

## The Impact of National Health Service Corps and Non-Corps Clinician Staffing on Financial Costs in Community Health Centers

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### ISSUE

The National Health Service Corps (NHSC) is an important source of clinician staffing for community health centers (CHCs). In Year 5, researchers from our team compared the marginal productivity (measured as visits per additional staff) for NHSC and non-NHSC clinicians in CHCs, and found that productivity for NHSC clinicians is similar to that of non-NHSC clinicians in primary care, but is higher for NHSC clinicians in mental health care. However, whether NHSC staffing reduces total costs of care in CHCs remains unknown. In the present study, we compared the marginal effect of NHSC and non-NHSC clinician staffing on medical and mental health care costs and administrative costs in CHCs.

### METHODS

Using 2013-2017 data from the Uniform Data System (UDS) and the NHSC administrative database, we constructed multivariate linear regression models to examine the financial impact of NHSC and non-NHSC staffing in 1,022 CHCs. In the model, the dependent variable was each of the financial outcomes, and the key explanatory variables were the number of staff full-time equivalents for both NHSC and non-NHSC clinicians. Control variables included facility and patient characteristics, county poverty and uninsured rates, as well as health center and year fixed-effects. Standard errors were clustered at the center-level to account for autocorrelation within centers. The level of significance was set at 0.1, with two-tail tests. We used Stata version 15 (StataCorp) to perform all analyses.

### FINDINGS

Each additional NHSC primary care provider was significantly associated with a reduction of \$1.03 in medical care costs per visit in urban CHCs. Each additional NHSC mental health staff was significantly associated with a reduction of \$4.24 in mental health costs per visit in CHCs, more specifically, a reduction of \$3.73 in urban centers and \$8.554 in rural centers. Each additional NHSC primary care staff was also significantly associated with a reduction of \$0.35 in administrative costs per visit in CHCs (\$0.36 in urban CHCs). In comparison, each additional non-NHSC primary care staff was significantly associated with an increase of \$0.68 in medical care costs per visit in CHCs (\$0.73 in urban CHCs). Increases in non-NHSC mental health staff was not significantly associated with cost reductions in mental health care. In addition, increases in non-NHSC staffing were also significantly associated with increases in administrative costs in urban CHCs.

### DISCUSSION

This study complements our previous findings that NHSC clinicians are similar or more productive compared to non-NHSC clinicians, by suggesting that NHSC staffing can effectively improve patient care capacity without increasing total costs of care in CHCs. The cost savings associated with NHSC staffing may help to expand services such as substance use disorder treatments, chronic care management, or other outreach activities. These findings also suggest that increasing the number of NHSC clinicians in CHCs is especially beneficial in rural CHCs. Future study should evaluate the impact of NHSC and non-NHSC staffing on care quality in CHCs. Findings on productivity, costs, and quality can provide comprehensive evidence of the role of the NHSC in enhancing CHCs' capacity and help inform future policies and staffing strategies.

**Key Words:** National Health Service Corps, community health centers, staffing, primary care, mental health care, total costs of care, administrative costs