The Evolution of Physician Practice Styles: Evidence from Cardiologist Migration

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Motivation

- Large Variation in Procedure Use
- Less Variation in Patient Outcomes

Research Question / Contribution

- Do physicians' practice styles change based on their practice environment?
  - Pole 1: Physicians completely adopt the practice environment they move to.
  - Pole 2: Physician behavior remains perfectly consistent between moves.
- Migration = plausibly (possibly?) exogenous variation in physician environment.

Preview of Findings

- Physician practice style converges to destination practice environment.
  - 10 percentage point difference in practice environment $\Longrightarrow$ $\approx$ 6.6 percentage point difference in migrant's practice
- The effect is robust to physician age.

Background: Heart Attack

- Acute Myocardial Infarction (AMI)
- Why?
  1. Medicine vs. Catheterization
  2. Sufficient Variation
  3. Emergency!: Less Selection

Data

- Medicare Claims Data
  - Heart Attack Patients
  - Cardiac Catheterization
  - Time/Location of Physician Practice
  - Patient Characteristics
- AMA Physician File
  - Cardiologists
- Dartmouth Atlas
  - Hospital Referral Regions (HRRs)

Econometrics and Identification

- Event Study

$$(1) \quad (cath)_{ijt} = \{origin\ HRR\ FEs\}_j + \sum_{s=-8}^{7} \left[\alpha_t \mathbf{1}(s = t) + \beta_t \Delta_j \mathbf{1}(s = t)\right] + \{calendar\ year\ FEs\}_i + \{patient\ risk\text{-}adjusters\}_i + \epsilon_{ijt}.$$

- Pretrend = Test for Selection
- DD & DDD

Threats

- Epiphanous (Discontinous) Selection
- Potential Omitted Variable Bias

Results

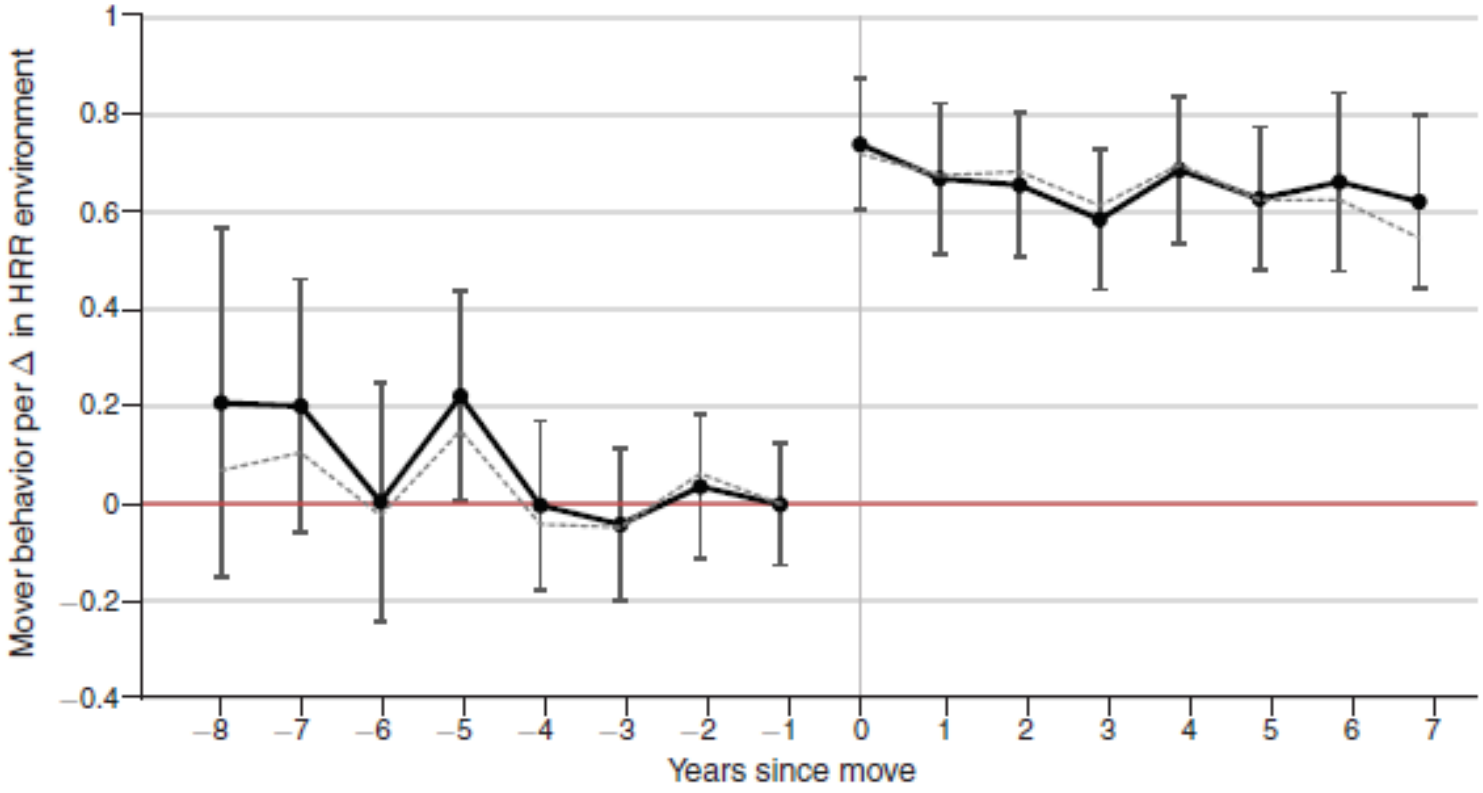

FIGURE 3. EVENT STUDY—CHANGE IN HRR ENVIRONMENT

Notes: Graph plots (solid black) estimates of physician practice style t years since move as a function of the change in HRR cath environment experienced across the move (see Figure 2, panel A). These estimates come from a regression that includes fixed effects for origin HRR, calendar year of patient admission, years since physician move, and patient age, race, sex, and first heart attack. Results controlling for physician fixed effects instead of origin HRR are plotted by the dashed gray line. Bands indicate 95 percent confidence intervals constructed from two-way clustered standard errors at the physician and HRR levels.