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Multi-Sectoral Partnerships and Patient-Engagement Strategies in Accountable Care Organizations

Abstract

Background: Patient-engagement strategies are increasingly recognized for enriching traditional medical care and improving population health. Accountable Care Organizations (ACOs) may be well positioned to leverage multi-sector organizational partnerships to improve the reach of their patient-engagement strategies, particularly given incentives to meet cost, quality and population health goals. Little is currently known about the relation of multi-sector partnerships and patient engagement in ACOs.

Purpose: To examine the relation of patient-engagement strategies and breadth of multi-sectoral organizational partnerships in 71 primary care practices affiliated with one of two ACOs.

Methods: Clinical and administrative leaders from each practice were surveyed. Questions assessed practice use of 12 different partnership sectors and the adoption of 14 patient-engagement strategies. Bivariate tests examined associations between patient-engagement strategies and practice use of partnership sectors. Multivariate linear regression estimated the extent to which practices with a greater number of multi-sector organizational partnerships had greater adoption of patient-engagement strategies.

Results: Practices reported partnering with a mean of 3.2 (standard deviation, SD= 2.1) out of 12 sectors and implementing a mean of 7.1 (SD=3.4) out of 14 patient-engagement strategies. Each additional type of multi-sector partnership was associated with greater adoption of patient-engagement strategies ($\beta = 0.59$, 95% CI = 0.23–0.95, for all partnerships and $\beta = 0.92$, 95% CI = 0.42–1.43, when restricted to nonmedical partnerships)

Implications: Practices with a greater breadth of multi-sector partnerships, particularly nonmedical partnerships, use a wider range of strategies to engage patients in their own care.

Keywords

Multi-Sector Partnerships, Health Services, Patient Engagement, Accountable Care Organizations

Cover Page Footnote

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INTRODUCTION

Multi-sectoral partnerships and patient engagement are increasingly encouraged approaches to improve population health. The *Accountable Health Communities* initiative^{1,2} proposed by the Centers for Medicare and Medicaid (CMS) and *Building a Culture of Health*³ investments by the Robert Wood Johnson Foundation (RWJF) are two large-scale efforts to bolster multi-sectoral partnerships and patient engagement. Patient-engagement strategies aim to support patient self-care and health decision-making. Healthcare systems traditionally have not addressed upstream health factors and social needs. Partnerships between medical practices and other organizations such as faith-based organizations, local public health departments, and social services/community development agencies may support medical practices' efforts to better engage patients, thereby promoting health and reducing downstream costs of care.⁴

Accountable Care Organizations (ACOs) may be well-positioned to cultivate multi-sectoral partnerships and patient-engagement strategies given their responsibilities to meet triple aim targets: lowering costs, increasing quality and satisfaction, and improving population health.⁵ To our knowledge, no research has examined the associations between multi-sectoral partnerships and the implementation of patient-engagement strategies in ACO-affiliated practices.

METHODS

One clinical or administrative leader was surveyed from each of 71 adult primary care practices in two ACOs (October–December 2014, response rate=100%). One ACO includes a multispecialty medical group with multiple hospital affiliations that serve the greater Los Angeles area; the other ACO includes a multispecialty medical group and a hospital system that serves the greater Chicago area. The ACOs were selected because they are examples of different large ACOs with risk-based contracting and have real incentives to engage patients for both quality and cost containment purposes.

Questions assessed the use of 12 different partnership sectors (Table 1) and 14 patient-engagement strategies based on a comprehensive review of the patient-engagement literature. The 12 partnership sectors represent medical-, social-, and community-based organizations that could influence patient-engagement reach and population health. The 14 patient-engagement strategies were selected from 39 total strategies because they may necessitate interface and coordination with outside organizations. Respondents reported full, partial, irregular, or no implementation for each patient-engagement strategy, recoded for interpretability to *yes* if full or partial implementation and *no* if irregular or no implementation.

Specific patient-engagement strategies included: (1) practice refers patients for disease prevention/health promotion based on a health risk assessment; (2) practice encourages patient participation in a program for healthy eating, (3) physical activity or (4) employee wellness; (5) practice sponsors or participates in school health clinic interventions; (6) clinicians encourage patients to discuss work, home, and social life; (7) select staff serve as health coaches for patients seeking to modify their lifestyle; (8) an organized follow-up program assists patients in managing medications at home; (9) practice has implemented group visits for patients with

Table 1. Mean number of patient engagement strategies among practices with and without multi-sectoral partnerships

	Practices with partner %(n)	Strategies ^a with partner	Strategies ^a without partner	Difference (95%CI)
Medical Partnerships				
Hospital	74.7 (53)	7.6	5.8	1.8 (– 0.6 to 3.6)
Insurer	64.8 (46)	7.4	6.6	0.8 (– 1.2 to 2.6)
Home Health	63.4 (45)	7.3	7.0	0.3 (– 1.8 to 2.0)
Nonmedical Partnerships				
Faith	26.8 (19)	8.9	6.5	2.4 (0.9 to 3.9) **
Public Health Department	23.9 (17)	8.9	6.6	2.3 (0.6 to 4.0) **
Transportation	21.1 (15)	8.3	6.8	1.5 (– 0.2 to 3.3)
School	14.1 (10)	8.3	6.9	1.4 (– 0.8 to 3.6)
Housing	9.9 (7)	10	6.8	3.2 (0.6 to 5.9) *
Parks & Recreation	7.0 (5)	7.4	7.1	0.3 (– 3.8 to 4.4)
University	7.0 (5)	8.2	7.0	1.2 (– 3.1 to 5.4)
Utility	7.0 (5)	9.0	7.0	2 (– 0.5 to 4.6)
Library	1.4 (1)	Too few to calculate		

* = *p*-value <0.05, ** <0.01, *** <0.001

a. List of 14 patient engagement strategies analyzed is described in results

diabetes or (10) cardiovascular disease; (11) practice has implemented patient-to-patient programs for diabetes or (12) cardiovascular disease; and (13) programs exist to improve family participation and support for patients with diabetes or (14) cardiovascular disease.

Partnerships (12 overall or 9 nonmedical partnerships) and patient-engagement strategies (14 strategies) were each summed to create composite scores. To examine bivariate associations, χ^2 -tests compared use of each partnership with use of each patient-engagement strategy (data not shown) and t-tests compared the use of each partnership sector with the number of overall patient-engagement strategies (Table 1). Finally, multivariate linear regression models estimated the extent to which (1) overall partnerships and (2) nonmedical partnerships were associated with the greater use of engagement strategies, controlling for the ACO with which each practice was affiliated since geography, contracting and organizational structures, or other ACO-based characteristics may influence the relationship between practices' partnerships and patient-engagement strategies. The study was approved by the Committee for Protection of Human Subjects, University of California, Berkeley (2014-086613).

RESULTS

Practices reported partnering with a mean of 3.2 of the 12 sectors (SD=2.1; range=1–9). Traditional medical partnerships—hospitals (74.7%), insurers (64.8%), and home health

agencies (63.4%)—were most common. Partnerships with parks and recreation (7.0%), universities (7.0%), utility companies (7.0%), and libraries (1.4%) were most rare (Table 1).

Practices also reported implementing a mean of 7.1 of 14 patient-engagement strategies (SD=3.4; range=0–14). The most commonly implemented strategies were encouraging participation in a physical activity program (88.7%) or a healthy eating program (85.9%). The least implemented strategies were group visits for cardiovascular disease (16.9%), school health clinic interventions (16.9%), and patient-to-patient programs for cardiovascular disease (11.3%).

In bivariate analyses, each partnership sector was associated with the implementation of 1 to 4 individual patient-engagement strategies ($p<0.05$). For example, hospital partnership was significantly associated with four individual patient-engagement strategies: disease prevention/health promotion referrals; healthy eating program participation encouraged; physical activity program participation encouraged; and discussion of work, home, and social life encouraged ($p<0.01$ for each strategy). The total number of implemented patient-engagement strategies did not significantly differ between practices with and without hospital partnerships, but was significantly greater for practices partnering with faith-based organizations, local public health departments, or housing agencies ($p<0.05$) (Table 1).

In multivariate analyses, controlling for ACO affiliation, each additional partnership was significantly associated with implementing more patient-engagement strategies ($\beta = 0.59$; 95% CI = 0.23–0.95). When analysis was restricted to nonmedical partnerships, the association increased ($\beta = 0.92$; 95% CI = 0.41–1.43) (Table 2).

Table 2. Association between total partnerships and patient engagement strategies, controlling for ACO affiliation

All Partnerships		
		<i>Observations = 71</i>
		<i>R² = 0.15</i>
		<i>F-statistic = 5.8, p-value = 0.005</i>
	B-Coefficient	95% CI
All Partnerships Composite	0.59	0.23 to 0.95 **
ACO Affiliation	1.36	– 0.23 to 2.95
Nonmedical Partnerships		
		<i>Observations = 71</i>
		<i>R² = 0.15</i>
		<i>F-statistic = 7.1, p-value = 0.002</i>
	B-Coefficient	95% CI
Nonmedical Partnerships Composite	0.92	0.41 to 1.43 ***
ACO Affiliation	1.43	– 0.13 to 3.00

* = p -value <0.05 , ** <0.01 , *** <0.001

IMPLICATIONS

These results provide the first evidence on the breadth of multi-sectoral partnerships that ACO-affiliated practices are developing. A greater number of multi-sectoral partnerships developed by practices were significantly associated with more extensive implementation of patient-engagement strategies, supporting hypotheses that multi-sectoral partnerships may enable and support patient-engagement strategies.

Restricting analyses to nonmedical partnerships strengthened the association between multi-sectoral partnerships and the implementation of patient-engagement strategies. In particular, practices partnering with faith-based organizations, local public health departments, or housing agencies tended to use more patient-engagement strategies than nonpartnering practices. These associations support the importance of nonmedical partnerships in promoting opportunities for patients to more fully engage in improving their health.

These results should be considered in light of some limitations. First, we are unable to make causal conclusions based on the cross-sectional study data. While the survey response was 100%, the sample was small (N=71 practices), and since all practices were affiliated with one of two ACOs, results may not generalize to other ACOs. Also, in an effort to keep the survey brief, information such as practice size, payer mix, patient demographics, and other organizational characteristics was not collected. The inclusion of these omitted variables in multivariate analyses might alter the association between multi-sectoral partnerships and patient-engagement factors. Future research examining the relationship of multi-sectoral partnerships and patient engagement should assess practice-level factors that might confound the associations examined. In addition, qualitative research could explore how multi-sectoral partnerships and patient-engagement activities are interwoven and where the greatest opportunities to address social needs can leverage partnerships to better activate and engage patients.

The movement to bridge traditional medical care and public health might be accelerated by efforts to support primary care practices in developing and using multi-sectoral partnerships to improve patient engagement. More evidence is needed to inform approaches for primary care practices to integrate multi-sectoral partnerships. The wide range in number of partnership sectors reported in these analyses (1–9) suggests that practices with fewer partnerships may be able to learn from highly partnered practices to increase partnership development. In addition, it may be that combinations of specific partnerships can be complementary and resources can be pooled for greater impact. Researchers, policymakers, and practice-based implementers have much to learn about optimizing multi-sectoral partnerships in a way that more effectively engages patients in managing their own care, improves the quality of care, and ultimately improves population health.

SUMMARY BOX

What is already known about the topic? Multi-sectoral partnerships have potential to help bridge medical care and population health improvement efforts. Accountable Care Organizations may be well positioned to leverage multi-sectoral partnerships for patient engagement, but little is known about the connection between practice use of partnerships and implementation of patient-engagement strategies.

What is added by this report? ACO affiliated practices vary in their use of multi-sectoral partnerships and implementation of patient-engagement activities. Nonmedical partnerships are rare, yet several sectors including faith-based organizations, local public health departments, and housing agencies were associated with greater use of patient-engagement strategies in bivariate analysis. Practices with a greater number of partnerships implemented a greater number of patient-engagement strategies, particularly for practices with more nonmedical partnerships.

What are the implications for public health practice/policy/research? The movement to bridge traditional medical care and public health might be accelerated by efforts to support primary care practice use of multi-sectoral partnerships to improve patient engagement. More evidence is needed to inform how primary care practices should integrate multi-sectoral partnerships to improve the reach and effectiveness of patient-engagement efforts.

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