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Using multi-stakeholder alliances to accelerate the adoption of health information technology by physician practices



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ABSTRACT

Background: Multi-stakeholder alliances – groups of payers, purchasers, providers, and consumers that work together to address local health goals – are frequently used to improve health care quality within communities. Under the Aligning Forces for Quality (AF4Q) initiative, multi-stakeholder alliances were given funding and technical assistance to encourage the use of health information technology (HIT) to improve quality. We investigated whether HIT adoption was greater in AF4Q communities than in other communities.

Methods: Drawing upon survey data from 782 small and medium-sized physician practices collected as part of the National Study of Physician Organizations during July 2007 – March 2009 and January 2012–November 2013, we used weighted fixed effects models to detect relative changes in four measures representing three domains: use of electronic health records (EHRs), receipt of electronic information from hospitals, and patients' online access to their medical records.

Results: Improvement on a composite EHR adoption measure was 7.6 percentage points greater in AF4Q communities than in non-AF4Q communities, and the increase in the probability of adopting all five EHR capabilities was 23.9 percentage points greater in AF4Q communities. There was no significant difference in improvement in receipt of electronic information from hospitals or patients' online access to medical records between AF4Q and non-AF4Q communities.

Conclusion: By linking HIT to quality improvement efforts, AF4Q alliances may have facilitated greater adoption of EHRs in small and medium-sized physician practices, but not receipt of electronic information from hospitals or patients' online access to medical records.

Implications: Multi-stakeholder alliances charged with promoting HIT to advance quality improvement may accelerate adoption of EHRs.

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1. Introduction

There is a growing appreciation that significant improvements in health care quality cannot be achieved by a single organization or sector working in isolation.^{1–4} In many communities, health care alliances – groups of payers, purchasers, providers and consumers – identify local health care goals and voluntarily undertake activities to achieve those goals.^{5,6} Over the last two decades, multi-stakeholder alliances have been used to advance public

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reporting and measurement systems, quality improvement, and disease management.⁷

Multi-stakeholder alliances may also be well suited to advance adoption of health information technology (HIT) by physician practices. Alliances may facilitate adoption of HIT, for example, by establishing local learning collaboratives to disseminate evidence on the value of HIT, initiating quality improvement efforts that depend upon clinical information technology (e.g., patient-centered medical homes), encouraging public reporting of quality data, and/or providing direct technical assistance to practices. Because they are local organizations, often viewed as trusted, neutral conveners within their communities, they may also be well-positioned to reach smaller physician practices, which have been slower to adopt HIT.^{8–11}

We examined whether the adoption of HIT spread more quickly among small and medium-sized physician practices in communities where alliances were charged with using HIT to advance quality improvement. Specifically, we investigated adoption of HIT by small and medium-sized physician practices across three domains: adoption of electronic health records (EHRs), receipt of electronic information from hospitals, and patients' online access to their medical records. Alliances included in this study were all grantees of the Aligning Forces for Quality (AF4Q) initiative, the Robert Wood Johnson Foundation's signature effort to lift the overall quality of health care in targeted communities.¹²

1.1 Federal efforts to expand use of HIT

HIT holds potential for improving care quality while reducing costs.^{13–16} EHRs and electronic communication with hospitals and patients may facilitate patient engagement, care coordination, and the implementation of new models of care delivery. However, healthcare delivery organizations – and in particular, small physician practices – have struggled to implement EHRs and other HIT because of the cost, complexity, and time required.^{8,9} Further, within community-based ambulatory practices, studies have found mixed results regarding the association between HIT and healthcare costs and quality of care.^{17–19}

Given the promise of HIT, the federal government established a strategic plan to improve health and health care through the use of HIT, and committed substantial resources to promoting the adoption and use of EHRs and information exchange.^{20,21} The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 provided \$35 billion dollars²² to promote HIT, including EHRs and private and secure electronic health information exchange. For example, HITECH established financial incentive programs for physicians and hospitals as they adopt, implement, upgrade, and demonstrate meaningful use of HIT, such as the Beacon Community Program, which provided grant funding for communities to build and strengthen HIT infrastructure and exchange capabilities²³; the Consumer eHealth Program, which works to increase patients' access to their own health information; Regional Extension Centers (RECs) to help primary care providers adopt EHRs; and the State Health Information Exchange (HIE) Cooperative Agreement Program to help build capacity to exchange health information across healthcare systems within and between states.^{24–25}

1.2 The Aligning Forces for Quality (AF4Q) program

Concurrently, the largest privately funded community-based quality improvement initiative to date was also underway.²⁶ Under the AF4Q initiative, funding was directed to multi-stakeholder alliances that facilitated improvement by securing and coordinating resources, promoting collaboration across providers, disseminating information, and prioritizing common goals.^{5,27} The

initiative began in 2006 with four alliances that were invited to participate based on their history of community collaboration. Through a competitive process, the Foundation added 10 alliances in 2007. The alliances represented a diverse set of communities across the nation, including whole states and metropolitan and rural areas (e.g., Minnesota, Cleveland, Humboldt County, CA). A more thorough description of the AF4Q program can be found elsewhere.^{28,29}

In 2010, the Foundation required alliances to leverage HIT as they worked toward their quality improvement goals. The Foundation provided alliances with hands-on technical assistance with a variety of HIT needs, access to conferences and learning opportunities, and opportunities to partner and learn from national HIT leaders.³⁰ Alliances met the AF4Q program requirement in a number of ways. The most common approach was educating local physician practices about HIT and meaningful use through learning collaboratives or webinars (12 of 14 alliances). Other examples include working with the health information exchange to promote EHR adoption, meaningful use, and secure messaging with hospitals (9 alliances); promoting the REC's activities to alliance members (8 alliances); and providing practice coaching and direct technical assistance (6 alliances). Three alliances served as the local REC, two played a role in the community's Beacon program, and an additional two served on the board or steering committee of the local Beacon or REC program. Additionally, 11 alliances led or supported activities to help physician practices adopt new delivery care models, such as patient-centered medical homes (PCMH), which depend heavily on the use of EHRs and electronic communications.³¹

2. Materials and methods

We conducted a quasi-experimental study (pre-post design with a comparison group) to examine whether physician practices in AF4Q communities adopted EHRs, receipt of electronic information from hospitals, and patients' online access to their medical records at greater rates than practices in non-AF4Q communities.

2.1 Data source and sample

We used two rounds of survey data from the National Study of Physician Organizations (NSPO), which was designed to survey physician practices nationally and within the AF4Q communities about their organizational capabilities and external incentives for providing high value health care.^{32–34} The sampling frame for the survey was developed from the IMS Healthcare Organization Services national database.³⁵ Small and medium-sized practices (1–19 physicians) were eligible for the first round of the survey if at least 60% of physicians were adult primary care providers, cardiologists, endocrinologists, or pulmonologists. For the second round of the survey, practices were eligible if at least 40% of physicians were from these specialties. The surveys included only these specialties because NSPO is focused on care management processes for four chronic illnesses: asthma, diabetes, congestive heart failure, and depression. Academic faculty practices and practices belonging to federal hospitals were excluded.

The survey used a random sample of practices, stratified by practice size (1–2, 3–8, 9–12, and 13–19), each of the four physician specialties, and location (fourteen AF4Q communities and the remainder of the U.S.). Each of the AF4Q communities and strata with relatively few practices were oversampled. The surveys were fielded from July 2007 – March 2009 and January 2012 – November 2013. Telephone interviews were conducted with lead administrator or lead physician, and respondents were paid \$175 for the

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