

Special Report

Introducing the “Teamlet”: Initiating a Primary Care Innovation at San Francisco General Hospital

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Abstract

Context: The 15-minute office visit to primary care clinicians cannot meet the health care needs of patients. Innovation is needed to address this limitation, but practice redesign is challenging in clinical settings.

Objective: Here we describe the implementation of a practice innovation, the teamlet model, in a San Francisco safety-net clinic. The teamlet consists of a clinician and “health coach” who expand the traditional medical visit into previsit, visit, postvisit, and between-visit care.

Design: Teamlet implementation is occurring in phases. Phase 1 is evaluated using plan-do-study-act improvement cycles and interviews with a few patients, clinicians, and coaches. Phase 2 is evaluated using a pre- and postevent questionnaire, focused interviews, and focus groups with patients, faculty, clinicians, and coaches.

Main outcome measures: Phase 1: Plan-do-study-act cycles generate ideas to improve implementation. Phase 2

evaluation will query demographics, satisfaction, knowledge of self-management support, access, teamwork, and benefits/challenges of the teamlet model. Future research would measure objective clinical outcomes.

Results: Phase 1 of the teamlet project led to useful adaptations, with anecdotal evidence that patients and clinicians were satisfied overall with practice improvements. Logistic problems made implementation of the innovation challenging. Phase 2 is currently underway, with results expected in 2008.

Conclusions: Primary care innovation requires multiple perspectives and constant revision. Traditional randomized controlled trials and quantitative evaluation designs are not appropriate for assessing practice-improvement pilot projects because projects must change and develop in their early stages. Despite numerous challenges, the teamlet practice redesign has the potential for improving on the traditional 15-minute physician’s office visit.

Introduction

Mounting demands on primary care clinicians are about to break the proverbial camel’s back. One study estimates that it would take 7.4 hours per working day for a physician to provide all recommended preventive care to a panel of 2500 patients, plus 10.6 hours to adequately manage all chronic conditions.^{1,2} Forty-two percent of primary care physicians report not having adequate time to spend with patients.³ In reflecting on these facts, it is troubling but not surprising that 50% of patients leave an office visit without understanding the advice given by their physician.⁴ Equally concerning is that primary care clinician discontent is growing and the proportion of US medical students entering

primary care careers is plummeting.⁵ Drastic change is needed in the way primary care is delivered—both to improve patient care and to maintain an adequate primary care workforce. In this article, we discuss our experience with a unique innovation in primary care redesign, the teamlet model.

What Is Teamlet?

The teamlet model, described in rich detail in the *Annals of Family Medicine*,⁶ is offered as a replacement for the inadequate 15-minute physician visit. It is called teamlet because it involves only a small part of the larger primary care team—the clinician and medical assistant or community health worker. This model transforms

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the medical assistant or community health worker into a health coach who augments the limited primary care visit by providing previsit, postvisit, and between-visit contact with the patient (Table 1). The immediate focus of the teamlet is to improve delivery of chronic care, particularly in the area of patient self-management support. Health coaches are trained in negotiating the visit agenda, medication reconciliation, “closing the loop,” goal-setting, and self-management support for patients with chronic disease. Currently, health coaches do not constitute a formally recognized category of clinicians with licensure or legally defined duties.

Our Health Care Setting

The Family Health Center is one of several San Francisco safety-net clinics and is organized into five large clinical teams. A teaching clinic for family medicine residents and medical students, the Family Health Center cares for approximately 8000 patients and provides about 40,000 patient visits annually. Most patients receive Medicaid or are uninsured—receiving no-cost or low-cost services. We chose to implement phase 1 of the teamlet pilot in the clinical area specializing in refugee health because of the availability of language-concordant health coaches. Nearly 90% of patients seen by the refugee clinic team do not speak English, with approximately 30% speaking Chinese, 20% Russian, 8% Spanish, 8% Vietnamese, and smaller numbers speaking Bosnian, Cambodian, Laotian, Arabic, or other languages.

Implementation of the Teamlet Model: Phase 1

We launched the teamlet pilot in June 2006. Implementation has taken place in two distinct phases. Phase 1 involved four health coaches and several clinicians (resident physicians and nurse practitioners). The clinic management released the coaches from their other duties for only one clinic session per week, limiting the number of teamlet encounters. Although the full-blown teamlet model envisions a clinician and coach working together every day as a permanent and cohesive dyad, this was not possible during phase 1, resulting in the coaches working with a number of different clinicians. Phase 2 expanded the process to 11 coaches and 13 physicians caring for patients with cardiovascular risk factors.

To begin, it was imperative to gain the support of the nursing staff and the Family Health Center management team, because the innovation affects staff roles, staff training, appointment templates, patient scheduling, clinician communication, clinic flow, and other clinic logistics. Our initial aim was to seek buy-in for the teamlet concept and to negotiate protected time to train health coaches. We held two training sessions for clinic staff for a total of six hours. The curriculum included the collaborative paradigm of providing care; setting agendas with patients; ensuring that patients understood the advice given by the clinician (“closing the loop”); engaging patients in discussions of behavior-change goal-setting and action plans; and basic information about cardiovascular risk factors, focusing on diabetes,

“Close the loop” (make sure patients understand clinician’s advice)

Phase of delivery	Health coach functions
Previsit	Establish patient agenda Reconcile medications Answer patient questions Orient patient to health care system
Visit	Fill out forms, make referrals, and write prescriptions as determined by the clinician Serve as translator if needed Document clinician’s findings during medical history and physical examination Order preventive health screenings/examinations per protocol
Postvisit	Review medication instructions “Close the loop” (make sure patients understand clinician’s advice) Negotiate behavior-change goals/action plans Answer questions
Between-visit	Call patient to follow up on behavior-change action plan and medication changes Elicit patient concerns and help solve problems Answer questions Serve as liaison between patient and physician Troubleshoot problems accessing the health care system (pharmacy, laboratory, referrals)

hypertension, and hyperlipidemia. From these training sessions, four health workers demonstrated interest in becoming teamlet coaches. Their language skills included Cantonese, Mandarin, Toisonese, Vietnamese, Laotian, Russian, and Bosnian. Two Spanish-speaking coaches were added later.

We negotiated for each of the four coaches to be freed of other clinic responsibilities one half-day per week. At the beginning of each teamlet session, coaches reviewed the scheduled patients and selected which were most appropriate for teamlet encounters (patients with inadequately controlled chronic disease and language concordant with the coach). Phase 1 did not involve a previsit but rather focused on the visit, postvisit, and between-visit portions of the expanded encounter. During the patient's visit with the clinician, the coach was present to meet the patient, learn the medical history, and listen to the clinician's plan. After the clinician left the room, the coach "closed the loop" by asking patients to repeat the clinician's instructions to assess and correct patient understanding of new medical advice, particularly medication changes. Coaches also worked with patients to develop behavior-change action plans, usually focused on diet or exercise.

For the first several weeks, project leaders mentored the health coaches, observing them during postvisit sessions and providing feedback. Mentoring continued until the coaches had solidified their interpersonal skills and were competent in their skill set. Throughout phase 1, project leaders were present at each half-day clinic to answer coaches' questions, review their post-visit experiences, and enter information into a database. It became evident that two of the initial four coaches were seeing most of the patients; the other two had too many competing demands or were less enthusiastic. Later in the process, a medical student and premedical student—both Spanish-speaking—were trained and augmented the health coach staff.

Phase 1 of the pilot took place from June to December 2006. Ninety-three patients engaged in teamlet encounters, and health coaches contacted 30% of these patients with between-visit phone calls. One-third of teamlet encounters were conducted in Cantonese, 20% in Vietnamese, 19% in Spanish, 10% in Russian, 8% in Bosnian, 6% in English, and the remainder in a variety of other languages. Seventy-five percent of the patients had diabetes, 48% had hypertension, and 35% had hyperlipidemia.

Because the coaches were engaged in their role for a small proportion of their time, the role change had a minimal impact on overall clinic staffing. A fuller

implementation of the teamlet model would require additional staff. To the extent that coaches could offload work from clinicians, allowing clinicians to see one or more extra patients per clinic session, the additional revenue from increased clinician productivity could help finance extra staff.

Evaluation of Phase 1

The evaluation of practice change takes place in three stages. Stage 1, involving the initial rollout of an innovation, is evaluated using plan-do-study-act (PDSA) cycles, in which participants in the innovation make changes depending on what is working and what is not working. Because the innovation is constantly changing, formal evaluation methods are not appropriate. Stage 2 continues with PDSA cycles but adds qualitative data collection—open-ended written surveys, individual interviews, or focus groups—to assess the attitudes of the various players (clinicians, clinic staff, and patients) about the innovation. Some preinnovation quantitative data and quantitative data collected after the innovation has been ongoing for 12 months might also be measured. However, the innovation is still changing over time. Stage 3 can take place when an innovation has been tested on a large enough scale that it has become a formal intervention. At this point, the properties of the intervention are locked into place and no further changes are made until the formal evaluation has been performed. Stage 3 consists of a formal quantitative evaluation—randomized controlled trial, controlled clinical trial, or interrupted time series—with well-defined endpoints. For stage 3, a qualitative component that queries all participants adds richness to the evaluation.

To evaluate phase 1 of the teamlet pilot, the health coaches, clinicians, and project leaders held informal meetings to perform the "study" portion of the PDSA cycle and to suggest changes in the structure, logistics, roles, and training to be implemented the following week. Many changes were made from week to week. For example, a teamlet form and phone follow-up form were devised to document patient-coach interactions. Coaches began to print patients' HbA_{1c} and low-density lipoprotein cholesterol levels graphed over time, using these graphs to give patients clear and powerful messages about their clinical goals.

Phase 1 patient anecdotes motivated the process. One patient had a total cholesterol of 317 mg/dL. The health coach learned that the patient's family owned a bakery where she ate pastries daily. The patient made an action plan to stop eating pastries, and her cholesterol level dropped to 190 mg/dL. Another pa-

tient had impaired fasting glucose and revealed to the health coach that he drank 12 sodas daily. The patient made an action plan to reduce soda consumption to six, and eventually to three per day. Several patients revealed to their health coach that they had never taken medications their clinician had been prescribing for years. Many of the collected anecdotes demonstrated straightforward patient health issues that could be easily addressed by a health coach.

Semistructured interviews were conducted with a few health coaches, clinicians, and patients at the conclusion of phase 1. Several responses are provided below.

Patient Feedback

When asked, “How was the teamlet visit?” one Chinese-speaking patient with hypertension and hypercholesterolemia remarked, “It was very good. I learned a lot that day.” An English-speaking patient with hypertension excitedly shared, “Oh! I remember that visit! It was new to me, but I think it’s a good idea. ... I learned so much.”

When queried, “Was it worth the extra time spent at the clinic to complete the teamlet visit?” one patient said, “Oh yes! I like the way the coach taught me about food and blood sugar. I’m doing exactly what my action plan describes, and I’m expecting a better lab result next time.” A Vietnamese-speaking patient with diabetes commented, “Now I know how food is related to my blood sugar. I’m following my action plan [to reduce rice intake by one-third].” Another patient with hypertension made an action plan to reduce salt intake and confided, “Maybe I was told the same thing before by the doctor, but I did not remember. ... I understand better now.”

Negative feedback from patients centered on difficulty obtaining follow-up appointments and waiting too long before seeing their clinician. We did not measure if wait times increased for patients during teamlet visits compared with traditional visits. It is not clear whether the extra time required for the teamlet encounter created dissatisfaction.

Health Coach Feedback

One health coach reflected, “Teamlet is my most fulfilling working experience ever.” She affirmed that teamlet is “what patients want” and that “they enjoy the attention they receive and become more responsive [to suggested measures to improve] to their health.” When asked, “How does patient care compare between teamlet care and standard care?” one health coach said, “I deeply believe this is very good treatment—an effective

way for [delivering] chronic care.” Without prompting, he confirmed the problems that inspired the development of the teamlet model by stating, “Surprisingly, almost all the patients [I’ve had contact with] don’t know what the glucose figure means. ... All they know is [that] they took the medicine ... and they don’t have any real idea about the relationship of diet and sugar. Lots of them, after I explain it to them, act stunned.” This health coach described his unique analogy for supporting patients with self-management:

The patient always thinks the doctor is the commander in chief. I try to convince the patient they are the commander in chief and we’re just the support ... we’ll give him the plan, but it depends on the patient—if they want to fight or not. They realize ... if they give up, we all lose. We put them in the front line—in the position of action.

These comments are consistent with patients’ feedback expressing that they learn more during teamlet visits than during regular primary care visits. It must be noted that these interview findings may be skewed because we interviewed health coaches who stayed involved rather than those who became less active.

The health coaches’ criticisms of teamlet focused on the logistic difficulty of the program. Given the competing demands of a busy clinic, they did not always have sufficient time to complete follow-up phone calls and paperwork. One health coach maintains that “we’re never given time to do [follow-up]” and suggested that health coaches need protected time for phone follow-up with patients. This coach explained, “When I call patients, they say, ‘Hey, I’m doing a lot better!’ After making a few calls, I realized that the patient will treat us like a friend or coach if we follow up with patients closely.”

A coach criticized the lack of integration of teamlet paperwork into patients’ charts, an issue being addressed in teamlet phase 2. One coach also felt that additional training is essential so that health coaches collaborate with patients on action plans rather than ordering patients to make lifestyle changes.

Clinician Feedback

Feedback from clinicians included praise as well as constructive criticism. When asked for his overall impression of working in the teamlet model, one resident enthusiastically said, “Wow—this is amazing! This is how [clinical care] could be.” Consistent with patients and coaches, clinicians all commented that patients learn more during a teamlet visit than during a normal primary care visit. A resident physician commented that in the postvisit consultation, coaches repeatedly

identified and clarified patient misunderstandings. An unanticipated benefit was that clinicians received immediate feedback on what advice they failed to provide clearly, giving them the opportunity to improve their own delivery of health information.

Clinicians noted that patients revealed behaviors to coaches that they did not share with their clinician. One clinician commented, "I was shocked because I knew the patient quite well and the patient was telling me she was taking [the medication]," but during the postvisit consultation, that same patient confided to the health coach that she never actually took the medication. Patients may be more embarrassed to admit "failure" to the clinician than to the coach, who shares the patient's culture.

Several challenges for clinicians were apparent in phase 1. Health coaches were sometimes pulled from teamlet visits when other clinicians required language skills other than English for patients with more urgent health care needs. Scheduling was logistically difficult, especially when trying to pair patients and staff on the basis of language skills. Because there were virtually no support staff for phase 1, one dedicated resident called patients directly to reschedule them on a day when a health coach with appropriate language skills could be present.

One clinician said that she sees definite potential to improve care through the use of teamlets but felt that the program had not yet "offloaded" much work from the clinicians. She suggested that in the future, health coaches could further help clinicians by doing medication reconciliation, setting up patients for examination (eg, shoes and socks off for diabetic foot examinations), addressing health care maintenance needs, and filling out forms, laboratory requests, and explaining common preventive health procedures. One resident also acknowledged that some clinicians may be hesitant to give up some of these responsibilities. One clinician said, "There needs to be a system in place for dealing with frustrations ... a channel for staff to say 'this isn't working for me.'" Many of these concerns have been addressed in phase 2 of the teamlet innovation.

Implementation of the Teamlet Model: Phase 2

After anecdotal success during phase 1, Family Health Center leadership began planning phase 2, an expansion of the model. Phase 1 feedback from clinicians and

coaches was integrated to improve logistics. Phase 2, taking place from June 2007 through July 2008, involves 13 first-year resident physicians, 10 faculty physicians, and 11 health coaches. Phase 2 is integrated into the California Academic Chronic Care Collaborative sponsored by the Association of American Medical Colleges and the Improving Chronic Illness Care project led by Ed Wagner, MD.

To launch phase 2, the entire Family Health Center staff participated in six one-hour training sessions, and 11 health coaches were chosen. Training in the teamlet model was also provided for first-year medical residents and faculty mentors. To facilitate immediate feedback from health coaches, residents, and faculty after each phase 2 teamlet session, we developed a short electronic survey on surveymonkey.com (surveymonkey.com, Portland, OR).

Two hundred patients were identified as the population of focus for phase 2. Each patient has two of the following coronary artery disease risk factors: hypertension, hyperlipidemia, diabetes mellitus type 2, obesity, and tobacco use. As much as possible, the health coaches form stable teamlets with the residents. The patients are assigned to language-concordant teams in which their physician and health coach can speak the patient's primary language (English, Spanish, Cantonese, or Mandarin).

Evaluation of Phase 2: A Mixed-Methods Approach

Patients will be administered surveys to assess satisfaction in the following domains: ability to contact health-center staff, self-management support, length of visit, and information about medication and nutrition. Clinical processes and outcomes for the 200 patients will be followed to assess improvement in control of blood pressure, low-density lipoprotein, cholesterol, HbA_{1c}; in documentation of body mass index; in smoking status; and in setting and meeting self-management goals. A disease registry will enable the tracking of these measures.

Staff, residents, and faculty will be surveyed to assess the impact of their training on knowledge of self-management tools, attitudes and skills in working with teams, and job satisfaction. Direct observation with video-stimulated recall, a behavioral education tool currently used with residents, will be used to assess resident and coach skills in communication and self-management support. Semistructured interviews and focus groups of residents, staff, and faculty will evaluate satisfaction of the curriculum learners.

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It is hoped that the teamlet model of primary care delivery will be further integrated into the Family Health Center. One can imagine that the clinic could be organized to deliver teamlet care for patients with poorly controlled chronic disease who are seen by all clinicians, including faculty, residents, and nurse practitioners. Further ahead, payment paradigms may be developed to support the intensive patient encounters and training needs offered through the teamlet model.

Conclusion

Implementing and evaluating innovation in a primary care safety-net clinic is no trivial task. For the teamlet model, it took many phase 1 PDSA cycles to work out numerous challenges. After months of persistence and revision, phase 2 teamlet was implemented on a larger scale; it continues to be challenging. Perhaps the major success of phase 1 was the ability of teamlet coaches to act as cultural bridges between clinician and patient. Although primary care improvement may not carry the same academic weight as randomized control trials, the work is necessary to address the difficulties of the 15-minute visit in primary care. One resident imparted particularly wise words: “When you do primary care,

you’re not necessarily the best person equipped to do drug trials, but you are the best person to understand the way care is delivered—you are in the best position to be an innovator.” ❖

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The Sufferer

We were assured, with sincerity, that our task in life was to relieve suffering.
But never once did I hear anyone explain that the word patient
really means “a sufferer” ... Often the suffering was simple fear.

— The Cunning Man, *William Robertson Davies, 1913-1995,*
Canadian novelist, playwright, critic, journalist, and professor