

The most used and most helpful facilitators for PACT implementation

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PACT is...

- Intended to improve quality and access to services through the provision of integrated, team-based care
- An expensive investment
 - VA allocated >\$800 million for the first 3 years of PACT implementation (through 2012)*
- Implemented with some variability between facilities
- A change embraced differently by different individuals and team members

*Chokshi et al., *Healthcare*. 2013

Facilitators of PACT implementation

- Literature suggests supporting resources are needed to ensure implementation success*
- What are “supporting resources”?
 - Facilitators
 - Activities to assist with and monitor PACT implementation
 - Policy guidance documents
 - Learning sessions
 - Meetings
 - Toolkits

*Landon et al., *Health Affairs*. 2010.

VA PACT Implementation Resources

Activity or Resource	Brief Description/Example
Local education sessions about PACT	Facility or team-level in-service about PACT
Learning collaboratives	Regional learning collaboratives to facilitate a common understanding of PACT and share experiences
Measurement tools	Use of patient data to evaluate improvement benchmarks
Teamlet huddles	Brief daily meetings before clinic to establish a game-plan for the day
Regular (non-huddles) teamlet meetings	Formal weekly/monthly meetings to identify areas for improvement and trend performance efforts
Information systems to provide data/feedback to staff	Primary Care Management Module
New approaches to scheduling	Improve same day access to providers by allotting appointments for emergent issues
QI methods	Plan-Do-Study-Act cycles for implementing process improvement
Disease registries	Diabetes, hypertension, and congestive heart failure registries
Online toolkit	Online suite of locally-developed quality improvement tools or innovations

Purpose of our study

1. Which of the 10 PACT resources/activities have VA primary care staff used or participated in?
2. Which of the 10 PACT resources/activities do VA primary care staff rate as being the most helpful (i.e., utility)?
3. How do helpfulness ratings vary according to PACT role?

Why do we care?

- Improve the targeted delivery of activities and resources
 - Get important resources into the hands of those not currently using them, where warranted
 - Begin to understand why certain individuals don't use or like resources
- Prioritize the development and roll-out of future activities/resources

POLL

What is your primary role in the VA?

- A. PACT Physician
- B. PACT Nurse
- C. Other Primary Care Role (e.g., Dietician, Pharmacist)
- D. Investigator or Research Staff
- E. Other

Poll question

- Which of the following PACT implementation activities or resources have you found **most** helpful? (select **one**)
 1. Local education sessions or regional/national learning collaboratives about PACT
 2. Measurement tools to help assess the PACT team's performance or quality improvement methods to conduct small tests of change
 3. Teamlet huddles or regular non-huddles teamlet meetings
 4. Information systems to provide timely data and feedback to staff on PACT
 5. None of the above or have not used any

Study methods

- Data from VA's 2012 primary care personnel survey (n = 6,464)
- Logistic regression
 - Respondents nested within facilities within parent medical center
 - 2-part mixed model
 1. Predict (odds ratio) activity/resource use or participation
 2. Predict (odds ratio) helpfulness of activities/resources
→Conditioned on use

Respondent characteristics

Variable	Number	Percent
Time working in VHA		
<6 months	162	2.5
6 months to 1 year	279	4.3
1 – 2 years	609	9.4
2 – 5 years	1504	23.3
5 – 10 years	1324	20.5
10 – 15 years	880	13.6
15 – 20 years	525	8.1
>20 years	805	12.5
Unknown	376	5.8
Primary job function in primary care		
Administrative	732	11.3
Dietician	88	1.4
LPN/LVN/CNA	1119	17.3
Mental health professional	110	1.7
Nurse care manager	1136	17.6
Nurse case manager	246	3.8
Other or unknown	100	1.5
Other RN	354	5.5
Pharmacist	375	5.8
Provider	1769	27.4
Social worker	178	2.8
Technician	257	4.0
Supervisory responsibility		
None	3858	59.7
Team leader	1735	26.8
Higher than team leader	545	8.5
Unknown	326	5.0

Resource utility (n = 6464)

Activity or Resource	Not helpful	Somewhat or very helpful	Don't know/not involved
Local (e.g., work station or parent-facility) education sessions specifically about PACT	17.7%	58.0%	24.2%
Regional or national learning collaboratives about PACT	17.1%	49.1%	33.9%
Measurement tools associated with PCMH to help assess your team's performance	21.2%	53.5%	25.3%
Teamlet huddles	7.7%	72.6%	19.6%
Regular teamlet meetings (other than huddles) to discuss process/performance improvement	8.5%	64.0%	27.6%
Information systems to provide timely data and feedback to staff on PACT activities	16.3%	53.1%	30.7%
New approaches to scheduling	18.3%	47.6%	34.1%
Quality improvement methods to conduct small tests of change	14.1%	28.3%	57.6%
Disease registries	11.2%	47.8%	40.9%
Online toolkit of care delivery and organization tools	14.1%	33.0%	52.9%

Unadjusted ranking of resource utility by PACT role, among raters

	Local education sessions specifically about PACT	National/regional PACT collaboratives	PCMH Measurement tools	Teamlet huddles	Regular (non-huddles) teamlet meetings	Information systems to provide data and feedback to staff	New approaches to scheduling	Quality improvement methods to conduct small tests of change	Disease registries	Online toolkit of care delivery and organization tools
Pharmacy	7	6	9	2	3	4	8	10	1	5
Provider	5	7	8	1	2	4	6	10	3	9
Nurse care manager	4	5	7	1	2	6	9	10	3	8
Nurse case manager	4	9	7	1	2	5	8	10	3	6
Administrative clerk	6	5	9	1	2	3	10	7	4	8
Clinical associate	5	6	6	1	2	4	8	10	3	9
Other RN	10	5	7	2	1	4	8	9	3	6

Significant predictors of resource use, summarized

1. Supervisors more likely to report resource use than non-supervisors
2. Longer tenure positively associated with use of most resources
3. PACT team members more likely to report resource use than non-PACT team members
4. RN care managers more likely to report resource use
5. Age, race, facility complexity not predictive of resource use

Significant predictors (ORs) of resource helpfulness among users (adjusted)

Covariate	Local PACT education	PACT collaborative	Measures	Teamlet huddles	Teamlet meetings	Information systems	Scheduling tools	QI methods	Disease registries	Online toolkit
Supervisor (vs. not)	0.76	0.72	0.79	0.74	0.72	0.84		0.72		0.76
Time worked in VA (ref. is < .05 years)										
0.5 - 1 years										
1 - 2 years	2.64	2.44	2.66			2.86				2.92
2 - 5 years	4.18	3.78	3.39		2.69	4.53	1.88	2.97	3.9	5.81
5 - 10 years	4.95	4.14	4.06		2.69	4.35	1.86	2.94	4.18	6.55
10 -15 years	4.48	4.22	2.97	2.44	3.1	3.9	1.88	3.63	3.67	6.49
15 - 20 years	4.85	4.26	3.56		2.94	4.06		3.1	3.67	5.93
>20 years	3.71	2.94	2.61			2.51				4.48
PACT team member (ref. is Yes)										
No										0.63
Not in Teamlet	0.66	0.7								
Not sure	2.03	2.64	3.35	2.8	2.27	3.78	2.59	3.03	2.53	3.06
Role in PACT (ref. is provider)										
Administrative	0.44	0.39	0.53	0.62	0.55	0.42	0.72	0.31	0.61	0.35
Dietician	0.05		0.14			0.19		0.11	0.14	0.05
LPN/LVN/CNA	0.51	0.58	0.58	0.64	0.53	0.54	0.73	0.45	0.48	0.47
Mental Health Prof.	0.39	0.44								0.35
Nurse Care Manager	0.56	0.69	0.72	0.55	0.55	0.68		0.59	0.63	0.55
Nurse Case Manager	0.55		0.63			0.61		0.49		0.44
Other	0.32	0.34	0.3			0.26			0.37	0.31
Other RN	0.39	0.57	0.54		0.45	0.51		0.49	0.64	0.48
Pharmacist	0.37	0.35	0.49			0.39	0.59	0.41	0.3	0.22
Social Worker	0.28	0.32	0.5	0.19	0.15	0.5	0.44	0.36		0.2
Technician	0.47	0.53	0.43			0.51	0.57	0.39		0.46
Time in primary care (ref. is >80%)										
<20%	0.59		0.44			0.59		0.52		
20% - 40%						0.54				
41% - 60%	0.58									
61% - 80%	0.61							0.61		

Significant predictors of resource helpfulness, summarized

1. Supervisors less likely to report resources as being helpful
2. Longer tenure positively associated with helpfulness ratings
3. PACT team membership not associated with helpfulness ratings
4. Administrative and clinical associates less likely than providers to find resources helpful
5. Time spent working in primary care and facility complexity not significantly predictive of helpfulness ratings

Summary

1. Teamlet huddles widely used and liked by primary care personnel
2. Quality improvement methods to conduct small tests of change were the least used and liked
3. PCMH measurement tools were widely used, but less often rated highly
4. Supervisors were more likely to have used resources, but less likely to rate them highly

Implications and future research

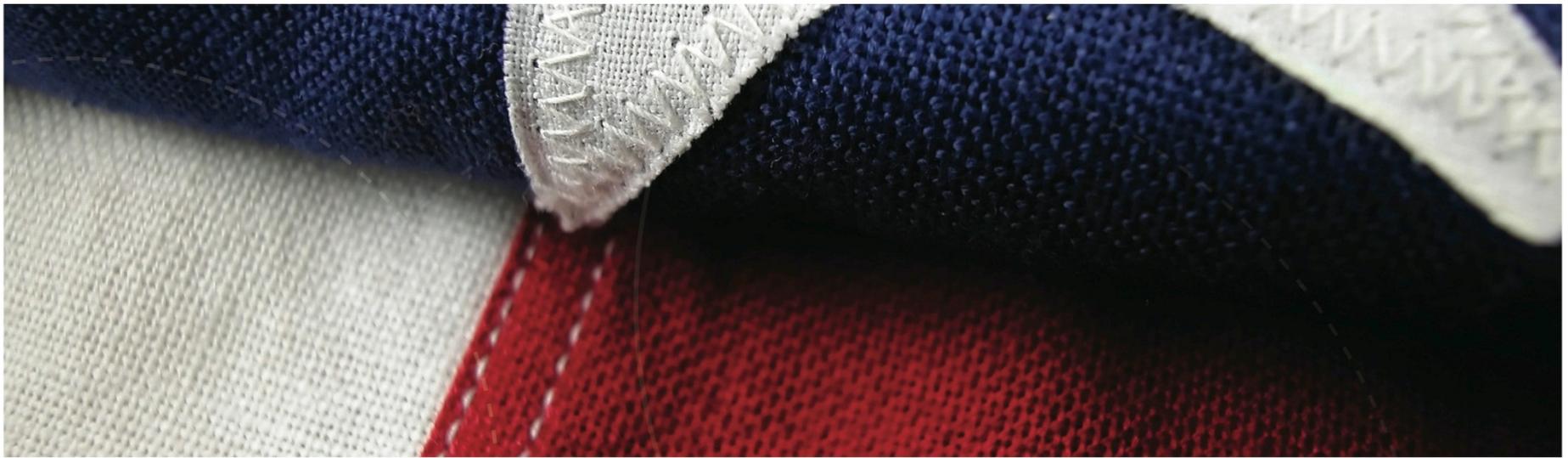
- Targeted outreach to those less invested in PCMH adoption (e.g., those with shorter tenure and in supportive roles) may be needed
- Policymakers and systems redesign staff may benefit from using similar models to maximize investments in and the uptake of key implementation resources

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Questions?

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Which facilitators and barriers have the strongest associations with clinic-level implementation of a patient-centered medical home in VA?

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Organization Function Working Group

Test association with medical home implementation

- Randy's analyses found:
 - Respondents generally cited use & helpfulness similarly (e.g., Teamlet huddles v. quality improvement small tests of change).
 - Some exceptions: e.g., PCMH measurement tools were widely used, but less often rated highly.
 - Respondent characteristics significant correlates, but rankings by helpfulness largely consistent
- Next: wanted to determine which facilitators, as well as barriers, associated w/ medical home implementation

Primary Care Personnel Survey included 19 barriers to delivery of optimal, patient-centered care

Difficulty accessing specialist care	Inadequate support for pt. behavior change
Poor communication w/ VA specialists	Recruiting & retaining providers
Poor communication, non-VA specialists	Recruiting & retaining other clinicians
Poor communication on inpatient care	Recruiting & retaining non-clinicians
Lack of control over one's schedule	Clinical reminder volume
Lack of responsiveness from one's team	Delivering opiate therapy
Inadequate time allotted to education	Time & effort to input notes
Inadequate time for follow-up care	Electronic medical record (CPRS) alert volumes
Patients have limited VA benefits	
Preferred medications difficult to obtain	

Construction of PACT Implementation Progress Index (PI2)

- Have also developed overall measure of implementation progress on the VA medical home (Patient Aligned Care Teams) (Nelson et al, JAMA Internal Medicine, 2014).
- Facility-level scores across 8 domains, roughly based on NCQA certification.
 - Variables were standardized at the facility level; sum of the standardized means for each variable
 - Clinic-level rankings generated for each domain
- PI2 score calculated for each clinic (n=913):
 - $PI2 \text{ score} = (\# \text{ of domains in the top quartile}) - (\# \text{ of domains in the bottom quartile})$
 - Range from 8 to -8: High implementation: 5 to 8; Low implementation: -7 to -5

Validation of the Pi2: Sites with Higher PI² Score had Higher Patient Satisfaction, Lower Staff Burnout & Lower ED Use†

PI ² scores	No. of clinics	Patient satisfaction (0 worst – 10 best)		Staff Burnout	ED Encounters
		Provider rating, CAHPS-PMCH/SHEP	Overall health care rating, SHEP	MBI*	Number per 1,000 patients
5 to 8	77	9.33/9.05	8.62	2.29	188
2 to 4	213	9.02/8.91	8.49	2.47	227
-1 to 1	346	8.67/8.73	8.32	2.56	286
-4 to -2	190	8.23/8.55	8.15	2.62	289
-7 to -5	87	7.53/7.52	7.87	2.80	245
		P < 0.001	P < 0.001	P=0.016	P<0.001

†Nelson et al, JAMA Internal Medicine, 2014.

*Maslach Burnout Inventory emotional exhaustion scale, range

Data Sources

PACT GOALS	PI ² domains	Source of data	# of items
Accessible, continuous and coordinated care	Access	CAHPS-PCMH CDW	11
	Continuity of care		3
	Coordination of care		8
Team-based care	Delegation, staffing, team functioning, working to top of competency	Provider survey	18
Patient-centered care	Comprehensiveness	CAHPS-PCMH	3
	Self-management support		2
	Patient-centered care and communication		6
	Shared decision making		2
Total			53

Methods

- Cross-sectional analysis, multinomial logistic & linear regressions
- Dependent variable: Clinic-level Pi2 covering 8 domains and incorporating administrative, clinical, patient survey and employee survey data (Nelson et al 2014).
- Independent variables: structured measures of
 - 10 facilitators of PACT implementation and
 - 19 barriers to patient-centered care
 - Adjusted for respondent characteristics previously found associated with facilitator use, and clinic-level workload and staffing measures.
- Each facilitator & barrier tested in separate model, w/ the site-level percentage of respondents who reported:
 - Highest rating of helpfulness (“very helpful”) for each facilitator
 - Availability of each facilitator
 - Highest rating of each barrier

Independent variables

- Web-based survey
- Fielded via e-mail from health care operations (a.k.a., 10N) through clinical leadership in Primary Care, Nursing, Pharmacy, Social Work, Nutrition
- Data collected from May 21, 2012 – June 29 , 2012
- We focused on 5,404 respondents in the 4 core teamlet occupations
 - Subset of 6,476 respondents Randy analyzed
- Approximately 25% response rate

Dependent variable: Pi2

OBSERVATIONAL COHORT STUDY in 2012:

- Patient surveys: n= 75,101 Veterans.
 - Consumer Assessment of Health Plans (CAHPS)-PCMH survey.
 - Survey of the Health Experiences of Patients (SHEP).
- PACT Primary Care Personnel survey: n= 5,404 primary care staff.
- Corporate Data Warehouse (CDW): n= >5.6 million Veterans.
 - Administrative and clinical data.
 - Clinical quality External Peer Review Program (EPRP).

Findings: Facilitators Very Helpful (odds ratios: we expect high $P_{i2} > \text{mid} > \text{low}$)

	Odds low v. mid P_{i2}	P-value	Odds high v. mid P_{i2}	P-value*
Local education sessions	.80	.25	1.59	.03
Learning collaboratives	.86	.43	1.21	.35
Measurement tools	.87	.47	1.22	.28
Teamlet huddles	.90	.48	1.37	.12
Regular team meetings	.77	.11	1.26	.19
Information systems	.76	.08	1.41	.08
New approaches to scheduling	.85	.37	1.36	.12
Quality improvement methods	.88	.63	1.62	.08
Disease registries	.76	.09	1.39	.06
PACT toolkit	1.01	.94	1.48	.10

Findings: Facilitators not available (odds ratios: lower = better PCMH implementation)

	Odds low v. mid Pi2	P-value	Odds high v. mid Pi2	P-value*
Local education sessions	.92	.63	.65	.14
Learning collaboratives	.98	.90	.83	.42
Measurement tools	1.46	.03	.42	.02
Teamlet huddles	1.34	.16	.36	.04
Regular team meetings	1.27	.14	.46	.03
Information systems	1.36	.05	.58	.07
New approaches to scheduling	1.09	.64	.81	.36
Quality improvement methods	1.25	.15	.96	.82
Disease registries	1.59	.02	.85	.49
PACT toolkit	1.02	.91	.67	.08

Findings: Barriers to PCMH (odds ratios)

	Odds low v. mid Pi2	P-value	Odds high v. mid Pi2	P-value
Difficulty accessing specialist care	1.29	.25	.76	.16
Poor communication w/ VA specialists	1.06	.78	.74	.20
Poor communication, non-VA specialists	1.03	.82	.62	.01
Poor communication on inpatient care	1.16	.38	.88	.68
Lack of control over one's schedule	1.40	.02	.61	.03
Lack of responsiveness from one's team	1.59	.01	.92	.66
Inadequate time allotted to education	1.02	.87	.73	.06
Inadequate time for follow-up care	1.25	.22	.68	.02
Patients have limited VA benefits	1.43	.05	.88	.51
Preferred medications difficult to obtain	1.19	.37	.94	.73

Findings: Barriers to PCMH (odds ratios)

	Odds low v. mid Pi2	P-value	Odds high v. mid Pi2	P-value*
Inadequate support for pt. behavior change	1.42	.04	.62	.01
Recruiting & retaining providers	1.58	.05	.65	.05
Recruiting & retaining other clinicians	1.70	.01	.73	.21
Recruiting & retaining non-clinicians	1.39	.05	.68	.10
Clinical reminder volume	1.17	.33	.83	.40
Delivering opiate therapy	1.09	.60	.65	.09
Time & effort to input notes	1.02	.91	.82	.38
Electronic medical record (CPRS) alert volumes	1.25	.19	.78	.35

Discussion

- In adjusted analyses, half of the facilitators and nearly half of the barriers remained significantly associated with PACT implementation.
- Local education sessions were the only facilitator that when found very helpful was associated with PCMH implementation.
- In terms of barriers, or lack of use/access to facilitators, the strongest associations with PACT implementation were with basic infrastructure issues related to hiring & retaining personnel, clinical IT and scheduling.
 - The highest PCMH sites were generally distinguished from medium PCMH sites by team huddles and regular meetings; support for behavior change; and communication with non-VA specialists.
- Basic infrastructure issues may reflect, more broadly, a more structured and supported environment for PACT.

Limitations

- VA PCMH simultaneously rolled out to over 900 VHA facilities in April 2010, w/ no gold standard for implementation of PCMH.
- Our measures of barriers and facilitators, and several of the Pi2 domain scores rely on self-report.
- The primary care personnel survey had a low response rate.
- Cross-sectional analyses; no assessment of change over time, which reduces our confidence in internal validity.
- Potentially limited generalizability.

Ways the VA Patient-Aligned Care Team (PACT) initiative is similar and dissimilar to other PCMH models

Similarities	Dissimilarities
Founded on team-based care, w/ providers working.	Electronic Health Record infrastructure already in place in VA
Emphasis on enhanced access (e.g., telephone, secure email)	Primary-care patients were largely already empanelled
Coordinated care across inpatient and outpatient settings or across primary and specialty care	No payment reform; VA owns/operates primary care clinics
Comprehensive care, including preventative, acute, and chronic care	Extensive quality improvement system in place, including use of system-wide quality metrics

Conclusions

- We found clinic-level, primary care personnel-reported ratings of facilitators & barriers were consistently associated with an index of PCMH implementation largely derived from independent measures.
- Basic infrastructure related to hiring & retaining personnel, clinical IT and scheduling, may be the most significant issues for initial progress.
- The most significant issues for clinics at the later stages of medical home development may be related to effective use of team meetings; obtaining support for behavior change; and effective communication with specialists outside of the delivery system.

Thank you, happy to answer questions

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