

Teamlet Structure and Early Experiences of Medical Home Implementation for Veterans

Hector P. Rodriguez, PhD, MPH^{1,2}, Karleen F. Giannitrapani, MS, MPH^{1,2}, Susan Stockdale, PhD^{2,3}, Alison B. Hamilton, PhD, MPH^{2,3}, Elizabeth M. Yano, PhD, MSPH^{1,2}, and Lisa V. Rubenstein, MD, MSPH^{1,2,4,5}

¹Department of Health Policy and Management, Fielding School of Public Health, University of California, Los Angeles, Los Angeles, CA, USA; ²HSR&D Center for the Study of Healthcare Innovation, Implementation, and Policy, VA Greater Los Angeles Health Care System, Los Angeles, CA, USA; ³Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA, USA; ⁴Department of Medicine, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA, USA; ⁵RAND Health, Santa Monica, CA, USA.

BACKGROUND: High functioning interdisciplinary primary care teams are a critical component of the patient-centered medical home. In 2010, the Veterans Administration (VA) implemented a medical home model termed the Patient Aligned Care Teams (PACT), with reorganization of staff into small teams (“teamlets”) as a core feature.

OBJECTIVE: To examine the early experiences of primary care personnel as they assumed new roles through reorganization into teamlets.

DESIGN: Convergent mixed methods study design involving semi-structured interviews and a survey; data were collected in 2011 and 2012.

PARTICIPANTS: We interviewed 41 frontline teamlet members (i.e., primary care physicians and staff) from three practices that were part of a PACT demonstration laboratory and examined clinician and staff survey data from 22 practices.

MAIN MEASURES: Semi-structured interview guide and clinician and staff survey questions covering the following domains: teamlet formation and structure, within-teamlet communication, cross-coverage, role changes, teamlet training, impact on Veterans, and leadership facilitation and support.

KEY RESULTS: Respondents had limited input into teamlet structure and indicated limited training on the PACT initiative. Guidelines delineating each teamlet member’s roles and responsibilities were emphasized as important needs. Chronic understaffing also contributed to implementation challenges and territorial attitudes surfaced when cross-coverage was not clear. In addition, several core features of VA’s medical home transformation were not fully implemented by teamlet members. Most also reported limited guidance and feedback from leadership. Despite these challenges, teamlet-based care was perceived to have a positive impact on Veterans’ experiences of

primary care and also resulted in improved communication among staff.

CONCLUSIONS: The PACT teamlet model holds much promise for improving primary care at the VA. However, more comprehensive training, improving the stability of teamlets, developing clear cross-coverage policies, and better defined teamlet member responsibilities are important areas in need of attention by VA leadership.

KEY WORDS: team structure; patient-centered medical home; practice redesign; primary care teams; veterans.

J Gen Intern Med 29(Suppl 2):S623–31

DOI: 10.1007/s11606-013-2680-1

© Society of General Internal Medicine 2013

BACKGROUND

Primary care (PC) practices across the United States are applying the principles of patient-centered medical home (PCMH) to honor patient preferences, coordinate care, and support patients with chronic illnesses.^{1,2} A core component of PCMH is high functioning interdisciplinary primary care teams. The early experiences of major PC practice transformation have further underscored the importance of fostering such effective interdisciplinary teamwork.³

In 2010, the Veterans Administration (VA) implemented a medical home model termed the Patient Aligned Care Teams (PACT). The overarching goal of PACT initiative was to promote a whole person approach to care, including actively coordinating Veterans’ medical health, behavioral health, and psychosocial needs. To achieve this goal, the VA approach was informed by Bodenheimer’s concept of a teamlet consisting of a primary care provider (PCP) supported by two health coaches.⁴ In PACT, the VA operationalized the teamlet as a PCP (either a physician, physician’s assistant, or a nurse practitioner), a registered nurse (RN) care manager, a licensed practical nurse (LPN), and a clerk or medical support assistant, for a total of 3.0

Electronic supplementary material The online version of this article (doi:10.1007/s11606-013-2680-1) contains supplementary material, which is available to authorized users.

Published online April 9, 2014

full-time equivalent (FTE) staff for each PCP FTE. Teamlets were also grouped together into larger teams that had one or more of the following extended team members: pharmacists, psychologists, psychiatrists, social workers, health coaches and dietitians. This implementation of teamlets as the foundation of PACT represented a major shift in VA staffing policies, which heretofore had emphasized large teams, or firms,⁵ with less staffing and fewer requirements for continuity of care.

Each teamlet FTE, i.e., four FTE teamlet members, are expected to care for a panel of 1,200 Veterans. The teamlets are responsible for all major patient care activities, including phone calls, scheduling, and check-in. Core features for improving patient-centered care in these teamlets under the PACT include: improving PCP-patient continuity by changing appointment booking practices,¹² providing health coaching for Veterans, conducting shared medical appointments (or group visits) for patients with diabetes and other chronic illnesses,¹³ increasing planned follow-up telephone encounters,¹⁴ improving panel management,¹⁵ improving appointment access by preventing unscheduled patient visits,¹⁶ and promoting secure messaging with Veterans.¹⁷ The VA also set several performance goals for PACT teamlets, including high PCP-patient visit continuity⁶ (77 % of patient encounters should be with their PCP in any given month), same-day urgent access and 7-day routine appointment access (70 % and 92 %, respectively), a minimum of 20 % of primary care encounters by telephone, and contact with at least 75 % of patients within two business days of hospital discharge.

In this paper, we examine the early experiences of teamlet members as they implemented new roles and responsibilities as part of the VA's PACT initiative. Based on semi-structured qualitative interviews in three VA practices, we identify common themes about the challenges and benefits of teamlet-based care as part of medical home implementation. We expect our formative findings to provide a basis for continuous improvement of PACT implementation.

METHODS

Design, Setting and Samples

We used data from the PACT evaluation conducted by the Veterans Assessment and Improvement Laboratory (VAIL), which is the PACT demonstration laboratory for the southern California and southern Nevada region. The VAIL evaluation employs a convergent mixed methods study design⁷ with concurrent qualitative and quantitative data collection.

Survey. To examine quantitative data on teamlet characteristics and whether these were similar to other

practices in the region, we analyzed data from a web-based questionnaire administered to all PACT PCPs and staff in the region between November 2011 and March 2012. The survey included 515 respondents from 22 practices in the region; 85 respondents were from the three demonstration practices selected for interviews.

Interviews. Individual teamlet member interviews were conducted between January and July 2012, approximately 18–24 months after the PACT initiative was launched. A quota sampling approach⁸ was used to select three individuals from each of the following five randomly ordered strata at each practice: PCPs \geq 0.5 FTE; PCPs < 0.5 FTE; RN care managers; LPNs; and clerks. For some strata, the supply of potential respondents was exhausted before a quota was achieved. The demonstration practices (Practices 1, 2, and 3) had 12, 13, and ten teamlets, respectively. We invited 68 individuals to participate and 41 were interviewed (response rate=67 %). Interviews were completed with 14 PCPs, ten RN care managers, ten LPNs, and seven clerks. Most interviews (38/41) were conducted in person and three were conducted by phone. The most common reasons for not participating were lack of time ($n=10$) and the perception of not being qualified to participate ($n=7$).

We developed a semi-structured interview protocol and refined the interview guide during the course of data collection to reflect emergent themes. The 45–60 min interview covered: teamlet formation, teamlet communication, role changes, team training for PACT implementation, experiences of PACT changes, PACT's impact on Veterans, and experiences of leadership facilitation and support. Most interviews (95 %) were recorded.

Analyses

Interview Data. We used a combination of deductive and inductive approaches to analyze teamlet interview data.⁹ We based the initial codebook on the interview guide, as well as independent open coding of five transcripts by two researchers. We applied these initial codes to a subset of four interviews (one per teamlet role). Coding was compared for consistency, and after consensus was reached, the codebook was revised. Each researcher then coded half the transcripts (or interview notes for unrecorded interviews) using ATLAS.ti software.¹⁰ Coding practices were regularly compared and discrepancies were addressed through discussion and clarification. We also analyzed codes by individual practices and noted differences in teamlet formation and structure, roles and responsibilities, communication, and performance feedback. Finally, we examined the use of core features of VA medical home implementation across the practices, including improving PCP continuity through redesigned appointment booking

protocols, health coaching roles for teamlet members, shared medical appointments, planned return telephone encounters, improving appointment access, and promoting secure messaging with patients.

Survey Data. We used chi-square statistics to assess differences in team and organizational factors reported by clinicians and staff from the three demonstration practices ($n=85$) and from the 19 non-demonstration practices ($n=430$).

RESULTS

Survey Results: Teamlet and Respondent Characteristics

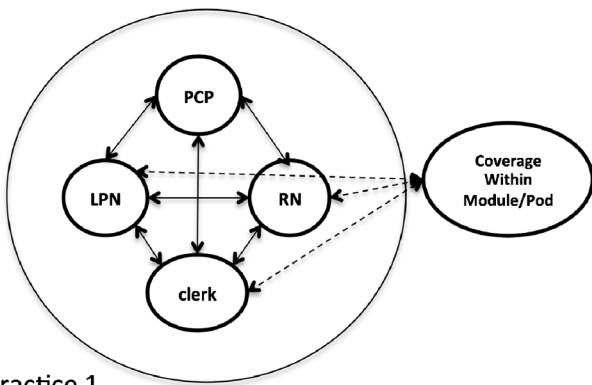
The mean number of PCPs at the three demonstration practices was 10.2 ± 5.7 and the ratio of non-PCPs to PCPs was 3.1 ± 0.3 . Approximately half of respondents reported

belonging to one teamlet and one-third belonged to three or more teamlets. Primary care practice and teamlet characteristics were similar at demonstration and non-demonstration practices. However, demonstration practice staff were slightly less likely to be male and non-Hispanic White than staff from non-demonstration practices. Information about teamlet and respondent characteristics is available in the online [Appendix](#).

Interview Results

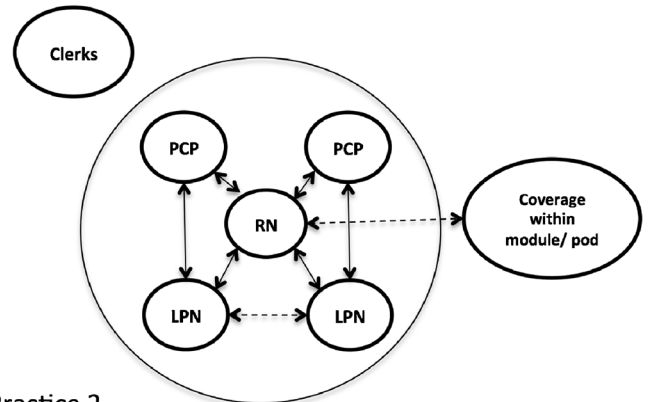
Teamlet Structure. Each of the three demonstration practices organized teamlets in a different way (Fig. 1). Teamlets in Practice 1 (when fully staffed) conformed to the teamlet structure described in national PACT guidance,¹¹ where a panel of 1,200 patients was cared for by a PCP (or multiple part-time PCPs), a consistent RN care manager, LPN, and clerk. In contrast, in Practices 2 and 3, one or two

a Single teamlet with underspecified coverage



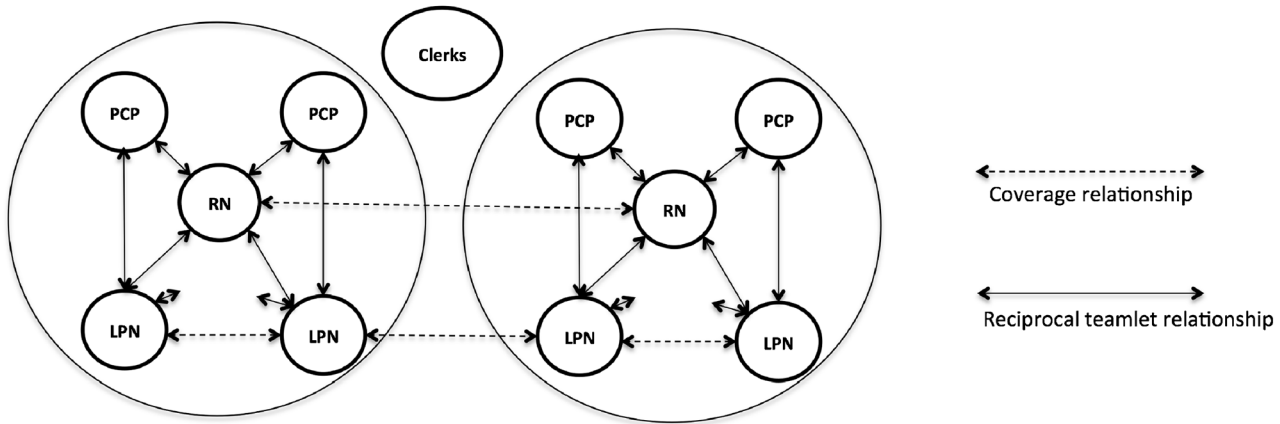
Practice 1

b Paired teamlets with centralized clerical support



Practice 2

c Paired teamlets with paired cross coverage for nursing roles



Practice 3

Figure 1. PACT teamlet structure: variation in membership and coverage relationships.

Note: Resident physicians were sometimes linked with primary care physicians. When linked to a teamlet, resident physicians sometimes managed a subset of a physician’s panel and worked closely with the PCP’s teamlet members.

clerks were assigned to registration desks in the front office, but the majority of clerks were centralized in appointment phone rooms and other non-patient care settings with little in-person interaction with Veterans. As a result, most informants in these practices did not consider clerks as members of teamlets. A typical PCP response was, “We don't have clerks assigned specifically to our teamlet. We interact with them minimally, I'd say.”

Teamlet Formation and Training. Practices also differed in how involved staff were in decisions about teamlet formation. In Practice 1 and 2, participants perceived that they did not have any influence on decisions about their teamlet's membership. In contrast, most Practice 3 participants reported that clinicians and staff were involved in decisions about their teamlet structure. Training for teamlet members on how to execute new roles and responsibilities was also not implemented in a systematic way, and a sizable proportion of teamlet members across the practices reported receiving no training about new PACT responsibilities. For example, an LPN expressed, “So we're doing things according to the way we think that they should be done. We don't have guidance, so we're kind of like the blind leading the blind. We need training.” Teamlet members who were trained reported wide-ranging experiences of PACT training; some found trainings extremely valuable, while others did not believe that concrete skills were imparted. In most cases, participants reported that they did not get trained with fellow teamlet members. One PCP said, “When they rolled it out, they didn't roll it out universally. A piece of us went to training over here and a piece went to training over there. Some of us never went to a training, but we were expected to make it all work.” When participants were able to receive training with their fellow teamlet members, they expressed challenges of making changes without the cooperation and participation of their other teamlets in the practice. As one clerk expressed, “All the people I went to the meeting with came back very motivated... Motivation died off after we saw the rest of the people [in the practice without training] not doing what we were trying to do.”

Teamlet Staffing. Interview participants at each practice indicated that some teamlets were chronically understaffed and incomplete, due to high staff turnover and challenges with the timely replacement of teamlet members. Although the clerk was the most commonly missing role (by design), participants at all three practices indicated that the least consistently staffed teamlet role was the RN care manager. Many informants noted the ripple effect of incomplete teamlets on team functioning and workflow. For example, one participant stated, “I think the PACT model, because each person has such a specific role, if one person is missing, the teamlet just really falls apart.” Staff also often emphasized that members of incomplete teamlets had to

compensate in order to make the teamlet model work. One RN care manager noted, “Some of the teamlets are not complete, so it's basically being handled by one LPN and a clerk because they don't have an RN care manager. So everything is actually being passed on to whoever's available on their team, which is quite difficult for them to handle....They're trying to work as a team but it's just difficult for them.”

The need to attend to immediate workflow or backlog issues often impeded the completion of important teamlet tasks, especially population management activities for RN care managers and LPN teamlet members. One LPN participant expressed, “If there's a shortage of LPNs checking patients, everybody gets pooled, even the RNs. You drop whatever you're doing, get everything and schedule because the doctors shouldn't be wasting their time waiting for their patient to be checked in.”

Cross-Coverage. Cross-coverage was one of the most frequently cited barriers to a successfully functioning teamlet. Teamlet members often had to negotiate coverage with departmental staff because of frequent shortages, and teamlet members were generally not paired with members of other teamlets for covering responsibilities for missing members (or “cross-coverage”). Many participants from Practice 1 (Fig. 1a) and Practice 2 (Fig. 1b) were unclear about cross-coverage policies. In contrast, most Practice 3 (Fig. 1c) teamlet members reported being paired with members of other teamlets for cross-coverage purposes. Importantly, there were no restrictions to implementing a paired teamlet coverage system, nor was it a requirement or explicit recommendation for implementing the VA teamlet model.

Many Practice 1 participants expressed that PACT performance goals, especially achieving high PCP–patient visit continuity,⁶ fostered territorial attitudes and behaviors, including a lack of willingness to provide care to patients outside of a teamlet's panel when approached for assistance by other practice members. This was also complicated by staff having limited support for negotiating coverage beyond the boundaries of their teamlet. Participants expressed frustration with the effort and time required to negotiate coverage or support in times of high demand. One LPN said, “And now it's like, ‘This is not mine, that's not mine, this is yours, that's mine,’ so everybody's territorial now. ‘That's not my patient. It's your patient.’ So we're not fairly treating the Vets because, you know, when they come in—‘Your patient is here,’ instead of, ‘There's a patient out there.’” Participants from Practices 1 and 2 indicated that cross-coverage was sometimes further complicated because of the substantial variation in individual teamlet member responsibilities across teamlets within the practice.

In contrast, Practice 3 informants reported more reliable cross-coverage (a paired approach) and indicated that they

could readily rely on practice members for help. As one LPN informant indicated, “*We have a pretty good working relationship, so we can ask each other for help. And I know, especially in our [team], our providers have different patient loads... So sometimes there’s coverage there from an LPN who doesn’t have a provider there that day.*”

Teamlet Roles and Responsibilities. The responsibilities of individual teamlet member roles varied considerably across the practices, due to differences in competing demands on clinician and staff time. Participants from all practices also expressed some uncertainty with roles and responsibilities of individual members within the VA teamlet model, and were unclear when new teamlet responsibilities would be required. Interruptions due to unscheduled visits (“walk-ins”) were also mentioned as a significant challenge to implementing new teamlet member responsibilities at all three practices. A PCP indicated that her teamlet RN was unable to focus on population management activities because her “*RN is attached to three providers, and so she just gets overwhelmed with all the messages...and then she takes care of all the walk-ins that come in. Then on top of that, she has a hypertension clinic that she has to run.*” In Practices 1 and 2, RN care managers were often unavailable to teamlets because of walk-ins that required triaging, or handling PCP phone messages and secure messages from the patient portal system (called “MyHealtheVet”). For example, one RN respondent shared, “*My clerk would like for me to have a full schedule of nursing appointments every day just like the providers. But that’s impossible, because who would be picking up the slack when I’m doing those nursing appointments?*”. In contrast, Practice 3 was more fully able to develop the RN care manager roles and responsibilities, possibly because the practice had a relatively smaller number of “walk in” patients compared to the other practices.

Use of Core Features of VA Medical Home by Teamlet Members. PCP continuity and panel management activities, including “schedule scrubbing” or proactively managing the PCP’s schedule to meet patients’ needs without a visit, were the most commonly adopted medical home strategies implemented by teamlets. There was limited implementation of health coaching responsibilities for LPNs, low use of telephone encounters among PCPs, and only one demonstration practice had implemented routine shared medical appointments for Veterans with diabetes (Practice 3).

Leadership Support and Feedback. Participants across the practices underscored the need for more guidance from leadership and ongoing training about how to implement the teamlet model. For example, when expressing what leadership can do to better support PACT implementation, a

PCP said, “*I think they need to talk about more specifically what people’s roles need to be in the teamlet process, because people aren’t aware of what the clerk is able to do or what the RN is supposed to be doing.*”. Many indicated a need for more frequent communication from leadership and transparency about future practice changes. A PCP challenged by local leadership’s communication of PACT changes expressed, “*We want more transparency. From my experience with PACT, they start something and, three months later, they want something new; like it’s always changing. I wish administration would be a little more open with us about what their agenda is. We really feel like we’re in the dark a lot of times.*” In addition, only Practice 1 reported receiving feedback from leadership on teamlet-level clinical quality and patient experience metrics. Respondents from Practices 2 and 3 were unaware of teamlet-level performance data.

Managing Staff Resistance to Change. Participants often expressed challenges with the volume of organizational change priorities within the VA. “*We’re just so overwhelmed with so many changes, so much additional responsibility, I don’t think they have time to even breathe to say, ‘Okay, let me see how it’s actually working.’*” Another common frustration was working with PC personnel that were unwilling to implement PACT strategies. When asked about how resistance to change might be overcome within the practice, a PCP indicated, “*I’m not really sure encouragement would do it. For example, there is a RN who consistently refuses to touch clinical reminders [automated, mandatory clinical actions]. And there has been nothing done about it. And even the RN manager just says, [The employee] is a Vet, what can we do?*” Of all teamlet members, PCPs most consistently expressed frustration with teamlet members not accepting changes required of PACT implementation.

The Perceived Benefits of the VA Teamlet Model. In spite of staffing challenges, many informants underscored the benefits of teamlet implementation on the working relationships of team members and clinical relationships with Veterans (Tables 1 and 2). For example, a clerk underscored the value of the VA teamlet model and role clarity, expressing, “*You have your own doctor, you have your own LPN.... with the PACT system, it runs smoothly because we are all defined—what’s your role, what’s expected from you, and we’ve learned to work cohesively within a team within the bigger team.*” Teamlet members overwhelmingly perceived the impact of PACT on Veterans to be positive.

Another benefit noted by PCPs was that teamlet members developed continuous relationships with a designated panel of Veterans. Referring to the improved patient and team member relationships resulting from the implementation of the VA teamlet model, a PCP noted, “*My nurse has been*

Table 1. Teamlet Formation, Communication and Feedback, and Member Perceptions of the Impact of the Teamlet Model, by Demonstration Practice

	Practice 1	Practice 2	Practice 3
Teamlet Formation			
Clinicians and staff were involved in decisions about their teamlet's membership*	Some	Most	Some
Teamlet Communication and Feedback			
Consistent use of daily teamlet huddles [†]	No	No	No
Instant messaging for routine teamlet communication [†]	Yes	Some	Yes
Planned team/practice meetings (at least monthly) [†]	Yes	Some	Yes
Clinical and patient experience performance feedback at the teamlet level [†]	Yes	No	No
Perceived Impact of the VA Teamlet Model			
Perceptions of the impact of the VA teamlet model on staff experiences of work [‡]	Negative	Mixed	Positive
Perceptions of the impact of the VA teamlet model on Veterans' experiences of care [‡]	Positive	Positive	Positive

Key informant interviews of primary care clinicians and staff from the three demonstration practices (n=41)

Categorization decisions are based on an analysis of patterns of responses within practices

*Most= $\geq 60\%$ of informants at the practice reported; Some=10–60 % of informants at the practice reported

[†]Yes= $\geq 60\%$ of informants at the practice reported; Some=10–60 % of informants at the practice reported; No= $< 10\%$ of informants at the practice reported

[‡]Positive= $\geq 50\%$ of informants at the practice reported primarily positive impact; Negative= $\geq 50\%$ of informants at the practice reported primarily negative impact; Mixed=No shared perspective about the impact of PACT emerged

around for a while and she knew most of the patients, especially the repeat visitors, but [with the VA teamlet model] some of them she really got to know well and that made it faster... for both of us. It improved the efficiency quite a bit.”

Communication among Teamlet Members. Although brief daily meetings that included all teamlet members (or “huddles”) as envisioned under the PACT model were not routinely implemented by any of the three practices (Table 2), most participants believed that implementing the VA teamlet model improved communication among PC personnel. Prior to PACT, many staff indicated supporting multiple PCPs and not establishing strong relationships with patients. As one RN expressed, “Before I had 11 doctors. . . Now I have only 1,300 patients and I have only two doctors and I have two LPNs assigned to me. So the role is completely different because I coordinate the care for them with the doctors.” By having repeated interaction with the same individuals, most felt there was improvement in communication. This occurred mostly as informal meetings between two teamlet members (the PCP and LPN, for example) between individual clinical encounters. Some participants also mentioned that the teamlet's communication approach was driven by their PCP's preferences. For example, some reported using instant messaging to communicate operational issues, which they preferred as a “leaner” form of communication than in-person meetings, especially for teamlet communication in-between clinical encounters.

DISCUSSION

In 2010, the VA implemented a major reorganization of how primary care was delivered. This PACT initiative was

designed to move the VA towards a PCMH model of care. Our qualitative study highlights some of the early challenges that were experienced as a result of this reorganization. Our main finding is that embarking on such a large-scale transformation of personnel roles and responsibilities depends heavily on well-defined and clear teamwork processes and supportive policies. Major early challenges included limited input from staff about their teamlet structure at two of the practices, and the perception at all three practices of haphazard training. These findings underscore the need for a more participatory approach in planning a large-scale organizational transformational change and a more robust and systematic approach to training prior to implementation.

Teamlet staffing and, in particular, clinician and staff turnover were cited as major challenges to successful teamlet function by most respondents. When teamlet membership was incomplete and unstable, the new roles and responsibilities for improving care under the PACT initiative were challenging to implement. Indeed, territorial behavior between teamlets often emerged when cross-coverage policies were not clear and members needed to spend time on patients who were not perceived as their primary responsibility. Other operational workflow problems, especially unscheduled patient visits, also impeded the execution of new responsibilities. In contrast, when the teamlets were complete and members felt supported by clear coverage policies, they were able to more effectively assume new responsibilities for patient care. They also spent less time negotiating coverage during times of high demand or limited resources. These findings suggest that much closer attention to issues of high turnover, timely replacement of teamlet members, and practice coverage policies is a major challenge warranting much closer attention by VA leadership.

Table 2. Use of Core Features of VA Medical Home by Teamlet Members

Core Feature	Use Among Teamlet Members	Examples of Implementation From Teamlet Members' Perspectives
Improving PCP continuity through redesigned appointment booking protocols	Most participants indicated that ensuring a match between a patient and their PCP for clinical encounters was a high practice priority with PACT	“Because of continuity of care, [Veterans] actually like it better because they only see one PCP. Whatever problems they have, they only have to deal with one person. Before PACT, every single time a Vet came in, they had to start over by telling providers their conditions. Now with PACT, the doctors know a patient’s history from the beginning to until the most recent appointment.”
Health coaching	Health coaching was generally described as being built into the existing workflows, rather than in the form of encounters with specialized coaches, where intensive self-management support was provided.	“My LPN definitely speaks to the patient about ways to better their health. She does that when she sees them, when she checks them in, but also through secure messaging. So I know that some of that [health coaching] takes place.”
Shared medical appointments	One practice had routine self-management education groups, but the use of shared medical appointments were limited because of their complex implementation requirements and perceived limited value.	“Veterans usually don’t want to just be seen for one thing. So doing the group visit [shared medical appointment] would only address that one issue and then they would have another list of, “Oh, and while I’m here, by the way, I have this, this and this.” And if you bring in a group, it’s not going to work. They’re all going to want more than just that one issue addressed. That’s the big drawback of why no one thought group visits were going to be beneficial.”
Planned return telephone encounters	RN care managers sometimes used planned follow-up telephone encounters as a strategy to ensure high-risk patients were monitored carefully. No PCP participants reported using planned follow-up telephone encounters. One practice was beginning to plan for a pilot implementation.	“I have not done that, but my nurse sometimes does. My nurse follows up. And that’s another thing I hope would be implemented is for the nurse calls to count [as a continuous visit]. We’re supposed to do it as a mini team or as a team. Why does it have to be the doctor who calls or the provider? It shouldn’t be.”
Schedule “scrubbing”	Proactively managing PCP panels and schedules to address Veteran’s concerns without a visit was a common teamlet activity.	“When we scrub, what we’ll do is we’ll gather the patient information for patients that need to be seen or prioritized [due to their specific needs]. We’ll talk about each patient’s existing conditions and then the PCP will let us know exactly what needs to be done. Some doctors will call patients directly and, or give them to the nurses to take care of.”
Secure messaging (MyHealthVet)	Informants generally reported infrequent use. Authentication of Veterans for patient portal use has been challenging. Once authenticated, participants indicated that Veterans appear to use secure messaging infrequently.	“They’re forgetting to do the final step and so there’s a few Vets that signed up, but they’re not on it yet because they say they can’t get into the system—and they said they know the step but I know they haven’t done the final step.”
Improving appointment access	Participants at all practices indicated walk-in volume reduced appointment access and interrupted workflow. Some teamlets developed patient follow-up strategies to address the problem.	“We have a recall list— people who haven’t been seen in forever. These are the potential walk-ins because they haven’t been here in a long time. So I call ten people per day.... ‘Haven’t seen or talked to you in a little while. Is everything okay? If you need to come in and see us for anything, here are our phone numbers. Please call and make an appointment. Try not to walk in because if you walk in, you might not get seen in a timely manner.’”

Key informant interviews of primary care clinicians and staff from the three demonstration practices (n= 41)

While having the full complement of teamlet staff and better defined paired coverage policies may foster increased relational coordination of patient care responsibilities,^{12–14} other interim approaches are also possible. For example, in Bodenheimer’s teamlet model, the two health coaches share the same scope of responsibilities and work together with the PCP to conduct a range of patient care activities, including agenda-setting with the patient,¹⁵ ordering routine services, tracking history, documenting the PCP’s findings, recapitulating the PCP’s advice, setting goals with the patient, and tracking patient history.⁴ In contrast, in the VA

teamlet model, each member is assigned unique roles and as a result, cross-coverage challenges are more frequent when there are staffing shortages. Thus, redesigning and retraining each teamlet so that members can cross-cover for each other may be another approach that can help address the repeatedly cited problems of staffing shortages and coverage.

Effective interdisciplinary primary care team approaches are a critical component of advancing patient-centered care.^{16,17} In addition, PCMH demonstrations outside the VA suggest that medical home implementation and

improving primary care teamwork may yield substantial benefits to job satisfaction,^{18,19} better patient experiences,²⁰ and lower costs of care²⁰ in the VA. Thus, it was encouraging that despite the many staffing and operational challenges, most respondents also felt that the PACT initiative fostered continuity of patient care and improved ongoing relationships with Veterans. Improved communication among clinicians and staff that resulted from teamlet formation was another perceived benefit of the PACT transformation.

Our results should be considered in light of important limitations. First, our study was limited to three demonstration practices. However, our survey data suggests that the three sampled practices have similar characteristics and features as other VA practices in the region. Second, we did not conduct a practice-based analysis, or relate practice-specific structure and organization to processes and challenges. Instead, we tried to strike a balance between drawing connections across the themes related to teamlet structure and implementation, while ensuring that we adhered to our promise to participants that their feedback would be presented in a way that would maintain the anonymity of practices. Lastly, our interviews with frontline workers generated very candid responses about successes and challenges of teamlet implementation. However, their perspectives may substantially differ from the views of leadership at each practice.

In summary, our analysis revealed areas for potential improvements, primarily centered on staffing and coverage of teamlets. Members feel they can more effectively assume their new roles and responsibilities when they have stable staffing, clearly defined roles and responsibilities, well-defined cross-coverage policies, and when they are supported by regular training. Until these issues are addressed, additional flexibility in local teamlet structures may be necessary to ensure that practices can effectively adapt to local resource constraints and demands. The perception by clinicians and staff that there is limited guidance and feedback from leadership may also be a contributing factor for these ongoing operational barriers. Despite these challenges, most clinicians and staff perceived important benefits to patient care under the PACT initiative. This finding bodes well for the long-term success of the program.

Acknowledgements:

Contributors: We would like to thank John McElroy for his coordination of the key informant interviews, Jill Darling, MSHS, for her work on the human subjects application and with institutional review board (IRB) interface, Lisa Meredith, PhD, for leading the collection of the clinician and staff surveys that was central to the analyses, and John Ovreteit, PhD, and Ken Wells, MD, MPH, for critical review of the manuscript. We are grateful for the interview and survey participation of primary care clinicians and staff in VISN 22.

Funders: This work was undertaken as part of the Veterans Health Administration's PACT Demonstration Laboratory initiative, supporting and evaluating VA's transition to a patient-centered medical home. Funding for the PACT Demonstration Laboratory initiative is provided by the VA Office of Patient Care Services. Dr. Yano's effort was funded by a VA HSR&D Service Senior Research Career Scientist award (Project #05-195). The views expressed within are solely those of the authors, and do not necessarily represent the views of the Department of Veterans Affairs or the United States government.

IRB Approval: The study protocol was approved by the Institutional Review Boards of the Greater Los Angeles VA Healthcare System (2011-070725 and 2011-030295) and the RAND Corporation (HSPC Project ID: 2010-0870).

Prior Presentations: None.

Conflict of interest: The authors declare that they do not have a conflict of interest.

Corresponding Author: Hector P. Rodriguez, PhD, MPH; Department of Health Policy and Management, Fielding School of Public Health, University of California, Los Angeles, 650 Charles E Young Drive South, Los Angeles, CA 90095, USA (e-mail: hrod@berkeley.edu).

REFERENCES

1. Jackson GL, Powers BJ, Chatterjee R, Prvu Bettger J, Kemper AR, Hasselblad V, et al. The patient-centered medical home: a systematic review. *Ann Intern Med.* 2013;158(3):169-78.
2. Hoff T, Weller W, Depuccio M. The patient-centered medical home: a review of recent research. *Med Care Res Rev.* 2012;69(6):619-44.
3. Crabtree BF, Nutting PA, Miller WL, McDaniel RR, Stange KC, Jaen CR, et al. Primary care practice transformation is hard work: insights from a 15-year developmental program of research. *Med Care.* 2011;49(Suppl):S28-35.
4. Bodenheimer T, Laing BY. The teamlet model of primary care. *Ann Fam Med.* 2007;5(5):457-61.
5. Yano EM, Simon BF, Lanto AB, Rubenstein LV. The evolution of changes in primary care delivery underlying the Veterans Health Administration's quality transformation. *Am J Public Health.* 2007;97(12):2151-9.
6. Rodriguez HP, Marshall RE, Rogers WH, Safran DG. Primary care physician visit continuity: a comparison of patient-reported and administratively derived measures. *J Gen Intern Med.* 2008;23(9):1499-502.
7. Creswell JW, Clark VL. *Designing and Conducting Mixed Methods Research.* 2nd ed. Thousand Oaks, CA: SAGE Publications, Inc.; 2010.
8. Mainous AG 3rd, Hougland JG Jr. Survey sampling issues in primary care research. *Fam Med.* 1991;23(7):539-43.
9. Fereday J, Muir-Cochrane E. Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development. *Int J Qual Methods.* 2006;5(1):80-92.
10. ATLAS.ti (version 6). Scientific Software Development; 2009.
11. Nelson K. The patient centered medical home in the veterans health administration. *Am J Managed Care.* 2013.
12. Gittell JH, Godfrey M, Thistlethwaite J. Interprofessional collaborative practice and relational coordination: improving healthcare through relationships. *J Interprof Care.* 2012.
13. Havens DS, Vasey J, Gittell JH, Lin WT. Relational coordination among nurses and other providers: impact on the quality of patient care. *J Nurs Manag.* 2010;18(8):926-37.
14. Gittell JH, Fairfield KM, Bierbaum B, Head W, Jackson R, Kelly M, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay: a nine-hospital study of surgical patients. *Med Care.* 2000;38(8):807-19.
15. Lang F, McCord RS. Agenda setting in the patient-physician relationship. *JAMA.* 1999;282(10):942-3.
16. Bodenheimer T. Primary care—will it survive? *N Engl J Med.* 2006;355(9):861-4.

17. **Bodenheimer T, Chen E, Bennett HD.** Confronting the growing burden of chronic disease: can the U.S. health care workforce do the job? *Health Aff (Millwood)*. 2009;28(1):64–74.
18. **Reid RJ, Fishman PA, Yu O, Ross TR, Tufano JT, Soman MP, et al.** Patient-centered medical home demonstration: a prospective, quasi-experimental, before and after evaluation. *Am J Manag Care*. 2009;15(9):e71–87.
19. **Friedberg MW.** The potential impact of the medical home on job satisfaction in primary care. *Arch Intern Med*. 2012;172(1):31–2.
20. **Reid RJ, Coleman K, Johnson EA, Fishman PA, Hsu C, Soman MP, 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(5):835–43.