Comparing Team Experiences of Engaging Patients with Diabetes and Cardiovascular Disease in Accountable Care Organizations

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Acknowledgements

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Interdisciplinary Primary Care Teams and Patient Engagement

- Institute of Medicine: recommends patients receive "opportunities to access appropriate …clinical knowledge, enabling them to be the "source of control" in making healthcare decisions"

- Interdisciplinary care teams are foundational to improving patient engagement, but little is known about the role of teamwork and team experiences of engaging patients.

Research Objective

To compare primary care team experiences of engaging patients with diabetes and/or cardiovascular disease (CVD)* in 8 practices highly involved in PA&E and 8 practices with limited involvement in PA&E.

- To compare team participation and relational coordination in high vs. low PA&E practices

- To compare patients' experiences of care and outcomes in high vs. low PA&E practices

* Excludes hypertension only

Conceptual Model

Study Hypotheses

- H1: High PA&E practices will have greater team participation and better relational coordination compared to low PA&E practices.

- H2: Team members of low PA&E practices will have a greater tendency to attribute engagement challenges to patients compared to high PA&E practices.

- H3: Patients experiences of care will be better in high PA&E practices.

- H4: Patient complexity will be no different in high vs. low PA&E practices.

Data Sources and Samples

- **Practice Survey of Patient Activation and Engagement Strategies**: 2 ACOs, 71 practices; October 2014 → 16 randomly sampled from top and bottom quartiles (8 from each of 2 ACOs)

- **Primary Care Teamwork Surveys**: 411 primary care physicians and staff, 34 items (Response Rate= 84%; January 2015 – March 2015)

- **Key Informant Interviews**: 48 primary care physicians, staff, and practice managers, 1 hour long, 44 of 48 were in person (May 2015).

- **Patient Experience and Patient-Reported Outcomes Survey**: 2,176 patients with diabetes and/or CAD (Response Rate= 51%; April 2015 – September 2015)

- **Administrative and clinical encounter data** from all survey respondents (January 2014 – December 2014).

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Survey Measures

Practice Survey

- 39-items assessing extent of use of patient engagement strategies

Team Survey

- Team Participation (Alexander et. al; 7-items)
- Relational Coordination (Gittell et al; 7-items x 8 roles)

Patient Survey

- Patient Activation Measure (Hibbard et. al, 13-item composite)
- CollaboRATE (Elwyn etl al., 3-item shared decision making experience composite)
- Patient Assessment of Chronic Illness Care (PACIC-11)
- PROs: Social Functioning (PROMIS), PHQ-4 (emotional), and physical (SF-12)

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Survey Analyses

- Descriptive statistics of patient engagement strategies used, team participation, relational coordination, patient experiences, PROs, and clinical outcomes, stratified by high vs. low PA&E practices.

- T-tests and chi-square tests to compare key measures for high vs. low PA&E practices.

Qualitative Data Analyses

- All interviews transcribed verbatim
- Transcripts summarized according to pre-established domains for feedback to practices.
- Transcripts coded using iterative coding by 2 separate coders
- Atlas.ti used to compare and contrast codes and content of transcripts from high vs. low practices and by occupation.
- Regular analysis meetings to reconcile differences in coding and introduction of new codes.

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PA&E Strategies Used by Practices

STRATEGY	# High PAE Practices	# Low PAE Practices	TOTAL
At-home Monitoring Devices/Tools	8	4	12
Patient Treatment Preferences in EHR	7	4	11
Motivational Interviewing Training (clinicians)	8	2	10
Health Risk Assessment (HRA) Results in EHR	8	2	10
Ongoing Monitoring of HRA Results	8	2	10
Medication Management Follow-up	8	2	10
Family Participation Programs (diabetes pts)	7	2	9
Health Promotion Program referrals based on HRA	8	1	9
Shared Decision-Making Impact Evaluation	8	1	9
Health Risk Assessment	8	0	8
Health Coaches	6	2	8
Motivational Interviewing Training (staff)	6	1	7

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PA&E Strategies Used by Practices (cont'd)

STRATEGY	# High PAE Practices	# Low PAE Practices	TOTAL
Peer to Peer Programs (diabetes pts)	6	0	6
Family Participation Programs (CVD pts)	4	2	6
Group Visits (diabetes pts)	6	0	6
Telehealth (diabetes pts)	6	0	6
Telehealth (CVD pts)	6	0	6
Patients on Quality Improvement Teams	5	0	5
Group Visits (CVD pts)	5	0	5
Patient Advisory Councils (diabetes pts)	4	0	4
Patients help govern the practice	4	0	4
Peer to Peer programs (CVD pts)	4	0	4
Shared Decision-Making Videos	4	0	4
Patient Advisory Councils (CVD pts)	3	0	3

Most Frequent Codes, by High vs. Low PA&E Key Informants

CODE	High PAE	Low PAE	TOTAL	High PAE	Low PAE
Empowering Self-Management	76	58	134	56.7%	43.3%
Team meetings/communication	56	45	101	55.4%	44.6%
Team Structure & functioning	47	53	100	47.0%	53.0%
Team Structure & functioning: Delegation of roles	50	47	97	51.5%	48.5%
Patient Outreach	49	42	91	53.8%	46.2%
PAE Challenges & Obstacles	40	41	81	49.4%	50.6%
Goal Setting with Patients	35	38	73	47.9%	52.1%
Roles and Responsibilities	35	30	65	53.8%	46.2%
QI Initiatives	34	26	60	56.7%	43.3%
Communication with Patient: Handouts	31	26	57	54.4%	45.6%

Team Structure Differs in High s. Low PA&E Practices

High PA&E

- Frequently referred to bounded teams or formal/high frequency interactions between roles

- Teams often work together to address a range of social issues (transportation, finances, social support, etc.)

- Teams connected to shared medical appointments

Low PA&E

- Varying conceptions of a "team":
  - Nurse follow-up calls
  - Referrals to related services
  - Doctor-Patient
  - Patient-Family

- Only one mention of addressing non-medical needs

- Some concerns about physicians engaging as team members

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Challenges of Patient Engagement in High vs. Low PA&E Practices

High PA&E

- Mentioned low engagement when asked to name challenges to PA&E, but generally not when discussing other topics

- Compared to low PA&E practices, more frequently described shared decision making as a strategy to overcome low adherence

Low PA&E

- Often mentioned low engagement as a challenge when discussing other topics

- Infrequently mentioned low engagement in connection with financial, social, or cultural barriers faced by patients.

Time & Resource Constraints

High PA&E

- Doctor: I run the Weight Loss Clinic here ...and, we really need to expand. We really need to grow more. Because one of the biggest factors that causes diabetes is obesity. (44:50)

- Nurse: everything that I do in the morning [huddle] is to improve access right now. It's a knife in my heart.(46:46)

Low PA&E

- Doctor: I really felt I had all these new tools to break through resistance and everything, in truth when you're seeing patients every 15 to 30 minutes, it was not practical (48:17)

- Nurse: they're expecting to have them do an additional 100 things, so it's not so easy to care about the patients' outcomes when you are expected to do so much. (49:61)

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Team Participation in High vs. Low PAE Practices

	High PAE Sites	Low PAE Sites	p value of diff
Team Participation Index	27.0	26.5	0.45
I frequently contribute information	4.1	4.0	0.30
I frequently interpret information	4.0	3.8	0.08
I can comfortably disagree with others	3.8	3.7	0.20
I feel free to participate actively	4.1	4.1	0.89
I usually propose alternatives	3.7	3.7	0.98
I usually evaluate alternatives	3.7	3.7	0.84
I frequently participate in making decisions	3.7	3.6	0.66

Relational Coordination in High vs. Low PA&E Practices

	High PA&E Sites	Low PA&E Sites	p value of diff
Relational Coordination Between Roles	3.94	3.71	0.08
Relational Coordination Within Roles	4.15	4.03	0.31
Relational Coordination, by role			
Primary Care Provider (MD/NP/PA)	4.3	4.1	0.05
Nurse	4.2	4.1	0.19
Medical Assistant	4.2	4.0	0.09
Receptionist	3.9	3.5	0.04
Social Worker	3.8	3.8	0.60
Dietician	4.0	4.0	0.83
Diabetes Educ.	4.0	4.1	0.75
Specialist Phys.	4.1	3.9	0.14

Patients Experiences of Care were Better in High PA&E Practices

	Overall	High PA&E	Low PA&E	
n	2,171	1,079	1,092	p-value
Patient Assessment of Chronic Illness Care-PACIC-11 (mean(SD))	56.4 (27.8)	57.6 (27.5)	55.1 (28.0)	0.04
CollaboRATE – Shared Decision-Making (mean(SD))	64.0 (28.0)	65.3 (28.3)	62.6 (28.3)	0.03

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Patient-Reported Outcomes were Similar for High vs. Low PA&E Practices

	Overall	High PAE	Low PAE	p-value (low vs. high sites)
n	2,171	1,079	1,092	
Patient Activation (mean(SD))	76.1 (14.8)	76.1 (15.0)	76.1 (14.7)	0.96
Physical Health- SF-12 (mean(SD))	77.3 (19.4)	77.0 (19.7)	77.5 (19.1)	0.52
Social Health- PROMIS (mean(SD))	69.9 (22.6)	69.1 (22.7)	71.0 (22.5)	0.11
PHQ-4 (mean(SD))	82.5 (24.5)	81.8 (25.0)	83.2 (24.0)	0.18

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Clinical Outcomes were Similar for High vs. Low PA&E Practices

	Overall	High PAE	Low PAE	p-value (low vs. high sites)
Intermediate Outcomes (ave value)	2,171	1,079	1,092	
HbA1c <8.0 (%)	76.9	75.1	78.8	0.07
Blood pressure < 130/80 if under 65; <140/90 if 65+ (%)	63.7	61.6	65.8	0.04
LDL-C < 100 (%)	66.8	65.9	67.7	0.42

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Summary

- High PA&E practices did <u>not</u> have greater team participation, but PCPs reported better relational coordination compared to PCPs in low PA&E practices *(Partial support for H1)*

- Team members of low PA&E practices had a greater tendency to attribute engagement challenges to patients compared to high PA&E practices *(supporting H2)*

- Patients' experiences of shared decision making and of chronic care were better in high PA&E practices compared to low PA&E practices *(supporting H3)*

- Patient complexity was similar for high and low PA&E practices, but patients of high PA&E practice actually had worse clinical outcomes on average *(partial support for H4)*

Limitations

- Cross-sectional data limits ability to examine dynamic and causal relationships, but 2nd wave just completed.

- Two ACOs, but substantial variation in PA&E activities and team structures

- Patient survey differential non-response could bias estimates

- Multivariate analyses comparing high vs. low not conducted, given multilevel nature of the data and modest sample size (n=16) at the practice-level.

Policy and Research Implications

- ACO-affiliated practices with high investment in patient engagement do not necessarily have better team participation and relational coordination than ACO-affiliated practices with low investment, but their patients report better experiences of chronic illness care.

- High team functioning may be foundational to chronic care, but insufficient for improving patient engagement.

- Efforts and training to improve teamwork will <u>not necessarily</u> translate into improved patient engagement and improved outcomes.

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