon \)
• \( i = CU, SL, \text{ or CH} \)
• Period = 1 if before announcement, 2 if between announcement and enforcement, 3 if after ban
Curveball Spin Rates Over Time

Day

Curveball Spin Rate

Jun 3

Jun 21
Hitters’ Response
Curveball xwOBA Over Time

Day

0  50  100  150

Jun 3

Jun 21

Curveball xwOBA

0.2  0.3  0.4  0.5  0.6
Conclusions

- Change in spin rate did not affect hitter performance against these pitches
- Robustness checks?