Disease Management for Diabetes Among Family Physicians and General Internists: Opportunism or Planned Care?

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Background and Objectives: Diabetes requires substantial ongoing medical management and use of monitoring tests. However, physicians' performance of these tests is often suboptimal. This study explored primary care physicians' management of diabetes in the context of both planned diabetes visits and acute visits for conditions unrelated to diabetes. Methods: Semi-structured depth interviews were conducted with 12 primary care physicians in 9 family practice and internal medicine practices distributed throughout the state of South Carolina. All interviews were tape recorded and transcribed. Themes, divergences, and trends were identified and discussed by the investigators. Results: Although all participants reported a preference toward planned diabetes management, because most patients fail to adhere to scheduled care, opportunistic disease management tended to be the default mode of diabetes care. Participants reported performing appropriate tests during scheduled visits but acknowledged that when confined to acute visits, diabetes care was difficult to perform. Reasons included time constraints and patient agenda. Participants reported that inadequate tracking of completion of diabetes standards of care influenced their adherence to guidelines. Conclusions: The current system of delivering diabetes care opportunistically in the context of non-diabetes acute visits may need to be more closely examined in an effort to improve the delivery of services.

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Diabetes mellitus is one of the most common chronic diseases, affecting approximately 15.7 million individuals in the United States. It is also one of the most costly diseases to treat, resulting in approximately $98 billion in direct and indirect costs in 1997.

Several landmark trials, including the Diabetes Control and Complications Trial (Type 1 diabetes) and the United Kingdom Prospective Diabetes Study (Type 2 diabetes), have shown that aggressive treatment of patients with diabetes can reduce long-term complications of the disease. These findings have led the American Diabetes Association (ADA) to develop guidelines for monitoring and treating persons with diabetes. These guidelines include recommendations for ongoing monitoring tests, such as glycosylated hemoglobin levels, serum lipid levels, foot examinations, urinary microalbumin levels, and ophthalmoscopic examinations. The guidelines also include recommendations on when to initiate or increase pharmacologic therapy.

Despite widespread agreement among physicians about guidelines for the care of diabetes, treatment of diabetes in actual practice is often suboptimal and does not comply with the guidelines. This is particularly true in primary care settings (where most patients with diabetes receive their care), since the task of complying with recommended standards of care is particularly difficult when primary care physicians have to deal with diabetes and a broad array of the patients' other medical problems, plus preventive care and health promotion. Thus, when diabetes care occurs in a primary care setting, compliance is often decreased substantially. However, if primary care providers had sufficient time for the care of diabetes and diabetes-related conditions, it would follow that compliance with guidelines might improve.

This study elicited physicians' impressions of the tension that exists in primary care practice between the delivery of diabetes care during scheduled visits and the delivery of diabetes care in the presence of other
illnesses. The study captured the primary care providers’ perceived barriers to the delivery of diabetes care. How they actually deliver diabetes care, how they prefer to deliver diabetes care, and how they reconciled any inconsistencies between the two was also captured.

Methods
Twelve in-depth interviews, as described by McCracken,11 were conducted by a physician investigator using a semi-structured interview tool. The interview tool consisted of 11 open-ended questions that were used in all 12 interviews. The interview questions are shown in Table 1. Questions were developed by a multidisciplinary team and were designed to elicit the individual participant’s perspective on disease management for patients with Type 1 and Type 2 diabetes. Planned probes were included in the interview tool to prompt the participants to reflect on more focused content. For example, when inquiring about the participant’s variation in management strategy based on different patient characteristics, the participant was prompted to reflect on variation in care for compliant patients versus noncompliant patients.

Sampling
A homogeneous group of primary care providers, both family physicians and internists, was serially and contingently selected.12 Informants were selected to represent physicians with typical cases that characterize rural, urban, and regional differences in their patient populations. Practices had to report a significant census of patients with diabetes (>15%). This proportion of patients with diabetes was selected to ensure that the informants could provide information that was typical practice to managing patients with diabetes. Sampling was continued to the point of redundancy to establish evidence for the credibility of the generated theories.12

Approval of the Institutional Review Board was obtained from the Medical University of South Carolina. Interviews were conducted in person or by telephone between March and July 2000.

Data Analysis
Interviews were audiotaped and transcribed. To reduce the influence of preconceptions about the data, a commonly used interpretive form of qualitative data analysis known as the editing style11 was used to analyze the data. This interpretive form of analysis involves searching for meaningful segments of text and organizing them into categories and themes. The physician investigator who conducted the interviews and a social psychologist who was blinded to the identity of the participants studied the transcribed interviews independently to identify meaningful segments of text and categorized these segments into themes. The team met after each set of three interviews had been conducted to compare segments of text from the transcribed interviews, explore the themes that emerged in the discussion, and reach consensus about interpretation of the texts and themes. Frequent meetings allowed newly collected data to inform the inquiry process. Subsequent interviews were conducted to reframe and test the emerging hypotheses.

Results
Planned Care
The first theme to emerge was the participants’ strong preference for and expectation of planned diabetes care. Planned care was defined as regularly scheduled appointments dedicated to the patients’ diabetes and diabetes-related conditions. Planned care was the preference for delivering care to patients with both well-controlled and poorly controlled diabetes, although the interval of the care varied based on the degree of diabetes control. Interestingly, this preference for planned care was described as the ideal delivery of care that the participants strove to achieve. The planned approach to diabetes care had been modeled in the participants’ residency training, but once in practice the ideal of planned care was difficult to carry out.

Table 1
Explored Issues in Diabetes Management in Primary Care

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<th>Issue</th>
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<tr>
<td>• How do you manage patients with diabetes to ensure that they are receiving appropriate monitoring tests like HbA1C?</td>
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<td>• Do you see all your diabetes patients at a fixed time interval, or does it vary based on the degree of control?</td>
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<td>• How do you address the patient’s diabetes monitoring if the reason for the visit is an acute problem unrelated to the diabetes, like influenza or a sprained ankle?</td>
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<td>• Are there things related to diabetes that you try to work into a visit (eg, foot exams) and others that you don’t deal with in that visit?</td>
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<td>• How do you decide what to include and what not to include (eg, preventive services, chronic disease management) in an acute visit?</td>
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<td>• If you do not address diabetes management in an acute visit for some problem unrelated to diabetes, what strategies do you use to try to monitor and manage their diabetes?</td>
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<td>• How did you develop this strategy?</td>
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<td>• How does your strategy for diabetes management differ according to different patient characteristics? (eg, Type 1 versus Type 2 diabetes patients)</td>
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<td>• How valuable do you think performing opportunistic disease management is in providing quality of care to your patients?</td>
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<td>• What are the barriers to doing opportunistic disease management? (PROBE: time constraints, availability of testing facilities)</td>
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<td>• What would make you more likely to do opportunistic disease management? (PROBE: higher reimbursement for the visit, patient request for the test)</td>
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Sample comments from the interviewed physicians included:

I try to see all my diabetics every 3 months on a fixed interval.

I see the diabetic patients every 3 months unless they are out of control, and then I see them more often.

I like to have a time or appointment dedicated to diabetes so I can cover that [diabetes care] more thoroughly.

Planned Care Is Infrequent

The next theme to emerge was the participants’ admission that planned care occurred infrequently. Most patients do not adhere to this scheduled care; therefore, opportunistic diabetes care tended to be the default mode of care. Opportunistic care was defined as routine diabetes care that was delivered in the setting of an acute visit for a condition unrelated to diabetes. Opportunistic care was acknowledged to be the reality of care in contrast to the ideal of planned care. One physician commented that:

You have to address the diabetes when they come in [for an acute visit] because you may not see them again for quite a while.

Another stated that:

People have a difficult time just getting here, so you know that if you don’t take care of it [diabetes care] at that [acute visit] appointment, you may not see them again for a while.

In addition to citing patient noncompliance with scheduled visits, participants lamented the lack of a system for identifying and tracking their practice’s diabetes population. Only one practice had the capability of an electronic medical record. Two other participants volunteered that they had developed systems for reminding diabetes patients of appointments, but neither of these systems had been maintained. These physicians stated:

We have no way of knowing who comes back and who doesn’t come back for care.

and:

We don’t take the next step, which includes contacting those who don’t come, the patients who have fallen through the cracks, which might explain the difference between the compliance physicians think they have and the actual numbers.

Time Constraints

Another dominant theme was that participants uniformly reported consistent performance of the appropriate diabetes monitoring tests during planned diabetes visits. However, when confined to acute visits for problems unrelated to diabetes, diabetes care was difficult to integrate into the visit for two reasons: time constraints and patient agenda.

Physicians described the brief patient encounter for the acute visit as providing inadequate time to address the diabetes management of the patient. Participants expressed that they often were pressed to prioritize the recommended guidelines for care and choose to perform some, but not all, of the recommended care due to time constraints of the acute visit. Compliance also varied based on the constraints of the daily practice schedule. Diabetes education was difficult to integrate into the acute visit. One physician stated:

They have a 10-minute slot, and if you take a half hour with them, then you just get so far behind. Unless it was something that was planned ahead, but usually somebody calls in that day and ends up in a 10-minute slot. Then there isn’t really much you can do but just take care of that one problem that day. It becomes a case of the urgency of the immediate I guess.

Another physician commented that:

Time constraints are a barrier, and I have to say if I have a busy day then I don’t do as well at keeping the standards of care.

Another indicated that:

It’s somewhat too complex to try to do all the diabetic teaching and awareness during an acute illness . . . You do what you can and then . . . have them come back.

Patient Agenda

The patients’ agenda and state of discomfort were also identified as a barrier to delivering diabetes care during an acute visit. Physicians worried that patients perceive opportunistic diabetes care as a dismissal of their primary complaint for which they made an office visit. For example, one physician stated:

The person feels so bad. If they’ve got the flu, then [the patient] probably could care less about talking about diabetes eye care, foot care, or diets.

Another commented:

[The patient] wonders ‘Why are you talking to me about diabetes again, when I am just here for neck pain?’
A third physician stated:

I think you shouldn’t overburden them when they come in for something else because then they feel like whatever they came in for that day, which is worrying them, isn’t really a priority, [it takes] second chair.

**Quality Assurance Systems**

Participants described the absence of a quality assurance system for tracking adherence to diabetes guidelines. They tended to rely heavily on reviewing the individual patient chart documentation from previous visits. Quotes from the physicians included:

No, I just do that by memory. I look through the chart to see what has been done. 

I guess you were asking, though, how do I ensure [standards of care] being done for all the patients, and I don’t ensure it’s being done. I know there are some who fall through the cracks. I just try to work it in when they come in.

Finally, physicians expressed frustration about their inability to reconcile the ideal of planned care with the reality of opportunistic care. One physician stated:

If they don’t do that [keep scheduled appointments], they are lost. If they don’t come in, I can’t make them, and no one can make them come in.

**Discussion**

In this study, primary care physicians showed a preference and expectation for the ideal of planned diabetes care delivery. However, they also reported that most patients are not compliant with planned care. In addition, practices lack systems for identifying and tracking their diabetes populations. By default, opportunistic care, the more frequent mode of diabetes care delivery, becomes the reality of practice. Physicians also report that diabetes standards of care are consistently met in the context of planned care. However, these standards are difficult to integrate into an acute visit for a condition unrelated to diabetes for two reasons. The time constraints of the acute visit prohibit physicians from performing all the necessary monitoring tests. In addition, the patient’s agenda for the acute visit is a barrier to delivering diabetes care.

Participants expressed frustration with the expectations placed on them to overcome the barriers to opportunistic care. Inconsistencies and contradictions in each participant’s response underscore the tension. In the course of each interview, participants defended their compliance with the standards of care, while conversing freely about the insurmountable obstacles to performing opportunistic diabetes care. The inconsistencies were: (1) I adhere to the guidelines for management of all my diabetes patients. However, I do not have a system for knowing who all my diabetes patients are. (2) I manage diabetes in planned visits. However, my diabetes patients don’t come for planned visits. (3) I manage diabetes in opportunistic visits. However, there is no dedicated time to adequately deliver all the standards of diabetes care.

Through the process of the interview, an admission commonly evolved: I don’t adhere to all the guidelines but I am doing the best I can do.

Participants report adherence to ADA guidelines in the setting of planned diabetes care and a decline in adherence in the setting of opportunistic care. Poor compliance statistics nationally are a direct reflection of physicians’ inability to reconcile the ideal of planned care with the realities of opportunistic care. The themes captured in our study demonstrate that physicians are trained in a manner that does not adequately prepare them for the realities of practice. Further, interventions like academic detailing and other quality improvement strategies have targeted individual physician performance and have shown little success in increasing physician compliance with guidelines for management of chronic illnesses. Even the strongest interventions to improve compliance with recommended standards have only increased compliance rates from 15% to 32%. Consequently, physicians defend their performance as appropriate to the resources available: “I’m doing the best I can do.” This sentiment suggests that the error may lie in the performance of the system of care and not in the performance of the individuals who provide the care. Interventions based on the opportunistic disease management model may have a relatively low ceiling in their ability to improve diabetes care. The opportunistic model cannot achieve the quality of care necessitated by advances in diabetes management.

**Limitations**

This study has several limitations. First, only primary care physicians were interviewed. The inclusion of subspecialists in the study might have presented confirming or contradicting viewpoints that could have elaborated our analysis. Although subspecialist physicians tend not to provide a full scope of services, some do provide care for conditions outside of their conventionally accepted area of expertise. Second, although the qualitative study design was chosen as the best method of obtaining physicians’ perspectives on diabetes management, the method relies on the self-report of physicians, and our results have not been validated by a quantitative study.
Conclusions

Although primary care physicians try hard to deliver appropriate diabetes care, the practice of opportunistic disease management does not seem to be effective. Examination and trials of new models of care delivery seem warranted. It might be valuable to investigate the implementation of a system-wide change in structuring diabetes-related visits.

Although the following specific interventions are dependent on patients coming to the office for diabetes-related visits, a situation to which many patients do not currently adhere, the change in the practice structure to bundle services and make diabetes care more available may ultimately be a successful strategy. One model that has recently been examined and has demonstrated effective results in chronic disease management is a group visit. This model has been shown to reduce hospital admissions and increase delivery of preventive services. A second model is based on the mini-clinic diabetes management model that is used in the United Kingdom. Mini-clinics have been linked to improved glycemic control and reduced hospitalizations. Mini-clinics are blocks of practice time devoted to the care of patients with a specific chronic disease. Continuity with one’s physician is maintained with the mini-clinic. Primary care visits focused on diabetes care would occur on regularly scheduled intervals and interdisciplinary services (eg, nutrition, pharmacy counseling, lab tests) could be bundled into the same scheduled session. There are currently no available evaluations of the effectiveness of these alternative models for diabetes care in the United States.

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References