

Implementing Evidence-Based Patient Self-Management Programs in the Veterans Health Administration: Perspectives on Delivery System Design Considerations

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While many patient self-management (PSM) programs have been developed and evaluated for effectiveness, less effort has been devoted to translating and systematically delivering PSM in primary and specialty care. Therefore, the purpose of this paper is to review delivery system design considerations for implementing self-management programs in practice. As lessons are learned about implementing PSM programs in Veterans Health Administration (VHA), resource allocation by healthcare organization for formatting PSM programs, providing patient access, facilitating PSM, and incorporating support tools to foster PSM among its consumers can be refined and tailored. Redesigning the system to deliver and support PSM will be important as implementation researchers translate evidence based PSM practices into routine care and evaluate its impact on the health-related quality of life of veterans living with chronic disease.

KEY WORDS: self-management; implementation; veterans health administration.

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INTRODUCTION

During the past several decades, patient-self management (PSM) programs have been developed to foster self care among patients with chronic disease.¹⁻⁵ Variation exists in terms of the program components, location of the program with the health care system and staff involvement.⁶ Experts define PSM as strategies that enable the patient's ability to monitor and manage daily health and symptoms, to problem-solve to overcome barriers encountered, to modify lifestyle risk factors, and to communicate with clinical providers as active collaborators in defining and adhering to health and therapeutic goals.^{1,2,7-9}

The evidence on the effectiveness of (PSM) programs varies across chronic conditions. Randomized controlled trials of PSM programs have demonstrated improvements in outcomes

for chronic medical conditions¹⁰ including asthma;¹¹ low back pain;^{12,13} hypertension;¹⁴⁻¹⁶ arthritis;^{17,18} and diabetes.¹⁹ Moreover several meta-analyses have reported that PSM programs have produced clinically meaningful outcomes for patients with diabetes and hypertension, but not for patients with osteoarthritis where the outcome was pain control.^{20,21} However, a recent meta-analysis demonstrated that psychological interventions which included cognitive-behavioral and self-regulatory components had positive effects on pain intensity and interference, depression and health-related quality of life among patients with chronic pain.²²

In addition, PSM programs offer patients options and strategies for coping with chronic medical conditions in order to function daily and maintain health-related quality of life. Patients with chronic disease are often left on their own to cope and manage their symptoms in between medical visits.²³

While many programs have been developed²⁴ and evaluated for efficacy,^{12,16} fewer efforts have been devoted to translating these programs for delivery to patients. Therefore, the purpose of this paper is to review delivery system design considerations for implementing PSM programs into practice and to describe our experiences in an integrated national healthcare organization. The presented themes emerged from a workshop on this topic at the (VHA) QUERI (QQuality Enhancement Research Initiative)²⁵ meeting held in December 2008 where three presenters discussed their implementation work in progress for hypertension²⁶ and stroke self management.^{27,28}

Implementation of PSM Programs into Practice

For the purpose of this paper, we define implementation as the systematic delivery of a PSM program within an organization by dedicated personnel for qualified patients as an adopted usual care protocol.²⁹

Our implementation goals at the VA for PSM are threefold. First, PSM program designers will collaborate with key VA stakeholders (i.e., front line clinical providers, patients) to assist with the local adoption of evidence based PSM programs that address patient needs. Second, VA implementation researchers will evaluate the implementation process of adopting PSM into practice. Finally, effective PSM programs that are successfully adopted by VA will be sustained by the organization.

Example of a PSM at the VA

An example of one PSM at the VA is VSTITCH [The Veterans' Study to Improve the Control of Hypertension], a PSM program designed to assist patients with uncontrolled hypertension and has demonstrated effectiveness in improving hypertension.¹⁵ In this program, a member of the clinical staff is guided through a computer assisted telephone protocol to assist patients in making lifestyle changes and adhering to therapeutic regimens. Bosworth and colleagues are currently evaluating the adoption of VSTITCH into primary care services across several VA facilities.

Delivery System Design Considerations

During the progression from effectiveness to implementation research, there are several key delivery system design issues to consider including designing the format of the PSM program, defining targeted recipients of PSM, defining the facilitators of and access to PSM, and specifying support tools to implement the PSM.

Format of PSM. Several approaches to self-management support have demonstrated promising results. A number of studies have shown that the format of a PSM can be tailored to best reach its recipients and to utilize space and personnel efficiently while maintaining effectiveness. PSM programs have been delivered in individual sessions by telephone;^{13,18} in group sessions of persons with chronic medical conditions;¹⁰ by shared, group medical visits;³¹ by teleconference groups;^{32,33} and by virtual groups via the internet.^{11,18,34,35}

A VA hospital may cover a wide range of geographic area, limiting the frequency for which veteran patients may be able to attend PSM programs. Thus, the format for which PSM is offered may affect its reach into the targeted recipient population. In VHA [Veterans Health Administration], community-based outpatient clinics (CBOCs) are smaller facilities that typically focus on delivering primary care services closer to patients' homes that may support PSM programs and reach a larger volume of veteran patients.

Targeted Recipients for PSM. The principles and methods of self-management support in chronic disease interventions may be similar across different diseases, and the benefits of a PSM intervention may extend beyond the intended targets. One study reported a significant improvement in glycemic control due to the nurse telephone intervention addressing hypertension.³⁶ This hypertension intervention produced a similar standardized effect size on glycemic control as PSM interventions focused on diabetes, suggesting there are likely common features of PSM support that transcend our usual disease-focused interventions. This finding is encouraging for the integration of PSM support within primary care where many patients have multiple chronic conditions.

Facilitators of PSM. A central component of implementing a PSM program is establishing facilitators within the healthcare system.³⁷ First, organizations need to establish how patients can best access the PSM programs. When implementing PSM programs, organizations need to move away from recruitment

of participants and consider giving direct-to-consumer access with referrals from multiple services (e.g., primary care, rehabilitation) to support the patient PSM programs. Second, providers are an important resource and influence on patient care decisions.³⁰ With each medical visit, providers have the opportunity to refer patients to PSM programs and discuss its importance.

While it is important for clinicians to encourage patient participation in programs, PSM skills may be developed and reinforced during routine clinic visits. Clinical encounters between patients and providers may be structured to encourage this partnerships approach. One mechanism that supports this approach is clinical decision support tools within the electronic medical record. For example, the **Self-management TO Prevent (STOP) Stroke Tool**²⁸ systematically guides providers in PSM counseling during a clinical patient encounter. PSM teaching is centered on stroke risk factor reduction and providers are prompted on collaborative action planning, problem solving, and decision making with the patient during the clinic visit. The STOP Stroke Tool also simultaneously documents the elements of PSM counseling that were completed by the provider.²⁸

To systematically facilitate provider PSM interaction, the leadership of the healthcare organization will need to assign clinical providers to include the administration of PSM in their scope of duties or add new staff to specifically perform these tasks. To illustrate, a nurse practitioner (NP) arranged shared, group medical visits, coordinated interdisciplinary care for diabetic patients and followed up with patients who missed clinic visits by telephone to foster PSM.³¹ PSM facilitation was part of the NP scope of duties.

Support Tools. Support tools refer to any device that may assist clinical providers in facilitating PSM.^{38,39} Support tools such as electronic templates in CPRS (Computerized Patient Record System) may enhance PSM facilitation. CPRS is the VA electronic record system that all providers use, contains scheduling, medication, vitals, consults, reports, and can accommodate clinical reminders.

CPRS offers clinical reminders that are triggered based upon patient clinical criteria which clinicians must address during the medical visit. However, provider feedback indicates that there has been a proliferation of clinical reminders developed targeting performance measures and as a result, providers may gradually become desensitized to their use.

Home telemonitoring of patients with chronic disease has been viewed as a valuable tool in promoting PSM and is currently being tested in VA for improving hypertension care⁴⁰ and pressure ulcer prevention in veterans with spinal cord injury. One of the important early lessons has been the feasibility of home telemonitoring in a veteran population. During the first six months of a self-management trial using home telemonitoring, 693 technical alerts documenting some alteration in home monitoring protocols were generated by 267 participants; 61% of the total alerts were attributed to patient non-adherence to the blood pressure monitoring protocol. This level of difficulty with home monitoring procedures will need to be considered should home monitoring become a component of future PSM interventions.⁴¹ Telemedicine interventions that rely on advanced telemonitoring may be limited in their applicability to the many patients with complex chronic illnesses who struggle to properly use this equipment. Similarly,

a recent trial comparing the use of videophones to telephones for delivery of a chronic heart failure support program found that veterans experienced equipment use difficulties with technology.^{42,43}

Several factors are important to fostering PSM in VHA: tool availability, ease of use, effectiveness, and cost. VHA has been a leader in health information technology. Simple devices, e.g. pedometers, have been shown to increase physical activity and reduce weight and blood pressure.⁴⁴ Thus, VA facilities across the organization currently supply veteran patients with pedometers to foster behavior modification when prescribed by the VA clinical provider. However the rate of systematic implementation of pedometer prescription by clinical providers is unknown. For direct-to-consumer promotion of pedometer use for PSM, a VA team has developed an internet-based program to motivate and monitor pedometer use among veterans.³⁵

Another PSM support tool is my My HealthVet (MHV). MHV is the internet based personal health record created by VA for veterans to manage their care. Spinal Cord Injury (SCI) QUERI is collaborating with the SCI/D and MHV program offices to create a healthy living information center on MHV dedicated to PSM in persons with spinal cord injury.⁴⁵ Thus, support tools can extend the care of the healthcare organization to reach a larger portion of its consumers and provide PSM support during and in between medical visits.

COMPARISON OF VA TO OTHER INTEGRATED HEALTH CARE SYSTEMS' PSM IMPLEMENTATION

Similar to other integrated healthcare systems (e.g., Kaiser Permanente). VHA is a capitated national system that provides care across the continuum of health within limited resources per patient. These integrated healthcare systems invest in and utilize health information technology to communicate, share information and manage care within their network. Moreover, these organizations invest in programs and tools that foster the wellbeing of their patient population given the long term service relationship with its patient population. Kaiser Permanente recently announced that it is assessing patient physical activity level at each medical visit and entering this data into their electronic medical record system to foster PSM during patient visits.⁴⁶ Similarly, both VHA and Kaiser Permanente have begun to utilize support services to foster PSM. In some VA sites, primary care has begun to implement patient counseling by pharmacy for patients with uncontrolled hypertension. VA researchers Bosworth and Kerr are currently examining PSM administered by pharmacists in VHA and Kaiser Permanente.

CONCLUSION

As lessons are learned about implementing PSM programs in VHA, resource allocation towards formatting PSM programs, providing patient access, facilitating PSM, and incorporating support tools to foster PSM among its consumers can be refined by the healthcare organization. Redesigning the system to deliver and support PSM will be important as implementation researchers collaborate with key stakeholders to translate

evidence based PSM practices into routine care and evaluate its impact on health-related quality of life of veterans living with chronic disease.

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