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Frontline Experiences of a Practice Redesign to Improve Self-Management of Obesity in Safety Net Clinics

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Abstract

Background—Teamlets of physicians and medical assistants may help improve obesity management in primary care settings. We aimed to understand the barriers and facilitators of implementing a teamlet approach to managing obesity in three safety net clinics.

Methods—Key stakeholder interviews (n=21) were conducted both during early implementation of practice change and six months later; Patient surveys (n=393) examined obese patient activation and health status.

Results—Insufficient program resources and limited patient engagement due to external factors were implementation barriers, despite fairly high patient activation.

Discussion—Staff members need time and resources to execute new responsibilities to support obesity management in safety net settings. Due to high turnover, multiple supporters may improve sustainability.

Keywords

practice redesign; safety net clinics; medical assistants; teamlets; self-management

BACKGROUND

The shift to chronic care from episodic care in the United States requires a primary care system redesign to more effectively meet the needs of patients receiving care in resource-constrained safety net clinics.(Coleman, Austin, Brach, & Wagner, 2009; Rothman & Wagner, 2003) The Chronic Care Model (CCM) describes six delivery system components to optimize care for patients with chronic conditions, including delivery system redesign and self-management support.(Coleman et al., 2009; Pearson et al., 2005) Most studies of CCM

implementation assess the impact of one or two CCM components but do not assess the relative effectiveness of each of the six components in improving patient outcomes and quality of care.(Stroebel et al., 2005; Tsai, Morton, Mangione, & Keeler, 2005; Wagner et al., 2001) Of these components, changes in delivery system design and self-management support are most consistently associated with improving patient outcomes and quality of care (Tsai et al., 2005) and hold strong potential for improving patient health behaviors central to managing obesity.

Previous studies examined systematic changes to support patient self-management, including health coaching and training providers about patient goal-setting and behavior change.(Abramowitz, Flattery, Franses, & Berry, 2010; Bennett et al., 2009; Chen et al., 2010; Cifuentes, 2005; Levinson, Lesser, & Epstein, 2010; Ngo, Hammer, & Bodenheimer, 2010), but the use of these strategies for managing obesity remains largely unexplored. We compare the implementation of a primary care practice redesign to improve patient self-management of obesity across three safety net clinics in Northern California in 2012. The practice change was guided by Bodenheimer's teamlet model of primary care (Bodenheimer & Laing, 2007), which employs other primary care staff to provide non-clinical services outside of the formal patient visit, such as assistance with self-management. Safety net physicians have reported a lack of time to work with patients on setting health goals, especially chronically ill patients, noting that other primary care team members could step in.(MacGregor et al., 2006) We aim to clarify the facilitators and barriers of implementing a practice change to improve self-management of obesity within safety net clinics.

METHODS

Study Design

We conducted interviews among clinic staff to assess experiences of the practice redesign during early and late implementation. To contextualize these interviews, we surveyed patients prior to the redesign to assess differences in sociodemographic characteristics, patient activation, and health behaviors. The study was approved by the Institutional Review Board (IRB#11–002771-AM-00007).

Practice Redesign

Clinic leaders trained all staff and clinicians on motivational interviewing techniques to support obese patients in setting goals to improve physical activity. The clinics also piloted a health coaching program to expand medical assistant (MA) roles in patient care by pairing them with obese patients to jointly develop action plans to achieve patient goals. The MAs would use protected time to monitor and guide patient progress through weekly phone calls over 10 weeks. A local quality improvement (QI) and chronic illness care advocacy organization helped to create a staff coaching handbook and program marketing materials, including printed materials for patients and making buttons for staff to wear regularly. Prior to the implementation of the practice redesign, clinic staff attended training sessions that emphasized: 1) benefits of exercise, including proper terminology to discuss obesity with patients; 2) patient resources, including handouts, websites, and local places; 3) agenda setting and goal setting with patients; 4) patient readiness to change and action plans; 5)

techniques for motivational interviewing; 6) health coaching logistics; and 7) strategies and troubleshooting to help patients reach their goals.

Sampling

Patient Survey—We surveyed a random sample of mildly obese (body mass index: 30–34) adult patients (n=393) that had at least two clinic visits during the six months prior to practice changes and were likely exposed to the early implementation. We stratified patient sociodemographics, patient activation, and health behavior factors by clinic to assess differences in patient characteristics. Chi-square analysis and ANOVA models were estimated to examine differences by clinic ($p < 0.05$).

Staff Interviews—Research staff randomly selected interviewees by staff role until each role was represented for each practice: (1) administrator/ manager, (2) physician/ nurse practitioner, (3) MA, (4) other non-physician clinician, such as a diabetes care manager or social worker.

Data Collection

Patient Survey—To encourage responses, initial mailings included a $10 gift card and non-respondents received two follow-up reminders. The questionnaire included measures on patient experiences with clinicians, exercise behavior, patient activation measures [using the Patient Activation Measure-13 (PAM-13)] (Hibbard, Mahoney, Stockard, & Tusler, 2005), general health [using the Medical Outcomes Study 12-Item Short Form Version 2 (SF-12v2)] (Frosch, Rincon, Ochoa, & Mangione, 2010), diet using questions from the "Starting the Conversation" measure (Paxton, Strycker, Toobert, Ammerman, & Glasgow, 2011), self-reported chronic conditions, and demographics.

Staff Interviews—Semi-structured interviews were conducted in-person and by telephone during the early stages of implementation and again six months later. Each participant received a $10 gift card for each completed interview. Interviews ranged from 30–60 minutes and topics included practice redesign and health coaching program implementation experiences, caring for overweight or obese patients, team development activities, and practice characteristics. The same interviewer conducted the baseline and follow-up interviews.

Data Analysis

Patient Survey—We stratified patient sociodemographics, patient activation, and health behavior factors by clinic to assess differences in patient characteristics across participating practices. Chi-square analysis and ANOVA models were estimated to examine differences by clinic ($p < 0.05$).

Staff Interviews—All interviews were recorded and transcribed. The codebook was initially developed based on the key informant interview guide, which focused on areas of change to support obese patient self-management, including teamlet activities, patient needs, staff support for patients, and staff needs. Three researchers used qualitative research software ATLAS.ti to independently code two interviews each from a subset of three

interviews (one per clinic), so that two coders reviewed each transcript. The Qualitative Data Analysis Program's Coding Analysis Toolkit, web-based software compatible with ATLAS.ti, compared paired transcripts to calculate kappa scores for intercoder reliability. Due to low initial kappa scores, the coders discussed each coding discrepancy to reach consensus and revised the codebook. ATLAS.ti was used to code the transcripts and then analyze patterns of practice change implementation for similarities and differences across clinics and across clinic roles.

RESULTS

Patient Survey

The survey had an adjusted response rate (RR) of 55.3% (n=198) after undeliverable mailings (n=33) were excluded (unadjusted RR: 50.4%). Overall, 70% of the mildly obese patients were female, 44% reported having at least three chronic conditions, the most common being hypertension, high cholesterol, and diabetes (Table 1). The average patient age was 49 (SD=10). More than half primarily spoke a language other than English at home and 42% had less than a high school education. When comparing clinics, there are significant differences in age, educational levels, physical health, and the length of time they have been visiting the clinic (see Table 1), although mean patient activation levels were similar.

Staff Interviews

A total of 21 semi-structured interviews were conducted of 12 unique participants (only nine participated at follow-up). Out of 56 total staff members, 20 individuals were contacted for interviews and 12 individuals accepted and completed interviews (60 percent recruitment rate). Among non-participants that were contacted, 75% of individuals did not respond and 25% declined. Physicians and nurse practitioners were the most difficult to recruit (44% recruitment rate).

During baseline interviews, only Clinics A and B had implemented the teamlet model while Clinic C's leadership waited to first develop staff health coaching skills (see Table 2) in order to later role model healthier behaviors to patients. Clinics A and B later experienced the departure of a program champion, clinic manager, and some health coaches, which made it difficult to sustain practice changes (see Table 2). In follow-up interviews, participants noted more tension among practice members about the practice redesign. One clinician noted, *"…and I think we are more and more stressed. I think all of us just try to get through the day, and I think it's been tough. I think the few moments we think about [health coaching], it's great, and we say, 'oh yeah, we're going to try to talk about patient-centered [care]' but it hasn't been a focus. It just hasn't."* Barriers and facilitators to practice change were identified during early and late implementation as well as across staff roles (see Table 3).

Team Activities

Early versus Late Implementation—Team communication strategies such as team huddles, daily brief structured team meetings, were not consistently used in either early or

late implementation. One clinic's respondents all described team huddles as very helpful for implementing the practice change, while respondents at the other two clinics identified challenges with routine teamlet communication. A clinic administrator attributed communication struggles to the newness of team member relationships and the health coaching responsibilities, *"They're so focused on doing things non-stop but they still cannot be efficient because they are not communicating or they're not being good team players."*

Comparison by Roles—Most participants felt that clinicians and staff had effective working relationships and felt free to voice their opinions. However, while practice leaders felt that they communicated the redesign's intent and direction well, the MAs and some other clinicians did not share the same understanding of the redesign's goals. One MA said, *"I was talking to one of the [physicians] the other day, so this is a ten-week program. After the ten weeks what do we do? Do we just leave these patients or do we help them get onto something?"* The lack of specificity on key issues like "graduation" often frustrated the health coaches who felt they lacked guidance in coaching the patients.

Managers and MAs tended to view team huddles more favorably than physicians because physicians tended to feel that some meetings did not directly impact them. *"Oh yes, [team huddles have] been extremely useful… there is a caveat and…it's not our entire team…the PCPs are not there…it's a cultural issue…they're not all present, so that's a little disappointing,"* said a manager. Within the same practice, one physician commented, *"To be honest with you, I don't attend very many huddles…I don't feel like I'm being told anything that is going to make a difference in my day."*

Patient Needs

Early versus Late Implementation—Interviewees consistently used the term "patient motivation" as an important component for MAs to provide extended patient care through health coaching during both implementation periods. During early implementation, interviewees expressed more confidence both in their ability to motivate patients and the receptivity among patients. Many staff indicated that physicians selected more highly motivated patients to participate in health coaching. One MA shared, *"I think…it's about the motivation and [patients'] willingness to actually make a change in their own lifestyle."* During late implementation, MAs noted that some patients did not seem motivated to change their physical activity level. One MA said, *"I think some patients didn't realize what the whole program entailed. I think initially they were initially motivated, but after a couple of weeks, they just lost their motivation."* One physician said, *"Several of my patients have had other life events happen. Their parents got sick. They had transportation problems. There were some other issues, so they just couldn't focus on it, but most patients, they're very open to the idea."*

Most respondents reported positive patient responses from the extended role of MAs. During early implementation, one MA said, *"[My patient] said he feels good that I call him every week and he's motivated to make sure he's doing something because he knows I'm going to call him the following week."* Another coach observed, *"…we're also offering social interaction, which a lot of our patients need, so they like that social interaction, also, that*

piece that someone's actually calling them to check on them and to see, you know, how they're doing." By late implementation, a number of coaches indicated that some patients looked forward to their scheduled phone visits, but mainly for social support rather than technical expertise. One physician said, *"What I heard from our MAs was that sometimes they felt that the patients just wanted to talk or chat… and [the MAs] would say 'it's so hard to get them back to what I'm calling them for'."*

Comparison by Roles—Staff and clinicians frequently emphasized their sensitivity to overweight and obese patient concerns about their weight. Staff and clinicians' choice of words or actions during their interaction with obese patients can have unintended consequences. One MA reported: *"I told* [the patient] that I had to change the blood pressure cuff to a bigger cuff. She got offended because she thought I said she was overweight, that she was fat. I just said, we just need to get a bigger blood pressure cuff, we have to get the correct one for your arm, I didn't say she was [fat]. She took it the wrong way. They just think that everybody's calling them fat and stuff. It's not like that."

Staff Support for Patients

Early versus Late Implementation—Over time, respondents' concerns shifted from issues about the extent to which patients would accept increased services from MAs to concerns about physicians relating to the challenges faced by obese patients and fully support the practice change. One clinician expressed concern about how patients would receive advice about physical activity or counseling from physicians that did not appear to have or understand problems with weight management, stating, *"[Our physicians are] all pretty fit. Our patients are huge, some of them, so they don't feel like physicians can understand. The same thing happened with our 'fit' [physical activity] group. My intern, she was very tall, thin, she said she's never had any weight problems in her life, and the patients would say, 'well, how would you know about us?'"*

Comparison by Roles—Staff members, irrespective of their roles, that reported sharing their own weight-loss struggles with patients also reported more positive relationships with patients which impacted patient attitudes towards behavior change. One MA shared, *"They see me at my 216 pounds that dropped down to my 149 pounds and it's not because I went to the gym every day for an hour a day…So I think for them to see it actually really happen…I think that it helps them be more determined."* Another MA mentioned, *"…when I started the coaching program, I felt that I had to do something myself…so I started using the stairs instead of the elevators so that when I talk to these patients I don't tell them to do this and not doing it myself…I was talking to one of [the patients] the other day and she said I hope you are doing some exercising, too, because you're my model."*

Staff Needs

Early versus Late Implementation—Initially, clinic leaders and staff were generally supportive of the practice redesign. One physician said, *"Initially [the MAs] said, 'we have so much to do already, how are we going to fit this in?' But…as they've been doing it, they find that it's not too much of a time commitment, so they're not complaining as much as they did initially."* However, the launch of practice redesign coincided with an organizational-

level policy decision to increase daily patient volume. One manager said, *"...[P]roviders are already feeling the pressure of needing to see more patients. The [MAs] are feeling it, too."* By late implementation, this policy in addition to staff turnover created frustration. One non-physician clinician said, *"I think that if we were to do this again, somebody has to kind of keep people on track…somebody has to do it for us and people feeling not overwhelmed."* Health coaches expressed a need for resources, such as sufficient time with patients, although clinic leaders and physicians did not report awareness of these issues. Patients also did not always answer their weekly calls and coaches lacked direct phone lines or voicemails to receive messages. Unanticipated staffing changes due to absences or during times of high demand also meant reduced protected time for coaches.

Comparison by Roles—In contrast to the lack of administrative support, support from practice leaders influenced the enthusiasm and support for change from staff and clinicians. Interviewees described appreciation for the resources as well as the leadership support. One MA reported, *"[The health coaching buttons are] a nice thing because sometimes when we're rooming the patients they actually see the button and then they start to ask questions, 'So what is a health coach?'…I tell them I'm the health coach. I can help you try to either get more exercise in or eat better and if you're interested go ahead and ask the doctor and if they are, they do bring it up to the doctors, too."* However, the physical absence of the leader impacted staff enthusiasm for change.

DISCUSSION

Barriers

Implementing the teamlet model to aid mildly obese patients is a difficult and complex organizational change for safety net practices with vulnerable patient populations. Staff interviews revealed mixed results with only some patients meeting their health goals. The complexity of this patient population, from multiple chronic conditions to differing language needs, made it difficult for staff to tailor to individual patient needs. For example, patients already addressing several chronic conditions might find it difficult to make additional health behavior changes or add an additional weekly clinic visit, even by phone. Time and resource constraints for MAs were noted as key barriers to fully implementing this practice redesign. Other quality improvement studies within safety net clinics reported similar challenges.(Ferrer, Mody-Bailey, Jaen, Gott, & Araujo, 2009; Ngo et al., 2010) Despite these challenges, MAs were generally enthusiastic of the practice redesign and they enjoyed encouraging patients to work towards their health goals.

Facilitators

One possible solution to more effectively integrate health coaching roles is to follow Bodenheimer's suggestion to staff teamlets with one physician and two health coaches. Doing so will likely allow for patients to receive care as needed, since having two MAs to coach each patient might help address problems with covering both general MA duties and health coaching.(Bodenheimer & Laing, 2007) Despite constraints, an important facilitator of change was leadership support for the teamlet approach within the practice. Program champion support from mid-level or top-level managers is necessary for enabling practice

change.(Berenson et al., 2008; Crespo & Shrewsberry, 2007; Ploeg, Davies, Edwards, Gifford, & Miller, 2007; Wang, Hyun, Harrison, Shortell, & Fraser, 2006) Although interviewees acknowledged leadership support, the lack of physical presence of leaders dampened their enthusiasm. Ideally, identifying multiple champions in settings with high turnover and unmet demand could help promote and sustain future changes.

A key factor that supported the practice change was the extent to which staff supported obese patients through role modeling. As seen in other studies, if health coaches had experience making similar goals for themselves, the coaches tended to be more confident and patients tended to be more receptive to making behavior changes.(Ferrer et al., 2009; Goh, 2012) Future studies can assess this type of strategy with the teamlet model, since there are multiple team members who may serve as role model(s) and specific clinical skills are not required.

The patient survey and interview results were shared with the clinics for feedback to ensure face validity, as well as to provide recommendations. In general, suggestions included more guided training for staff and clinicians throughout the early stages of practice change to allow for extended practice of health coaching techniques and opportunities for feedback about their coaching experiences. These training sessions include time for staff and clinicians to understand and sensitively address situations where obese patients may perceive staff members to be judgmental of their weight. Additional training could also address the communication issues underscored by interviewees, specifically program goals and timelines. Although staggered staff schedules and overloaded schedules often hinder full attendance at regular staff meetings, improving documentation of practice decisions such as using meeting minutes or a staff intranet message board may facilitate communication outside of the meetings.

There are some limitations to note in this study. The results may not necessarily reflect the views of all clinic staff and clinicians, although individuals were randomly selected within roles and across clinics to avoid potential bias from only getting opinions from those willing to participate and perspectives from a wide range of different roles are represented. A few follow-up interviews were not conducted because of turnover and timing issues, but most individuals were available for follow-up. Although it would have been ideal to assess everyone's experiences at both time points, the interviews still included all three clinics and all types of roles. Moreover, the staffing issues themselves are indicative of some of the challenges with making changes within practices in safety net clinics.

CONCLUSION

The implementation of a teamlet model within safety net clinics to improve the management of mild obesity may be feasible, but frontline clinicians and staff faced many challenges in integrating new MA health coaching responsibilities into routine practice. Given the high primary care demands safety net clinics face and will continue to face in the future, it is important to find new ways to efficiently deliver care in a manner that is also effective for patients. Future practice redesign efforts to improve obesity management should have support from top and middle levels of management and frontline staff, preferably

championed by multiple individuals to aid the sustaining the practice changes in the face of personnel changes. Taking advantage of health coaches who naturally gravitate to being patient role models may be an especially useful strategy to improve obese patients' health behaviors.

Acknowledgments

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Table 1

Differences in Characteristics of Obese Patients (BMI 30–34) by Clinic

	Overall (n=198[*])	Clinic A (n=60)	Clinic B (n=54)	Clinic C (n=82)	
Female	70%	63%	67%	78%	p=0.13
Race/ethnicity					p=0.05
Spanish-speaking Latinos	38%	33%	31%	45%	
English-speaking Latinos	30%	28%	24%	35%	
Non-Latino Whites	14%	13%	20%	11%	
Non-Latino Other	14%	25%	24%	9%	
Mean age (years)	49 (10)	50 (10)	52 (8)	46 (11)	p=0.01
Education					p=0.02
Less than high school	42%	36%	32%	52%	
High school/ GED	23%	28%	32%	15%	
Some college	23%	24%	17%	28%	
4-year college degree or more	11%	12%	19%	5%	
Comorbidities **					p=0.25
0	13%	18%	11%	9%	
1	24%	17%	24%	28%	
2	20%	27%	15%	18%	
3+	44%	38%	50%	45%	
Length of Relationship with Practice					p=0.00
1 year or less	8%	12%	5%	7%	
1 to 3 years	47%	73%	56%	24%	
3 to 5 years	22%	12%	24%	28%	
Over 5 years	23%	3%	15%	40%	
Mean Patient Activation (PAM-13) score (0–100)	63 (22)	61 (22)	62 (24)	66 (21)	p=0.39
SF-12 dimensions					
Mental component summary score (0–100)	42 (9)	42 (7)	43 (10)	43 (10)	p=0.84
Physical component summary score (0–100)	42 (6)	43 (6)	40 (6)	43 (10)	p=0.02

*
Two respondents received care from a non-participating clinic and were only included in the total population.

**
The most common comorbidities included hypertension, high cholesterol, and diabetes.

Table 2

Health Coaching Implementation Differences by Clinic

	Clinic A	Clinic B	Clinic C
Medical assistants actively coaching patients at least once per week			
Baseline	Yes	Yes	No
Six-month follow up	No	No	No[*]
Medical assistants trained as health coaches to aid obese patients in improving their physical activity			
Baseline	Yes	Yes	No
Six-month follow up	Yes	Some	Yes
Program resources available for health coaches[**]			
Baseline	Yes	Yes	No
Six-month follow up	Yes	Yes	Yes

[*] The practice piloted health coaching for clinic staff, but not for patients

[**] Program resources include: training sessions, binders with program guides and community resources to refer patients, internet access to search for additional community resources, telephone and voicemail access.

Table 3

Facilitators and Barriers of Program Implementation During Early and Late Intervention Phases of Practice Change

Program Detail	Barriers and Facilitators	Examples
Leadership support	*Barriers*: Institutional policy to increase patient volume limited time for health coaching and not all coaches had phone or voicemail to use to reach patients.	*"I think that's the most frustrating for [health coaches] is trying to find time in the midst of their busy day to get these things done and try to focus and then to make a phone call at different times when people may or not be there…"*
	Facilitators: When present, clinic leaders and program champions helped to increase staff enthusiasm for this practice change.	*"[The clinic leader] was really excited about it. I think that you kind of jump on the bandwagon as a staff member, but the problem is that [the leader] wasn't always there."*
Staff training	*Barriers*: Some staff wanted additional training during health coaching and for new staff.	*"So I think they need to train more people, get more people into the program and see how much more we can help the patients that are really interested."*
	Facilitators: Binders of training materials and training sessions were deemed helpful.	*"I think the motivational training interviewing was extremely helpful and being able to use the action plan, I think, was extremely helpful because it made it more concise and it made it more specific."*
Patient-provider relationship	*Barriers*: Some staff reported patients feeling judged by their providers, which impacted communication.	*"[A] patient called me and complained… 'The nurse told me that I am fat.' So that alone, I think, draws a wall right away…It got her very upset and she refused to see the person again."*
	Facilitators: Providers who shared their own experiences with weight loss tended to have more success with health coaching.	*"I think it's also very important that the clinic staff and the provider also set that example, if I can do it, you can, too."*