Public Health Insurance Expansions and the Use of Non-Physician Providers: Evidence from Certified Nurse Midwives

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Introduction

Motivation: Effects Public Health Insurance Expansions

- Recent ACA Medicaid Expansions brought sizable increases in healthcare demand and utilization
  - See Barbaresco, 2015; Wherry and Miller, 2016; Sommers et al., 2016; Sommers, 2017b,a; Ghosh, 2017; Alcalá, 2017; Mazurenko and Menachemi, 2018; Lee, 2018; Gruber, 2019; Kandilov, 2021).
- Public health insurance expansions that increase demand can lead to:
  - Negative Spillovers or reduced healthcare availability of services and higher wait times (Mitchell et al.,2020)

Motivation: Physician Shortage in Obstetrics

- Burden on healthcare system especially salient in the area of obstetrics (ACNM, 2015; ACOG, 2018; Rosenberg, 2019; Health and Services, 2021).
- Project serious workforce shortage by 2030 (ACOG, 2019)
- Certified Nurse Midwives (CNMs) key piece of expanding obstetric workforce. (ACNM, 2015, ACOG, 2016, 2018)
  - Offer reproductive health services, often during pregnancy, labor, and delivery (ACNM)

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Overview of the Present Study

- **Context:** Did Affordable Care Act (ACA) Medicaid Expansions influence the use of non-physician providers (CNMs/CMs)?
- **Findings:**
  - The ACA Medicaid expansions led to an increase in the utilization of CNMs/CMs and a decrease in physician-reported deliveries
  - This shift from physicians to CNMs/CMs is particularly noticeable in states with Medicaid reimbursement parity for CNMs/CMs

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Background

Certified Nurse Midwives

- CNM/CM use in the United States:
  - In 2014, CNMs attend 8.2% of deliveries and 12.3% of vaginal deliveries (ACNM, 2016)
  - In the United States–4.7 Ob-gyns per CNM (AHRF, 2018)
  - Typically, in the developed world there are 2.5 midwives for every Ob-gyn (ACNM, 2015)
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Data

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1. **Data Source** *Restricted-Use Natality Detailed File*: Birth Certificate Records for 2010-2019 (NCHS/CDC)
2. **Study period**: 2010-2019
3. **Sample**:
    - Expansion states before 2017 included in the main analysis (excludes VA and ME)
    - States that expanded after 2019 are included as control
    - Focus on low-risk first births
4. **Outcomes:**
    - Use of non-physician provider: CNM-attended deliveries

Empirical Strategy

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Annual event-study specification for state s and quarter-year of delivery t:

$$H_{st} = \tag{1}$$

- H_{st} - CNM/CM use in state s and year t
- $1(\text{ACA Medicaid Expansion})_{sm}$ event-study dummy variables capturing ACA Medicaid expansion in state s at time $m = 0$
- Fixed effects: state a_s , and quarter-year of delivery η_t
- $\mathbf{X}_{st}$ are state-level controls
- e_{st} error term (clustered at the state level)

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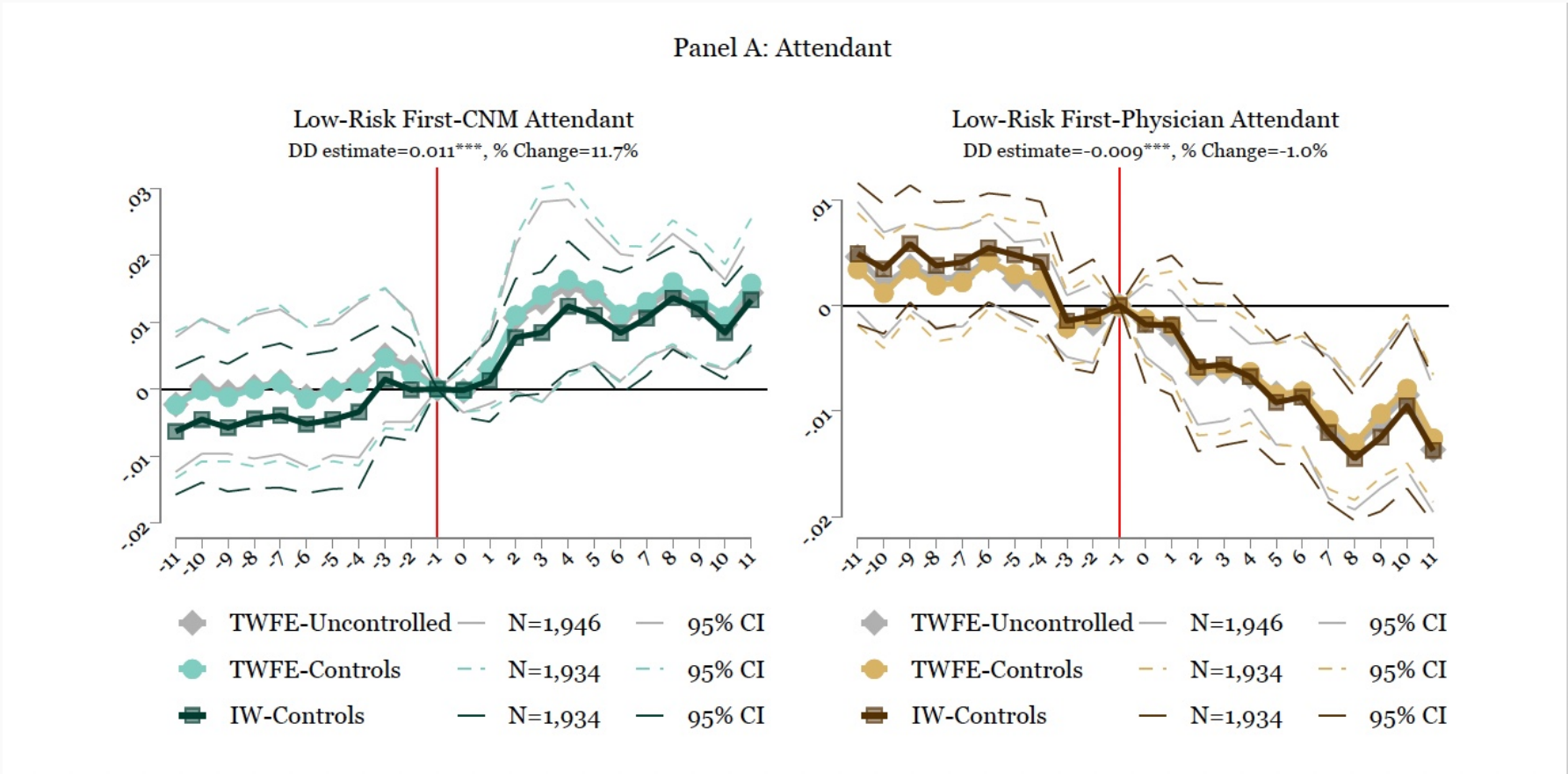
Findings

Event Study Results–ACA Medicaid Expansions and Provider at Delivery



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2. Find an increase in CNM use (1 p.p. or 11 percent) Conclusion

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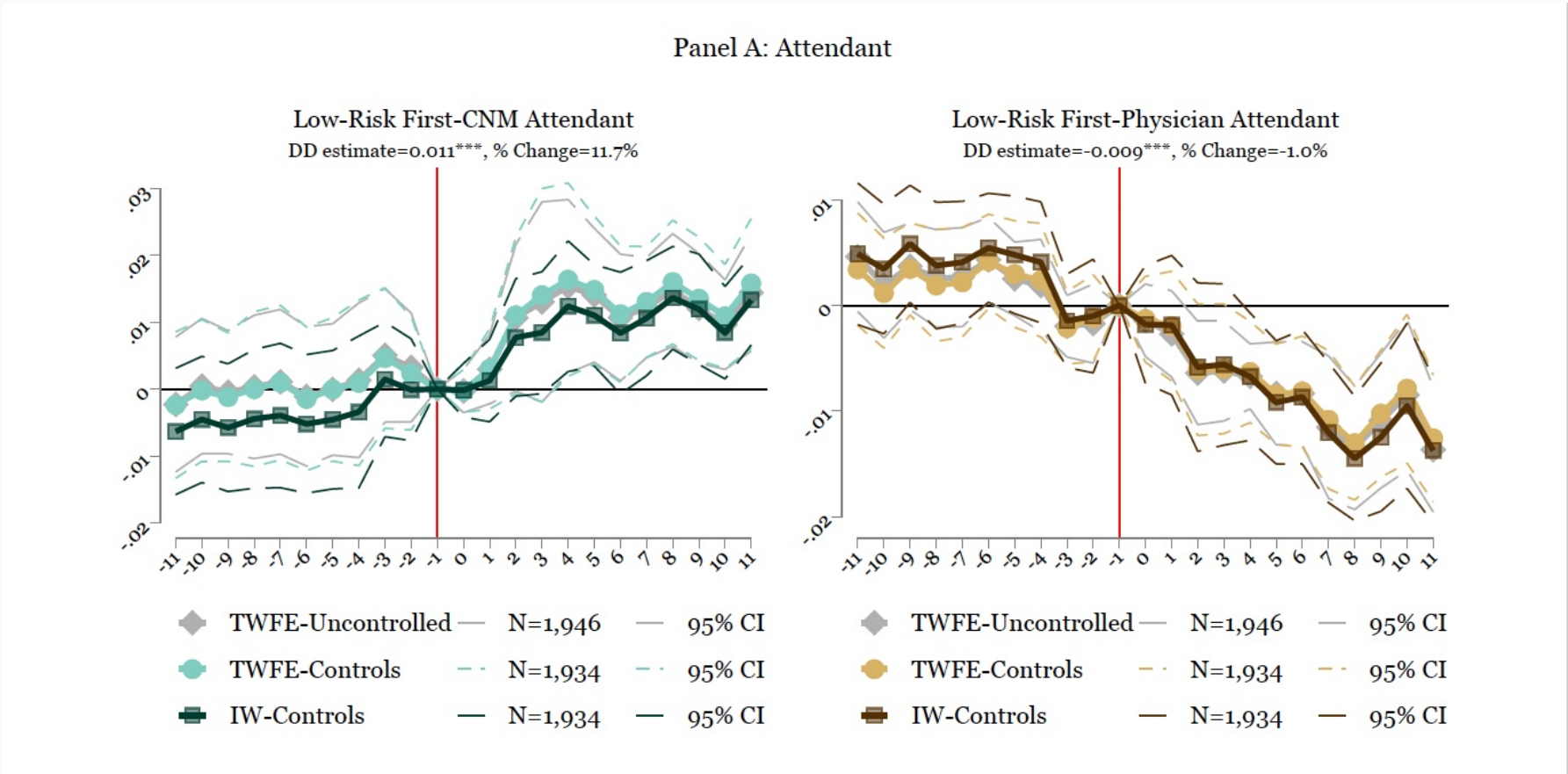

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Mechanisms for the Increase in CNM/CM Deliveries

What Explains the Increase in CNM/CM Deliveries?

Rule out these explanations:

1. Increase in demand for early prenatal care:
    - CNM/CM use increases across all levels of prenatal care, not just the 1st trimester.
    - We also test if prenatal utilization has increased - no significant increase for low-risk deliveries
2. CNM/CM supply increasing in expansion states:
    - CNM/CM labor supply most unchanged
    - Both the baseline ACA indicator and the interaction term on CNM reimbursements fail to show a significant change in CNM supply.

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What Explains the Increase in CNM/CM Deliveries?

Instead, find that CNM/CM Medicaid reimbursement parity matters

- CNMs/CMs use only increases when reimbursed the same as physicians
- Could be a physician/hospital response–only switch to CNMs/CMs when they can garner the same reimbursement

Conclusions

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2. CNM/CM use increases the most in states with Medicaid reimbursement parity
3. Adds to previous work studying public health insurance expansions:
    - Non-physician providers may help meet the demand for healthcare (Buchmueller et al., 2016; Carey et al., 2020)
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