Providers' Perspective on Diabetes Case Management: A Descriptive Study

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Objectives: To address the physicians' perspective on case management (CM) for diabetes.

Research Design and Methods: A nested descriptive study in a randomized controlled trial of diabetic patients who had blood pressure >140/90 mm Hg, glycated hemoglobin >9.0%, or low-density lipoprotein level >100 mg/dL. Patients received CM (n = 278) versus usual care over a period of 1 year. Surveys were designed to assess physicians' comfort in working with case managers. At the end of the study physicians whose patients were randomized in the trial were mailed these surveys.

Results: A total of 51 of the 72 providers completed the survey (70.8% response rate). The majority of the providers felt very comfortable working with case managers (91.5 %), found treatment provided by CM to be accurate (93.3%), reported that having case managers increased the likelihood of adherence to the treatment regimens (89.4%), and reported overall improved patient satisfaction with CM (93.5%). Seventy-four percent of the providers reported that working with case managers increased the number of patients who were able to achieve therapeutic goals. Almost all providers (99.74%) reported that they will likely consult case managers for management of poorly controlled diabetes.

Conclusions: Co-managing diabetes patients with nurse case managers did not undermine the providers' perceived professional role. In fact, having CM increased the rate of achieving therapeutic goals among patients with diabetes and cardiovascular risk factors.

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For author information and disclosures, see end of text.

Case management (CM) has been demonstrated to improve diabetes outcomes, including glycemic control,[1,2] hypertension,[3,4] and dyslipidemia.[4] CM has also been demonstrated to improve patient satisfaction[5,6] and patient perception of quality of care received.[7] We are not aware of any studies that comprehensively addressed the providers' perspective and level of comfort with CM for patients with diabetes.

Little is known about physicians' perception of their relationships with case managers. A recent meta-analysis[8] and systematic review[9] have reported that nurse practitioners (NPs) in general provide the same quality of care as primary care physicians. Physicians could conceivably view case managers as professional identity threats.[8] It is well known that physicians receive increased satisfaction from improved relationships with their patients.[10] Whether delegating the care task to case managers deprives the physicians of job satisfaction is unknown.

The purpose of our study is to define the views of providers regarding intensive diabetes nurse CM involving simultaneous management of 3 cardiovascular risk factors (ie, glycemic control, hypertension, and hypercholesterolemia) in patients with diabetes.

METHODS

The current study was nested in a randomized, unblinded trial of CM versus usual care. The study was conducted at the Minneapolis Veterans Health Care System (MVHCS), Minnesota, and was supported by Veterans Integrated Service Network 23. Primary study outcomes have been reported.[4]

As a part of the study, nurses used treatment protocols to independently advance treatment for management of hyperglycemia, hypertension, and dyslipidemia. After the completion of the randomized trial of CM versus usual care, providers whose patients were randomized in the trial were mailed a survey. Provider responses were anonymous. Surveys were sent by a research assistant who coded the surveys for tracking purposes. Only the research assistant was aware of the provider code. One reminder was sent to providers who did not return the survey within 3 weeks.

The survey was developed by the research team and designed to assess the providers' perceptions of the effectiveness of the study case

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We demonstrate that in patients with diabetes, nurse case management leads to:

- Higher provider satisfaction.
- Greater number of patients who are able to achieve therapeutic goals.
- Providers having more time to concentrate on other acute care needs of their patients.

managers in achieving diabetes outcome goals, their comfort level in working with case managers, and their perceptions of the effect of CM on treatment adherence and patient satisfaction. It also addressed the providers' familiarity with CM and whether CM gave the providers more time to focus on acute care needs of their patients.

RESULTS

A total of 72 healthcare providers were mailed surveys. These included 60 primary care physicians (37 at the MVHCS and 23 at affiliated Community-Based Outpatient Clinics [CBOCs]), 7 physician assistants (PAs) (4 at MVHCS and 3 at CBOCs), and 5 NPs (2 at MVHCS and 3 at CBOCs). A total of 51 providers (41 physicians, 5 PAs, and 5 NPs) responded to the survey. The overall response rate was 70.8%. The non-responders were 19 physicians and 2 PAs (11 at MVHCS and 10 at CBOCs).

Responses to the survey questions are reported in the **Table**. Eighty-five percent of the providers agreed that having CM allowed them to focus on the acute care needs of their patients. Seventy-four percent reported that working with case managers increased the number of patients who were able to achieve therapeutic goals. Most providers felt comfortable working with case managers (91.5%). The majority of providers found the practices of the case managers to be accurate (93.3%) and reported that having CM increased the likelihood of patient adherence to treatment regimens (89.4%) and improved patient satisfaction (93.5%). Providers reported a need for CM in the care of patients with poorly controlled diabetes (83.0%), hypertension (73.9%), and hypercholesterolemia (61.7%). Most providers were satisfied with the feedback they received from case managers (88.9%). Seventy-two percent disagreed with the statement that having case managers impeded the achievement of therapeutic goals. Only 29.6% felt that their patients preferred that a physician manage all their care. All (100%) reported that they would likely refer a patient to case managers for poorly controlled diabetes, while 84.8% were likely to refer for hypertension and 75.6% for hypercholesterolemia management. The majority (95%) reported that they would likely refer patients to case managers if they had 2 or more cardiovascular (CV) risk factors.

DISCUSSION

Our results suggest that the majority of the providers who had patients with diabetes enrolled in the randomized trial of CM or usual care for multiple risk factors felt comfortable working with case managers. In addition, the majority of providers reported that delegating tasks to case managers did not undermine their perceived professional role. Providers reported nurse CM services to be accurate and accountable. Providers were more likely to observe treatment adherence in patients who were case managed. The latter is consistent with prior studies and has been linked to better diabetes outcomes.[11,12]

Our findings also are consistent with a prior survey of 13 physicians whose patients were randomized to CM or usual care.[13] In the latter study, the majority of physicians reported that CM decreased the amount of time they spent with patients and they strongly recommended adopting a CM program.

Despite several studies demonstrating improved patient satisfaction[5,6] and quality of life,[1,7] CM for diabetes has not been widely implemented. There have been several barriers implicated in the global implementation of CM for chronic diseases. It has been reported that CM alters the relationship of physicians with other practitioners involved in the care of the patient.[14] Williams and Sibbald[15] have demonstrated that having CM induced a change in roles and identities among doctors and nurses, leading to uncertainty about their respective professional roles among the general practitioners, and may be a major barrier for CM implementation. Our study contradicts this concept. We demonstrate that the providers' relationship with the case managers does not impact their job satisfaction. In addition, we demonstrate that providers do not view case managers as a threat to their professional identities. The latter does not constitute a major barrier in the implementation of diabetes CM.

There are limitations to our study. First, we did not pilot the survey we used in the study. Piloting is important to ensure the questions are clear and are not misleading. Second, this study may be unique to Minneapolis Veterans Heath Care system (VA) providers, who generally treat an older population of veterans with several comorbidities, and hence their views could differ from those of the providers outside the VA practice. The VA system does not have the typical fee-for-service construct, and therefore the likelihood of acceptance may be higher because case managers are not perceived as competition. In addition, the impact of CM on physician reimbursements could not be determined. Third, when analyzing provider responses, we were unable to account for the individual patient outcomes

Table. Providers' Views on CM

Question (abbreviated version)	Agree (%)	Neutral (%)	Disagree (%)
1. Allowed more time to focus on other needs	85.1	8.5	6.4
2. Increased number of patients meeting therapeutic goals	73.9	19.6	6.5
3. Comfortable with CM	91.5	4.3	4.3
4. CM gave accurate information	93.3	2.2	4.4
5. CM led to more adherence with treatment regimens	89.4	8.5	2.1
6. Higher patient satisfaction with CM	93.5	4.4	2.2
7. CM should be involved for poorly controlled diabetes	83.0	8.5	8.51
8. CM should be involved for poorly controlled hypertension	73.9	10.9	15.2
9. CM should be involved for poorly controlled hypercholesterolemia	61.7	23.4	14.9
10. CM provided adequate feedback	88.9	2.2	8.9
11. CM impeded attainment of therapeutic goals	17.0	10.6	72.3
12. Patients prefer that physicians manage their care	29.6	40.9	29.6
13. In the future, would likely consult CM for management of poorly controlled diabetes	100.0	0.0	0.0
14. In the future, would likely consult CM for management of poorly controlled hypertension	84.8	3.4[a]	11.9
15. In the future, would likely consult CM for management of poorly controlled hypercholesterolemia	75.6	5.8[a]	18.6
16. In the future, would likely consult CM for management of 2 or more of risk factors (13,14,15)	95.0	1.7[a]	3.3

CM indicates case management.
[a]Missing response.

in the study. Lastly, the inherent limitation of using the Likert scale is the central tendency bias and social desirability bias where the providers portray themselves in a more favorable light which may not represent their true views.

Key problems with CM implementation for different disease models have been reported to be uncertain identities[15] and relationships within a practice team.[14] Our study contradicts this concept and indicates that neither factor is a barrier to global implementation of CM in diabetes. This is consistent with the results of the study by Taylor et al.[13] However, it is imperative that our results are confirmed in fee-for-service healthcare settings prior to global implementation of CM.

The study case managers (an NP and an RN who was also a Certified Diabetes Educator) were highly experienced in managing patients with diabetes. Whether our findings would be replicated with less-experienced case managers is unknown.

CM has been demonstrated to improve CV risk factors. Patients have greater satisfaction with CM. The present study demonstrates that CM also improves physician satisfaction.

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