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Management of Chronic Hypertension in Older Men: An Exploration of Patient Goal-Setting

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Abstract

Objective—Despite the success of the collaborative care approach on chronic disease outcomes; many patients fail to adopt the behaviors necessary to manage their disease. Goal-setting is an approach to collaborative chronic care that involves the setting of goals for the activation and maintenance of specific self-care behaviors. Using patients' perspectives this study will describe how goals for the self-management of hypertension are developed and whether they conform to the characteristics of effective goal setting.

Methods—Qualitative methodology was used to explore the process of setting self-management goals for hypertensive patients. Thirty patients participated in semi-structured interviews based on the deductive framework of goal setting.

Results—Patients understand the risks associated with hypertension, have intentions to control their disease, report conducting at least one self-care task, and set informal goals for themselves; however these goals lack the characteristics needed to initiate and maintain behavior change.

Conclusion—goal setting is applicable to chronic hypertension care. Future studies need to examine ways to minimize barriers to effective goal setting to improve hypertension control.

Practice implications—as part of the process of chronic hypertension care, health care providers should include time and support for dedicated goal setting to improve the effectiveness of self-management behaviors.

Keywords

Hypertension; Goal Setting; Self-Management

1. Introduction

Hypertension is the most common chronic disease among adults with approximately 65 million adults suffering from the condition in the United States alone [1,2,3]. It is a major preventable risk factor for heart disease and stroke, which are leading causes of death among middle aged to older adults [4,6,7,8]. In the U.S., it is estimated that only 25% of patients with hypertension have their blood pressure adequately controlled [9]. A collaborative care approach to medical encounters involving a partnership between patients and clinicians may improve outcomes for chronic disease patients [10]. Appropriate self-management of hypertension and other chronic conditions includes adherence to prescribed treatment, but this is only one aspect. Self-management primarily involves a treatment plan with self-care activities such as taking prescribed medications, but also managing illness and its effects by

monitoring physical and behavioral status to make appropriate management decisions and plans about care [11,12,13,14,15,16,17]. It includes adherence to prescribed treatments, but this is only one aspect of self-management. Among chronic conditions like hypertension, clinical trials have been modestly effective in encouraging patients to take part in self-management activities [11]. Despite the mounting evidence on the usefulness of self-management to improve clinical outcomes for chronic disease and recommendations to use a multi-dimensional approach for hypertension treatment and management of hypertension control, patient preferences for care are often not considered [5]

One possible strategy to engage both patients and physicians in the process of self-management is collaborative goal setting [10]. Clinical goal setting involves the elaboration of both general and specific goals to achieve desired clinical and quality of life outcomes [10,18]. Locke and Latham (2002) demonstrated that individuals who set goals, which are specific, challenging, and finite, are more likely to focus their efforts on goal directed activities and away from goal-divergent distractions [19]. In addition, performance is improved when individuals develop and use strategies or implementation intentions that facilitate their goals [20].

Several studies have investigated the role and applicability of goal setting to disease self-management. For example, Estabrooks and colleagues (2005) found that diabetic patients who were involved in choosing goals and making plans for attaining them, often chose goals related to the behavior in which most change was needed and improved in that particular area more than patients who chose other goals [21]. Another study demonstrated that individuals who had goals congruent with their providers reported better self-efficacy and assessment of their self-management [22]. Another study found that frail older patients were more likely to attain their health goals through improved adherence to a treatment plan when their primary caregiver and clinicians explicitly set collaborative goals at the time of treatment development [23]. However, little is known about how co-morbid older adults participate in the development and monitoring of treatment plans for chronic hypertension and the potential role of goal setting methodology in these contexts.

The purpose of this study was to elucidate older patients' goals regarding hypertension control and how those goals relate to their self-management and self-care activities. In addition, we explored whether these goals and activities exhibited the recommended characteristics for effective goal setting.

2.0 Methods

2.1 Study Design and Sample

The study was approved by the Institutional Review Boards of both the University of Texas-Health Science Center at Houston and Baylor College of Medicine. Qualitative methods were used to explore the processes by which older adults attempt to self-manage their hypertension. A sample of patients from the Michael E DeBakey Veterans Affairs Medical Center (MED-VAMC) participated in semi-structured interviews from January 2006 through March 2006. In-depth interviews were the chosen qualitative methodology given our aim of describing the relationship of complex factors affecting chronic hypertension care, self-management activities, and patient-clinician communication [24,25].

Physicians and nurses identified their own patients who met the study eligibility criteria of being: 1) under active treatment, 2) at least 45 years of age, 3) English speaking, and 4) diagnosed with at least one other chronic condition (i.e. diabetes, ischemic heart disease, chronic kidney disease, asthma) for possible study participation. Participant recruitment was stopped at the point of thematic saturation or when no new concepts emerged from the

ongoing analysis of at least five interviews [24]. This resulted in a sample of 30 participants. Of the 34 total patients identified for study participation from MED VAMC physicians and nurses, three refused participation, and one withdrew from study participation.

2.2. Data Collection and Procedures

Written consent was obtained for the 30 patients who were enrolled as study participants. Participants were interviewed by the first author (VB) and asked a series of open-ended questions to elicit a conversation about management activities, overall health goals, and hypertension related goals. Participants were asked a series of open-ended interview questions to elicit rich descriptions of self-management of hypertension including goals and self-care plans. As participants identified specific blood pressure self-management activities and health goals, they were probed for more specific goals, the characteristics of goals, as well as factors that influence each goal. All patients who participated in the study were asked the following questions: 1) Why is managing your high blood pressure important? 2) What goals do you have for your health? 3) What goals do you have for your high blood pressure? Participants were allowed to describe as many self-management activities and goals as they liked. Their responses were further explored with probes focused on the following characteristics of goals: 1) rationale for conducting the identified activity or goal, 2) plans for conducting the activity or goal, 3) specificity of the goal or plan, 4) monitoring of the activity or goal, 5) effect of family and peer relationships on conducting specific self-care, 6) effect of the patient-physician relationship on the goal or plan, and 7) whether patients were given feedback about progress on the goal or plan.

Upon the completion of each interview, the patient's most recent blood pressure reading was recorded from the medical record to compare themes related to goals and factors that influence goals in controlled and uncontrolled participants. Participants with blood pressure readings greater than 140mmHg systolic or 90mmHG diastolic (>130/80mmHG in diabetics) were considered uncontrolled [4]. In addition, participants completed a brief questionnaire to better describe the characteristics of the study population. In addition, participants completed a brief questionnaire including age, education, blood pressure target, and co-morbidities.

2.3 Data Analysis

Interviews were audio taped and transcribed for analysis. Data were analyzed using the constant comparative method of qualitative analysis [24,25]. Investigators independently reviewed each transcript line-by-line to identify and sort segments of data with similar concepts into distinct themes with particular attention to the following content areas: 1) self-management activities, 2) characteristics of goals, and 3) factors that influence goals related to the self-management of hypertension. A coding scheme and code key was drafted after the first three interviews. As new themes arose the interview guide was revised to further investigate emerging themes. Coding occurred soon after each interview and prior to all interviews being completed. During the last six interviews, no new themes emerged and recruitment was stopped at the point of thematic saturation [24]. During the coding process, new data were constantly compared with previous quotes and codes in the same content area. After additional rounds of independent coding; careful review, negotiation, and consensus building among at-least two investigators resolved discrepancies in coding. When all interviews were completed, the final code key was reapplied to each transcript. At the point of thematic saturation, when no new concepts emerged, the categories were labeled and themes identified [24,25].

3 Results

3.1 Sample Characteristics

Table 1 describes demographic, blood pressure, and disease characteristics of study participants. Participants were male with ages from 50 to 87 years of age. The majority of the participants were minority and almost half had some college. Only about one half of participants reported knowing a blood pressure target and only about a third of participants had controlled blood pressure.

3.2 Patient's Perspectives on Managing Hypertension

Participants described their reasons for managing hypertension with all participants describing their awareness of the health risks associated with hypertension, specifically the risk of stroke and heart attack. When asked about the rationale for controlling hypertension one patient responded: *Well from what I have read, it's important because I don't want to have a stroke or heart attack or some other stuff. It's really important to me. I've seen people who have had strokes, heart attacks too. It's nothing nice to have. So that's why its important to me.*

Another participant succinctly stated: *It'll kill you. It can cause a heart attack. It can cause a stroke.*

Patients who described roles and responsibilities associated with hypertension care, often reported taking full responsibility for the management of their condition. Two patients described their role in self-care: *Because it's the individual's responsibility. It's the individual who has the high blood pressure, so it's going to be the individual's responsibility because nobody can make that person do, take their medicine or go out and exercise or monitor what they eat in order to prevent it. Only that person can.*

The other concurred about individual responsibility: *Once the doctor told them about their condition, its up to the patient to do what the doctor says to do. Take your medication on time and all that.* Other participants described a lack of self-efficacy to effectively manage their condition. For example, when asked about managing one's blood pressure, a participant stated: *Some people can control it by diet, but if it's hereditary, you have got no shot at it.*

3.3 Goals for health, hypertension control, and self-management

Patients did set goals for themselves relative to their overall health, self-management of their hypertension, and blood pressure control. In regards to overall health, patients gave a variety of goals: *I would have my high blood pressure and diabetes and cholesterol under control without needing medication, uh, probably a good bit of which could be accomplished by losing 50 pounds*

For many, health goals were only described in the broadest terms: *I would like to live as long as I can.*

When asked about blood pressure goals, participants most often discussed blood pressure targets: *The doctors and nurses give me boundaries. They want my blood pressure to be around 130, about 130 over 85. I try to keep it there.* Another patient stated: *my doctor he said it's around 140 over 85.* Despite the frequent discussion of blood pressure targets, only two participants were able to correctly report their target blood pressure.

3.4 Characteristics of Goals

Very few goals were well specified or attached to self-care plans or timelines.

3.4.1 Specificity—Participants were unable to give any specifics (i.e. how often, when, etc.) when conducting self-care tasks. Despite probing for additional goal characteristics, participants were seldom able to describe specificity in relation to their informal self-care goals. For example one patient described his eating patterns in regards to blood pressure control: *Well I try to eat halfway properly, but I've been tending to, but sometimes I go overboard. I, usually try to mainly manage my blood pressure through walking, which I do...do, I walk and I still watch my diet. I don't watch it as close as I should, because if I see a sweet roll or something, sometimes I'll eat one. I know I'm not supposed to be eating it.*

3.4.2 Finite Limits—Few participants reported having a deadline for when they would like to attain their goal. Participants consistently failed to describe a timeline associated with hypertension self-management goals. For example, when the interviewer asked one person about goals for his high blood pressure, he responded: *keep it down*. When further probed for an accurate blood pressure target, he again responded *just as long as it's under 140*. When the same participant was asked about plans to lower his blood pressure, he responded: *well, I just take my medication*. Lastly, when asked about a timeline to bring his blood pressure under 140, he responded: *I didn't set a goal for that. I just want to get it down there*.

3.4.3 Feedback and Concordance—Few participants reported having received feedback from their clinicians regarding the management of their hypertension. In addition, feedback received was not necessarily constructive. One participant described an encounter with his physician: *No matter what kind of doctor I was going to, I show it [a sheet that tracks blood pressure readings] to them. I show it to one doctor and [he] says he isn't interested in that*.

Participants also reported a lack of concordance or agreement between themselves and their clinicians regarding hypertension and self-management goals. When asked about goals for self-care activities, one person responded: *My goal is to keep my weight down. It helps with my diabetes too. My doctor's goal is 190. My goal is 200*.

3.5 Self-Care Activities

All participants reported conducting at-least one self-care activity with a total of 14 activities mentioned including some alternative medicine remedies (see Table 2). In general, these self-care activities did not include self-management strategies with the possible exception of blood pressure monitoring and recording of measurements. Even this activity, however, did not seem to have the appropriate characteristics of self-regulated behaviors because abnormal readings were not coupled with appropriate actions to facilitate hypertension control. The activities discussed lacked a clear rationale for conducting the technique, a clear plan of action, or goals associated with the self-care technique.

4 Discussion and Conclusion

4.1 Discussion

This study examined the goals, self-management processes, and self-care tasks that older adults use to control their chronic hypertension. The findings of this study (see Figure 1) suggest that patients not only understand the health risks associated with uncontrolled hypertension but fully intend to manage their disease. They seem to understand the consequences of the disease, but lack the necessary behavioral capabilities for effective self-regulation, i.e., knowledge of “what to do and how to it.” They also report little self-efficacy for management. This confluence of high risk perception and low self-efficacy can severely decrease motivation to try or maintain management behaviors [26]. These factors at the top left of Figure 1 may be personal determinants of goal setting behavior. The model also

includes external determinants or behavior of important persons in the environment of the patient. Many participants did not know their blood pressure targets and had not received feedback from providers about their effort to manage their illness indicating some communication deficits. Oliveria and colleagues (2004) also report that patients could not identify their blood pressures or appropriate targets [27]. Significant others were important in trying to manage blood pressure, but often their influence was not necessarily goal-directed or helpful.

These factors on the left of the Figure 1 can be hypothesized to influence goal setting, self-care and self-management activities in the middle column. Participants all seemed to have general health and blood pressure goals, but they did not report specific goals with any of the characteristics that have been shown to make goal setting effective in influencing behavior [19,28]. Goals lacked specificity, time limits, and feedback. Patients reported some self-care tasks but these tasks also lacked specificity and were not accompanied by implementation plans. Goal setting can be the first step for effective self-management followed by monitoring, responding to the feedback from monitoring (i.e., self-regulation) by deciding if a change in self-care is necessary, planning and implementing the change and evaluating the outcome. Many of the participants in this study reported monitoring blood pressure, but the data from monitoring did not seem to be related to goal setting or effective self-management processes.

It was impossible to describe the taxonomy of goals from these findings because of the lack of detail in the informal goals described by participants. The self-care activities and goals described could be better described as heuristics or rules of thumb that patients believe will reduce cardiovascular risk associated with hypertension [29]. In contrast to goal-setting methodologies which activate motivation and self-regulation, heuristics tend to become trapped by cognitive biases and errors that distort judgment and behavior [30].

It is important to note several study limitations. The study may have recruited a population that has greater co-morbid illness and disease burden than the typical outpatient practice. The VA setting is a unique managed care organization that has achieved a blood pressure control rate of about 50% in most sites [31]. However, in this study, only 30% of the patients were identified as controlled. Therefore this may be a lower functioning subgroup of hypertensive patients or the lower rates of control may be associated with the higher degree of co-morbidity in our sample. The findings may not be generalizable to other groups, however the objective of this qualitative study was to describe behaviors related to hypertension control and identify themes regarding hypertension self-management. The lack of goal complexity and self-care may be due to the older age of participants and influences related to the generational cohort or military background of these participants. Schulman-Green and colleagues (2006) found that some older patients found the goal setting concept to be somewhat foreign, sometimes personal and embarrassing to share with health care providers, and possibly a lower priority than symptom reporting when time in a visit is brief. [32].

4.2 Conclusion

The findings of this study are notable for an almost complete lack of presence of specific goals and plans related to the management of hypertension. They were focused most often on a blood pressure target (often an erroneous representation of the intention of the physician), but they were not focused on goals or plans for self-care. Participants' goals and intentions were so non-specific that effective monitoring of progress to hypertension control was impossible most of the time. Furthermore, without effective monitoring, there can be no comparison to a standard, revision of the goal, or meaningful feedback from experts.

4.3. Practice Implications

Considering the current low level of patient facility and experience with goal setting for hypertension management and the possible lack of attention to this strategy by clinicians, the study has several practice implications. First, it speaks to the need for patients and health care providers to “start at the beginning” to clarify blood pressure targets and to differentiate between clinical targets and the behavioral efforts of patients to meet those targets. From this beginning, the patient and provider can move on to consider what they want to achieve (goals) and the behaviorally specific self-care and self-management plans that will be required to meet the goals. The participants in this study seemed to be aware of the need for self-directed efforts to control one's hypertension, but they were in need of assistance and collaboration to further define and improve the potential efficacy of the efforts.

A second implication is that interventions should focus on both patients and their health care providers. Schulman and colleagues found that physician made implicit assumptions that goals should be about function, that they had experienced no emphasis on goal discussion or negotiation in medical training, and that they questioned whether goals were important enough to require an explicit discussion with patients [32]. Huang and colleagues (2005) found that patients also describe goals in functional terms [33]. Function might be a common ground for beginning discussions between patients and their clinicians; however, both parties must have the knowledge and skills to match the functional goal with specific plans for implementation effective self-care and self-management [20].

This need for better behavioral specification suggests two types of intervention. It is possible that both clinicians and patients need training on exactly what comprises a potentially effective goal and how to set one, accompanied by planning and problem solving in relation to the goal. A recent study reported positive outcomes in an evaluation of a very specific strategy for training in goal setting and planning comprising teaching recognition of the current state of affairs (is their a more desirable state?), the selection of goals and plans (What do I have to do?), and checking the outcome [34]. This study addressed the needs of individuals with cognitive complaints, but it is potentially generalizable to a variety of health concerns. The second part of the intervention would need to provide a cue and a structure for focusing goal-oriented discussion in the routine of clinical visits. Naik and colleagues (2005) have established the acceptability of an instrument that guides providers and patients through discussion of patient priorities, treatment planning, specific goals and follow-up [35].

I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

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Figure 1.
 Framework and Characteristics of Goal Setting for Hypertension Control Among Older Co-morbid Male Users of the United States Veterans Administration Health System

Table 1

Demographics of Study Population	
Demographics	Value
Age in years; (mean $\pm$ SD)	70.1 $\pm$ 8.9
Education; n, %	
Elementary/middle school	3 (10)
High school	13 (43.3)
Some college	12 (40)
College graduate	2 (6.7)
Reported knowing Blood Pressure (BP) Target; n, %	
Know BP Target	16 (46.7)
Do not know BP Target	14 (53.3)
Controlled Blood Pressure; n,%	9 (30)
Co-morbidities	
Stroke/Cerebrovascular Disease	12 (40)
Congestive HF/Heart Attack/Disease	21 (70)
Diabetes	19 (63.3)
Kidney Disease	5 (16.7)
Liver Disease	1 (3.3)

Table 2

Reported Self-care

Self-Care Tasks	Frequency
Employ visiting nurse	1
Rest	1
Reduce alcohol consumption	1
Eat garlic	1
Take magnesium	1
Eat oatmeal	1
Consume vinegar	2
Avoid personal triggers	2
Visit doctors office	3
Record blood pressure readings	5
Exercise	11
Take medications	13
Watch/change diet	14
Use blood pressure monitor	17