

## Longitudinal Analysis of Electronic Health Record Adoption on Staffing Mix in Community Health Centers

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### BACKGROUND

Community health centers (CHCs) have long operated with challenges in staffing recruitment and retention. Although electronic health records (EHRs) are slow to proliferate across primary care settings, especially in resource poor areas, due to workforce barriers, CHCs have been leaders in the adoption of EHRs among primary care providers. This study investigates how the adoption of EHRs has changed staffing mix of CHCs in ways that further quality improvements

### METHODS

The authors used the 2007 to 2013 Uniform Data System (UDS). The sample was restricted to CHCs operating in the fifty states and DC that were operating for the entire study period of 2007 to 2013. The sample was further restricted to those that had an identifiable year of EHR adoption. To supplement the EHR adoption collected in UDS, the authors used responses from a survey called, "Readiness for Meaningful Use and HIT and Patient Centered Medical Home Recognition Survey," to obtain the year of HER adoption.

This study used a statistical model to estimate how a change in the proportion of one type of provider category, such as physicians, shifts the proportion of another type of provider category, such as nurses, keeping all else constant. The model controls for CHC size, geographic location, presence of a patient-centered medical home model, and other local market conditions. The study treated each CHC within a particular year as a unique observation for a total N of 5,250 CHC-year observation (750 unique CHCs).

### FINDINGS

Between 2007 and 2013, 17% of CHCs had EHRs for the entire period, 42% never adopted EHRs, and 41% adopted EHRs at some point over the study period. The peak EHR adoption year was 2011. This study found that the mix of medical staff has been shifting away from physicians and nurses, and

### KEY FINDINGS

1. Over the seven-year study period, 125 CHCs had EHRs for the entire period, 314 CHCs never adopted EHRs, and 311 adopted at some point over the study period.
2. CHCs with EHRs had significantly lower share of physicians compared to CHCs without EHRs throughout the study period.
3. CHCs with EHRs had significantly higher share of other medical staff among early adopters and late adopters.
4. The trend in the share of other medical staff suggests the need for adequate support staff to get an HER system to successfully "go live."

towards nurse practitioners (NPs)/physician assistants (PAs) and other medical staff for CHCs with and without EHRs. CHCs with EHRs had significantly lower share of physicians compared to CHCs without EHRs. Another notable trend was that CHCs with EHRs had significantly higher shares of other medical staff compared to CHCs without EHRs at the beginning and end of the study period.

## **CONCLUSION**

CHCs with and without EHRs experienced similar trends over time in their staffing configurations, but CHCs with EHRs allocate their total medical staff differently than CHCs without EHRs. CHCs with EHRs appear to elevate the use of other medical staff over all other staffing, especially in the early years of adoption and again in later years. The finding with regards to other medical staff appears to confirm early studies that suggest that adequate support staff is necessary to get an EHR system to successfully “go live.” Although it does not confirm it, this study provides support for the hypothesis that EHR adoption in CHCs is allowing for greater flexibility among staff types.

## **POLICY IMPLICATIONS**

It will be important to continue to investigate the relationship between EHRs and staffing in CHCs. As CHCs gain more experience with both EHRs, staffing models may continue to evolve. Further understanding about the roles and functions of the health care workers is needed before one is able to make conclusions about the effect of EHRs. HRSA may consider including studies such as this in the resource section of the Health IT section of its Web site (<http://www.hrsa.gov/healthit/index.html>).