

How Patients Adapt Diabetes Self-care Recommendations in Everyday Life

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BACKGROUND. Our study explored behavioral factors affecting what patients with type 2 diabetes do for self-care and why they do it. The findings were used to develop clinical recommendations to improve intervention strategies.

METHODS. Interviewers, using open-ended questions, explored patients' own perceptions and assessments of self-care behaviors. The fifty-one subjects were self-identified Mexican Americans who had type 2 diabetes for at least 6 months, and had no major impairment as a result of this diabetes. Texts of patient interviews were analyzed by building and refining matrixes to display and compare central themes regarding treatment strategies and their contexts.

RESULTS. All patients were trying to control their diabetes, but none of them followed recommendations completely. Instead, they adapted self-care behaviors to the exigencies of everyday life. Key factors influencing patients' treatment choices were: (1) the belief in the power of modern medicine; (2) the desire to act and feel "normal"; (3) the desire to avoid physical symptoms; and (4) limited economic resources.

CONCLUSIONS. As patients apply treatment recommendations in the context of their everyday lives, they continually must make many small decisions affecting self-care behavior. The specific contexts of patients' lives, including their economic, educational, and cultural circumstances, determine how the generalized principles of type 2 diabetes management are implemented. Clinical strategies must be responsive to these circumstances in order to enable patients to make appropriate decisions when adapting their self-care behaviors to their own situations.

KEY WORDS. Diabetes mellitus, type 2; patient acceptance of health care; poverty; self-care; Hispanic Americans. (*J Fam Pract* 1998; 46:207-15)

Diabetes mellitus, particularly type 2, is a serious and growing health problem affecting all sectors of the population. Since 1935, there has been an eight-fold increase of type 2 diabetes, reaching 10% to 12% of persons older than 65 years of age by 1993.^{1,2} Diabetes is a leading cause of blindness, amputation, end-stage renal disease, coronary heart disease and

stroke.² Management of type 2 diabetes requires complex, continual, and demanding self-care behaviors, including dietary control, exercise, and frequent medication. Failure to follow treatment recommendations is reported as a serious and widespread problem in patients with type 2 diabetes.^{3,6} Research on nonadherence in these patients commonly focuses on patient motivation, knowledge, and psychological characteristics. The question behind such studies is "Why don't patients do what they should, and how can we get them to do it?" In the present study we take a slightly different direction and explore the question, "What are patients doing and why are they doing it that way?"

Type 2 diabetes is difficult to treat in any population, but because of its high prevalence among ethnic minorities, its management is of special concern among these groups. African Americans, Hispanics,

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and American Indians are consistently found to have a higher prevalence of type 2 diabetes and poorer outcomes than non-Hispanic whites.⁷ Prevalence of type 2 diabetes among Mexican Americans is especially noteworthy, at 2 to 3 times higher than in the general population.^{8,9} Study findings suggest that reasons for this higher occurrence include genetic predisposition and group-specific geographic, linguistic, and cultural considerations. Several studies also found factors associated with low socioeconomic status, such as low income, limited access to health care, and low literacy levels, influence the prevalence of diabetes in ethnic minorities.^{10,11} The specific mechanisms by which such factors may affect treatment behaviors have not been examined, however.

In this paper, we report how a group of low-income Mexican American patients with type 2 diabetes performed, understood, and interpreted self-care behaviors. We examined the strategies they employed to manage their diabetes as they simultaneously addressed other competing interests in their lives. On the basis of these findings, we offer clinical interventions and strategies that are responsive to patients' life circumstances, emphasizing the importance of enhancing patients' skills in making daily decisions about their treatment.

METHODS

PATIENT SELECTION

We interviewed a convenience sample of 51 patients consulting for type 2 diabetes at two public clinics serving low-income patients in San Antonio and Laredo, Texas. Twenty-two were recruited while waiting to see internal medicine physicians at the San Antonio clinic. The rest were participating in patient education trials as part of a larger project being conducted by the Texas Diabetes Institute. Twenty of these 29 were part of a diabetes patient education trial, and nine were part of an evaluation of a provider education trial. Each patient had type 2 diabetes for at least 6 months, had no major impairment due to diabetes, and gave informed consent to be interviewed at home. Approximately one half (24) were in good glucose control and the others (26) were in fair or poor glucose control. We classified level of glucose control according to a review of medical records over the past year.

DATA COLLECTION

We conducted in-depth interviews during which patients were encouraged to answer as expansively as they desired. The questions focused on their experiences and personal histories with type 2 diabetes, strategies for coping with diabetes, perceived barriers to care, and general illness and treatment concepts. The interviews lasted about 2 hours each and were tape-recorded and transcribed. We used a set of open-ended questions and probes to solicit unstructured responses. Sample questions and probes from the interview appear in Table 1. Interviewers were carefully trained and reviewed to ensure use of non-leading interview techniques. Interviews were conducted in English or Spanish, according to patient preference. One of the authors (L.M.H.) performed translations from the original Spanish of material included in this paper.

DATA ANALYSIS

We indexed field notes and transcripts using an evolving series of provisional categories and a filing and retrieval system. A database was also created with variables grounded in open-ended responses to relevant questions.

We established a method for standardizing and displaying interview data, as illustrated by Miles and Huberman,¹² and conducted content analysis as described by Bernard.¹³ Analysis took place in several steps. First, we built initial matrixes of blocks of text (quotations and summations) for each patient, with cells displaying reported treatment behaviors, context of treatment decision-making, and patient evaluations of perceived outcome of treatment innovations. We reviewed these initial matrixes for trends and patterns across cases. Patterns identified in these reviews were the basis of further classification of the data. We then summarized these into higher level matrixes, grouping subjects by types of treatment strategies and their contexts.

We cross-checked all phases of analysis in conference sessions where all involved personnel discussed specific cases and reached consensus about how to apply coding categories. Anomalies or discrepancies in coding procedures were addressed and resolved during these sessions. We determined interrater reliability by having a second researcher code 50% of the case material to check for discrepancies and validate the consistency in coding and classification procedures.

RESULTS

Patients interviewed for this study were all self-identified Mexican Americans, aged 29 to 69 years (mean 52.9), of low income levels (\$5000 to \$25,000; mean \$12,500) and low education levels (1 to 14 years of education; mean 8.1). Most were unemployed. The clinics where we conducted this study served a primarily indigent population. For this reason our subjects had notably low levels of income and education, and high levels of unemployment. Although this does not necessarily represent the general population of South Texas, it is consistent with the overall clientele of these clinics. Twenty-three patients chose to be interviewed in

Spanish, and 28 in English. Approximately half had diabetes for 6 years or more and approximately half were in good glucose control at the time of the interview (Table 2).

We found that these patients were indeed concerned about their diabetes and they made efforts to control their blood glucose level. However, none followed the recommended treatments to the letter. Two things became clear in their discussions of their self-care behaviors. First, self-care behaviors are not based on a single, discrete set of decisions, but instead are part of an ongoing process of making many small decisions. Patients must continually decide what to eat, whether to exercise, and when to take medications. Second, self-care decisions are always made within the context of the patient's broader situation, and are significantly influenced by their available resources, priorities, social responsibilities, and level of autonomy. To turn clinical recommendations into performance, patients must translate general treatment instructions into concrete behaviors. As one patient pointed out, "My doc-

TABLE 1

Sample Questions from Interviews with Patients About Their Self-management of Type 2 Diabetes

| Theme | Questions | Probes |
|-------------|--|---|
| Diet | What do you think would be an ideal diet for a person with diabetes? | Are there foods or drinks you think you should stay away from? Why? |
| | Are there times when you really can't or don't eat the way you're supposed to for your diabetes? Tell me about that. | What do you eat and drink then? Why? Do you think that is a pretty good choice? Why? |
| Medications | Do you always take your [pills or insulin] exactly as you were told to take them, or are there times that you change that somewhat? | Why change it? In what way change it? Why change it in that way? What effect does doing it that way have? |
| | What do you think about taking insulin? Have you ever, or do you think you might ever be asked to take it? What do you think about that? | Have you heard of any dangers or benefits in taking insulin? What do you think of that? |
| Symptoms | Can you tell by the way you feel whether your blood glucose is high or low? | What does it feel like when it's [high/low]? How often does that happen? What brings it on? |
| | [If distressing symptoms are mentioned:] What do you do when that happens? Is there anything you can do to feel better? | Do you ever change what you're eating or how you're taking your medicine to try to feel better? Tell me about that. |

tor only sees me when I have appointments. He doesn't know what's going on with me in the time between. So I have to adjust things myself."

On a day-to-day basis, even the most dedicated patients must balance diabetes self-care against myriad competing considerations encountered in everyday life. Key factors influencing treatment choices include: (1) the belief in the power of modern medicine; (2) the desire to act and feel "normal," (3) the desire to avoid physical symptoms; and (4) limited economic resources.

The Power of Medications. Although medication is only one component of the regimen recommended for patients with type 2 diabetes, it played a leading role in the treatment strategies for these patients. All but four were prescribed either hypoglycemic pills or insulin (Table 2). Perhaps exaggerating the expected power of "modern medicine," 51% of patients said they sometimes use their prescribed medications in place of behavioral changes, essentially "buying" latitude in negotiating glucose control against competing desired ends (Table 3).

Several reported that they felt they could ignore their diet, as long as they had medications, since they could control their blood glucose levels that way. In the words of one patient: "I used to think that as long as the pills had my sugar under control, my diet didn't really matter."

Patients commonly rely on medication as a safety valve to compensate for eating or drinking things not

included in the recommended diet. One patient, for example, insisted that her prescription be extended even though the doctor said that her blood glucose was well controlled and she no longer needed medication. She explained to her doctor, "Give me medicine anyway. I might go overboard eating something that I shouldn't. You know, I do that."

The Desire to Act and Feel "Normal." Seventy-eight percent of patients find it hard to accept "never eating and drinking normally again." The exclusion of their favorite heavy, fatty dishes, such as enchiladas and tamales, was especially distressing for some of the men. For them, eating low-fat foods and fresh fruits and vegetables is much too "light," like eating "rabbit food," and leaves them feeling weak. They believe that their bodies require much "heavier" foods in order to function well. No women made such statements. Instead women often describe the diet as "boring," excluding "regular" foods, and requiring that they eat something different from the rest of the family. Their common response is to simply eat "normal" foods until a crisis in glucose levels is encountered, and then eat more carefully until control is regained.

Compliance with self-care behavior may also require changes in usual social roles. For women, a common limiting factor is their role as caregiver to the family. For example, two women said they could not exercise since they must always be at home to provide 24-hour care for seriously ill relatives. Others said they cannot eat as instructed since they cook for many family members who want foods that are not on the recommended diet. Some try to compensate for this either by eating smaller portions of the same things as everyone else or eating only those things that are not major dietary transgressions. It is difficult to eat only the foods on the recommended diet since the "normal" foods are hard to resist when they are so accessible.

For men, conflict with social roles may occur when diabetes care is experienced as interfering with their manly ability to decide what they eat or drink, and whether to participate in social events such as parties or watching football, which often involve drinking alcohol. Some manage this by simply ignoring the recommendations to alter their lifestyle, and continuing to behave as usual. Others choose to discount the importance of alcohol in diabetes care, and despite following other dietary recommendations continue to drink alcohol regularly.

TABLE 2

Selected Characteristics of 51 Mexican American Patients with Type 2 Diabetes

| Characteristic | No. | (%) |
|-------------------------------------|-----|------|
| Sex | | |
| Male | 26 | (51) |
| Female | 25 | (49) |
| Occupation | | |
| Professional | 5 | (10) |
| Service | 2 | (4) |
| Skilled labor | 12 | (23) |
| Unskilled labor | 9 | (11) |
| Housewife | 5 | (11) |
| (Data missing) | 12 | (24) |
| Employment status | | |
| Not working | 36 | (71) |
| Working | 15 | (29) |
| Part-time | 10 | (19) |
| Full-time | 5 | (10) |
| Duration of type 2 diabetes* | | |
| < 1 year | 4 | (8) |
| 1 to 5 years | 20 | (39) |
| ≥ 6 years | 27 | (53) |
| Level of glucose control† | | |
| Good | 24 | (47) |
| Fair | 8 | (16) |
| Poor | 18 | (35) |
| (Data missing) | 1 | (2) |
| Medications | | |
| None | 4 | (8) |
| Insulin | 17 | (33) |
| Pills | 29 | (57) |
| Pills and insulin | 1 | (2) |

*Time since initial diagnosis of type 2 diabetes.

†Classification of the level of glucose control was based on a review of patients' glucose readings in their medical records over the past year. If glycosylated hemoglobin (Hb A1c) readings were available, level of glucose control was classified as follows: ≤7.5 = Good; 7.6 to 10.0 = Fair; >10.0 = Poor. If only fasting glucose readings were available, the classification was as follows: <180 = Good; 180 to 250 = Fair; <250 = Poor.

TABLE 3

Factors Influencing Treatment Choices and Treatment Strategies of 51 Mexican American Patients with Type 2 Diabetes, and Their Clinical Implications

| Factors Influencing Treatment Choices* | Examples of Treatment Strategies | Clinical Implications |
|--|--|--|
| Reliance on the power of medications, n=26 (51%) | Use medicines in place of behavioral changes | Should place more emphasis on behaviors and less on medicines in clinic |
| | Medicines used to compensate for indulgences | Give instructions for appropriate medication adjustment |
| Limited economic resources, n=38 (74%) | Reduce frequency of monitoring or medications | Develop low-cost treatment alternatives, like less frequent monitoring or less expensive drugs |
| | Eat well only when have more money, or when at home | Teach low-cost dietary alternatives |
| Desire to act and feel "normal," n=40 (78%) | Eat usual foods until a crisis, then diet until control is regained | Change the concept of "normal" to be a more healthy diet |
| | Eat smaller portions of usual foods | Encourage better food options in community |
| | Ignore the need for change | Promote positive peer role models |
| | Discount importance of some transgressions | |
| Avoidance of physical symptoms, n=32 (63%) | Eat sweets, or reduce medications to avoid symptoms | Be sensitive and responsive to patients' concerns about symptoms |
| | Continue behaviors that don't produce symptoms, or only pursue treatment when feel bad | |

* The percentages add up to more than 100%, since several patients reported more than one factor impacting their treatment behavior.

Interestingly, all the men in our study who follow this strategy have a woman (a wife or mother) who takes responsibility for managing their illness. Thus, while employing a rhetoric of living as they always have, unconcerned with their diabetes, they are in fact eating an altered diet and taking their medication regularly because of the activities of the women.

Because food and drink are central to most social events, both men and women find that dietary limitations interfere with their social lives. Patients feel restricted in their enjoyment of participation in family parties or on excursions to restaurants. Some just stay home, avoiding the stress of feeling different and struggling with temptation. Others ignore dietary limitations during social events, and eat whatever they please, believing that small indul-

gences will not be harmful.

Desire to Avoid Physical Symptoms. Sixty-three percent of patients made decisions on the basis of how they felt. It is an interesting contradiction that the condition that receives the greatest emphasis in the clinic is high blood glucose, which is often asymptomatic or has only minor symptoms. However, rapidly falling blood glucose, a frequent side effect of diabetes medications, may produce a number of alarming symptoms, such as dizziness, sweating, disorientation, and palpitations. Hypoglycemia is of clinical concern only when it reaches severe levels, but many people experience distressing symptoms even at mild levels. They may become frightened, believing the symptoms to be dangerous. One patient said, "You start shaking, lots

of sweat, you might go into seizure, or you might have a heart attack." To control these symptoms, patients report that they eat sweets, eat more frequently or "heavier" meals, or stop their medications.

Many patients fear low blood glucose more than high blood glucose. Patients who experience symptoms when they reach normal glucose levels may become skeptical of the value of lowering their blood glucose. They begin to question whether the standard defining high blood glucose levels really applies to them. The following comments of a 50-year-old unemployed warehouse manager illustrate this logic: "I feel great between 180 and 220. The doctor wanted me down to — what was it? 120? But if I'm 180 I feel kind of run down. Even when I had it real high, like over 300, even then I didn't feel no symptoms."

Some patients base treatment decisions on personal observations that they feel fine even when they fail to take medication or eat as recommended. They believe this indicates that no harm was done, and they feel free to continue their usual behaviors.

The experience of physical distress is also important in exercising. Comorbidities, such as arthritis or back pain, are common in patients with diabetes and often make exercise painful and difficult. Another common problem is that some people feel dizzy or extremely tired after exercising because of the drop in blood glucose that can result from exercise. Patients who have had negative experiences with exercising may avoid it.

Limited Economic Resources. Because these are low-income patients, the economic cost of managing type 2 diabetes is of great concern to them. This financial burden is twofold. First, keeping a job is a problem for some because of the fatigue and mental confusion associated with hypoglycemic incidents. Second, costs are a serious consideration. In our study, 74% of the patients reported that treatment costs were an issue for them. Even sliding scale charges assessed by public clinics are burdensome for a number of patients, as are expenses for supplies and maintaining the recommended diet.

One major concern was that the recommended diet calls for fresh fruits and vegetables, which are much more expensive than the items the study patients normally buy. Some patients said that if they followed the recommended diet, they would need to prepare one meal for themselves and another for the family, which they cannot afford to do. Some man-

age dietary changes without significantly increasing costs by having their entire family eat in the prescribed way, or by altering the regular menu enough so that they have some acceptable food choices.

The patients' ability to stay on the recommended diet may vary over time, depending on how much money they have on any given day. They may eat correctly when they have money, and do the best they can the rest of the time. Some patients who are able to control their diet when they have sufficient money resort to opportunistic eating when they are short on cash, and cannot make appropriate and affordable food choices.

Concerns associated with poverty kept many patients from pursuing regular exercise. Health clubs are too expensive for most. Several patients cannot go for walks around their neighborhoods because they live in high-crime areas where it is not safe to walk. Several had developed low-cost strategies for exercising, such as walking in a park or a shopping mall, but they could not always afford the bus fare to get there.

The cost of blood glucose monitor strips, syringes, and even the minimal amounts they are charged for medications are a major burden for many patients. To conserve these resources patients may take medications only every few days, or only monitor their blood glucose when they are feeling ill or not complying with the medications or diet. They view these decisions as justified if their glucose level is in good control. It should be noted that patients' ways of defining and evaluating control are complex. In addition to clinical measures of glucose levels, they assess how they feel and how well they function in their normal routines.

Factors and Level of Glucose Control. Patients' success or failure in achieving good glucose control is not associated with their citing any of the other factors outlined above. Chi-square tests comparing dichotomous variables for each factor (the power of modern medicine; the desire to feel normal; avoidance of physical symptoms; and limited resources) showed no significant relationship to the level of glucose control.

DISCUSSION

The patients in this study may be unusually knowledgeable and motivated, since they were participants in type 2 diabetes educational trials and were

intentionally selected to represent those in "good" glucose control. Nevertheless, all patients in this study regularly practiced self-care inconsistent with prescribed regimens or pushed the bounds of acceptable variation, even though they knew what they should do and were committed to taking care of themselves. Rather than reflecting poor understanding or lack of commitment, their failure to follow treatment recommendations reflects the complexities of adjusting diabetes management to the exigencies of everyday life. We saw clear logic underlying these adaptations and interpretations, given the patients' assumptions and perceived constraints. In an ongoing process, diabetes management evolves within the context of pressing immediate issues: resource allocation, social obligations, pleasures, and pains. Their evaluation of the value and danger of behavioral choices goes well beyond the clinical goal of achieving adequate glucose control, factoring in multiple considerations that are intimately connected to the broader context of their lives.¹⁴

Previous studies have shown that modification and adaptation of recommendations is not a radical or innovative behavior of only a few patients; it is a necessary aspect of any attempt to apply the principles of self-care to the particulars of daily life.¹⁵⁻²⁰ We have seen that in everyday application, patients routinely customize treatment recommendations to fit their specific circumstances and priorities. The data presented here, although drawn from a rather specialized patient population, indicate four key factors that are likely to be important in any patients' strategies for pursuing self-care: the reliance on the power of medications, the desire to act and feel "normal," the desire to avoid symptoms, and resource limitations.

Perhaps reflecting the broader cultural tendency in the United States to heavily rely on technological solutions, patients commonly use medications as a kind of fail-safe that permits them latitude in their other self-care behaviors. Physicians may unintentionally reinforce this perception by focusing clinic visits on reviewing and revising prescriptions and medication instructions, to the near exclusion of other aspects of self-care.²¹

The desire to maintain a sense of normality and to perform usual social roles are also important factors influencing self-care. Patients must integrate caring for their diabetes with other obligations and relationships in their lives. This is espe-

cially difficult in regard to dietary change. Food and eating are central to social interaction in most cultures, carrying important emotional and symbolic force.^{22,23} Altering one's diet involves much more than simply choosing to eat different foods. It requires renegotiation of social relationships and resource allocation, and cannot be understood as simply a matter of willpower.

The experience of hypoglycemic-like symptoms is a major consideration for patients, but is often discounted by providers when glucose levels are in the normal range. This is especially confusing for patients who are asymptomatic at very high glucose levels. While much has been published about hypoglycemia unawareness and about the downward resetting of the hypoglycemic threshold,²⁴⁻²⁷ little has been written about the potential for resetting it upward. Patients find the symptoms of low glucose levels distressing and will try to minimize them. These symptoms may be a more immediate stimulus for action than is any concern about possible future complications.

Access to resources, such as time, social authority, autonomy, or money, may be a determinant of performance of any self-care behavior. Because our study involved low-income patients, financial limitations were especially important here. These patients focused much of their discussion on economic constraints. Standard treatments for type 2 diabetes presume a certain access to time and materials. It is commonly left to the patients' own ingenuity to develop practical adaptations given the resources they have at their disposal.

The cases we have reviewed in this study clearly illustrate that the socioeconomic situations of these patients highly influenced their self-care behaviors. Our subjects represent a homogeneous socioeconomic and cultural group, and because of our selection methods, may be unusually well informed. Nevertheless, the principles we have discussed seem broadly applicable to any group struggling to make lifestyle changes for self-care regimens. Of course, generalization of these findings would require further research with representative and comparative samples. Still the principles behind our findings are straightforward and suggest that an effective clinical approach to type 2 diabetes must take into account the individual perceptions and circumstances of each patient.

Because we have no comparative sample, it is dif-

difficult to differentiate which of our observations are specific to low-income Mexican Americans as a socioeconomic or cultural group. The centrality of financial barriers and the distinctive content of social considerations, such as preferred food types and gender-specific roles, may explain some of the poor outcomes common to this particular ethnic minority.

RECOMMENDATIONS

The self-care strategies of these patients illustrate the importance of teaching patients the principles for making informed decisions in adapting self-care. Patients do, of necessity, continually interpret and modify treatment recommendations to fit them to their specific situation. These findings are supportive of a recent trend in diabetes education toward patient empowerment, enabling patients to make informed decisions about their own care.²⁸⁻³¹ To effectively change their behavior, patients must be given the knowledge and skills they need to make ongoing decisions and modifications in an appropriate fashion. They need to be equipped to make optimal choices as they encounter varied situations in their day-to-day life.

To understand and appropriately influence self-care choices, clinical encounters should include an open dialogue with patients. Providers should not presume that ignorance or a lack of motivation underlies poor outcomes. They should explore what patients are doing and why they are doing it that way, recognizing that self-care behavior is reasoned behavior.^{14,32,33} This will help move the management of type 2 diabetes away from the frustration of blaming patients for failed treatment toward helping patients make adequate and appropriate illness management choices.

Overreliance on the power of medications may be unintentionally reinforced by physicians who emphasize medications in consultations. Discussing with patients what they can and cannot expect in the long run from their medications may be an effective way to encourage greater reliance on behavioral changes.

Interventions can be better tailored to fit patients' needs by discussing social role conflicts they may experience in pursuing self-care behaviors. For instance, individuals who feel pressured to eat and drink inappropriately at social events need to develop culturally acceptable strategies to avoid certain

foods or to reduce intake. Also, familial acceptance of dietary change could be enhanced by replacing the concept of a "diet for people with diabetes" with the idea that it is a healthy diet for everyone.

It is important to attend to patients' concerns when they report distressing symptoms. Patients commonly find it confusing to have hypoglycemic-like symptoms at blood glucose levels in the normal range, while they are asymptomatic at very high blood glucose levels. A few minutes of discussion can help assuage patients' fears and produce clinically appropriate strategies responsive to patients' tendency to tie treatment behavior to symptoms.

Resource limitations of time, money, or autonomy introduce important barriers to self-care for any patient. Health care providers and patients together may be able to generate creative resolutions to resource problems. Such strategies may include: establishing safe procedures for the reuse of syringes and lancets^{7,34-36}; reducing the number of home glucose measurements if insulin is not being adjusted on the basis of readings; using phone follow-up in place of some office visits; and developing strategies for controlling food costs within a healthy diet.

Providers need to remember that while they may speak with a patient for only 15 minutes every 3 to 4 months, patients must make self-care decisions many times each day. Providers who establish an open dialogue with patients will become aware of how patients actually translate these brief encounters into action. This allows them to engage in an interactive process with their patients to help improve their behavioral decisions and eventually improve their outcomes. Self-medication adjustment, dietary experimentation, and response to symptoms all can be reasonable strategies when done with sufficient professional support. Physicians who begin a dialogue with their patients with type 2 diabetes can help assure that their practical decisions about self-care are clinically sound.

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