HELPING YOUR PATIENTS WITH CHRONIC DISEASE: EFFECTIVE PHYSICIAN APPROACHES TO SUPPORT SELF-MANAGEMENT

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You are an internal medicine resident seeing patients in the residency continuity clinic. Already running 10 minutes behind, you cringe a bit when you see that your next patient is Mr. Quinn, a 58-year-old man with poorly controlled diabetes, hypertension, and hyperlipidemia. You glance at the intake sheet and see that his blood glucose level on fingerstick testing today is 258 mg/dL and his blood pressure is 150/90 mm Hg. Checking Mr. Quinn's chart for recent laboratory tests, you see that 2 weeks ago he underwent fasting blood studies. His glycosylated hemoglobin (HbA_{1c}) level was 8.7%, which is essentially unchanged from where it was 6 months ago when you increased the dosages of his diabetes medications. His low-density lipoprotein cholesterol level also was significantly higher than 100 mg/dL. You glance at his medications list and note that he is currently prescribed metformin (1000 mg twice daily), glyburide (10 mg twice daily), simvastatin (80 mg/day), hydrochlorothiazide (25 mg/day), and lisinopril (40 mg/day).

As you proceed to the examination room, your first impulse is to focus on how to adjust Mr. Quinn's medications. However, you recall a compelling workshop you recently attended that highlighted the importance of understanding obstacles patients may face in their chronic disease self-management and ways to increase support for their self-management efforts. You resolve to do better for Mr. Quinn and to tackle the challenge of helping him take an active role in managing his health problems.

Approximately 45% of the U.S. population has a chronic medical condition, and about half of this group—or 60 million people—have multiple chronic diseases [1]. These numbers are rapidly rising. An estimated 150 million people will have at least 1 chronic condition in 2015, and by 2030 the number will grow to 171 million [1]. The sharp increase in chronic disease stems from several factors, including the increased life expectancy in the United States, the rapid growth of the nation's 65 and older population (from 35 million in 2000 to a projected 53 million in 2020 [2]), and unhealthy lifestyle habits (eg, poor diet, low rates of physical activity) that contribute to an increased incidence of diseases such as type 2 diabetes, hyperlipidemia, and hypertension at younger ages.

The explosive growth in the number of people affected by 1 or more chronic conditions poses huge challenges for physicians and health systems. A significant challenge for individual physicians is to effectively help patients manage their chronic conditions to improve their health and quality of life. Unlike the treatment of acute, time-limited diseases, the bulk of effective chronic disease management must be carried out by patients between medical office visits. While physicians are responsible for prescribing the most effective medications and providing guidance in relevant treatment areas (eg, diet, exercise), patients are responsible for implementing the often complicated treatment recommendations over a sustained period of time. In the words of Glasgow and Anderson, 2 leading chronic disease experts, "Patients are in control. No matter what we as health professionals do or say, patients are in control of these important self-management decisions. When patients leave the clinic or office, they can and do veto recommendations their doctor makes" [3].

Like Mr. Quinn, many patients with chronic diseases do not achieve adequate control of their conditions. For example, less than 30% of adults with diabetes in the United States have well-controlled lipid and blood pressure levels [4]. While many health system and provider factors contribute to this failure, a major problem is that, despite the availability of effective treatments for many chronic diseases, only about

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one third of patients with these conditions follow their prescribed treatment plans and less than half take their essential medications as prescribed [5,6]. Even fewer successfully adhere to diet and exercise programs. Numerous studies have demonstrated that patients frequently disagree with physicians' diagnoses and treatment plans, leading to unfilled prescriptions, partially used medications, lack of follow-up with referrals and return visits, and poor clinical outcomes [7,8]. As a 2003 World Health Organization report concluded, "Improving patient self-management of chronic diseases would have a far greater impact on the health of the population than any improvement in specific medical treatments" [9]. Improving chronic disease outcomes is largely dependent on improving patients' self-management of their conditions.

Unfortunately, physicians traditionally have not received much formal training in the skills and strategies necessary to be effective coaches to their patients. However, emphasis on good communication skills is growing. In fact, the Accreditation Council for Graduate Medical Education requires that residents demonstrate competency in a range of communication skills needed to be an effective self-management coach (ie, effective listening skills; effective nonverbal, explanatory, questioning, and writing skills). This article examines the critical foundations for effective patient management of chronic diseases, with a focus on the role of health care providers and specific communication skills physicians should seek to develop and hone. The case example of Mr. Quinn is used to outline a useful framework for effective behavioral counseling that can be applied in short office visits to provide self-management support for patients.

Definition and Determinants of Patient Self-Management

Chronic disease self-management refers to the full range of activities (or *behaviors*) in which patients engage to care for their illness; promote their health; augment their physical, social, or emotional resources; and prevent adverse short- and long-term effects from their disease [10]. Patient adherence (ie, the extent to which a person follows medical advice), while critically important, is only part of effective patient self-management. As Corbin and Strauss described, the 3 broad self-management tasks include: 1) medically managing disease (taking medications, following a diet, monitoring physical and emotional states); 2) maintaining one's daily life while living with chronic illness; and 3) dealing with anger, fear, frustration, and depression caused by the uncertainty of disease and its effects on one's future [11]. Thus, patients need medical information about their particular disease and treatments as well as broader knowledge about and support for effective exercise, nutrition, and coping skills.

Factors that Influence Patient Self-Management

In an effort to identify difficulties patients face in managing their conditions, it is useful to consider 5 distinct areas that affect self-management. These are: 1) patient-related factors (beliefs, expectations, knowledge, skills), 2) social/economic factors (family, community, and other social supports and resources; access to care and medications), 3) condition-related factors (duration, severity, symptom burden, number and types of illnesses, complicating factors), 4) treatment-related factors (complexity, duration, side effects), and 5) factors related to the health care team (patient-physician, patient-staff) or health system organization (quality of care, ancillary supports).

Although most research has focused on identifying patient characteristics that might predict poor adherence or self-management, these studies have found no readily observable patient characteristics that reliably predict how effectively patients will manage their conditions. Sociodemographic factors such as lower income and education, being non-English speaking in an English-speaking setting, and lack of insurance all put people at risk for worse self-management but are not always associated with this outcome. Low health literacy, depression, impaired cognitive function, and social isolation have more reliably been associated with poor self-management [9]. Yet, physicians are not able to predict better than by chance alone which patients will actually follow clinical recommendations [9].

However, there is good consensus in the literature on the key preconditions for effective self-management. These include: 1) sufficient knowledge of the condition and its treatment, 2) skills to manage the condition and to maintain functioning (ability to identify problems, barriers, and supports and to generate solutions), 3) internal or autonomous motivation (belief in treatment effectiveness and its relevance to one's goals, values, and priorities) [12,13], 4) confidence in one's ability to successfully execute specific tasks (self-efficacy) [14], and 5) adequate environmental support to initiate and sustain behavioral changes (assistance to overcome obstacles, reminders, encouragement, and support from valued persons at appropriate times and places) [15,16].

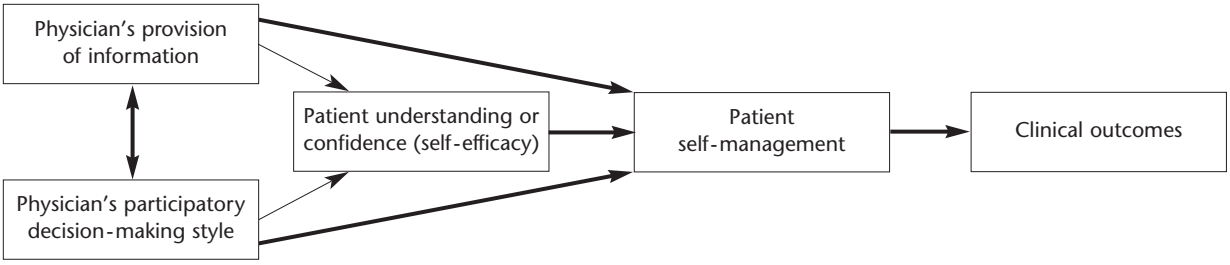

Figure 1. The influence of the physician's effective provision of information and participatory decision-making style on patient self-management. To support effective self-management, physicians need to be skilled at both providing the clear information that patients need about their disease and treatment and engaging patients in necessary decision making about treatment goals and plans of action that are appropriate for them. (Adapted with permission from Heisler M, Bouknight RR, Hayward RA, et al. The relative importance of physician communication, participatory decision making, and patient understanding in diabetes self-management. J Gen Intern Med 2002;17:244. Copyright © 2002 Blackwell Publishing Ltd.)

Role of Physicians in Supporting Effective Self-Management

While a patient's family, friends, and community resources all play important roles in fostering the determinants of effective self-management, the foundation of good chronic disease care is the quality of the interactions between the patient and his or her health care provider. Ideally, physicians should play a leading role in providing effective self-management support to patients. Self-management experts Funnell and Anderson note that this support entails providing a range of resources patients need to manage illness effectively: intellectual (therapeutic advice, education), behavioral (collaboration to set relevant and realistic self-management goals), emotional (addressing emotional needs during office encounters, recommending support groups), psychological (assessing and treating depression), and tangible (insulin, test strips) [10].

A large body of research shows that good physician communication improves patient adherence to treatment recommendations, self-care, satisfaction, and health outcomes [17,18]. To be effective, however, physicians must recognize their dual role as a provider of necessary information and education and as a coach or facilitator who encourages and supports their patients with chronic illness (**Figure 1**). Unlike the situation in caring for acute illnesses (eg, pneumonia requiring hospitalization), where the physician may be the main expert, in chronic disease care, physicians must share expertise with their patients; physicians are experts about the disease, but patients are the experts about their lives, how their conditions affect them, and what they are able and willing to do. Knowledge is necessary for patients to manage their disease effectively but is not sufficient to motivate them to make and sustain behavioral changes [19,20].

Table 1 outlines the roles and responsibilities of the physician and patient for effective chronic disease self-management. Both parties share responsibility for identifying and solving problems, for setting and achieving realistic goals, and for developing and adapting treatment strategies [21,22]. As Anderson and Funnell have noted, "Noncompliance is when patients and physicians are pursuing different goals" [23]. Patients interpret, evaluate, and accept or reject doctors' recommendations based on their personal experience of their illness in the context of their lives; patients usually cooperate only with recommendations that coincide with their own goals and ideas about their illness [24]. Collaborative physician styles have been found to result in higher patient satisfaction and adherence to treatment plans [25], and patient-provider agreement on treatment goals and strategies has been associated with higher levels of chronic disease self-efficacy and self-management [22]. Thus, the physician must be able to 1) assess where a patient is in adopting and sustaining necessary disease management behaviors, 2) help the patient select an appropriate plan of action, 3) negotiate realistic goals, 4) tailor the treatment plan to the patient's situation, and 5) provide ongoing follow-up and support.

Six A's Approach to Self-Management Counseling in Medical Visits

As you enter the examination room, you quickly remind yourself of the 6-step approach to self-management counseling you learned about in the workshop. You realize you have limited time to spend with Mr. Quinn and may not fully cover all 6 steps, but you're eager to apply what you've learned in a real patient setting. You take a deep breath and focus on

Table 1. Self-Management Roles and Responsibilities of the Physician and Patient

Physician roles and responsibilities
Provide clear information so that the patient can make informed decisions about costs and benefits of therapeutic and behavioral options
Assess the patient's needs, beliefs, values, and goals, and provide feedback on progress/status
Create a patient-centered environment
Establish a partnership with the patient and his/her family
Provide information about behavioral change and problem-solving strategies
Provide personalized feedback on laboratory values, physical examination findings, and ways behaviors can affect outcomes
Work with the patient to develop collaborative goals and a targeted action plan
Encourage the patient to be involved in decision making
Support and facilitate the patient in his/her role as self-management decision maker
Help link the patient to additional resources
Follow-up (in person, by phone, by e-mail)
Patient roles and responsibilities
Provide information about feelings, values, needs, and abilities
Become an active, informed consumer of health care
Establish partnership with health care team
Assume responsibility for self-management and outcomes
Develop and work toward self-selected goals

Adapted from Funnell MM, Anderson RM. Changing office practice and health care systems to facilitate diabetes self-management. Curr Diab Rep 2003:3127–33, with permission from Current Medicine.

the task of exploring Mr. Quinn's main concerns and assessing where he is in taking care of his diabetes.

Ideally, physicians have access to resources and staff to aid in providing a full range of self-management support services. A team approach is best, as physicians face many competing demands on their limited time during routine office visits. However, even in the absence of ancillary support and in the face of limited time, there is much that physicians themselves can do. One particularly effective strategy physicians can use to guide their self-management efforts is the "Five A's" (or "Six A's") approach, first developed by the National Cancer Institute for smoking cessation interventions [16]. This construct has been found to be so useful that the United States Preventive Services Task Force Counseling and Behavioral Interventions Work Group recently recommended adopting it as a unifying conceptual framework for evaluating and describing health behavioral counseling efforts in primary and general health care settings [26]. **Table 2** presents the main elements of each of the Six A's.

Table 2. The Six A's Framework for Behavioral Counseling

Address the agenda. Attend to the patient's agenda. Express desire to talk about target self-management behavior.
Assess. Ask about/assess factors influencing disease management/treatment. Assess knowledge, beliefs, concerns, personal values and goals, feelings, previous experience with change, level of confidence (self-efficacy), and motivation.
Advise. Give clear, specific, and personalized information and behavioral advice, including information about personal health harms and benefits.
Agree. Collaboratively select appropriate treatment goals and methods based on the patient's interest in and willingness to change the behavior.
Assist. Aid the patient in achieving agreed-upon goals by acquiring skills, confidence, and social/environmental supports for behavioral change and appropriate medical treatments. Identify personal barriers and resources.
Arrange. Schedule follow-up contacts (in person or by telephone) to provide ongoing assistance/support and to adjust the treatment plan as needed, including referral to more intensive or specialized treatment.

Adapted from Whitlock EP, Orleans CT, Pender N, Allan J. Evaluating primary care behavioral counseling interventions: an evidence-based approach. Am J Prev Med 2002;22:267–84. Copyright 2002, with permission from American Journal of Preventative Medicine.

Address the Patient's Agenda

You recall that the first step in the Six A's process is to probe for any issues that may be on the patient's agenda. And so you begin.

"Good morning, Mr. Quinn. Are there any concerns you'd like to discuss with me today?"

Mr. Quinn mumbles, "Uh, not really."

You give Mr. Quinn ample time and opportunity to raise any issues on his mind, emphasizing that you want to discuss anything that is of particular concern to him today. When he repeats that there is nothing he wants to discuss, you again resist the impulse to turn to his poorly controlled diabetes and you press on, as you want to fully understand what issues he is facing.

Recalling a detail from the workshop, you decide to take a different approach with Mr. Quinn and ask, "What is your most important problem?" [21].

Mr. Quinn looks a bit surprised and does not answer immediately. Rather than jumping in with another question, you remain silent. After a long pause, Mr. Quinn notes the difficulties he is having taking care of his wife with multiple sclerosis. You give him the chance to discuss how overwhelmed he is feeling caring for her, something he had never brought up before. During this discussion, he notes that his own medical problems seem insignificant in comparison with hers. You respond with empathy to reflect his expressed emotion.

"It sounds like you've been overwhelmed trying to address your wife's needs. Many people in your situation would find it hard to address your own health issues."

While noting to yourself the importance of continuing to work with Mr. Quinn on ways to support him in caring for his wife, you also see his statement about his own medical problems as an opportunity to better assess his current diabetes self-management.

Before explicitly assessing possible barriers to effective patient self-management, it is essential to give the patient a chance to express any concerns or areas he or she particularly wants to discuss at the office visit. Studies have found that many physicians fail to elicit patients' concerns, which impedes the development of an effective partnership. One recent study found that only 28% of physicians elicited the patient's complete agenda; the remaining physicians redirected or interrupted patients before they could finish voicing their concerns, leading to fewer patient concerns being spelled out, other concerns arising late in the encounter, and important information not being gathered [27]. While patients in this study were redirected after an average of 23.1 seconds, those patients who were not redirected required an average of only 32 seconds to completely voice their concerns. Effectively building a relationship and eliciting patient concerns and feelings are crucial building blocks for self-management support, especially with patients who are less motivated or ready to take action. These skills include open-ended inquiries, reflective listening, and expressing empathy.

Assess Factors Influencing Patient Self-Management

Not knowing which areas of his self-management he is most struggling with, you decide to ask Mr. Quinn a broad assessment question.

"What's the biggest problem you face in managing your diabetes?"

Mr. Quinn lists several areas he's grappling with. He concedes he often skips medication doses, something he's never volunteered in earlier visits, although you vaguely recall that you've never directly asked. He's also having trouble following a healthy diabetes diet and finding time to exercise. You identify medication adherence as being the most clinically important area to tackle first.

Recognizing that Mr. Quinn must agree on what area he's willing and would like to work on, you ask, "Is there a specific area you're most interested in working on?"

"Not really. It's all pretty overwhelming to tell the truth."

"OK. Then, perhaps the most important thing to start with is taking your medications. Would you be interested in working on that?"

"OK, sure. I can try to do that."

You then focus your assessment and discussion on medications, using the strategies learned in the workshop. Probing for factors that may be contributing to Mr. Quinn's difficulty taking his medications, you determine that, in fact, he is not convinced of the importance of taking his medications as prescribed. He also feels mildly guilty about having conditions for which medications are available when no medications have improved the course of his wife's disease. During your discussion of why he is taking each medication on his list, it also emerges that Mr. Quinn doesn't understand the purpose of several of his prescribed medications. He does feel confident that he could do better with his medications and states that over the next month he would be willing to try to take them as often as prescribed. Importantly, he also remarks that if he takes care of himself he may be better able to take care of his wife.

While recognizing the full range of behaviors necessary for effective chronic disease management, it is important to assess where the patient is with each behavior individually and to prioritize which behaviors to address. In effective assessments, the physician identifies problematic self-management areas and whether the problems stem from lack of understanding of medical recommendations (knowledge deficit), lack of agreement with recommendations, or barriers to performing a mutually agreed-upon self-care behavior [28]. Of critical importance is to encourage the patient to voice his or her concerns and to state steps for change in his or her own words. It is well-documented that patients

Table 3. Useful Questions to Assess Targeted Patient Self-Management Behaviors

Assessing the patient's current behaviors in targeted area

- *"Tell me about problems you are facing taking your medications."*
- *"Tell me about how you take your medications each day."*
- *"Is there anything you do now to help you remember to take your medications?"*
- *"Describe your diet over the course of a typical day."*

Assessing the patient's knowledge, beliefs, and concerns

- *"Tell me about each of the medications you are taking and why you are taking each one."* [go through the list]
- *"What do you know about metformin? glyburide? simvastatin? hydrochlorothiazide? lisinopril?"*

Assessing the patient's feelings about changes in targeted behavior

- *"How do you feel about taking medications regularly?"*
- *"I wonder how taking your diabetes medications fits in with [other goals/values]."*
- *"What are the advantages of not taking your medications regularly? What are the disadvantages?"*
- *"How much does taking medications regularly bother you? What most bothers you?"*
- *"It sounds as if you are feeling determined to try to take your medications regularly. What is the next step you'd like to take?"*

Assessing and clarifying the patient's goals

- *"How, if at all, does not taking your medications affect your ability to achieve other goals/affect other things you value?"*
- *"How, if at all, would changing this behavior affect your ability to achieve these goals or live out your values?"*
- *"Are there any changes you are interested in making now?"*
- *"What are you willing/able/interested in doing now?"*
- *"On a scale of 0 to 10, with 10 being very willing (interested/motivated), how willing are you to try to take your medications as they are prescribed?"*
- *"You gave a number of 9. Why didn't you say a lower number? A higher number? What would it take to raise that number?"*

Assessing pros and cons of change/possible obstacles

- *"What reasons do you have for wanting (and not wanting) to change?"*
- *"What do you think would be the hardest thing you would face if you try to change?"*

Portions adapted from Goldstein MG, DePue J, Kazura A, Niaura R. Models for provider-patient interaction: applications to health behavior change. In: Shumaker SA, editor. The handbook of health behavior change. 2nd ed. New York: Springer Publishing Company; 1998:85–113.

are better satisfied and more likely to feel committed to an action when they feel they have been able to express concerns and proposed actions in their own words [24]. Because of the multiple self-management behaviors required in chronic disease management, often it is best to continue to assess the patient's own agenda to help decide where to focus first.

The aim of assessment is to gather as complete information as possible on the 5 domains most likely to affect the patient's ability to successfully execute the targeted behaviors. These domains are: 1) cognitive (patient knowledge and awareness about the medical problem to be addressed, the targeted behavior, and benefits of change), 2) attitudinal (patient beliefs, attitudes, motivation, and self-efficacy), 3) instrumental (skills needed to effect change, such as methods to remember to take medications), 4) behavioral (coping and problem-solving skills; self-monitoring), and 5) social (social support and use of resources) [29]. Useful questions for assessing the relevant areas pertaining to targeted behaviors, using Mr. Quinn's case as an example, are shown in **Table 3** [30].

Advise

Up to now, you've identified that Mr. Quinn needs to better understand the rationale for his current medication regimen and the importance of adhering to the regimen. Thus, you focus on reviewing and assessing his understanding of what each medicine is intended for, why each is important, and how and when each should be taken. In this discussion, you take a moment to emphasize the relevance of his recent high HbA_{1c} and low-density lipoprotein levels and his high blood pressure reading today. You briefly review the importance of achieving better blood glucose control.

"Mr. Quinn, your recent blood tests show that your blood sugar level is still higher than where we

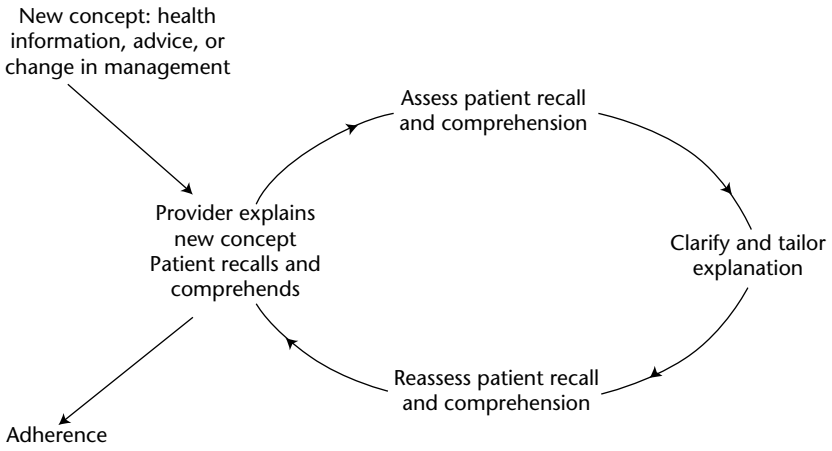

Figure 2. Closing the loop: interactive communication to enhance recall and comprehension. (Adapted with permission from Schillinger D, Piette J, Grumbach K, et al. Closing the loop: physician communication with diabetic patients who have low health literacy. Arch Intern Med 2003;163:84. Copyright © 2003 American Medical Association. All rights reserved.)

want it to be, even though you are on 2 medicines that work in different ways to help lower blood sugar. The A1c test showed a level of 8.7%. Ideally, we would like the number to be 7% or lower. Studies have shown that people with diabetes who can keep their level at 7% or lower have a much better chance of avoiding complications of diabetes, such as loss of vision or kidney damage."

After assessing his understanding of why glycemic control is important, you review the importance of good blood pressure and lipid control for avoiding both microvascular and macrovascular complications from diabetes. You then give him an opportunity to restate his understanding of the information you just reviewed.

"I've just given you a lot of information. What do you think is most important of what I just told you?"

"I definitely want to avoid going blind," remarks Mr. Quinn. "I also did read somewhere that blood pressure is just as important as blood sugars in diabetes but hadn't thought much about that. It's true that both of my relatives with diabetes died of heart attacks pretty young. If getting my blood pressure and cholesterol down can help me avoid that, I'm for that."

Returning to the issue of his medications, you explain that he is currently on the highest doses possible of each of his medications. The next step would be to add additional medications. You note, "Before we think about adding any medications to the ones you currently have, it would be good to see how you do if we can figure out a way to help you take these medications. How does that sound to you?"

You then briefly discuss with Mr. Quinn when he is taking his medications and the strategies he currently uses to help incorporate this task into his daily routine.

The physician's aim in advising is to provide clear, specific, and personalized information about the risks and benefits of recommended behavioral changes and to explain how the recommended behaviors will affect future clinical outcomes. Information is more powerful when it is tailored to link the recommended behaviors to the patient's health concerns, past experiences, and individual situation elicited during the current and previous assessments. It is important to recognize that the physician's role is not to insist on change but to describe options and available alternatives, to explain potential side effects and complications, and to present information while encouraging the patient to do the work of interpretation [31,32].

Central to effective advising is to use clear, jargon-free information tailored to the patient's needs and preferences. Unfortunately, physicians typically spend less than 1 minute out of a 20-minute visit discussing treatment and planning with their patients and in more than half of outpatient visits do not ask patients if they have questions [33]. Moreover, studies have demonstrated that patients recall and comprehend less than half of what their physicians tell them [34]. Patients often do not understand even common clinical terms such as "acute," "stable," and "progressive," and many have difficulty interpreting simple graphs.

One strategy for ensuring that the patient comprehends new information that is being presented is a method called *closing the loop* (**Figure 2**) [34]. To effectively close the loop, the patient is asked to restate information or instructions to ensure that they were understood and remembered and to assess the patient's perceptions about the information and/or changes in management that were discussed. This process can also uncover the patient's health beliefs, allow the physician to reinforce and tailor health messages, and activate the

patient by opening a dialogue (eg, *"Tell me in your own words your understanding of why you should take this medication."*). If the patient's restatements indicate poor or incomplete understanding, the physician should restate or clarify the information, providing additional information as needed, and then ask the patient again to voice his or her understanding of what was communicated (closing the loop). This process should be repeated as often as necessary to ensure full understanding. In addition, it is important to supplement verbal information with written information that the patient can take home to review, even if this entails simply writing down key points that were discussed and handing it to the patient.

In providing information, it is important to ask for permission (eg, *"I would like to discuss X with you. Is that all right?"),* to be sure not to predigest the information but instead to clearly present the facts in a nonjudgmental manner and to actively encourage the patient to interpret the information. As illustrated in the case of Mr. Quinn, it is useful to provide physiologic feedback when it is available (eg, *"Your test results [physical findings, etc.] indicate that…").* In discussing options for interventions when several acceptable choices exist, it is important to actively elicit patient preferences after describing the options (eg, "*Which of these options do you choose/prefer?").* When one option is clearly medically indicated, statements should be qualified to convey respect for the patient's autonomy and to encourage the patient to process the information and voice his or her own risks and rewards for specific behaviors (eg, *"As your physician, I feel I should tell you that…"; "Studies show that X…What do you make of that?"*).

Ideally, the physician has ancillary staff and can refer patients to readily available resources (additional training, education) and, thus, can act as an influential catalyst for behavioral changes, while other health professionals provide support and more in-depth details [35–37]. When patients are reluctant to initiate any behavioral changes, the process of assessing and advising may extend over multiple visits. However, it cannot be emphasized enough that the physician's role is to fully inform patients, to help patients explore and recognize discrepancies between their current behaviors and their own important personal goals (and resolve their ambivalence about necessary self-management behaviors), and to facilitate patients' efforts to initiate and sustain behaviors they decide to attempt. The physician's role is not to try to force change [32,38].

Agree on Treatment Goals and Strategies

You're pleased to find Mr. Quinn genuinely interested in the information you've presented about his medications. He then surprises you with a sudden expression of gratitude.

"Thanks for the wake-up call, doc. You know, every day I'm reminded of how multiple sclerosis has affected my wife. But my blood pressure, sugar, and cholesterol, well, they're just numbers that haven't really meant anything to me because they don't affect how I feel or what I can do. But blindness? Stroke? I can't afford to end up with something like that when my wife needs me. I appreciate you giving me the full picture of what I'm dealing with, and I want to do what I can to improve my numbers."

Mr. Quinn adds that he agrees with the specific goal of taking his prescribed medications and states that over the next month, he is going to take all of his medications as prescribed. His level of confidence that he can do this is "9." He adds that he had been thinking before of organizing his medications into a marked pill box at the beginning of each week to facilitate taking them without having to deal with all the multiple bottles, and he decides to try that over the next few weeks.

Once the patient has clearly expressed understanding of key issues related to the targeted behavior, the physician should actively seek consensus on the treatment goals and strategies to be pursued. Patients who are actively involved in setting treatment goals and strategies have a greater sense of personal control—an important prerequisite for successful self-management—and are more likely to make choices based on realistic expectations and their own values. Sometimes it will be necessary to strike a compromise between the patient's and the physician's priorities, but unlike in single-focused interventions (eg, smoking cessation), in chronic disease management there is almost always something that physicians and patients can agree to work on [39].

Critical for eventual success once a longer-term goal has been set is agreeing on a patient-generated short-term action plan. This plan is like a New Year's resolution but of shorter duration, such as a 1- to 2-week period [21]. Successful achievement of this short-term plan may be even more important than the overall goal itself, as success begets more success, through which patient self-efficacy is bolstered. The physician should encourage the patient to take small steps, breaking longer-term goals into manageable

pieces, with a plan that answers the questions of what, how much, when, and how often. After the patient has stated a measurable short-term action he or she would like to attempt (eg, *"I am going to walk 3 days a week for 10 minutes before lunch."*), it is useful to assess the patient's level of confidence in executing the plan (eg, *"On a scale of 0 to 10, with 0 being not confident at all and 10 being very confident, how confident are you that you can walk 3 days a week for 10 minutes?")*. Self-management experts argue that if the answer is less than 7, the physician should work with the patient to develop a more realistic plan [15]. It may also be useful to explore strategies that might increase the patient's level of confidence (eg, *"You gave a number of X. Why didn't you say a lower number? A higher number? What would it take to raise that number?"*).

In reaching agreement as well as when providing advice, physicians should continue to remember 2 important principles from behavioral theory: telling people what to do makes it more likely they will want to do the opposite (the *perversity principle*), and people's beliefs are more influenced by what they hear themselves say than what others say to them [31,38]. Finally, it is important to emphasize that reaching agreement with patients does not mean just leaving it to the patient to choose the treatment. Physicians provide the technical information and medical expertise but also need to encourage patients to reach agreement about the nature of the problem and its importance and to set mutually agreed-upon goals and specific short-term steps to reach those goals [40]. Setting joint goals may involve some negotiation between the goals patients are most interested in working on and those that the physician believes are most medically necessary.

Action Plan

Name: Mr. Quinn **Date:** 7/11/05
Phone: 555-555-5555

The healthy change I want to make is:
To better manage my health problems

My goal for the next month is:
To take my medications as prescribed by my doctor

The steps I will take to achieve my goal are (what, when, where, how much, how often):
Use a pill box to organize what pills I should take at what time each day

The things that could make it difficult to achieve my goal include:
Taking care of my wife

My plan for overcoming these difficulties includes:
Continue to remind myself that if I don't take my medications correctly, I may not be able to care for my wife. I will also post reminders to take my medications on the refrigerator and by my bed.

Support/resources I will need to achieve my goal include:
To purchase a pill box that is adequate for my medication needs

My confidence level is (scale of 1–10, 10 being completely confident that I can achieve the entire plan):
9

Review date: 8/15/05
Review method: (phone, e-mail, in person): in person

Figure 3. Sample action plan for Mr. Quinn. (Adapted from The Improving Chronic Illness Care Program. Available at www.improvingchroniccare.org. Accessed 11 Jul 2005. ICIC is a national program supported by the Robert Wood Johnson Foundation with direction and technical assistance provided by Group Health Cooperative's MacColl Institute for Healthcare Innovation.)

Assist the Patient in Achieving Treatment Goals

You write down Mr. Quinn's goal to take his medications as well as the specific steps you and he discussed to help him do this over the next few weeks and go over this specific action plan with him (**Figure 3**). You also print out a clear list of his medications, indications, and doses for Mr. Quinn to take home with him. Because you also recognize that an important way you can support Mr. Quinn is by linking him to resources to help him care for his wife, you provide him with a list of community resources to consider contacting. You also make an appointment for him to meet with a social worker to discuss possibilities of additional home supports and assistance programs.

Once self-management goals and an action plan have been agreed on, the physician can assist the patient in a variety of important ways. Even within the context of short medical visits, one can provide necessary information and support to enhance patient self-efficacy ("I can do it"), skill mastery ("Here's how"), and self-monitoring ("I know what different symptoms mean") [15]. Importantly, the physician should express understanding and praise

and offer reinforcement (eg, *"It's often difficult to change X."; "It's great that you are considering X."; "I can help you by X."*).

Several forms of verbal assistance may be useful to offer during visits. For example, the patient may need help formulating specific strategies that he or she can and would like to try and may benefit from reflecting on prior attempts (eg, *"What are some specific steps you would like to take in the next [week to several weeks] to try to meet that goal?"; "What have you already tried to treat your problem?"*). Or, the patient may need help anticipating possible obstacles, formulating ways to address these obstacles, and identifying possible sources of support (eg, "*What problems might arise?"; "Who or what might help you? How?")*. Similarly, the patient may need help acknowledging possible limitations of his or her plan or help revising the plan to enhance the chance of successful completion (eg, *"I have found that changing many things at once can be more difficult than doing one at a time."*). Finally, it is important to remember to provide concrete assistance and support materials. The patient should be given a copy of the agreed-upon treatment goals and action plan (see Figure 3); a form or log book to record progress made toward goals and to note obstacles faced; and a sheet of information on specific classes, support groups, and community resources.

Arrange Follow-up

You make a note of Mr. Quinn's concerns about caring for his wife and his action plan for his medications as items to follow-up on at his next visit. You recognize that he likely will need medication intensification even after he starts taking his medications regularly, but you first want to assess where he is after he is actually taking his current medications as prescribed. You also note his poor diet and lack of exercise to remind yourself that these are issues to be discussed in the future. Mr. Quinn states that at this time he does not feel the need for additional between-visit self-management support, as he would first like to focus on taking his medications, but he says he is open to consider something in the future. You schedule a return visit for 1 month.

Close follow-up is crucial to build and reinforce effective patient self-management behaviors and to respond to the changing challenges of chronic disease management. Elements of effective follow-up include:

- Scheduling a follow-up visit at an interval long enough to give the patient a chance to gain some experience in the trial of new self-management behaviors and to produce some measurable changes, but short enough to be able to provide timely feedback on progress;
- Carefully recording the main elements of the agreed-upon action plan and potential obstacles discussed (perhaps even in the patient's formal problem list in the medical record) to ensure follow-up on progress to date at the next visit;
- Encouraging the patient to attend relevant self-management training programs or other assistance programs in the community;
- As necessary, arranging for more in-depth sessions with a dietician, health educator, or counselor;
- If possible and as necessary, enrolling the patient in a telephone-based support program or case management program to provide between-visit self-management support;
- Calling or e-mailing the patient between office visits to maintain contact and offer support.

Conclusion

The hallmark of chronic disease care is that patients themselves have to carry out the bulk of treatment—and clinical outcomes depend to a large extent on how well they do this. Thus, effectively supporting patients to develop the understanding, confidence, skills, and motivation for successful self-management is one of the most important roles physicians caring for chronically ill patients can play. For physicians to develop the necessary skills, practice and mentoring are required. Medical students, residents, and practicing physicians need educational opportunities for skill modeling, role-playing, and rehearsals with standardized patients; feedback; repeated practice; and refinement.

While it initially may seem daunting to become comfortable with the well-researched behavioral approaches discussed here, it is worth remembering that the first entry for "doctor" in the Oxford English Dictionary (1989) is: "A teacher, instructor; one who gives instruction in some branch of knowledge, or inculcates opinions or principles." An effective teacher educates, inspires, and provides sustained support. To provide the best chronic disease care for our patients, we must meet the challenge of honing both our medical expertise and our teaching skills.

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