A national dissemination of an evidence-based self-management program: a process evaluation study

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Abstract

While evidence exists regarding the effectiveness of many health education interventions, few of these evidence-based programs have been systematically or widely disseminated. This paper reports on the dissemination of one such intervention, the 6-week peer-led Chronic Disease Self-Management Program, throughout a large health-care system, Kaiser Permanente. We describe the dissemination process and, using qualitative analysis of interviews and surveys, discuss the factors that aided and hindered this process and make recommendations for similar dissemination projects. Six years after the beginning of the dissemination process, the program is integrated in most of the Kaiser Permanente regions and is being offered to several thousand people a year.

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1. Introduction

I knew what I needed to do but I didn’t do it … until I took this class and realized that I had to do it. Now I’m doing much better. (A class participant)

In recent years, self-management for chronic diseases has been integrated into many comprehensive disease management programs [1]. Because patients with chronic disease make continuous self-management decisions, it is believed that informed patients improve their decisions by collaborating with their health-care providers. In turn, improved decision-making results in enhanced health-care outcomes and possibly reductions in health-care costs. This belief is borne out in documents such as the 2010 Health Care Objectives for the Nation, which includes goals of increasing the number of patients receiving self-management education [2]. In 2001 Medicare began to reimburse approved self-management programs for people with diabetes.

While there is widespread belief in the importance of self-management programs for people with chronic conditions, these programs will only fulfill their potential when programs that have been shown to be efficacious can be successfully replicated, disseminated, and implemented. Many programs have demonstrated their potential effectiveness in improving health status and/or reducing health-care utilization. Very little is known, however, about the factors that both help and hinder dissemination of these programs in “real-world” settings. This paper will discuss a qualitative study of dissemination within a large, nationwide health-care system of the Chronic Disease Self-Management Program (CDSMP), also known as “Healthier Living: Managing Ongoing Health Conditions”.

Kaiser Permanente is an integrated health-care system that serves over 8 million members in various regions across the United States, and is known for its focus on preventive care and patient education. The goal of the CDSMP is to empower patients with chronic conditions to take control of their health by teaching them skills and strategies for managing their conditions and improving their quality of life.
the United States. At initiation of this study, there were 12 regions in the system, ranging in size from tens of thousands of members to several million members. During the course of the study, Kaiser Permanente affiliated with Group Health Cooperative of Puget Sound, which was included as a region for the purposes of this project.

2. Background

People above the age of 60 have on average 2.2 chronic conditions, and many younger people also have co-morbid conditions [3]. Disease-specific patient education may not be the most efficient or effective means of meeting the growing problems associated with chronic disease in general and specifically co-morbidity. In an attempt to more effectively support these patients, the CDSMP was developed at Stanford University in the mid-1990s and evaluated in a 6-month randomized trial for over 1000 participants [4]. The CDSMP is a six-session (2.5 h weekly) community-based intervention built on self-efficacy theory and taught by a pair of trained peer leaders with one or more chronic conditions. A common set of core issues and coping skills that applied across chronic illnesses were identified. These are reflected in the course content, which includes goal setting, feedback, problem-solving, exercise, nutrition, medication use, coping with anger, fear, frustration and depression, management of pain, fatigue, and shortness of breath, and improving communications with friends, family and health-care professionals [5].

In the original trial, treatment participants when compared to randomized controls improved their health behaviors, health status, and self-efficacy and had 0.8 of a day less hospitalization in 6 months (all \( P < 0.05 \)). Many of these outcomes persisted for up to 2 years as demonstrated by a subsequent longitudinal trial [6]. Based on these results, a decision was made to disseminate this intervention throughout Kaiser Permanente. As part of the dissemination, two studies were conducted. The first was an outcome study to demonstrate the effectiveness of the CDSMP when disseminated. This 1-year longitudinal study involving 700 people demonstrated improvements in health behaviors, health status, self-efficacy, and health-care utilization similar to the original randomized trial [7]. The second study, discussed here, was a process evaluation that examined those factors that helped and hindered the national dissemination and implementation of the program in a large-scale, “real-world” health-care setting.

2.1. The dissemination process

The project was funded by the Garfield Foundation, which was established to evaluate innovations within Kaiser Permanente. In early 1997, the project director (D.S.) invited the Regional Directors of Health Education in each of the 12 Kaiser Permanente regions to participate in the study. All regions but one indicated an interest. The one negative response came from a region that was about to cease operations. A second region decided to delay the start of the program. The remaining 10 regions were invited to send staff to one of four separate 4-day trainings at which participants became “master trainers” who were prepared to train group leaders as well as to teach and administer the CDSMP.

Training functions comprised a major focus of the dissemination. The peer leaders attend a 3.5-day training in which they learn to teach in pairs following a detailed leader manual. Modeling is a key component of the course, and during the training the leaders conduct the entire workshop exactly as the leaders will in turn be expected to teach. On the last day, the leader trainees teach a section of the course and receive feedback. Each trainee role-plays the “goal-setting” and “giving feedback” techniques that are the most difficult skills required of the leaders. The peer leaders are trained locally by a pair of master trainers who were trained at the initiation of this project at four master training sessions in various parts of the country. In 4.5-day sessions, these trainees were prepared as peer leaders themselves as well as learning how to train leaders using a detailed master trainer manual. Those master training attendees received an additional 4 h of training on coordinating the program and managing the peer leaders to prepare them to serve as local coordinators. Each newly trained master trainer was expected to teach a CDSM workshop prior to conducting a peer leader training. Later in the project master trainers were trained at sessions that were being held at Stanford for other organizations, or they apprenticed by co-teaching with an experienced master trainer. In the larger regions, peer leader meetings were held periodically where some refresher role-plays were conducted, a response to feedback from the leaders for periodic refreshers especially on goal-setting.

Training programs were held during the summer and fall of 1997, and at least one person was trained from each of the participating 10 regions. Participants were to return to their regions, organize and teach one or more CDSMP programs and then begin training peer leaders. Following the original four master trainings, one region made an administrative decision not to offer the program due to budgetary concerns and one region attempted to offer the program but was not able to recruit participants. Shortly thereafter, the latter region ceased operation as a part of Kaiser Permanente. In 1998 Group Health Cooperative of Puget Sound affiliated with Kaiser Permanente and joined the study (see Fig. 1 for chronology).

In early 1997, a half-time national program coordinator (M.H.) was in place and by late 1997 the eight participating regions were beginning to offer CDSMP to patients. In addition, most regions had appointed regional CDSMP coordinators. All of the coordinators participated in an e-mail list and were invited to join monthly conference calls in which the investigators also participated. During these calls, the coordinators shared their successes and frustrations and
The most popular recurrent topic was recruitment of participants. These calls continued for the full 3 years of the dissemination project.

Although the Garfield Foundation funded a 3-year study and supported the initial master trainings, the grant did not fund actual implementation of the program. The funding covered the researchers, national program coordinator, and costs of national trainings, excluding trainee time and travel expenses. All other dissemination expenses including staff, materials, and recruitment costs were funded from the regional or individual site budgets. This model more closely simulates real-world implementation and ongoing operations.

2.2. Process evaluation study design background

There is an extensive literature on the dissemination of innovation and organizational change. McLeroy et al. provide a broad review of factors related to program dissemination in their article “An Ecological Perspective on Health Promotion Programs” [8]. Rogers has provided a classic description of the process of dissemination of innovation [9]. There is very little literature, however, on the dissemination of programs in large health-care organizations. More recently, Glasgow et al. have presented the RE-AIM model for evaluating the implementation of health education programs [10]. The RE-AIM model provides a context for our study.

3. Methods

3.1. Study participants

Data are from 291 telephone interviews (conducted in two exploratory rounds), and 225 final round questionnaires administered to regional health education directors (who direct all health education activities in a region), regional coordinators (who coordinate all CDSMP activities in a region), site coordinators (who coordinate CDSMP in a group of hospitals and clinics in the three largest regions), master trainers (who train CDSMP peer leaders), and peer
leaders (who actually teach the program). Many of the participants fit into two or more of these categories and in the final round were asked to answer the questionnaire befitting their “highest level” category. Not all levels of potential participants existed in all regions, and some potential participants had moved on to new positions by the time of the final round.

3.2. Ethics committee approval

Human Subjects Committee Approval was initially granted and annually renewed by the Stanford University Administrative Panel for Human Subjects and by the Human Subjects Committee in each of the regions of Kaiser Permanente in which this project was disseminated.

3.3. Criteria

The investigators established criteria a priori as the standard by which to judge the relative success of the dissemination at the end of the 3-year study. These criteria were based on the RE-AIM (Reach, Efficacy, Adoption, Implementation, Maintenance) Model suggested by Glasgow and was modified based on the results of exploratory rounds 1 and 2 [10].

For this study, the RE-AIM Reach criteria included the number of regions participating in the reach and the number of participants in each region. The specific Reach criteria were: (1) CDSMP offered on an ongoing basis, (2) courses offered in several sites within a region, and (3) ability to recruit participants. The Efficacy criterion was: (4) data demonstrating CDSMP effectiveness as measured by improved health status and reduced health-care utilization. The Adoption criterion was that (5) a region initially adopted and attempted to implement the program. There were several Implementation criteria: (6) ongoing training of master trainers resulting in an adequate number of master trainers, (7) ongoing training of peer leaders resulting in an adequate number of peer leaders, (8) sufficient referrals from physicians and other health-care professionals, and (9) low drop out rate. Finally there were three Maintenance criteria: (10) integration into the continuum of care, (11) adequate ongoing staffing and funding, and (12) ongoing workshops scheduled.

The selection of success criteria was validated by the regional directors, regional coordinators, and site coordinators who rated all these criteria as important or very important 5.1–6.8 on a 1–7 scale.

3.4. Data collection

3.4.1. Exploratory rounds 1 and 2

In year 1, the round 1 interviews were conducted by telephone, using an open-ended format. The questions explored what the participants thought were the strengths and weaknesses of the CDSMP program/dissemination in their region, as well as recommendations for change. Interviewers wrote down the answers, staying as close to verbatim responses as possible, and then entered them into MS Word files.

In year 2, the results of the round 1 interviews were used to construct round 2 interview questions that were more targeted but still open-ended, and were also entered into MS Word files. The results of the round 2 interviews were analyzed using classical content analysis procedures [11,12]. Materials were reviewed several times by one of the investigators and a graduate student, and recurring themes were identified. Categories to be coded (variables) were developed for each level of participant (regional directors, regional coordinators, site coordinator, master trainers, and peer leaders). The interviews were coded by noting the presence or absence of each category, and a person-by-variable matrix was created to permit statistical analysis of the data. At this point, decisions were made about lumping and/or splitting categories. Data were entered into MS Access files and tabulated by level and region.

3.4.2. Development of final written survey

A written survey that consisted mostly of closed-ended questions for each level of personnel was constructed for use in the final survey. The content came from the round 1 and 2 interviews as well as suggestions from the investigators. Three different questionnaires were developed: one for regional directors (10 pages), one for regional and facility site coordinators (15 pages), and one for course leaders (7 pages).

The final survey questions were designed to address each of the success criteria as well as the major “helps and hindrances” themes for dissemination that emerged from the round 1 and 2 data analyses. These were presented using Likert-like scales. Finally there were areas of interest that the investigators felt had not been explored adequately in previous questionnaires. These were included in the final survey as open-ended questions. The resulting paper-and-pencil instruments were mailed to the participants at the end of year 3.

The responses to the surveys are used to illustrate and complement the findings of the researchers as they witnessed success and failure in the implementation process at the different regions.

3.5. Data analysis

The responses to the closed-ended questions from the final survey were entered directly into computer files for statistical analysis. The open-ended questions were coded using classical content analysis procedures (see above) and then transferred to computer files. The nature of the data collected did not lend itself well to traditional statistical analyses because of varying response rates, low numbers or even lack of individuals in some categories of respondents, and differential response by regions. Despite that limitation, where possible we compared the mean responses by the different regions, as well as overall. For some questions,
The regional health education directors, the regional CDSMP coordinators, and the site CDSMP coordinators from individual health facilities such as hospitals and/or clinics all indicated that the data showing program effectiveness (impact on health status and health-care utilization) was important to its successful dissemination (mean 5.8–6.5 on a scale of 1–7 with 7 being very important). It should be noted that at the time of initial dissemination, the results from the original randomized trial were unpublished. Later the published data were used to help support implementation. Most regional directors, regional coordinators, and site coordinators also found the content of the course to be important for the successful implementation (means 5–7 out of 7). Staff who worked with the program showed a true enthusiasm based on their observations of improvements in the participants. Six regions listed the design of the program as being helpful for its implementation (means 5–6.5 out of 7). One region that did not continue offering the program rated the program design as a hindrance to implementation (mean 2). Most of the regions found the length of the CDSMP (6 weeks) as well as the length of the individual sessions (2–2.5 h) to be acceptable, although two regions, one successful and one not successful, found both the length of the course and the length of the sessions to be a hindrance to implementation. While most responders found that the length of the individual sessions was appropriate there was more divergent opinion about how the number of sessions affected successful dissemination with wide-ranging responses from 1 (great hindrance) to 7 (great help). For the most part, those regions that were not successful in implementing the program found the program length to be a hindrance.

4.1.2. Administrative factors

4.1.2.1. Participant recruitment.

I believe direct communications with patients, rather than all channeled through the physician and health care team, will be a large part of the future. (Leader)

I don’t have the time or luxury to partner with the community. (Regional Director)

Not being linked to a specific condition made the program difficult to market to providers. (Regional Coordinator)

Several factors pertaining to the administration of the CDSMP affected the dissemination process. Peer leaders, site coordinators, regional coordinators, and regional directors identified that participant recruitment was by far the largest barrier to successful implementation. Most early recruitment efforts were aimed at getting physicians to refer and approaching patients through the use of flyers, public service announcements, and the use of a program-specific video in clinic waiting rooms. Because CDSMP is a peer-led
program, it was difficult to explain the intervention since it differed from the usual professionally taught patient education classes. Because the program is not disease-specific, it is not well understood by either health professionals or patients, who tend to think in terms of specific diseases rather than general coping skills for chronic illness. In some cases, this led to perceived redundancy, confusion, and competition with other programs including disease-specific education, chronic pain, and stress management offerings. In the first year of dissemination, these recruiting efforts resulted in about a third of the workshops being canceled because of lack of participants.

About 18 months into the study recruitment improved by targeting appropriate high utilizing patients with direct mailings signed by the patient’s physician or by another physician (e.g. Chief of Patient Education). One region with an early disease registry had very successfully pioneered this direct mail approach from the outset, and with the development of information technology systems and support and disease registries, other regions were eventually able to adopt this technique. Several pilot studies were conducted to determine effectiveness of the mailed invitations. The response rates (based on number of participants registered at the first session) varied from 2 to 11%, with most mailings yielding between 4 and 8% of the recipients registering for the workshop. The variation appeared in part due to selection criteria, socioeconomic status of target population (higher SES yielded higher response rates), as well as timing and setting (including issues of parking, safety, and evening classes). Older patients and those with more frequent physician visits responded at a higher rate. In one test classes). Older patients and those with more frequent physician visits responded at a higher rate. In one test mailing, letters signed by the patient’s primary care physician (N = 376) yielded registration rates 32% higher (7.8% versus 5.8%, not statistically significant) than letters signed by the physician Chief of Patient Education (N = 377). Repeat mailings to 500 potential participants yielded small incremental response rates with 6.0% on the first mailing, 2.6% on the second mailing, and 1.0% on the third mailing.

After people had registered for the workshop in most regions they received a reminder call shortly before the first meeting. With direct mail recruitment and reminder calls, the workshop was more reliably filled and the workshop cancellation rate dropped from 37% to approximately 23%.

The name of the program may have also influenced earlier recruitment. Based on a survey of participants and members, many regions chose to rename the program from the Chronic Disease Self-Management Program to Healthier Living with Ongoing Health Conditions. Participants preferred the term “workshop” over “class” or “program”, “health conditions” over “disease”, and “ongoing” over “chronic”. The recruitment materials also emphasized symptom relief and increased ability to function rather than disease management, as well as quotes from previous participants [13].

In the final survey, regions were asked to rate the helpfulness of 10 recruiting strategies. The results can be found in Table 1. The most successful recruitment strategies were direct mail targeting high utilizing patients, articles in older adult media/publications, and reminder calls. It should be noted that regions meeting the success criteria used an average of 7.5 out of 10 strategies while regions not meeting the criteria used on average only five strategies.

### 4.1.2.2. Master trainers.

At the beginning of the dissemination, at least two master trainers were trained in each region (a pair of trainers conducts each training of peer leaders). Continuity of master trainers was a problem in several regions. In one region, the CDSMP was discontinued when one of the master trainers took another job. Successful regions were able to manage the transition by replacing master trainers. In some cases, master trainers were shared with other organizations that offered the courses. All the regional directors, regional coordinators, and site coordinators rated the performance of master trainers highly (mean 5.5 on a 1–7 scale).

Half of the regional coordinators and one-third of the responding regional directors suggested that there were problems in recruiting master trainers. Most master trainers were Kaiser Permanente employees and were expected to have some prior experience with teaching and hopefully had a chronic condition themselves. They needed to have a flexible enough schedule to be able to conduct a 4-day training as needed. To understand this recruitment problem better, we examined survey data from 23 master trainers. When asked why they took on this role more than half (15) indicated that they wanted to spread good information and to help others. Three wanted help with their own chronic condition. Five were talked into volunteering and for three master training was a job requirement. Only five master trainers received special pay or a gift. Although most were Permanente employees some felt that they were undercompensated, as the training was not part of their normal job description. Only 26% of the master trainers considered the compensation (which varied significantly across regions) they received for conducting trainings as “fair”.

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<th>Table 1 Helpfulness of recruiting strategies</th>
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<td><strong>Regional coordinators</strong></td>
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<td>Articles in older adult media</td>
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<td>Reminder calls to those registered</td>
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* Scale 1–7: 1 = not helpful; 7 = very helpful.
  * Mean values.
4.1.2.3. Peer leaders.

Though we have experience with volunteers in health education, the special care, nourishing and support for lay leaders was a novel experience. (Site Coordinator)

Peer leaders are the heart of the program. However, depending on volunteers for operational programs can be very challenging. (Regional Coordinator)

Although the peer leaders are considered a strength of the program, recruiting and retaining them was also reported as a significant barrier to implementation by regional directors, regional coordinators, and site coordinators. Approximately 10% of the peer leaders were paid Kaiser Permanente staff while the rest were lay volunteers. The 163 peer leaders responding to the survey taught on average one workshop per year. Twenty percent indicated that they would not teach again while 31% indicated that they would be willing to teach more often. Of the 45% who were paid, the average pay was the recommended $110.00 for teaching the entire workshop. Of those responding, both paid and not paid, 55% considered the pay inadequate. Seventeen percent reported having problems teaching with co-leaders. They indicated that they did not have any problems with the facilities, receiving materials, or with feeling comfortable teaching. The major problems that peer leaders encountered in work with Kaiser Permanente staff were that staff did not recruit enough participants and that they, the peer leaders, did not receive adequate reimbursement.

Ninety percent rated their training as adequate but suggested that the training should contain more role-playing, and that there should be a shorter time between training and offering their first course. They would also like to receive refresher courses. In those regions that did not continue to offer the workshop, some of the leaders indicated that they had problems with the course content. These generally had to do with combining persons with different diseases in one course and not orienting course participants to the purpose of the program.

Regional directors, regional coordinators, and site coordinators all indicated that they did not have problems with the performance of the peer leaders. Fidelity to the program content did not appear to be a problem. The detailed leader’s manual used by the peer leaders facilitated adherence, and the importance of following the manual was stressed in trainings. At some point during a leader’s first course, the site coordinator usually sat in on at least a portion of a class, and they tried to periodically observe subsequent sessions. Three of the six regional coordinators indicated that they had significant administrative issues regarding peer leaders and liability coverage (see below).

4.1.2.4. Staffing and funding. Regional directors, regional coordinators, and site coordinators reported that the level of staffing needed to support the program and peer leaders, as well as the level of funding allocated in their budget to support implementation (when such funding existed), hindered implementation. Especially in the early stages, budgets had not been adjusted to accommodate this new program, and although annual funding increased in most regions, the staff was still stretched in managing this new program.

During the course of implementation, the costs of the program slightly increased due to having to pay the leaders and to cover the costs of direct mail recruitment. In the initial CDSMP pilot studies at Stanford University, peer leaders volunteered for their first teaching experience and were paid a modest stipend for subsequent assignments. The same approach was initiated in this study but with the difference in setting and sponsorship the acceptance of volunteer status had changed. Leaders were much more difficult to recruit, possibly because more of the population were working rather than retired. Initially leaders taught their first workshop on a volunteer basis, but after that many were unwilling to teach for little compensation, requesting at least reimbursement for mileage and other direct expenses. Liability issues were raised which resulted in some regions hiring peer leaders as instructors in order to provide legal coverage under the umbrella of Kaiser Permanente. In many areas, the course was led by one peer leader and one staff person on paid time. Additionally, the targeted mailings that were eventually used for recruitment proved to be expensive. Despite the higher than anticipated cost, the previous research results had shown such significant cost-effectiveness that no facility withdrew support of the program based on financial considerations.

4.1.2.5. Top-down approach. Finally, this program was offered using a “top-down” approach in which an already developed program was offered nationally and individual regions and sites were not permitted to change or adapt the program. Health Education Departments in each region and medical centers were accustomed to adapting existing programs to their own preferences. However, probably because of both the extensive data on CDSMP, and the fact that this was a research project, the workshop was readily adopted “as is”. Also because of the national approach many regions exhibited strong support among higher administrative levels. The “top-down approach” was judged as very effective by the regional and site coordinators (mean 5.7 with 7 as very effective).

4.1.3. Organizational factors

This program represents a different ‘model,’ which is difficult to communicate and promote within our current system. (Regional Director)

Kaiser has so many classes for its members it is hard for the MDs and nurses to keep them separated. (Site Coordinator)

It needs champions in several areas of the organization, not just health education. (Regional Coordinator)
The major factor influencing the decision to offer the program in the first place or continue the program was overall organizational stability and viability. During the study period, four regions either ceased operations or separated from Kaiser Permanente. A by-product of these major organizational discontinuities was unsuccessful implementation of the program.

Site-specific readiness at the outset proved to be a critical factor. This included familiarity with the CDSMP among Health Education Directors and key physicians and administrators. A physician champion in each region was important, someone who spoke at physician meetings, introduced a speaker to describe the program, and advocated with administration regarding the medical importance of this program to the patients. Administrative support was also a key. This included the ability to allocate funding for dedicated staff time, a budget to cover program expenses, and priority for room availability (e.g. one location said that during the day meeting rooms were held for medical center meetings and she could not book a daytime class in advance). On the positive side, the region that decided to postpone implementation benefited from the experience of the other regions in working out issues such as publicity, working with peer leaders, logistics, etc.

In examining the factors that helped implementation, the site coordinators named the national CDSMP coordinator and the regional CDSMP coordinator and regional health education director. On average, site coordinators were authorized to use 5–15% of their time for the CDSMP. The actual time they spent on the program was usually slightly more than allocated. Regional directors, regional coordinators, and site coordinators were all asked to rank the priority of the CDSMP compared with other programs they offered for people with chronic conditions. Not surprisingly the regional coordinators for whom the CDSMP was a primary responsibility rated the program with a high priority, 8.7 on a 10-point scale. Site coordinators who had many competing demands rated it 6.1 while regional health education directors rated it a 4.2. Disease-specific patient education programs (e.g. diabetes, asthma, heart disease) were often mentioned as higher priority than CDSMP because of their better integration into clinical care and the perceived needs of patients for disease-specific information and skills. This was an important factor in two of the regions. Another readiness factor was the ability to make the workshop a priority in the Health Education Department.

Lack of strong organizational support was reflected in several areas. For example, all of the regions rated physicians, nurses, and administrators 4 or below on a scale of 1 (did not contribute) to 7 (contributed a great deal) on influencing the success of the program. Thus, it appears that while referral and support of physicians and other health-care providers is highly valued and sought after, it contributed little to the success of the program implementation. It should be noted, however, that there was widespread acceptance by physicians and other health-care providers of Kaiser Permanente sponsorship and the use of peer leaders in the CDSMP. Survey comments suggested that the lack of referrals from physicians and other providers was due to (1) lack of time to explain the complex program and make referrals, (2) competition from disease-specific education programs, and (3) competing priorities for physicians in a busy clinical practice. Each level of personnel expressed the lack of organizational support differently. Peer leaders were most concerned with the low recruitment and the lack of reimbursement for teaching. Site coordinators were most concerned about (1) the enthusiasm of physicians, (2) adequate funding and support, (3) recruitment of participants, and (4) the turnover of peer leaders. Regional CDSMP coordinators expressed concern about (1) the priority of the CDSMP among other health education programs, (2) the priority administrators placed on the program, (3) lack of support from the public affairs/community and government affairs office, (4) the continuity of both site coordinators and master trainers (in both cases there was a high turnover), and (5) the level of enthusiasm expressed by physicians. Finally, the regional health education directors were concerned about (1) the level of enthusiasm from both physicians and administrators, (2) the level of staffing and funding, and (3) the turnover or lack of continuity of site coordinators, master trainers, and peer leaders.

5. Discussion and recommendations

5.1. Discussion

This study demonstrated that a proven patient education program can be successfully disseminated throughout a large health-care system. Based on a combination of hard data obtained from surveys and the experience with widespread dissemination of the program, conclusions can be drawn regarding key success factors. This discussion will contrast successful and not successful sites and include recommendations for dissemination of similar patient education programs.

While it is difficult to pinpoint common factors that differentiate the five successful regions from the four regions that did not meet the success criteria, most of the distinguishing factors fall into the category of organizational issues. The regional health education directors of three of the non-successful regions demonstrated initial hesitancy in becoming involved with the program. In two of these cases, the hesitancy had to do with workload and budget. In the third case, the region had just begun to disseminate a new chronic conditions program and there was some feeling that the two programs might be competitive. Despite this hesitancy, all three regions sent staff to the original trainings. Following this one of the regions offered one or two courses and then stopped supporting the program. A second region made the decision to delay implementation of the program due to budgetary and staffing constraints. This
region has recently begun offering the program on a limited basis. The region with competing programs assigned staff to the CDSMP and offered programs for about a year before making the decision to only support their own chronic conditions program.

While there were some similarities among these three regions, the fourth region was very different. It had a strong interest in the program and gave several initial programs. However, with the departure of one master trainer and compensation issues with the other, the program faltered. This is in contrast to a similar-sized successful region that also lost a master trainer but was able to continue the program. The differences in the two regions may have had to do with very committed physicians and administrators in the successful region and lack of this support in the unsuccessful region.

In those regions that succeeded there are several similarities. All had part-time staff dedicated to the CDSMP dissemination. Four of the five had strong physician champions who visibly supported and advocated for the program with administrators and physician colleagues. Successful regions also had strong support from their regional health education directors. It is interesting to note that the two largest regions, both of which met the success criteria, had dedicated budgets. In one region, some sites received initial start-up funding. The region that did not initially start the CDSMP with other regions but rather waited and then built a strong base of support for the program listed the fewest organizational barriers to implementation.

That region provides an interesting case study regarding readiness. The region had an enthusiastic regional director and a strong physician champion, and these leaders chose to take time to build organizational readiness. A regional representative joined the study’s monthly conference calls and asked many clarifying questions regarding the issues being discussed. They decided that the most successful approach would be implementation of CDSMP as part of a community coalition, and the region led a well-organized community effort. When they implemented the program late in the third year of this study, they were successful in filling and maintaining the reasonable number of classes offered.

The fact that this program was familiar to many of the regional directors proved to be a major factor in ready adoption. Unfortunately, the randomized trial demonstrating the improved health and cost outcomes of the program was not published until after the dissemination was underway, and this made selling the program at each site more difficult.

Staff support is a critical factor at every level. A national coordinator was important, organizing four national trainings, fielding questions from regional coordinators about details of the program, and sharing documents with all sites as well as coordinating the dissemination study. The support role for this position was reduced significantly by the third year as the program was implemented and local coordinators tended to depend more on their peers and to effectively train their successors. Local coordinators needed dedicated time to perform their many coordinating tasks. Coordinators functioning more efficiently as the program became more established. In the two largest regions, site coordinator meetings were held on a periodic basis to share information and problem-solve, and frequent emails were exchanged. Recruitment was one area where experience yielded efficiency, as the mailings proved to be effective and less time was applied to less rewarding recruitment efforts. Staff turnover was sometimes handled well, assuring program continuity. At other sites new staff were not hired on a timely basis or were not fully trained or experienced, which resulted in a faltering program.

Special funding for dissemination can prove to be either supportive or detrimental. While such funds can provide resources for innovation, the continuation of the program is often at risk when the funding period is concluded. In the case of the dissemination of the CDSMP, the ending of the dissemination study did not put an excess burden on the regional or site budgets, as only the centralized implementation and study was funded, not local costs. A pilot study conducted in one region provided small grants to randomized sites to support initial implementation. No difference was found at the conclusion of that study between the funded and non-funded sites in terms of successful implementation.

The maintenance of a volunteer structure using peer leaders was new to the system and difficult to develop and maintain; training and staffing requirements were significant. Recruitment was challenging and retention was affected by an expectation of both master trainers and peer leaders of remuneration even though the initial Stanford studies had succeeded using a volunteer or modest stipend basis. For liability purposes, volunteers were eventually hired in some regions as instructors, but these additional costs did not jeopardize continuation of the program.

Toward the end of the study period, several regions moved toward a combination of professional and peer leaders to co-lead the workshop, and several successful co-sponsorships with community organizations strengthened the infrastructure.

Effective participant recruitment is essential. While physician referrals, integration into disease management care paths, and word-of-mouth are highly desirable, they appear to be relatively inefficient methods of participant recruitment for a program like CDSMP. Once disease registries became available direct mail to patients became the preferred means of publicity, with use of media and community partnerships also yielding success at least in the initial stages of program implementation. Some sites reported easier recruitment by referral and word of mouth once a “critical mass” of patients and physicians in the population had experience with the program.

Special funding was obtained to develop two videos for marketing purposes. One was aimed at physicians and health-care managers orienting them to the professionalism and effectiveness of the CDSMP. Its use and effectiveness have been limited, although organizations considering the
program have found it helpful. The other was an edit of the first aimed at recruiting participants and was shown at community presentations and waiting room televisions, also not effectively utilized.

Although the Kaiser Permanente study identified major barriers to the dissemination of the CDSMP, the implementation has been quite successful. Three years after the end of the dissemination study, the CDSMP is offered in six of nine regions with two additional regions actively pursuing the possibility of reactivating the program. Each year over 3500 people participate in the program and the number of participants continues to grow. Kaiser Permanente also is collaborating in several regions with community organizations such as employers, senior centers, faith-based organizations, and community clinics. These partnerships include consultation, joint training, recruitment, and promotion as well as sponsoring the programs. The National Care Management Institute of Kaiser Permanente designated CDSMP as a “successful practice” and the National Health Education Directors sponsored a subgroup to encourage its nationwide implementation. In 2001, the CDSMP won the highest Kaiser Permanente national award for quality improvement and interregional innovation, the James A. Vohs Award for Quality [13]. In 2003, Kaiser Permanente’s two largest regions determined that the CDSMP will be a standard health plan benefit with no fees and no co-pays.

It should be noted that while this is the discussion of dissemination within one organization, the CDSMP is now being offered in more than 200 large and small organizations around the world including the National Health Service of England, the Sharing Health Programs in Australia, and numerous health-care and social service agencies in the United States. Among the more recent adopters, many cite the successes in this study as a reason for their willingness to implement the program.

The staying power and growth of the program remains to be determined. We do know that it has survived and thrived beyond the funded study and there are many signs that it will continue to do so.

5.2. Recommendations

Based on the results of the study and experience with widespread dissemination of the program, the following recommendations can be made for dissemination of similar patient education programs:

- Assessing site-specific readiness prior to implementation is essential. Factors to examine include administrative and key stakeholder support, stability of the system, relative priority of the program, and availability of dedicated staff and resources. Timing of dissemination is critical to success.

- Early success in program implementation, even on a small scale, is important, as early failures appear difficult to overcome.

- The publication and dissemination of evidence-based evaluations including, if possible, cost-effectiveness, prior to implementation, and dissemination is highly desirable.

- In a large-scale dissemination, an overall program coordinator is necessary and a means of group communication (email discussion list, conference calls, meetings) is important.

- The provision of a standardized program which cannot be altered reinforced by uniform training programs, detailed leader manuals, direct observation of leaders, and co-leader structure all help to maintain the consistency, integrity, and fidelity of the intervention.

- The presence of effective local staff with dedicated time and clear accountabilities is important to success.

- It is important to proactively anticipate and plan for staff changes and turnover. The loss of a single individual without a coordinated turnover can jeopardize the entire implementation.

- There is a fine balance between disseminating all responsibilities for program implementation to the lowest organizational level (site coordinator) and centralizing some of the implementation functions. In this case, dissemination may have been more successful if all trainings of the peer leaders had been centralized at a regional level with other aspects of program implementation being a function of the local sites.

- As much as possible programs should be scheduled and recruitment begun before the leader training is held so that a leader’s first course will be taught shortly after completion of the training.

- Special funding for program coordination is probably useful, but special funding for program implementation may be detrimental to long-term sustainability.

- Special incentives (honorarium, bonus pay, salary) for peer leaders and master trainers proved to be critical to recruitment and retention of skilled leaders.

- Direct mail to patients and use of media and community partnerships appear to be the most effective means of recruitment, at least in the initial stages of program implementation.

- Effectively marketing programs requires an understanding of how to match the program with the perceived needs of the potential participants. Language is extremely important in marketing (e.g. “workshop” rather than “class”).

5.3. Summary

This paper describes a 3-year process evaluation of the dissemination of the evidence-based Chronic Disease Self-Management Program and demonstrated that a proven program can be effectively replicated and nationally disseminated in a large health-care organization. Of the 12 regions to which the program was offered, nine regions implemented the program, three ceased operations and, at
the conclusion of the 3-year implementation study, five regions met most of the predetermined criteria for successful ongoing implementation.

Success was in large part shaped by the organizational readiness and timing of the implementation. This was reflected in strong financial and administrative support with dedicated staff to coordinate and support implementation, and an effective way to manage staff turnover to maintain continuity of the effort. Direct outreach and communication with participants proved to be the most effective means of recruitment. While some features of the CDSMP may be unique such as the use of peer leaders, the results of our experience may help organizations plan for the widespread dissemination and sustained implementation of similar patient education interventions.

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