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4-30-2021

### The Effects of the Hospital Readmissions Reduction Program on Non-Targeted Interventions

Anna Kate Peterson  
*Hope College*

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# The Effects of the Hospital Readmissions Reduction Program on Non -Targeted Readmissions

Anna Kate Peterson



# The Question and Why It's Important

- **Problem** : healthcare cost and quality
- **Proposed solution** : Hospital Readmissions Reduction Program (HRRP)
  - Financial penalty on excess Medicare readmissions for certain procedures
- **Research Q** : How does the HRRP affect nontargeted readmissions?
  - Possible spillover effects
  - Literature on targeted effects of HRRP

# Theoretical Foundations

- **Spillovers from HRRP**
  - Staff practices (-)
  - Technology (-/+)
  - Changes in reporting (+)

# Data

- **Sources:** U.S. Centers for Medicaid and Medicare Services (CMS), the National Quality Forum (NQF)
  - Nationally representative
- 2010-2018 (HRRP enacted in 2012)
- 2000-3000 hospitals
  - 2/3 treatment hospitals affected by HRRP

# Variable Construction

- **Dependent Variable:** nontargeted readmission rates
  - Percutaneous Coronary Intervention (PCI) and Pediatric Intensive Care Unit (PICU)
- **Independent Variables:**
  - **Treatment/Control dummy variable** : *Treated*
  - **Constructed hospital quality indicator:** *X*
  - **Time variable (Post HRRP):** *Post*

# Empirical Model

- Difference in Differences (DD)
  - With procedure, hospital, and year fixed effects

$$\text{readmission rate}_{iht} = \beta_0 + \beta_1 \text{Treated} * \text{Post}_{iht} + \beta_2 X_{iht} + \delta_i + \gamma_h + \eta_t + \epsilon_{iht}$$

- Expanded to Triple Difference, with differences between:
  - 1) pre- and post-HRRP
  - 2) treatment and control hospitals
  - 3) targeted and nontargeted interventions

# Triple Difference

## Strengths

- Strong causal connection
- Multiple dimensions of comparison

## Limitations

- Control Hospitals





# Conclusion

- Ambiguous predictions for HRRP's effect on nontargeted readmissions
- What does this mean for hospital quality efforts?
- Further research
  - Data earlier may provide better causal connection
  - Implications for healthcare policy and policy analysis of spillovers

# Any Questions?

email me: [anna.peterson@hope.edu](mailto:anna.peterson@hope.edu)

