

Preliminary Description of the Feasibility of Using Peer Leaders to Encourage Hypertension Self-Management

Avery Hayes, MD; Jeffrey Morzinski, PhD; Kristyn Ertl, BA; Christine Wurm, BS; Leslie Patterson, MS; Nancy Wilke, OT; Jeff Whittle, MD, MPH

ABSTRACT

Background: Despite consensus that effective treatment of hypertension reduces morbidity and mortality, control rates remain relatively low. This report describes key features of a peer support program designed to motivate individuals to improve self-management of hypertension.

Methods: We recruited Veterans of Foreign Wars posts in southeastern Wisconsin and trained members of these posts to be peer health leaders over a period of 18 months. The curriculum covered information important to blood pressure control, as well as peer educator skills. During this time, the peer leaders presented educational materials and encouraged self-monitoring of blood pressure at post meetings. Surveys and focus groups were conducted to evaluate the adoption of the program at the posts.

Results: After a series of informational mailings and visits to veteran posts, 15 posts and 27 peer leaders volunteered to participate. Fourteen posts (93%) continued active participation throughout the study period, as did 24 peer leaders. Peer leaders reported that they gained health knowledge, skills, and confidence to perform as informational resources at their posts, resulting in greater levels of health support among post members.

Conclusion: The partnership of health care professional, medical school, and veteran service organization suc-

cessfully organized and maintained a community-based, peer-led program to promote healthy behaviors among Wisconsin's armed services veterans. Community physicians should be familiar with programs of this type as chronic disease self-management grows in appeal in our communities and increasing numbers of veterans return from armed service duty.

BACKGROUND

Approximately 65 million Americans have hypertension. National Health and Nutrition Examination Survey (NHANES) data indicate that the age-standardized prevalence of hypertension increased from 24.4% to 28.9% ($P < 0.001$) between surveys conducted in 1989-1991 and 1999-2004.¹ An aging population, growing rates of obesity, high-sodium diets, and a sedentary lifestyle all are thought to contribute to this increase.² Nationally, hypertension is the largest treatable contributor to stroke and the second largest contributor to coronary heart disease. It is also the second leading cause of end-stage renal disease and contributes significantly to congestive heart failure.³

Despite consensus that effective treatment for hypertension significantly reduces the risk of these clinical outcomes, treatment and control rates remain relatively low. Only 35.1% of people with hypertension are adequately controlled, including just 57.2% of those being treated.² Inadequate control is more common among older individuals with hypertension, particularly older men.¹ The ineffectiveness of traditional care has led to many interventions aimed at improving hypertension control.⁴ Most efforts to date have focused on encouraging health care professionals to optimize medical management. However, even under the best circumstances these interventions have been inadequate for many patients. In the Antihypertensive Lipid Lowering Heart Attack Trial (ALLHAT), 35% of patients were still uncontrolled despite good access to health care and medication, aggressive monitoring, and feedback to health care professionals.⁵

Author Affiliations: Primary Care Division, Clement J. Zablocki VA Medical Center, Milwaukee, Wis (Hayes, Whittle); Center for Patient Care Outcomes Research, Medical College of Wisconsin, Milwaukee, Wis (Ertl, Wurm, Whittle); Department of Medicine, Division of General Internal Medicine, Medical College of Wisconsin, Milwaukee, Wis (Hayes, Whittle); Department of Family and Community Medicine, Medical College of Wisconsin, Milwaukee, Wis (Morzinski, Patterson); Rehabilitation, Extended and Community Care Division, Clement J. Zablocki VA Medical Center, Milwaukee, Wis (Wilke).

Corresponding Author: Jeff Whittle, MD, MPH, Clement J. Zablocki VA Medical Center, Mailstop 00 (PC), 5000 W National Ave, Milwaukee, WI 53295; phone 414.384.2000 ext. 46444; fax 414.382.5017; e-mail jeffrey.whittle@va.gov.

Another approach to controlling hypertension is to enhance the patient's ability to participate in his or her own blood pressure management. Randomized clinical trials have shown that "activated patients"—those who are actively involved in their own care—have better clinical outcomes with asthma, diabetes, arthritis, and chronic diseases in general.⁶⁻⁷ A key element of activation is patient education. While long-term effects of education are not well known, patient education is known to be beneficial when paired with other self-management skills.⁸

An innovative method for patient education is the use of trained community members, alternatively referred to as lay health advisors, peer health educators, or simply peer leaders.⁹ Peer leadership on health matters often adds the benefit of sustained engagement in a socially supportive environment, which may result in longer-term effects on chronic disease self-management. Several studies have demonstrated that peer-led education supports healthy behavior changes, including exercise, nutrition, and communication skills.¹⁰⁻¹³ Moreover, there is significant evidence that social isolation is one of the most powerful negative influences on all causes of mortality among men.¹⁴ The need for improved hypertension control and the increasing evidence that community interventions are effective led us to implement a peer support program to improve hypertension management in a high-risk population in Wisconsin.

PROGRAM DESCRIPTION AND METHODS

Wisconsin is home to almost half a million veterans, most of whom are older men: 75% are >50 years old, and 41% are >65 years old. Many older veterans belong to 1 or more of 53 congressionally chartered veterans service organizations (VSOs). These organizations originally formed as veteran advocacy groups, but have important social roles as well. The Veterans of Foreign Wars (VFW) was formed in 1899. It is the second largest of the VSOs in Wisconsin, after the American Legion. The VFW has a strong orientation toward community service, especially for youth programs, military families, and the survivors of veterans. The VFW has a national and state structure, but the local post is the primary organizational unit. There are more than 300 VFW posts in Wisconsin. Posts are usually affiliated with a town or suburb, but sometimes with a career (eg, police post) or an employer (eg, Harley Davidson post). Most posts meet monthly to conduct post business and socialize; attendance commonly ranges from 10 to 25 members. Decisions

about post activities are driven almost entirely by the post members themselves, rather than by the state or national organization.

Because the post provides an existing social structure where many high-risk individuals with hypertension regularly come together, our study team approached Wisconsin VFW leaders about forming a partnership to implement a pilot program. The program—Posts Working for Veterans' Health (POWER)—trained members of the VFW to serve as peer leaders to improve hypertension control among their fellow post members. In this report, we describe this program, how it was implemented, and preliminary measures of adoption and success.

The principal investigator of this study initially visited 8 VFW posts in the greater Milwaukee area to discuss the importance of hypertension control and self-management of chronic disease and to elicit suggestions from post members for an effective program to improve hypertension control. The study team then worked with state VFW leaders to develop the study intervention and apply for funding. The Healthier Wisconsin Partnership Program, a local health-focused foundation, provided funding for 3 years to a partnership among the VFW, the Medical College of Wisconsin, and the Clement J. Zablocki VA Medical Center in Milwaukee. The institutional review board at the Zablocki VA Medical Center approved the study. Participation was offered to all 51 VFW posts located within approximately 30 miles of the Zablocki VA Medical Center through an initial mailing to the post commander. Follow-up calls were made offering to visit the post and describe the POWER program. Three American Legion posts approached us because members had heard our presentation at VFW meetings.

Based on literature concerning adoption of innovations,¹⁵⁻¹⁶ our informational visits emphasized the need for support from post leadership and 2 post members who would be willing to be trained as peer leaders. Prior health experience was not required for these volunteer leaders, but they had to be members in good standing and have time to complete POWER-related tasks. If posts expressed interest, we provided further information about annual peer leader stipends of \$200 and post payments of \$300 annually to cover the costs of participation. In addition, each participating post received 2 automated oscillometric blood pressure monitors (Omron model HEM-780), 12 pedometers, and 1 weight scale.

Once recruited, peer leaders attended an initial 8-hour training session to review the basics of hypertension self-management, including home blood pressure

checks, weight monitoring, and pedometer use. Small-group leadership and communication skills, lifestyle modification, and behavior change were also discussed during this session. Following this initial session, regular 2-hour evening meetings were held with the peer leaders—monthly to start, then every other month. At these meetings, we reviewed project-related activities, introduced new health materials that peer leaders were expected to bring to their posts (see “script” information in the next paragraph), and discussed health topics raised by the peer leaders. Each meeting also included a debriefing and problem-solving session for issues related to the peer leader role. For example, we discussed strategies that peer leaders could use with post members who were unclear or skeptical about the value of health behavior change. To make it easier to attend these meetings, duplicate meetings were held each month at locations convenient to the peer leaders.

We expected the peer leaders to be visible and audible health resources at their monthly post meetings. They routinely set up blood pressure cuffs and weight scales, offered to help their peers check and record these values, and distributed health self-management tools and information. For each training session, the study team developed “health scripts” that peer leaders could use to promote self-management among post members. Scripts were designed to be delivered in 10 minutes or less and included both health content and guidance about how they were to be delivered. The study team selected the initial script topics; later topics reflected input from the peer leaders and study team assessment of what seemed to “work” (see Table 1). The training session *Preparing for Doctor Visits* stressed the value of a being an active participant in health care decisions, knowledge of treatment regimens and goals, and the primacy of communicating with the physician. The importance of engaging social support was the emphasis of another training session that provided participants with means of involving family and friends in health-related issues.

To examine the extent to which the program engaged the peer leaders and their posts, data were collected in 2 ways. First, post-training surveys were administered to peer leaders to determine their learning and behavior changes. Second, after-program focus groups were held using standard methods¹⁷ to inquire about the factors that peer leaders associated with program success and barriers. Analysis consisted of descriptive statistics of numerical data and content analysis of narrative text.

All evaluation data were collected and stored using standard research techniques, including informed con-

Table 1. Peer Leader Training Session Topics

Topics	Date Covered
General	
Establishing Post Priorities	June/July 2007
Getting POWER ^a on the Agenda	September 2007
Contest Introduction	January 2008
Medical Knowledge	
Hypertension Basics	October 2007
Self-Measurement of Blood Pressure	September 2007
Stress Management	July 2008
Hypertension Review	January 2009
Patient Activation	
Preparing for Doctor Visits	January 2008
Establishing Health Goals	November 2007/ March 2008
Taking Medications	September 2008
Motivation and Communication	
Stages of Change	March 2008
Family Support for Chronic Disease	September 2008
Nutrition and Eating Habits	
Counting Calories/Reading Labels	November 2007
Tips on Dining Out	May 2008
Physical Activity	
Losing Weight/Barriers to Exercise	January 2008
How to Use a Pedometer	June/July 2007
Metabolic Equivalents/Exercise Tips	May 2008
Steps to Fitness	July 2008
Exercise Bands	November 2008

^aPosts Working for Veterans' Health

sent and data storage in secure locations. In contrast, the extent to which personal health matters were discussed at post meetings was left to the discretion of the post members. For example, some post members asked that the peer leader maintain a log of blood pressure readings and weights, while others kept these health measurements private. As is generally the case in support group settings, many members related personal anecdotes during discussions of the health issues.

RESULTS

The 35 posts (65% of 54 invited) that requested an informational visit were located in communities across urban and rural parts of southeastern Wisconsin. All 35 posts were contacted by phone after the visit, and a total of 15 posts (43%) agreed to participate in the program. These 15 posts represented 6 southeastern Wisconsin counties (Figure 1).

From the 15 posts, a total of 27 peer leaders were recruited. Their ages ranged from 45 to 81 (mean of 63), and 21 (78%) were male. Several had medical experience

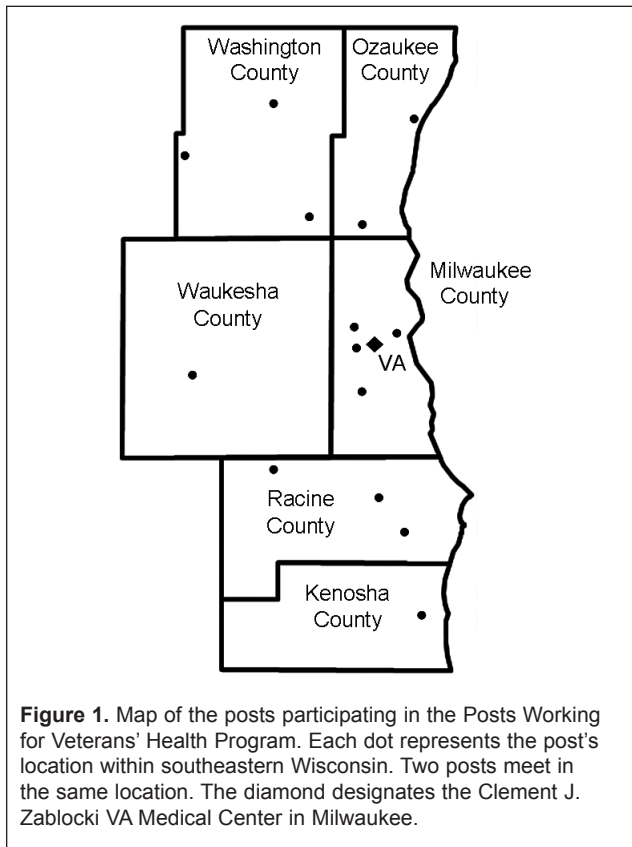


Figure 1. Map of the posts participating in the Posts Working for Veterans' Health Program. Each dot represents the post's location within southeastern Wisconsin. Two posts meet in the same location. The diamond designates the Clement J. Zablocki VA Medical Center in Milwaukee.

during their military service (eg, 3 had served as combat medics), and 3 had non-military experience as medical professionals. All but 1 had completed high school, and 22% were college graduates. On average, peer leaders attended 7 of the 11 follow-up training sessions. Six peer leaders (22%) withdrew during the 2 years of the study. The reasons they gave were out-of-state relocation, health issues, or changes in job status. Three were replaced with other post members, leaving 24 peer leaders to participate in the end of program evaluation.

All but 1 of these peer leaders (96%) completed surveys assessing their reaction to the program and acquisition of new skills. Most peer leaders (18/23, or 78%) believed the program was worth their effort; the remainder said they were unsure; none thought it was not worth the effort. Peer leaders reported that each of the training sessions contributed significantly to their knowledge or understanding of the topics. On a scale from 1 (no contribution to knowledge or understanding) to 5 (a very strong contribution), they rated the contribution strongest for sessions focused on *Preparing for Doctor Visits* (4.5), *Using Blood Pressure Monitors* (4.3), and *Steps to Fitness* (4.3). Peer leaders also judged their ability to present these content areas to their peers. They rated their ability the highest (1=low ability; 5=high ability) for *Using Blood Pressure Monitors*

(4.5), *Use of Exercise Bands* (4.3), and *The Importance of Physical Fitness* (4.2).

During focus groups we asked peer leaders whether support for post member health increased due to the POWER program. The consensus response was that participation in the program promoted support among members, most notably through discussions and interactions about health, where there were no such discussions or interactions before the program. When asked to look back and comment on factors associated with program success at their post, peer leaders highlighted 3 factors as most influential:

1. Credible information—"Members appreciated that the information presented came from a doctor, which makes it more credible."
2. Accessible information—"Members listened more to health information when it came from their peers as opposed to the newspaper or somewhere else."
3. Sustained presence—"It takes 7 times to create a new habit, so if you get them focused 7 times, they're committed."

Peer leaders also commented on barriers to participation. Commonly reported barriers were low levels of enthusiasm and participation in post activities generally. One peer leader said, "The majority of attendees are 70 plus years old and unwilling to make lifestyle changes." Some reported difficulty in having the health topic added as a regular post meeting agenda item. Finally, some post members felt that health maintenance and blood pressure control were issues that their doctor would address for them.

DISCUSSION

This study describes the implementation and early success of an innovative peer-led program encouraging healthy behaviors among community-based, older veterans in southeastern Wisconsin. The study team feels results will be of interest to physicians and policy makers seeking to design supportive programs for chronic disease self-management.

From an open solicitation for program participants, 15 of 34 VSOs visited by program staff agreed to participate. All but 1 post participated throughout the 2 years of the project. We were satisfied with this level of participation due to the novelty of the program's design, which required a certain amount of change and accommodation in an organization with a highly regimented structure. The requirement that a post identify 2 committed peer leaders prior to joining the program, also limited post participation; in many cases posts

expressed interest but did not have individuals willing to serve as peer leaders.

Several factors account for early success in establishing a peer-led educational program in this particular group. First, statewide leaders were supportive, facilitating efforts to recruit individual posts. Second, peer leaders reported significant confidence in the skills and responsiveness of training staff, leading to their perceptions of a shared commitment to veterans' health. Delivering credible information through a visible physician-led program was perceived as an important factor in POWER's success. Third, peer leaders were very satisfied with the staff's presentations and interactions that often included discussions of personal health issues. We repeatedly emphasized the bi-directional nature of this program and consistently drew the analogy to a well-functioning partnership between doctor and patient. For example, we selected and refined health information scripts on the basis of peer leader views. This alignment between peer leader interests and staff-supplied instructional resources contributed to the peer leaders' high ratings of their confidence and skill.

Finally, financial support by the Healthier Wisconsin Partnership Program was essential to fund the cost of equipment (such as blood pressure cuffs and pedometers) and to offset personnel costs. Tangible equipment and dedicated staff time were concrete reminders that this program was worthy of participants' attention. Moreover, repeated post contacts were key to establishing credibility and forming relationships. These would have been very difficult to sustain solely through volunteer efforts.

Some challenges were encountered as the program evolved. First, posts that had just 1 peer leader did not receive information on some topics because the sole peer leader was unable to attend the corresponding training session. Our experience supports others who emphasize the value of co-teaching, using active *pairs* of peer leaders to encourage sharing of peer leadership tasks.¹⁸ Second, support for the intervention among post leadership varied. Although all commanders had agreed to participate, peer leaders reported varying success at including the health topic as a regular item on the monthly agenda. Although peer leaders at these posts still provided the information to members before or after the meeting, they found that they missed many of the members this way and reported less positive perceptions of their impact.

Peer leaders also reported a wide range of beliefs and attitudes, from highly supportive to highly skepti-

cal, concerning the role of the post in supporting health self-management. Peer leaders reported explicit statements by some members that their health was a matter for them and their physicians, but certainly not the post. Other post members expressed concern that health-related activities added to already busy agendas led to longer meetings. The use of prepared scripts—timed to last 10 minutes or less—was a response to this concern. When we encountered skepticism, we found that our best approach was that of concerned listener, to focus discussions on evidence that supported our initiative and to tie our efforts to the ultimate goal of improved veteran health. Currently we are collecting and analyzing data regarding the impact of post interventions on self-management attitudes, skills and behaviors. We believe evidence of its impact on these, and eventually on blood pressure, will bolster support among peer leaders and post members. Explicit support of these activities from physicians in a post's community would also enhance the credibility of such a program. However, our limited financial support did not allow us to offer incentives for local physicians. As this program is refined and extended, we encourage peer leaders to identify community physicians who support the activity.

Several factors limit the generalizability of this study. This pilot study was without a control group and involved small numbers of peer leaders and service organizations. Therefore, the results reported here may be due to the chance enrollment of certain types of participants, which may have influenced findings in unpredictable ways. Second, this study is a preliminary report on program design and training outcomes that doesn't examine POWER's influence on veterans' blood pressure, lifestyle, or self-management skills. Analyses of project outcomes are ongoing and will be reported in the future. Third, this evaluation relied on self-reported data. However, the trustworthiness of findings was strengthened by using both numerical and narrative data. Finally, we have limited data regarding the sustainability of the intervention. However, 1 year after the last training session, 14 of the 15 posts still provide health information to post members in varied ways, ranging from articles in the post newsletter to oral presentations during each meeting.

CONCLUSION

We believe that the design and results of this intervention add to a growing body of literature on the use of existing community social structures to promote healthy lifestyle changes. By strengthening ties between post members, this intervention also works to reverse social

isolation, which is associated with mortality, especially in older men. The unique emphasis on VSOs extends prior studies and recognizes the special importance that Wisconsin has long attached to supporting veterans of military service.

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