The Relative Importance of Physician Communication, Participatory Decision Making, and Patient Understanding in Diabetes Self-management

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OBJECTIVE: Patients’ self-management practices have substantial consequences on morbidity and mortality in diabetes. While the quality of patient-physician relations has been associated with improved health outcomes and functional status, little is known about the impact of different patient-physician interaction styles on patients’ diabetes self-management. This study assessed the influence of patients’ evaluation of their physicians’ participatory decision-making style, rating of physician communication, and reported understanding of diabetes self-care on their self-reported diabetes management.

DESIGN: We surveyed 2,000 patients receiving diabetes care across 25 Veterans’ Affairs facilities. We measured patients’ evaluation of provider participatory decision making with a 4-item scale (Provider Participatory Decision-making Style [PDMstyle]; α = 0.96), rating of providers’ communication with a 5-item scale (Provider Communication [PCOM]; α = 0.93), understanding of diabetes self-care with an 8-item scale (α = 0.90), and patients’ completion of diabetes self-care activities (self-management) in 5 domains (α = 0.68). Using multivariable linear regression, we examined self-management with the independent associations of PDMstyle, PCOM, and Understanding.

RESULTS: Sixty-six percent of the sample completed the surveys (N = 1,314). Higher ratings in PDMstyle and PCOM were each associated with higher self-management assessments (P < .01 in all models). When modeled together, PCOM remained a significant independent predictor of self-management (standardized β: 0.18; P < .001), but PDMstyle became nonsignificant. Adding Understanding to the model diminished the unique effect of PCOM in predicting self-management (standardized β: 0.10; P = .004). Understanding was strongly and independently associated with self-management (standardized β: 0.25; P < .001).

CONCLUSION: For these patients, ratings of providers’ communication effectiveness were more important than a participatory decision-making style in predicting diabetes self-management. Reported understanding of self-care behaviors was highly predictive of and attenuated the effect of both PDMstyle and PCOM on self-management, raising the possibility that both provider styles enhance self-management through increased patient understanding or self-confidence.

KEY WORDS: physician-patient relations; disease management; self-care; ambulatory care; chronic disease.


Almost 100 million Americans have 1 or more chronic conditions, a number projected to increase by 35 million in the next 25 years.1 Primary care providers face a significant challenge in helping patients manage their chronic conditions to improve their health and quality of life.2,3 Among chronic diseases, diabetes mellitus presents patients with an especially daunting array of behavioral challenges, because optimal control requires a high degree of self-management.4 Despite solid evidence for improved clinical outcomes with effective treatment,4–8 many people with diabetes continue to have suboptimal glycemic and blood pressure control and elevated low-density lipoprotein levels.9 Moreover, although more than 95% of treatment for diabetes is carried out by patients or their family members, physicians vary widely in their provision of recommendations for self-management,10 and many patients have received no assistance with self-management.11,12 At the same time, many patients face considerable difficulty in carrying out recommended treatment behaviors.10,13,14 One third to three fourths of patients with diabetes report not following physician recommendations for treatment.15–17

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As per Clark et al, self-management or self-care in the context of chronic diseases refers to a set of skilled behaviors to manage one’s illness. These include: 1) engaging in activities that promote health, build physiologic reserve, and prevent adverse sequelae; 2) interacting with health care providers and adhering to recommended treatment protocols; 3) monitoring physical and emotional states and making appropriate management decisions on the basis of the results of self-monitoring; and 4) managing the effects of illness on the patient’s ability to function in important roles and on emotions, self-esteem, and relationships with others.10–12 This study focuses on the first two of these skilled behaviors.
To facilitate patients’ self-management, chronic disease experts have called for a “paradigm shift” in provider-patient relations from directive to more collaborative patient-provider interaction styles, with joint definition of problems, treatment goals, and management strategies. Enhancing patient-provider communication and shared decision making have been shown to result in greater patient satisfaction, adherence to treatment plans, and improved health outcomes, such as higher self-reported health status, emotional health, symptom relief, and physiological measures of disease control. Several recent randomized clinical trials of programs explicitly promoting patient involvement in defining treatment goals and therapeutic strategies for type 1 and type 2 diabetes have also found improved clinical outcomes. The consistency of these studies’ findings of improved physiological outcomes and reported health status is impressive. Yet, the causal mechanism for their results remains unclear. Inherent in a shared decision-making style is: 1) a substantial increase in provider communication and provision of information; and 2) an increase in patient involvement in medical decision making. Much additional research needs to be done to tease out which aspects of these patient-provider interaction styles (or provider styles) are most effective in promoting improved self-management among different groups of patients. Moreover, we need to better understand the mechanisms by which these styles affect patient self-management. One hypothesis is that they improve self-management by increasing patients’ understanding of their conditions and treatments as well as self-confidence in their own self-care abilities (self-efficacy), both of which have been shown to be positively related to treatment adherence. It is also possible that their effect is explained through other mechanisms, such as increased patient motivation and fit between treatment and patient goals and lifestyles, or that they exert a direct effect on patients’ self-management. Clarifying these questions will help physicians and health care systems best target time and resources to improve communication, patient self-care behaviors, and ultimately health status.

Therefore, we sought to assess the influence of patients’ evaluation of their providers’ participatory decision-making style, rating of physician communication, and understanding of diabetes self-care on their diabetes management. The conceptual model we tested is depicted in Figure 1. Using data from a survey of 2,000 diabetic patients receiving care in 25 VA medical centers, we asked: 1) Do patients’ assessments of their physicians’ provision of information and participatory decision-making style correlate with variations in self-reported diabetes management? 2) What is the relative importance of patients’ assessments of these 2 provider styles in predicting their diabetes self-management? 3) Is there evidence that these provider styles improve patient self-management through greater reported understanding of diabetes self-care?

**METHODS**

**Study Population**

The initial sample was composed of 2,000 veterans receiving diabetes care at 1 of 25 VA medical centers located in 4 Veterans’ Integrated Service Networks, representing 3 of the 4 census regions. Patients were identified using electronic pharmacy and laboratory information for fiscal years 1998 and 1999 from each participating VA facility and a national utilization database. Patients were eligible if they satisfied 1 of the following criteria within the past 12 months: 1) one hospitalization with a diabetes-related ICD-9 code (250.x, 357.2, 362.0, or 366.41); 2) two outpatient visits with a diabetes-related ICD-9 code; or 3) at least 1 prescription for a glucose control medication or monitoring supplies. A final eligibility criterion was 2 outpatient visits of any kind in fiscal year 1999. From among those eligible, we randomly

![Figure 1](Image1.png)

**FIGURE 1.** Conceptual model tested: how provider styles influence patients’ diabetes self-management.