Helping patients change behavior is an important role for family physicians. Change interventions are especially useful in addressing lifestyle modification for disease prevention, long-term disease management and addictions. The concepts of "patient noncompliance" and motivation often focus on patient failure. Understanding patient readiness to make change, appreciating barriers to change and helping patients anticipate relapse can improve patient satisfaction and lower physician frustration during the change process. In this article, we review the Transtheoretical Model of Change, also known as the Stages of Change model, and discuss its application to the family practice setting. The Readiness to Change Ruler and the Agenda-Setting Chart are two simple tools that can be used in the office to promote discussion. (Am Fam Physician 2000;61:1409-16.)

One role of family physicians is to assist patients in understanding their health and to help them make the changes necessary for health improvement. Exercise programs, stress management techniques and dietary restrictions represent some common interventions that require patient motivation. A change in patient lifestyle is necessary for successful management of long-term illness, and relapse can often be attributed to lapses in healthy behavior by the patient. Patients easily understand lifestyle modifications (i.e., "I need to reduce the fat in my diet in order to control my weight.") but consistent, life-long behavior changes are difficult.

Much has been written about success and failure rates in helping patients change, about barriers to change and about the role of physicians in improving patient outcomes. Recommendations for physicians helping patients to change have ranged from the "just do it" approach to suggesting extended office visits, often incorporating behavior modification, record-keeping suggestions and follow-up telephone calls.\(^1\)\(^-\)\(^3\) Repeatedly educating the patient is not always successful and can become frustrating for the physician and patient. Furthermore, promising patients an improved outcome does not guarantee their motivation for long-term change. Patients may view physicians who use a confrontational approach as being critical rather than supportive. Relapse during any treatment program is sometimes viewed as a failure by the patient and the physician. A feeling of failure, especially when repeated, may cause patients to give up and avoid contact with their physician or avoid treatment altogether. After physicians invest time and energy in promoting change, patients who fail are often labeled "noncompliant" or "unmotivated." Labeling a patient in this way places responsibility for failure on the patient's character and ignores the complexity of the behavior change process.

**Lessons Learned from Smoking and Alcohol Cessation**

Research into smoking cessation and alcohol abuse has advanced our understanding of the change process, giving us new directions for health promotion. Current views depict patients as being in a process of change; when physicians choose a mode of intervention,
"one size doesn't fit all." Two important developments include the Stages of Change model and motivational interviewing strategies. The developers of the Stages of Change model used factor and cluster analytic methods in retrospective, prospective and cross-sectional studies of the ways people quit smoking. The model has been validated and applied to a variety of behaviors that include smoking cessation, exercise behavior, contraceptive use and dietary behavior. Simple and effective "stage-based" approaches derived from the Stages of Change model demonstrate widespread utility. In addition, brief counseling sessions (lasting five to 15 minutes) have been as effective as longer visits.

**Understanding Change**

Physicians should remember that behavior change is rarely a discrete, single event. Physicians sometimes see patients who, after experiencing a medical crisis and being advised to change the contributing behavior, readily comply. More often, physicians encounter patients who seem unable or unwilling to change. During the past decade, behavior change has come to be understood as a process of identifiable stages through which patients pass. Physicians can enhance those stages by taking specific action. Understanding this process provides physicians with additional tools to assist patients, who are often as discouraged as their physicians with their lack of change.

The Stages of Change model shows that, for most persons, a change in behavior occurs gradually, with the patient moving from being uninterested, unaware or unwilling to make a change (precontemplation), to considering a change (contemplation), to deciding and preparing to make a change. Genuine, determined action is then taken and, over time, attempts to maintain the new behavior occur. Relapses are almost inevitable and become part of the process of working toward life-long change.

**Precontemplation Stage**

During the precontemplation stage, patients do not even consider changing. Smokers who are "in denial" may not see that the advice applies to them personally. Patients with high cholesterol levels may feel "immune" to the health problems that strike others. Obese patients may have tried unsuccessfully so many times to lose weight that they have simply given up.

**Contemplation Stage**

During the contemplation stage, patients are ambivalent about changing. Giving up an enjoyed behavior causes them to feel a sense of loss despite the perceived gain. During this stage, patients assess barriers (e.g., time, expense, hassle, fear, "I know I need to, doc, but...") as well as the benefits of change.

**Preparation Stage**

During the preparation stage, patients prepare to make a specific change. They may experiment with small changes as their determination to change increases. For example,
sampling low-fat foods may be an experimentation with or a move toward greater dietary modification. Switching to a different brand of cigarettes or decreasing their drinking signals that they have decided a change is needed.

**Action Stage**

The action stage is the one that most physicians are eager to see their patients reach. Many failed New Year's resolutions provide evidence that if the prior stages have been glossed over, action itself is often not enough. Any action taken by patients should be praised because it demonstrates the desire for lifestyle change.

**Maintenance and Relapse Prevention**

Maintenance and relapse prevention involve incorporating the new behavior "over the long haul." Discouragement over occasional "slips" may halt the change process and result in the patient giving up. However, most patients find themselves "recycling" through the stages of change several times before the change becomes truly established.

The Stages of Change model encompasses many concepts from previously developed models. The Health Belief model, the Locus of Control model and behavioral models fit together well within this framework. During the precontemplation stage, patients do not consider change. They may not believe that their behavior is a problem or that it will negatively affect them (Health Belief Model), or they may be resigned to their unhealthy behavior because of previous failed efforts and no longer believe that they have control (external Locus of Control). During the contemplation stage, patients struggle with ambivalence, weighing the pros and cons of their current behavior and the benefits of and barriers to change (Health Belief model). Cognitive-behavioral models of change (e.g., focusing on coping skills or environmental manipulation) and 12-Step programs fit well in the preparation, action and maintenance stages (Table 1).

**TABLE 1**

<table>
<thead>
<tr>
<th>Stages of Change Model</th>
<th>Patient stage</th>
<th>Incorporating other explanatory/treatment models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precontemplation</td>
<td>Not thinking about change</td>
<td>Locus of Control</td>
</tr>
<tr>
<td></td>
<td>May be resigned</td>
<td>Health Belief Model</td>
</tr>
<tr>
<td></td>
<td>Feeling of no control</td>
<td>Motivational interviewing</td>
</tr>
<tr>
<td></td>
<td>Denial: does not believe it applies to self</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Believes consequences are not serious</td>
<td></td>
</tr>
<tr>
<td>Contemplation</td>
<td>Weighing benefits and costs of behavior, proposed change</td>
<td>Health Belief Model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Motivational interviewing</td>
</tr>
<tr>
<td>Preparation</td>
<td>Experimenting with small changes</td>
<td>Cognitive-behavioral therapy</td>
</tr>
<tr>
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</tr>
<tr>
<td>Action</td>
<td>Taking a definitive action to change</td>
<td>Cognitive-behavioral therapy 12-Step program</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Maintaining new behavior over time</td>
<td>Cognitive-behavioral therapy 12-Step program</td>
</tr>
<tr>
<td>Relapse</td>
<td>Experiencing normal part of process of change Usually feels demoralized</td>
<td>Motivational interviewing 12-Step program</td>
</tr>
</tbody>
</table>


**Interventions**
The Stages of Change model\(^4\) is useful for selecting appropriate interventions. By identifying a patient's position in the change process, physicians can tailor the intervention, usually with skills they already possess. Thus, the focus of the office visit is not to convince the patient to change behavior but to help the patient move along the stages of change. Using the framework of the Stages of Change model,\(^4\) the goal for a single encounter is a shift from the grandiose ("Get patient to change unhealthy behavior.") to the realistic ("Identify the stage of change and engage patient in a process to move to the next stage.").\(^4\)

Starting with brief and simple advice makes sense because some patients will indeed change their behavior at the directive of their physician. (This step also prevents precontemplators from rationalizing that, "My doctor never told me to quit."). Rather than viewing this step as the intervention, physicians should view this as the opening assessment of where patients are in the behavior change process. A patient's response to this direct advice will provide helpful information on which physicians can base the next step in the physician-patient dialog. Rather than continue merely to educate and admonish, interventions based on the Stages of Change model\(^4\) can be appropriately tailored to each patient to enhance success. A physician who provides concrete advice about smoking cessation when a patient remarks that family members who smoke have not died from lung cancer, has not matched the intervention to the patient's stage of change. A few minutes spent listening to the patient and then appropriately matching physician intervention to patient readiness to change can improve communication and outcome.

Patients at the precontemplation and contemplation stages can be especially challenging for physicians. Motivational interviewing techniques have been found to be most effective. Miller and colleagues\(^21\) replicated studies with "problem drinkers," demonstrating that an empathetic therapist style was predictive of decreased drinking while a confrontational style predicted increased drinking. Motivational interviewing incorporates
empathy and reflective listening with key questions so that physicians are simultaneously patient-centered and directive. Controlled studies have shown motivational interviewing techniques to be at least as effective as cognitive-behavioral techniques and 12-step facilitation interventions, and they are easily adaptable for use by family physicians.\textsuperscript{22-27}

**Helping the 'Stuck' Patient**

The goal for patients at the precontemplation stage is to begin to think about changing a behavior. The task for physicians is to empathetically engage patients in contemplating change (Table 2).\textsuperscript{6} During this stage, patients appear argumentative, hopeless or in "denial," and the natural tendency is for physicians to try to "convince" them, which usually engenders resistance.

Patient resistance is evidence that the physician has moved too far ahead of the patient in the change process, and a shift back to empathy and thought-provoking questions is required. Physicians can engage patients in the contemplation process by developing and maintaining a positive relationship, personalizing risk factors and posing questions that provoke thoughts about patient risk factors and the perceived "bottom line."

The wording of questions and the patient's style of "not thinking about changing" are also important. As precontemplators respond to questions, rather than jumping in and providing advice or appearing judgmental, the task for physicians is to reflect with empathy, instill hope and gently point out discrepancies between goals and statements. Asking argumentative patients, "Do you want to die from this?" may be perceived as a threat and can elicit more resistance and hostility. On the other hand, asking patients, "How will you know that it's time to quit?" allows patients to be their "own expert" and can help them begin a thought process that extends beyond the examination room. Well-phrased questions will leave patients pondering the answers that are right for them and will move them along the process of change (Table 3).\textsuperscript{6}

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Questions for Patients in the Precontemplation and Contemplation Stages*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precontemplation stage</strong></td>
<td>Goal: patient will begin thinking about change.</td>
</tr>
<tr>
<td></td>
<td>&quot;What would have to happen for you to know that this is a problem?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What warning signs would let you know that this is a problem?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Have you tried to change in the past?&quot;</td>
</tr>
<tr>
<td><strong>Contemplation stage</strong></td>
<td>Goal: patient will examine benefits and barriers to change.</td>
</tr>
<tr>
<td></td>
<td>&quot;Why do you want to change at this time?&quot;</td>
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<tr>
<td></td>
<td>&quot;What were the reasons for not changing?&quot;</td>
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<tr>
<td></td>
<td>&quot;What would keep you from changing at this time?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What are the barriers today that keep you from change?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What might help you with that aspect?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What things (people, programs and behaviors) have helped in the past?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What would help you at this time?&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;What do you think you need to learn about changing?&quot;</td>
</tr>
</tbody>
</table>
It is not unusual for some patients to spend years in the contemplation stage, which physicians can easily recognize by their "yes, but" statements. Empathy, validation, praise and encouragement are necessary during all stages but especially when patients struggle with ambivalence and doubt their ability to accomplish the change. Physicians may find statements such as the following to be useful: "Yes, it is difficult. What difficult things have you accomplished in the past?" or "I've seen you handle some tough stuff, I know you'll be able to conquer this." A successful approach calls for physicians to ask patients about possible strategies to overcome barriers and then arrive at a commitment to pursue one strategy before the next visit. It is also productive to ask patients about their previous methods and attempts to change behavior. Barriers and gaps in patients' knowledge can then surface for further discussion.

When patients experiment with changing a behavior (preparation stage) such as cutting down on smoking or starting to exercise, they are shifting into more decisive action. Physicians should encourage them to address the barriers to full-fledged action. While continuing to explore patient ambivalence, strategies should shift from motivational to behavioral skills. During the action and maintenance stages, physicians should continue to ask about successes and difficulties--and be generous with praise and admiration.

**Relapse from Changed Behavior**

Relapse is common during lifestyle changes. Physicians can help by explaining to patients that even though a relapse has occurred, they have learned something new about themselves and about the process of changing behavior. For example, patients who previously stopped smoking may have learned that it is best to avoid smoke-filled environments. Patients with diabetes who are on a restricted diet may learn that they can be successful in adhering to the diet if they order from a menu rather than choose the all-you-can-eat buffet. Focusing on the successful part of the plan ("You did it for six days; what made that work?") shifts the focus from failure, promotes problem solving and offers encouragement. The goal here is to support patients and re-engage their efforts in the change process. They should be left with a sense of realistic goals to prevent discouragement, and their positive steps toward behavior change should be acknowledged.²⁴

**Additional Tools**

Two techniques useful in the primary care setting are the Readiness to Change Ruler and the Agenda-Setting Chart.²⁶,²⁷ The Readiness to Change Ruler, which is incorporated in Figure 1,⁴,²⁶,²⁷ is a simple, straight line drawn on a paper that represents a continuum from the left "not prepared to change" to the right "ready to change." Patients are asked to mark on the

*--The change can be applied to any desirable behavior (e.g., smoking or drinking cessation, losing weight, exercise).

Physicians should then question patients about why they did not place the mark further to the left (which elicits motivational statements) and what it would take to move the line further to the right (which elicits perceived barriers). Physicians can ask patients for suggestions about ways to overcome an identified barrier and actions that might be taken before the next visit.

The Agenda-Setting Chart is useful when multiple lifestyle changes are recommended for long-term disease management (e.g., diabetes or prevention of heart disease). The physician draws multiple circles on a paper, filling in behavior changes that have been shown to affect the disease in question and adding a few blank circles. For example, "lose weight," "stop smoking" and "exercise" may each occupy a circle--all of them representing behavior changes that are known to reduce the risk of heart disease. The physician begins the patient session with, "Let's spend a few minutes talking about some of the ways we can work together to improve your health. In the circles are some factors we can tackle to improve your health. Are there other factors that you know would be important to address that we should add to the blank circles?" Discussion then revolves around the patient's priority area and identifies a goal that might be achievable before the next office visit.

**Changing Behavior for Your Health**

1. On the line below, mark where you are now on this line that measures change in behavior. Are you not prepared to change, already changing or someplace in the middle?
   - Not prepared to change
   - Already changing

2. Answer the questions below that apply to you.
   - If your mark is on the left side of the line:
     - How will you know when it's time to think about changing?
     - What signals will tell you to start thinking about changing?
     - What qualities in yourself are important to you?
     - What connection is there between those qualities and "not considering a change"?
   - If your mark is somewhere in the middle:
     - Why did you put your mark there and not further to the left?
     - What might make you put your mark a little further to the right?
     - What are the good things about the way you're currently trying to change?
     - What are the not-so-good things?
     - What would be the good result of changing?
     - What are the barriers to changing?
   - If your mark is on the right side of the line:
     - Pick one of the barriers to change and list some things that could help you overcome this barrier.
     - Pick one of those things that could help and decide to do it by ________________ (write in a specific date).
   - If you've taken a serious step in making a change:
     - What made you decide on that particular step?
     - What has worked in taking this step?
     - What helped it work?
     - What could help it work even better?
What else would help?
Can you break that helpful step down into smaller pieces?
Pick one of those pieces and decide to do it by _______________________ (write in a specific date).

- If you’re changing and trying to maintain that change:
  Congratulations! What’s helping you?
  What else would help?
  What are your high-risk situations?

- If you’ve "fallen off the wagon":
  What worked for a while?
  Don’t kick yourself—long-term change almost always takes a few cycles.
  What did you learn from the experience that will help you when you give it another try?

3. The following are stages people go through in making important changes in their health behaviors. All the stages are important. We learn from each stage.

We go from "not thinking about it" to "weighing the pros and cons" to "making little changes and figuring out how to deal with the real hard parts" to "doing it!" to "making it part of our lives."

Many people "fall off the wagon" and go through all the stages several times before the change really lasts.

**FIGURE 1.** The Readiness to Change Ruler can be used with patients contemplating any desirable behavior, such as smoking cessation, losing weight, exercise or substance-abuse cessation.

Information from references 4, 26 and 27.

**Involving Others**

While no research is available that uses the Stages of Change model in teaching families how to intervene with their loved one’s health-risk behavior, training about this model may help family members view the situation differently.

Physicians can enlist the help of other health care professionals (e.g., nutritionists, nurses, mental health personnel) to reinforce the message that a change in behavior is needed and to provide additional education and skill information to the patient. Referral can also reduce some patient care burden for physicians. Physicians should document the content and outcome of patient conversations, including specific tasks and plans for follow-up.

**Final Comment**

Family physicians need to develop techniques to assist patients who will benefit from behavior change. Traditional advice and patient education does not work with all patients. Understanding the stages through which patients pass during the process of successfully changing a behavior enables physicians to tailor interventions individually. These methods can be applied to many areas of health changing behavior.

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