Published in final edited form as:

Am J Med Qual. 2016 July ; 31(4): 331–336. doi:10.1177/1062860615581654.

Physician Satisfaction in Practices That Transformed Into Patient-Centered Medical Homes: A Statewide Study in New York

Joshua E. Richardson, PhD, MLIS, MS¹, Lisa M. Kern, MD, MPH¹, Michael Silver, MS¹, Hye-Young Jung, PhD¹, Rainu Kaushal, MD, MPH¹, and with the HITEC Investigators

¹Weill Cornell Medical College, New York, NY

Abstract

Patient-centered medical home (PCMH) transformation can significantly affect physicians' job satisfaction, which in turn can affect the quality of patient care. Between November 2012 and March 2013, the study team surveyed 159 community-based physicians in 159 practice sites that had experienced PCMH practice transformations in New York State. Of the 159 physicians, 121 responded (77% response rate) to the online survey. Nearly two thirds (60%) of physicians reported being somewhat or very satisfied overall with their practice after PCMH transformation. Overall satisfaction was lower than satisfaction with specific domains of practice: patient-centered care (82%), coordination of care (81%), access to care (79%), efficiency (76%), organizational culture (69%), and quality (69%). Although the physicians were moderately satisfied with care quality in their practices after PCMH transformation, their overall satisfaction was notably lower. The findings reveal a need to identify factors beyond quality for measuring physician satisfaction in PCMH transformed practices.

Keywords

patient-centered care; primary health care; quality assurance; job satisfaction; health services research

Patient-centered medical homes (PCMHs) are primary care practices that have undergone structural and process transformations designed to facilitate care coordination and management of patients with multiple chronic diseases.¹ In return for transforming their practices, physicians may be eligible for increased reimbursement from payers according to agreed upon payment formulas.

PCMH transformations, however, can be highly disruptive and therefore place additional burdens on primary care physicians who are already susceptible to stress that can lead to dissatisfaction and eventually burnout.²⁻⁵ For example, PCMHs rely on physicians' data collection to generate quality reports, which in turn can lead to feelings of lost autonomy

Reprints and permissions: sagepub.com/journalsPermissions.nav

Corresponding Author: Joshua E. Richardson, PhD, MLIS, MS, Weill Cornell Medical College, 1300 York Avenue, New York, NY 10065. jor2032@med.cornell.edu.

Declaration of Conflicting Interests: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

and control.³ Yet recent research has shown that active physician engagement during PCMH transformations can decrease “emotional exhaustion” and burnout.⁶ Clearly, there are opportunities to investigate the effects of PCMH transformations on physician satisfaction and to take actions to mitigate, if not improve, satisfaction.

The effects of PCMH transformation on physician satisfaction have been reported from integrated delivery systems,^{7,8} and more recently from federally qualified health centers.⁹ Yet few have reported how PCMH practice transformation affects satisfaction among community-based physicians. Of those few, researchers reported factors including strains on practice site resources and cultures,^{10,11} practice “chaos,”¹² and the adequacy of reimbursements in light of PCMH transformation.¹³

Given the nascent body of evidence in this area, it is important to investigate the effects that PCMH transformations have on physician satisfaction. This study sought to expand on the existing literature by evaluating physician satisfaction in the context of a statewide initiative that included financial incentives from the state to implement PCMH in community-based settings.

Methods

Overview

Between November 2012 and March 2013, a cross-sectional survey was conducted with community-based primary care physicians who worked in practice sites that had undergone PCMH transformation as part of a New York State (NYS)–sponsored program. The Weill Cornell Medical College Institutional Review Board approved the study protocol.

Context

The Healthcare Efficiency and Affordability Law for New Yorkers Capital Grant Program (HEAL NY) began in 2005 to promote interoperable health information technology (IT) and IT-enabled health care transformation.^{14,15} The third phase of this program, called HEAL NY Phase 10 (HEAL 10), included financial incentives for implementation of the PCMH,¹⁶ as defined by the National Committee for Quality Assurance (NCQA).¹⁷

HEAL 10 awards were given to community-based grantee organizations that recruited primary care practices for PCMH transformation and then coordinated their transformation. Nine grantee organizations were selected by the NYS Department of Health through a competitive application process. The HEAL 10 program was conducted from December 2009 through December 2012. Funds for the 9 organizations totaled approximately \$140 million.

With funding from the NYS Department of Health, researchers from the Health Information Technology Evaluation Collaborative (HITEC) conducted this satisfaction survey as part of a larger series of studies to determine how health IT affects health and health care. HITEC is a consortium composed of 4 NYS academic institutions: Weill Cornell Medical College at Cornell University, Columbia University, University of Rochester, and the State University

of New York at Albany. The coauthors are directors (RK, LMK) and members (JR, MS, AJ) of HITEC.

Participants

All 9 grantee organizations that received funding from NYS for PCMH implementation were included. One grantee organization was then excluded because it did not implement the PCMH as defined by the 2008 NCQA standards. An appointed liaison from each of the 8 remaining grantee organizations identified and reported to HITEC all of the PCMH practice sites in their communities that had received HEAL 10 funding. With permission from the grantee organizations, liaison reports were mapped onto a list of practice sites provided by NCQA. Based on these 2 sources, a sample frame of 196 potential PCMH practice sites was identified. From that, 37 practice sites were excluded because they underwent the lowest level of PCMH transformation (Level I) in coordination with each other, because those sites did not have any site-to-site variability in PCMH processes.

Each grantee liaison then identified and recruited one physician per eligible PCMH practice site (N = 159) to complete an online physician satisfaction survey (Figure 1).

Grantee liaisons selected physicians who were credentialed as medical doctors or osteopaths; who practiced internal medicine, family medicine, or pediatrics; and who worked in an NCQA-certified PCMH at least 6 months before and 6 months after certification. When more than one physician met those criteria, the grantee liaisons selected one for participation.

Survey

A survey instrument was used that HITEC had developed as part of previous work conducted in the Hudson Valley of New York. The survey instrument revised and expanded a previous survey instrument for physicians and staff by the American College of Physicians. The final HITEC survey consisted of 58 questions that captured demographics, practice site characteristics, and satisfaction (Patel V, Kaushal R, Cheung M, Edwards A, Dhopeshwarkar RV, Kern LM; unpublished data; 2010).

Physicians were asked to provide the following characteristics: sex, age, race, ethnicity, specialty, year medical degree was obtained, estimated number of patients seen in the past week, and sources of revenue (percentages of patients under Medicare, Medicaid, private insurance, or no insurance).

Practice site characteristics included the number of practicing physicians and whether the practice site had adopted an electronic health record (EHR).

Satisfaction questions reflected 7 non-mutually exclusive domains: (1) overall satisfaction, (2) quality, (3) patient-centered care, (4) access to care, (5) efficiency, (6) coordination of care, and (7) organizational culture. Responses were elicited on a 5-point Likert-type scale ranging from *not satisfied* to *very satisfied* (scored 1-5).

Finally, subjects were provided a free-text field in which they could provide additional information.

The Survey Research Institute at Cornell University administered the survey online. The HEAL 10 grantee organizations followed up with nonresponders to encourage participation. No financial compensation was offered. Responses were kept confidential and not shared individually with the participating practices. Data collection took place between November 2012 and March 2013.

Analysis

Descriptive statistics were used to characterize practice sites and physician characteristics. For each 5-point Likert-type scale question a “top-two boxes” analysis was conducted, establishing the proportion of physicians who responded with either of the most favorable 2 responses for that question (very satisfied or somewhat satisfied); this method has been used previously in analysis of patient satisfaction.¹⁸ Within each domain, the results were averaged across questions. Exact binomial confidence intervals were created to estimate the variability of each domain.

All data analyses were conducted with SAS version 9.3 (SAS Institute Inc., Cary, North Carolina). *P* values $\leq .05$ were considered significant.

Results

Of 159 physicians to whom surveys were sent, 27 (17%) did not respond or declined to participate, 10 (6%) began but did not complete the survey, and 1 (1%) did not meet the eligibility criteria. Thus, the final sample size was 121 physicians (77% response rate).

The majority were male, aged 50 years and older, and white/non-Hispanic (Table 1). Most participants worked in urban-based practice sites; 96% of these sites had an EHR, and 88% of these sites had achieved NCQA Level 3 PCMH certification. Nearly half specialized in family medicine and worked in practice sites with 3 or fewer physicians. The median number of patients seen in the 7 days prior to taking the survey was 90 (interquartile range 0-400). Participants reported that their patients had a variety of insurance types (Table 1).

Survey responses revealed that 60% (95% confidence interval = 55.6% to 64.6%) of physicians reported being somewhat or very satisfied with their medical practice site overall at least 6 months after PCMH transformation. As shown in Figure 2, satisfaction was even higher for specific domains of care: patient-centered care, coordination of care, access to care, efficiency, organizational culture, and quality.

Of the 121 physicians who completed satisfaction surveys, 31 (26%) included free-text comments (Table 2). These comments provided insights into the effects that PCMH transformations were having on satisfaction. Comments fell into 3 broad categories: (1) EHRs, (2) reimbursement, and (3) experiencing change. The comments included a mix of positive and negative comments within each category; however, there were a greater number of negative comments. Of those negative comments, physicians voiced strong feelings about their difficulties with EHR-based documentation and care delivery; frustrations that

reimbursement did not adequately compensate for the effort that goes into PCMH transformations; and dissatisfaction that PCMH transformations represent an unwelcome change in primary care practice.

Discussion

This community-based survey found that 60% of primary care physicians reported being very satisfied or somewhat satisfied with their provision of medical care within their PCMH-transformed practice site. Satisfaction was higher for specific domains of care, ranging from 69% for quality and organizational culture to 82% for patient-centered care.

One could reasonably expect PCMH transformation to promote greater physician satisfaction given some of the purported benefits, including redistributing work from physicians to other staff members. The literature suggests that redistribution of effort may indeed positively affect satisfaction,¹⁹ particularly within integrated delivery system practice sites,⁷ yet the present study's findings seem to be in contrast to that literature. Based solely on the qualitative data from a subset of physicians, one can hypothesize that PCMH transformation may negatively affect satisfaction, such as by imposing on physicians care coordination activities without adequate financial support.²⁰ The study team believes further investigation into this area is warranted.

These results demonstrate that overall satisfaction among community-based physicians is modest, and does not appear to be associated with the facets of quality for which the study team surveyed. Explanations for this likely include factors not directly related to quality, such as structural components like changes in practice site culture or EHR use,¹² or continued workload burdens²¹ that may be impactful enough to reduce overall physician satisfaction.²² Explanations such as these would be in line with previous findings that PCMH transformations strain limited resources, particularly in solo and 2-physician practices as well as nonaffiliated practices.¹⁰

Another explanation for this study's findings may have to do with perceived shortcomings in physician reimbursement relative to the effort required for PCMH transformation. Others have raised questions as to whether the level of reimbursement made to physicians in PCMH-transformed practices is sufficient.¹³ These stressors potentially impose burdens on the cultures within community-based practices that have well-known associations with physician satisfaction, such as feelings of loss of control³ or adding "chaos."¹² As PCMH reporting requirements have changed since 2008, and continue to change, policy-making bodies may need to consider how data gathering practices affect physician stress and, therefore, satisfaction.

Secular trends may limit the degree to which PCMH transformation can improve physician satisfaction. In addition to the factors already mentioned, physicians have expressed concerns around regulatory burdens²³ and market forces beyond their control.²⁴ Given the multiple factors from inside and outside practice sites, attaining measurable improvements in physician satisfaction as a result of PCMH transformation will be difficult^{25,26} and require long-term study.^{27,28}

Although there was no baseline or external cohorts against which to compare these findings, the results contribute to growing discussions around promoting physician satisfaction in primary care in general, and within PCMHs specifically. Such findings are crucial for mitigating physician burnout at a time when the Affordable Care Act is projected to increase pressure on the primary care system.²⁹

This study has several limitations. As a cross-sectional survey, there was no group against which to compare these findings. The participants were a convenience sample of physicians who were identified by grantee liaisons. However, the sample size and high response rate can lend credence to the results. Physicians also came from practice sites that had received NYS subsidies for PCMH transformation. Physicians in practice sites that transformed significantly longer than 6 months prior to the survey³⁰ or received subsidies may report satisfaction differently.

Conclusion

In conclusion, modest levels of overall satisfaction were found among physicians whose practices had transformed into PCMHs in the 6 months prior. More than two thirds of physicians were satisfied with specific domains of care. The PCMH is being implemented in the context of a rapidly changing health care policy environment. Ongoing monitoring of physician satisfaction is warranted.

Acknowledgments

We thank the grantee communities and primary care practices for their participation. We also acknowledge the National Committee for Quality Assurance for providing access to practice data for sampling purposes.

Funding: The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was funded by the New York State Department of Health (C025877).

References

1. Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the patient-centered medical home. *J Gen Intern Med.* 2010; 25:601–612. [PubMed: 20467909]
2. Friedberg MW. The potential impact of the medical home on job satisfaction in primary care. *Arch Intern Med.* 2012; 172:31–32. [PubMed: 22232144]
3. Misra-Hebert AD, Kay R, Stoller JK. A review of physician turnover: rates, causes, and consequences. *Am J Med Qual.* 2004; 19:56–66. [PubMed: 15115276]
4. Shanafelt TD. Enhancing meaning in work: a prescription for preventing physician burnout and promoting patient-centered care. *JAMA.* 2009; 302:1338–1340. [PubMed: 19773573]
5. Zazzali JL, Alexander JA, Shortell SM, Burns LR. Organizational culture and physician satisfaction with dimensions of group practice. *Health Serv Res.* 2007; 42(3 pt 1):1150–1176. [PubMed: 17489908]
6. West CP, Dyrbye LN, Rabatin JT, et al. Intervention to promote physician well-being, job satisfaction, and professionalism: a randomized clinical trial. *JAMA Intern Med.* 2014; 174:527–533. [PubMed: 24515493]
7. Reid RJ, Fishman PA, Yu O, et al. Patient-centered medical home demonstration: a prospective, quasi-experimental, before and after evaluation. *Am J Manag Care.* 2009; 15(9):e71–e87. [PubMed: 19728768]

8. Reid RJ, Coleman K, Johnson EA, et al. The Group Health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers. *Health Aff (Millwood)*. 2010; 29:835–843. [PubMed: 20439869]
9. Lewis SE, Nocon RS, Tang H, et al. Patient-centered medical home characteristics and staff morale in safety net clinics. *Arch Intern Med*. 2012; 172:23–31. [PubMed: 22232143]
10. Friedberg MW, Safran DG, Coltin KL, Dresser M, Schneider EC. Readiness for the patient-centered medical home: structural capabilities of Massachusetts primary care practices. *J Gen Intern Med*. 2009; 24:162–169. [PubMed: 19050977]
11. Rittenhouse DR, Shortell SM. The patient-centered medical home: will it stand the test of health reform? *JAMA*. 2009; 301:2038–2040. [PubMed: 19454643]
12. Alidina S, Rosenthal MB, Schneider EC, Singer SJ, Friedberg MW. Practice environments and job satisfaction in patient-centered medical homes. *Ann Fam Med*. 2014; 12:331–337. [PubMed: 25024241]
13. Bitton A, Martin C, Landon BE. A nationwide survey of patient centered medical home demonstration projects. *J Gen Intern Med*. 2010; 25:584–592. [PubMed: 20467907]
14. Kern LM, Kaushal R. Health information technology and health information exchange in New York State: new initiatives in implementation and evaluation. *J Biomed Inform*. 2007; 40(6 suppl):S17–S20. [PubMed: 17945542]
15. Kern LM, Barron Y, Abramson EL, Patel V, Kaushal R. HEAL NY: promoting interoperable health information technology in New York State. *Health Aff (Millwood)*. 2009; 28:493–504. [PubMed: 19276009]
16. [Accessed November 9, 2013] New York State Department of Health. HEAL NY Phase 10. http://www.health.ny.gov/technology/efficiency_and_affordability_law/phase_10.htm
17. NCQA. [Accessed November 9, 2013] Standards and Guidelines for Physician Practice Connections—Patient-Centered Medical Home (PPC-PCMH). http://www.ncqa.org/Portals/0/Programs/Recognition/PCMH_Overview_Apr01.pdf Published 2013
18. Agency for Healthcare Research and Quality. [Accessed November 29, 2013] CAHPS Clinician & Group Surveys. <https://cahps.ahrq.gov/Surveys-Guidance/CG/index.html>
19. Day J, Scammon DL, Kim J, et al. Quality, satisfaction, and financial efficiency associated with elements of primary care practice transformation: preliminary findings. *Ann Fam Med*. 2013; 11(suppl 1):S50–S59. [PubMed: 23690386]
20. O'Malley AS, Tynan A, Cohen GR, Kemper N, Davis MM. Coordination of care by primary care practices: strategies, lessons and implications. *Res Brief*. 2009; (12):1–16. [PubMed: 19452679]
21. Leigh JP, Tancredi DJ, Kravitz RL. Physician career satisfaction within specialties. *BMC Health Serv Res*. 2009; 9:166. [PubMed: 19758454]
22. Okie S. The evolving primary care physician. *N Engl J Med*. 2012; 366:1849–1853. [PubMed: 22591290]
23. Friedberg, MW.; Chen, PG.; Van Busum, KR., et al. [Accessed March 20, 2015] Factors affecting physician professional satisfaction and their implications for patient care, health systems, and health policy. http://www.rand.org/pubs/research_reports/RR439.html
24. Mazurenko O, Menachemi N. Environmental market factors associated with physician career satisfaction. *J Healthc Manag*. 2012; 57:307–322. [PubMed: 23087994]
25. Crabtree BF, Nutting PA, Miller WL, et al. Primary care practice transformation is hard work: insights from a 15-year developmental program of research. *Med Care*. 2011; 49(suppl):S28–S35. [PubMed: 20856145]
26. Carrier E, Gourevitch MN, Shah NR. Medical homes: challenges in translating theory into practice. *Med Care*. 2009; 47:714–722. [PubMed: 19536005]
27. Solberg LI, Crain AL, Tillema J, Scholle SH, Fontaine P, Whitebird R. Medical home transformation: a gradual process and a continuum of attainment. *Ann Fam Med*. 2013; 11(suppl 1):S108–S114. [PubMed: 23690379]
28. Solberg LI, Asche SE, Fontaine P, Flottemesch TJ, Anderson LH. Trends in quality during medical home transformation. *Ann Fam Med*. 2011; 9:515–521. [PubMed: 22084262]
29. Goodson JD. Patient Protection and Affordable Care Act: promise and peril for primary care. *Ann Intern Med*. 2010; 152:742–744. [PubMed: 20404263]

30. Higgins S, Chawla R, Colombo C, Snyder R, Nigam S. Medical homes and cost and utilization among high-risk patients. *Am J Manag Care*. 2014; 20:e61–e71. [PubMed: 24773328]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Figure 1.
Physician recruitment.

Figure 2. Physician overall satisfaction with their practice sites and satisfaction by care delivery domain.

Table 1Physician and Practice Characteristics^a.

Characteristic	n (%)
Total	121
Sex	
Male	79 (65.3)
Age	
30-39	12 (9.9)
40-49	29 (24.0)
50-59	53 (43.8)
60 and older	23 (19.0)
Role	
Family medicine	57 (47.1)
Internal medicine	35 (28.9)
Pediatrics	23 (19.0)
Race	
African American	14 (11.6)
Asian/Asian-American	25 (20.7)
White	66 (54.6)
Other	8 (6.6)
Hispanic ethnicity	
Hispanic	8 (6.6)
Total number of physicians at practice site	
1	31 (25.6)
2	14 (11.6)
3	13 (10.7)
4	13 (10.7)
5	13 (10.7)
6	8 (6.6)
7	13 (10.7)
8+	16 (13.2)
Urban versus rural setting	
Urban	76 (62.8)
PCMH level	
1	11 (9.1)
2	3 (2.5)
3	107 (88.4)
Self-reported patient visits in the last full week	90 (42)
Self-reported Medicare % revenue	25 (30)
Self-reported Medicaid % revenue	25 (40)
Self-reported private insurance % revenue	30 (40)
Self-reported patient payment % revenue	5 (9)

Abbreviation: PCMH, patient-centered medical home.

^aNumeric variables summarized with median and interquartile range.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2

Selected Physicians' Free-text Quotes.

Electronic health records

"I feel that the recent transition to an EMR has helped me structure patient f/u care in a way that allows me to do a better job getting the preventative care accomplished (ie, the computer doesn't forget or get distracted). However, this has been at the cost of general access to care and efficiency of visits."

Reimbursement

"... clinician workload has shot up, and clinician compensation has stagnated. Until reimbursement formulas start to whittle down volume-driven productivity directives (which still remain the basis for organizational bottom lines), the actual workers giving the improved care—staff and clinicians—will continue to suffer worsening morale."

Experiencing change

"My organization seems more interested in the additional revenue they may get than in actually exploring what it truly means to be a Medical Home. ... What keeps me here is the fact that I have relationships with my patients and their families that span over 20 years in this location."

Abbreviations: EMR, electronic medical record; f/u, follow-up.