

Impact of Patient-Centered Medical Home on Staffing and Productivity in Community Health Centers

Jeongyoung Park, PhD¹

Xiaoli Wu, MS¹

Bianca Frogner, PhD²

Patricia Pittman, PhD¹

¹GWU Health Workforce Research Center; ²University of Washington Center for Health Workforce Studies

AcademyHealth, June 2016

Funding: HRSA, U81HP26495-01-00

Patient-Centered Medical Home

- The PCMHs put emphasis on improved access to primary care and an ongoing relationship with a primary care provider or team, with improved whole-person, comprehensive and coordinated care
- Increased investment in primary care to achieve the “Triple Aim”



Evidence on PCMH

- Growing in size and scope
- Evidence underscores
 - Reductions in health care costs and unnecessary utilization of services
 - Improvement in quality of care metrics, access to primary care, and patient or clinician satisfaction

Gaps in Evidence/Motivation

- Workforce transformation (“who does what” & “how”) associated with PCMH adoption remains limited
- The relationship of PCMH adoption to practice productivity is unknown
- The work to date is exclusively focused on physician/group practices

Community Health Centers

- 1,278 grantees in 2014
- Federally funded safety-net organizations
- Provide comprehensive primary care to more than 22 million underserved population

PCMH in CHCs

- Federal and State Support
 - Patient-Centered Medical/Health Home Initiative (PCMHHI), HRSA, FY2010
 - Federally Qualified Health Center Advanced Primary Care Practice, CMMI
 - State Medicaid Payment Incentive
- Over 65% of CHCs, as of Dec 2015

Aims

- To examine staffing changes associated with PCMH adoption in CHCs
- To examine practice productivity changes associated with PCMH adoption in CHCs

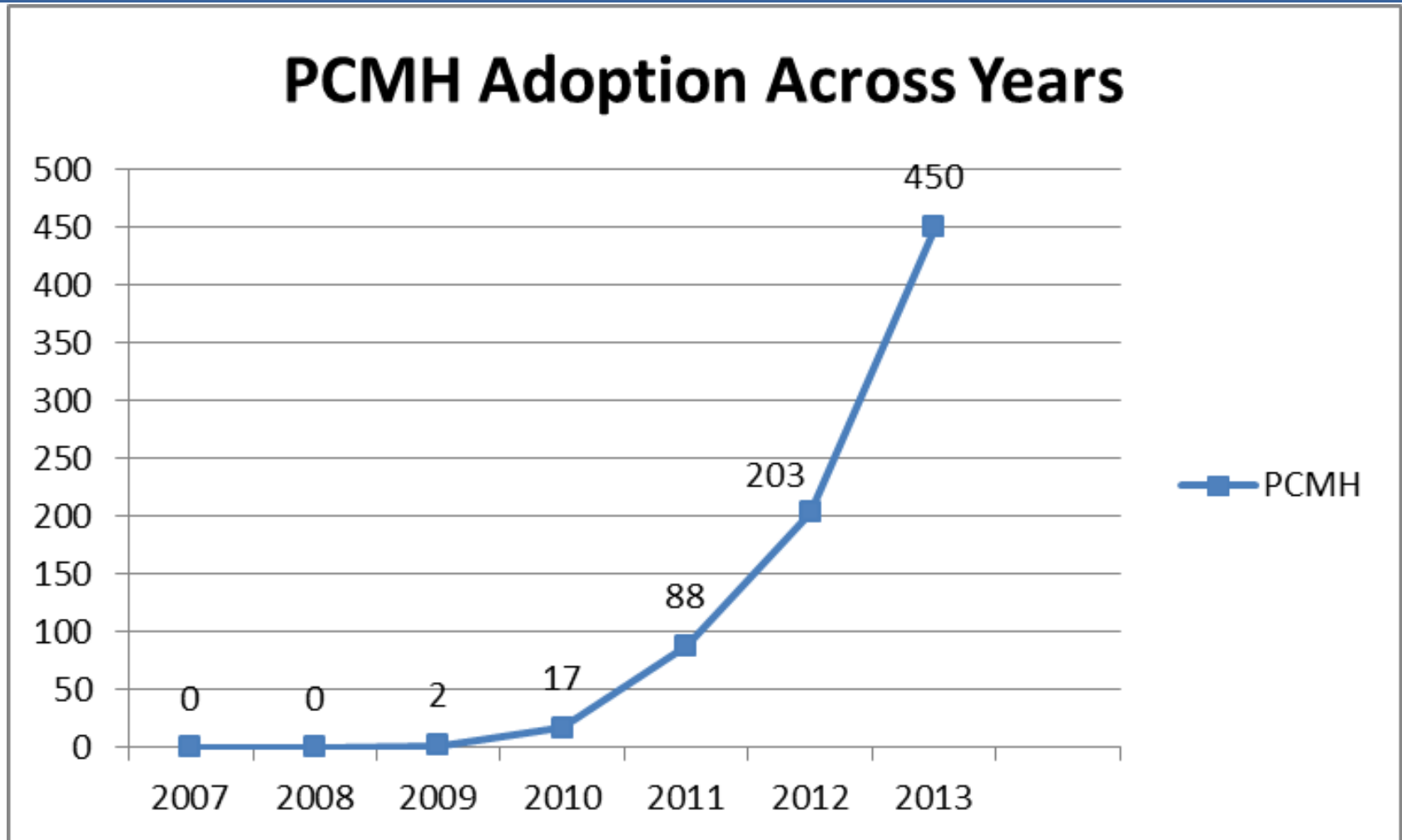
Data Sources

- Uniform Data System, 2007-2013
- HRSA Roster of PCMHs under PCMHHI
- GWU Readiness for Meaningful Use and Health Information Technology and PCMH Recognition Survey
- Area Health Resources File
- State NP Scope of Practice Law

Study Population

- 994 CHCs consistently in UDS, 2007-2013
 - 244 early PCMH adopters (prior to PCMHHI) excluded
- 750 CHCs identified
 - 450 PCMH adopters (through PCMHHI)
 - 300 non-adopters
- 693 CHCs included
 - 450 PCMH adopters (through PCMHHI)
 - 243 1 to 1 propensity-score matched non-adopters

PCMH Adoption, 2007-2013



Analytic Approach

- Difference-in-Differences (DD)

$$Y_{it} = \alpha + \beta_1 \text{PCMH}_i + \beta_2 \text{Post}_t + \beta_3 (\text{PCMH} * \text{Post})_{it} + X_{it} \theta + y_i + \lambda_t + \varepsilon_{it}$$

- β_3 is a DD estimator
- CHC FE (y_i) and Year FE (λ_t)
- Robust standard errors clustered at CHC-level

PCMH Adoption

- Model 1: PCMH adoption
 - **(PCMH*Post)**
 - An indicator of PCMH adoption in a given year
- Model 2: Years after PCMH adoption
 - **(PCMH*Post_{1,2,3+})**
 - Dummies to specify the years after PCMH adoption
 - Whether the treatment effect changes over time after treatment

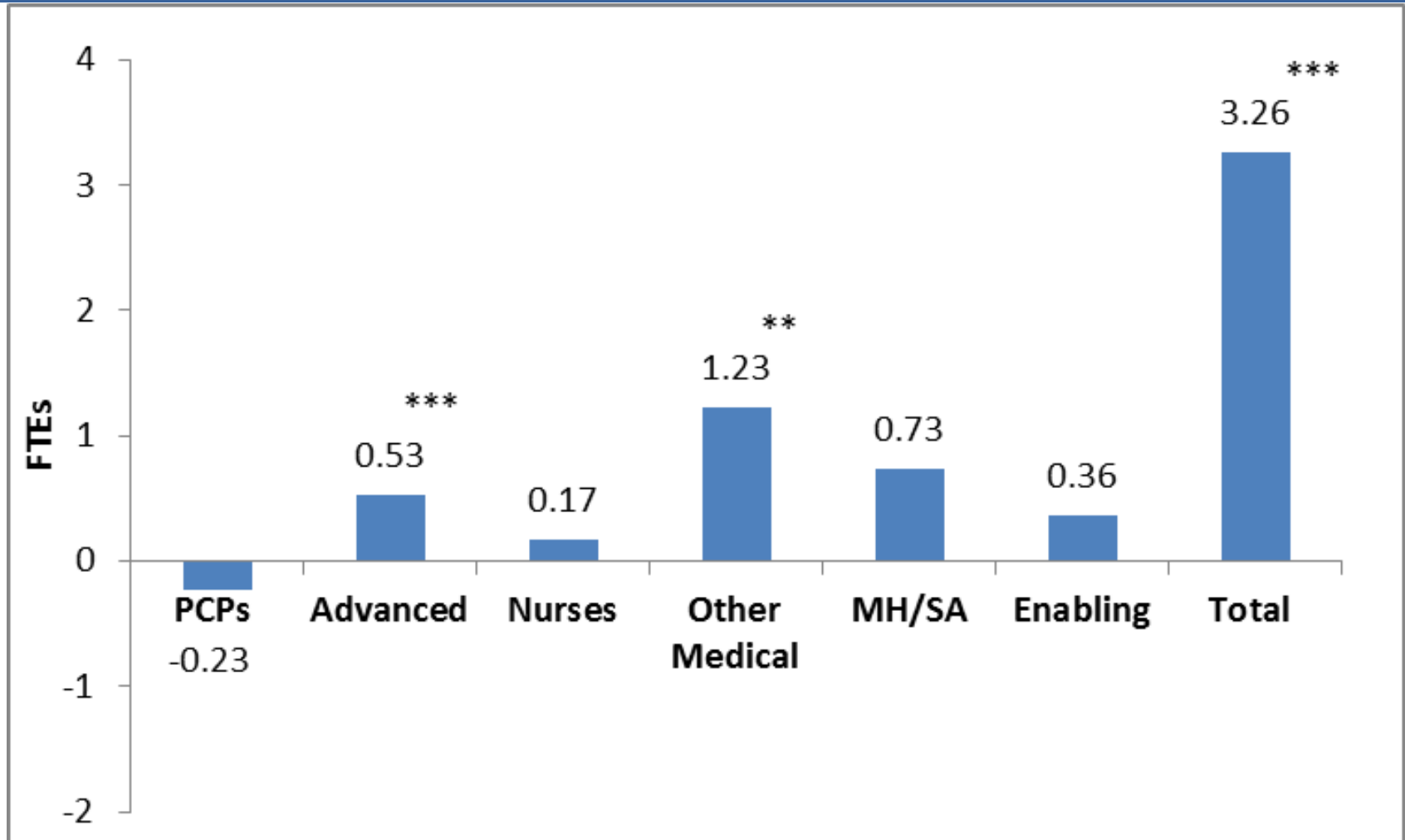
Outcomes

- Staffing, FTEs
 - (1) Primary care physicians
 - (2) Advanced practice staff (NPs, PAs, CNMs)
 - (3) Nurses
 - (4) Other medical staff (MAs, NAs, QI/IT staff, etc.)
 - (5) Mental health and substance abuse service staff
 - (6) Enabling service staff (case manager, health educators)
- Productivity, # visits made by each type of staff
 - Except other medical staff
 - Medical visits (1)-(3) adjusted by case-mix complexity

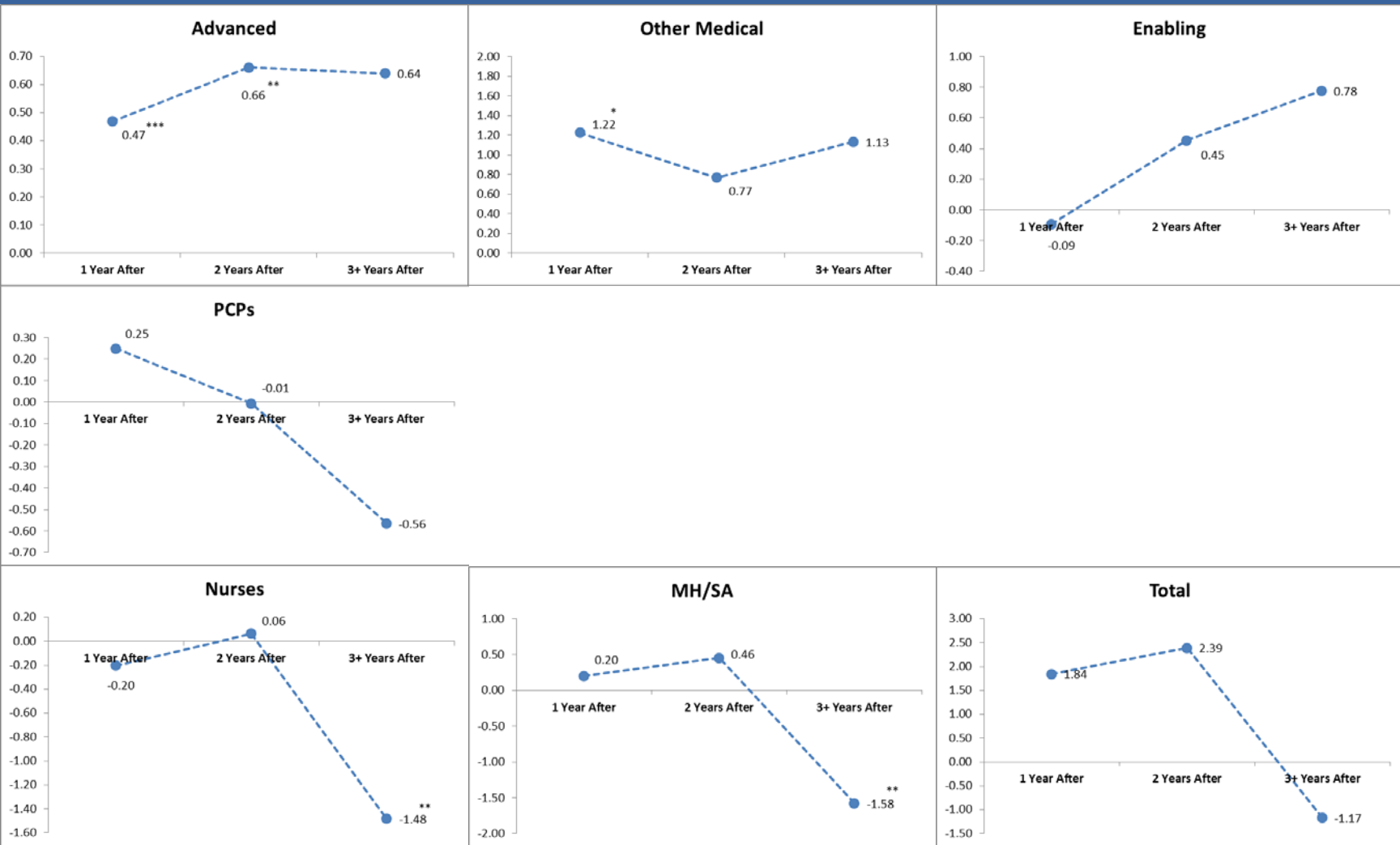
Covariates

- Patient characteristics
 - Age, sex, race/ethnicity, insurance, limited English proficiency, poverty
- Practice characteristics
 - Size, grant\$\$, EHR adoption
- Other environmental characteristics
 - Number of physicians, NPs, PAs in the county
 - State laws governing NP scope of practice

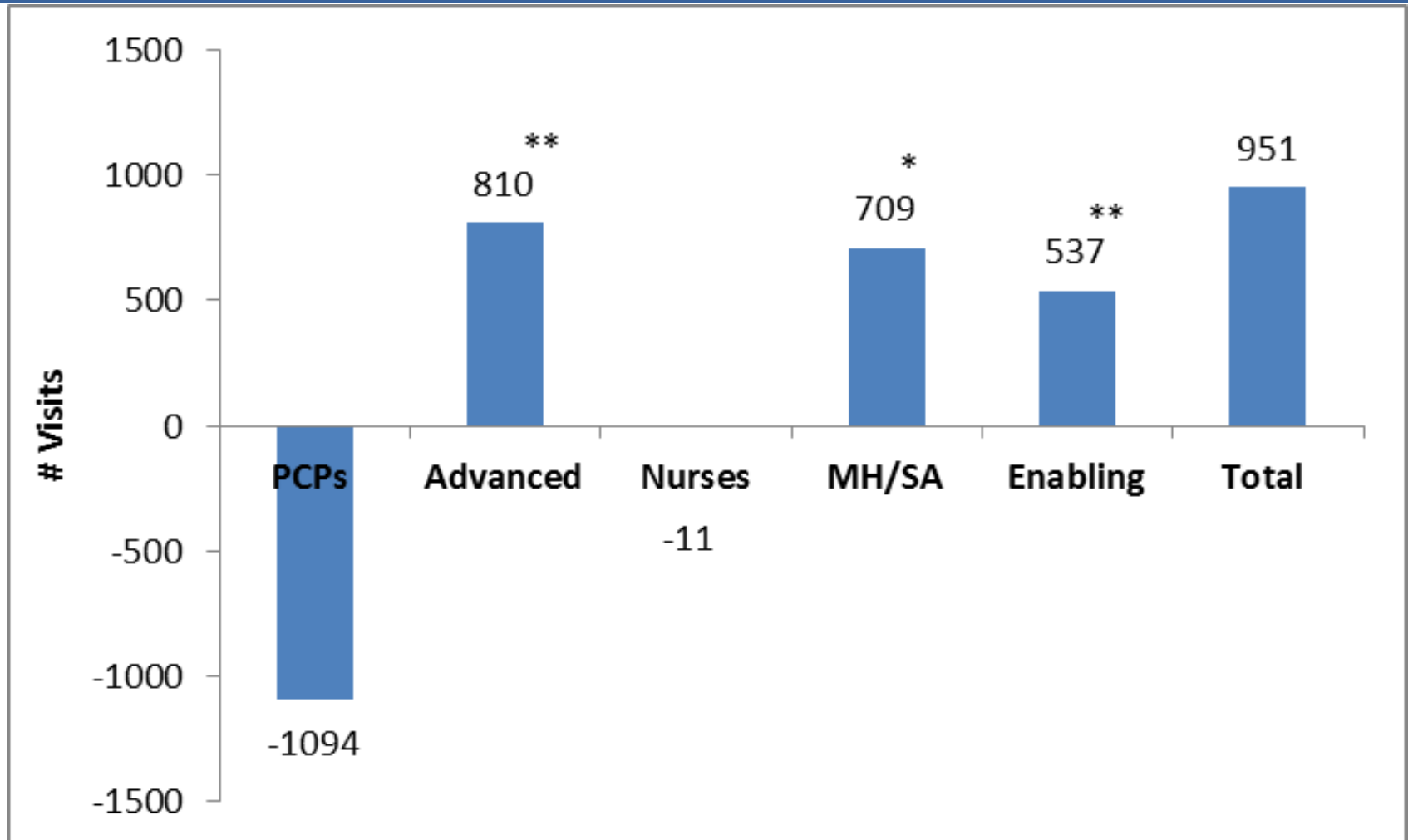
Staffing Changes Associated with PCMH (Model 1)



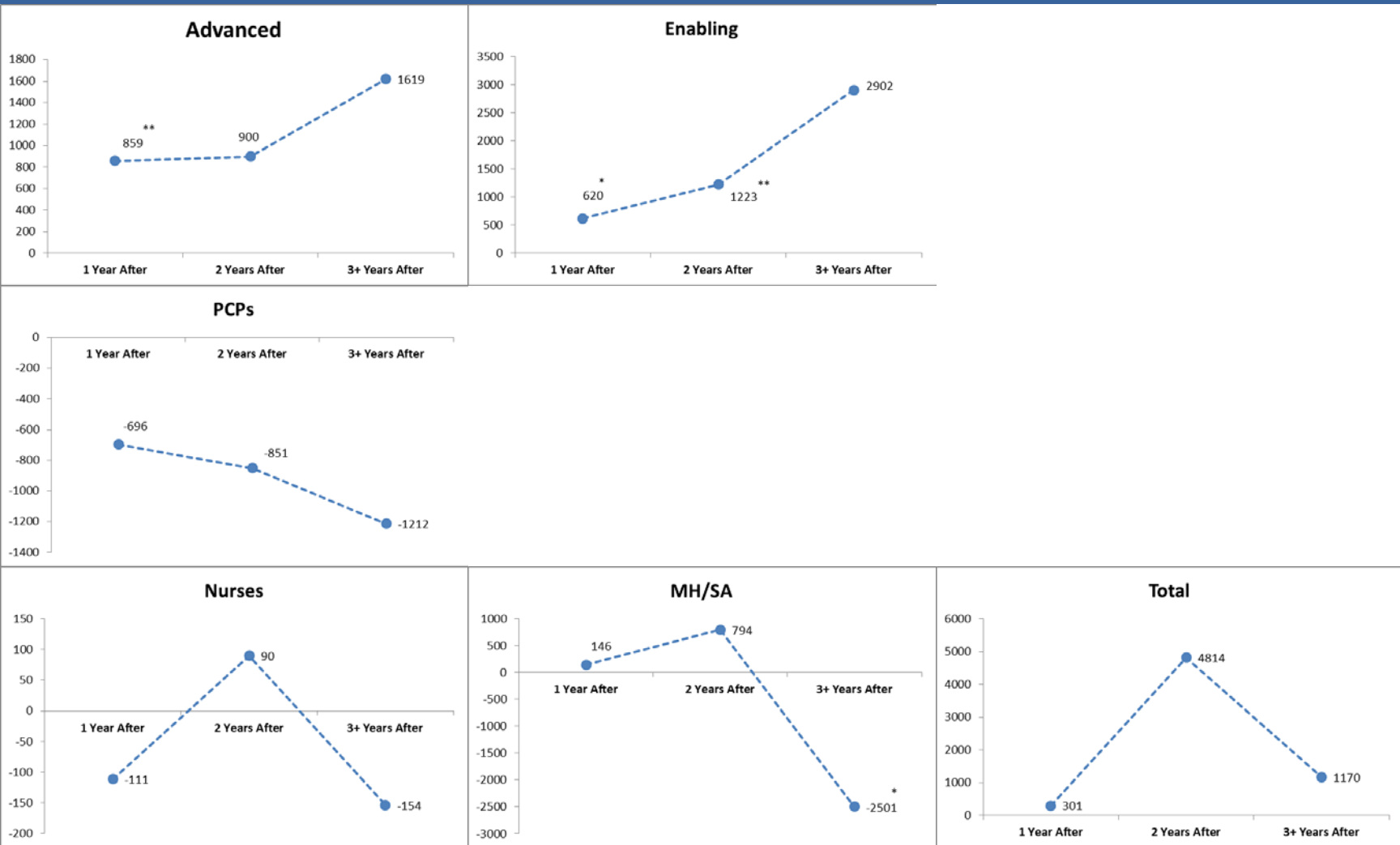
Staffing Changes Associated with PCMH (Model 2)



Productivity Changes Associated with PCMH (Model 1)



Productivity Changes Associated with PCMH (Model 2)



Productivity Changes Associated with PCMH-Related Staffing Changes

- Regression of (total visits) on (PCMH*Post*6Staff)
 - Including other medical staff
 - Coef. on each interaction term represents marginal productivity of each staffing type associated with PCMH adoption
- We found marginal productivity increases associated with this staffing shift
 - (+) significant, advanced practice staff
 - (+) but not significant, other medical staff

Summary of Key Findings

- A growth in advanced practice staff, other medical staff, and enabling staff over time
- A decline in primary care physicians, but not statistically significant
- No significant changes/trends in either nurses or mental health/substance abuse service staff
- No significant increases in total visits, but we found marginal productivity increases associated with this staffing shift

Limitations

- Grantee-level analysis
 - Multiple sites, implementation is heterogeneous
- The UDS data do not differentiate what roles each type of staff play
 - “who does what” & “how” still unknown
- Our measure of productivity is narrowly defined

Implications

- Expansion of staff to non-physicians associated with PCMH adoption
- Policies are needed not only to support the increased supply of these professionals, but to ensure their optimal use within care team
- Close attention to their training is critical to ensuring the quality of services they provide

Questions?