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COMMENTARY

Coaching for Behavior Change in Physiatry

ABSTRACT

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Behavior modification is vital to the prevention or amelioration of lifestyle-related disease. Health and wellness coaching is emerging as a powerful intervention to help patients initiate and maintain sustainable change that can be critical to physiatry practice. The coach approach delivers a patient-centered collaborative partnership to create an engaging and realistic individualized plan. The coaching process builds the psychologic skills needed to support lasting change, including mindfulness, self-awareness, self-motivation, resilience, optimism, and self-efficacy. Preliminary studies indicate that health and wellness coaching is a useful and potentially important adjunct to usual care for managing hyperlipidemia, diabetes, cancer pain, cancer survival, asthma, weight loss, and increasing physical activity. Physiatrists can benefit from the insights of coaching to promote effective collaboration, negotiation, and motivation to encourage patients to take responsibility for their recovery and their future wellness by adopting healthy lifestyles.

Key Words: Health Coaching, Health Behavior, Behavior Change, Health Outcomes, Physiatry, Motivational Interviewing

Up to half of all premature deaths are caused by unhealthy lifestyle choices related to tobacco, sedentary behavior, unmanaged stress, and poor diets. As the prevalence of obesity continues to rise, effective strategies to address the physical activity and diet of patients have become even more crucial today than it was in the past. Health and wellness coaching uses a collaborative patient-focused approach to enable patients to take responsibility for their health and well-being, to increase self-awareness, to harness heartfelt motivation connected to life values and purpose, to commit to realistic goals, and to adopt a resilient and confident mindset as they experiment with and eventually establish healthy behaviors. Effective coaching deals with both large and small challenges and builds on opportunities, including past successes and failures. The process supports positive change in a number of ways: by helping patients gain the lifestyle and psychologic knowledge that they are seeking, by helping them acquire the coping and behavior change skills that they need, and by applying their strengths, talents, and experience to their health goals.

PSYCHOLOGY OF COACHING

Research examining human behavior change has shown that the external expert source of motivation, which is typically used by clinicians, generates either compliance or defiance and is not reliable. External sources of motivation alone do not generate the internal motivation that most correlate with lasting engagement in health behaviors, where patients uncover their own reasons why a behavior is in their best interest and then place a high value on the outcome. Human beings are wired to want autonomy and resist being told what to do, even when the advice is in their best interest.

The roots of professional coaching in health care are firmly planted in evidence-based psychologic domains and theories on how to generate effective and durable behavior change, not only self-determination theory[1] but also many others including the transtheoretical model of change,[2] motivational interviewing,[3,4] appreciative inquiry,[5] goal-setting theory,[6] social cognitive theory,[7] adult development,[8] cognitive behavioral therapy,[9] and positive psychology.[10,11] The assimilation and translation of these theories into coaching skills, knowledge, and processes have given health and wellness coaches a road map for the facilitation of the patient's process of change, including change in thinking (beliefs and attitudes), emotions (more mindfulness and resilience), and behaving (new healthy habits).

Physicians are trained in an "expert approach," which is problem focused and relies on the clinician's skills and knowledge to determine the correct diagnosis and treatment for each patient. This approach is most effective when handling acute problems and emergency situations. Patients expect this approach when they enter the doctor's office for a sick visit. However, this same expert approach is often used to advise patients about making behavior changes such as initiating an exercise routine or losing weight and cutting down on salt intake. Sometimes, patients adhere to expert advice, but more often, they do not. The role of the physician as coach is different from his role as an expert in many ways (Table 1).

Clinical Evidence

Several clinical trials with a variety of populations suggest that the coach approach appears to be effective in generating short-term, and perhaps more durable, behavior change (Table 2). A wide variety of patients have responded favorably to collaborative coaching efforts, ranging from children with asthma to adults with cancer pain. The benefits of coaching interventions have included increased personal behaviors (such as exercise), improved measures of health (such as reduced cholesterol, or HbA1c) and reduced health utilization (such as hospitalization). Effective health and wellness coaching interventions used live sessions, on the telephone or in person. Common aspects of successful coaching interventions included a consistent one-on-one relationship, goal setting, and accountability through reporting to the coach on a regular basis.

Although the effectiveness of health and wellness coaching has been demonstrated in broad populations with diverse health concerns, there are limitations as to the current evidence for health coaching. Most studies have small sample sizes. A variety of coaching techniques and training has been used in studies. In addition, there is variability of the number, frequency, and duration of coaching sessions used. Long-term follow-up beyond 2 yrs has yet to be completed.

Many areas of uncertainty remain. A consistent definition of health and wellness coaching, along with standards for competency training and credentialing, need to be established. Which techniques can be most useful for particular mindsets, readiness to change, and disease states remains an area of active exploration. How the expert educator

TABLE 1 The differences between the expert approach and the coach approach

Expert	Coach
Treats patients	Helps patients help themselves
Educates	Builds motivation, confidence, and engagement
Relies on skills and knowledge of expert	Relies on patient self-awareness and insights
Strives to have all the answers	Strives to help patients find their own answers.
Focuses on the problem	Focuses on what is working well
Advises	Collaborates

TABLE 2 Randomized controlled trials of health and wellness coaching

Author	Design	Subjects	Intervention	Results
Wolever et al.[12]	RCT comparing integrative health coaching with usual care (control)	56 patients with type 2 diabetes	Fourteen 30-min coaching sessions by telephone over 4 mos	Significant reduction in A1c among participants with baseline values ≥7% ($P = 0.03$)
Whittemore et al.[13]	Pilot RCT; nurse coach *vs.* usual care; intervention group received a nurse coach intervention	53 women with type 2 diabetes	Six coaching sessions were delivered over 6 mos.	Intervention subjects had better diet self-management ($P = 0.02$), less diabetes-related distress ($P < 0.01$), better integration ($P < 0.03$), greater satisfaction with care ($P < 0.01$) , and trends toward better exercise self-management ($P = 0.13$) and lower BMIs ($P = 0.15$)
Vale et al.[14]	RCT; COACH *vs.* usual care	792 patients with CVD	Five telephone coaching sessions were delivered for 6 mos.	Intervention subjects demonstrated greater decrease in total cholesterol ($P < 0.0001$), more weight loss ($P < 0.0001$), greater reduction in fat intake ($P = 0.04$), and more walking activity ($P < 0.0001$)
Vale et al.[15]	RCT; coach model *vs.* usual care	245 CHD patients	Six telephone coaching sessions were delivered for 6 mos.	Intervention subjects had significantly lower fasting total cholesterol ($P < 0.0001$) and LDL-C levels ($P < 0.0004$).
Edelman et al.[16]	RCT; personalized health plan and a health coach with a medical provider *vs.* usual care plus health report	154 patients with one or more CV risk factor	28 two-hour in-person group training sessions with biweekly 20- to 30-min individual telephone sessions for 10 mos	Intervention subjects had significantly greater decrease in CHD risk ($P = 0.05$), greater increase in number of days of exercise per week ($P = 0.002$) and greater weight loss ($P = 0.54$)
Debar et al.[17]	RCT; group meetings and coaching *vs.* usual care	228 teenage girls	Annual visits, fitness center membership, biweekly team meetings, quarterly telephone sessions, and team meetings with parents, all of which are supported by a study website.	Intervention subjects had higher BMD in the spine ($P = 0.007$) and trochanter ($P = 0.03$) regions and greater consumption of calcium ($P < 0.001$) and fruits and vegetables ($P = 0.01$) for 2 yrs
Fisher et al.[18]	RCT; child and parent received coaching *vs.* usual care	191 children ages 2–8 yrs with diagnosis of asthma	Telephone and in-person visit with parent then biweekly telephone calls for 3 mos, after which calls were monthly for the duration of the 2-yr intervention.	Intervention subjects had significantly lower rehospitalization rates ($P = 0.002$).
Oliver et al.[19]	RCT; individualized education and coaching *vs.* usual care group with additional education	87 cancer patients with moderate pain	20-min visit before visit with doctor.	Intervention group experienced lower pain severity ($P = 0.014$).

TABLE 2 Continued

Author	Design	Subjects	Intervention	Results
Holland et al.[20]	RCT; nurse coach *vs.* usual care	504 subjects with a chronic health condition	Group classes on health topics and three 1-hr exercise training sessions with 11 contact hours with the nurse health coach by telephone and email for 12 mos.	Intervention subjects demonstrated increased minutes of weekly aerobic activity ($P = 0.001$) and increased minutes of weekly stretching ($P = 0.008$)

COACH, Coaching Patients on Achieving Cardiovascular Health; RCT, randomized controlled trials; BMI, body mass index; CVD, cardiovascular disease; LDL-C, low-density lipoprotein cholesterol; CV, cardiovascular; BMD, bone mineral density.

approach can be most effectively combined with the coach approach needs to be more fully elucidated.

Initiating and Maintaining the Coaching Relationship

Many patients need help in making behavior changes that are long lasting. For some patients, a health setback serves as a sufficient motivator to enable commitment, sustained action, and success in changing their unhealthy habits. For others, even a dramatic serious outcome (such as a myocardial infarction or a preventable lower limb amputation) may be insufficient to generate behavior changes (such as smoking cessation). In those cases, clinicians can use coaching techniques to make counseling time more effective and more efficient.

In a study examining different approaches for promoting physical activity in a primary care setting, it was demonstrated that 30 mins spent in a brief negotiation conversation with the subject was significantly more effective than a no-intervention control in increasing the patient's physical activity levels. It was estimated that the subjects in the brief negotiation group walked approximately 37 mins more during the week compared with the control group. Brief negotiation involved using motivational techniques such as giving feedback about the current level of activity compared with guidelines, assessing motivation and confidence for increasing physical activity, weighing pros and cons of increasing activity levels, information exchange, exploring concerns about increasing activity, and helping in decision making. In contrast, it was demonstrated that 30 mins spent directly advising the subject about increasing physical activity levels yielded no significant difference compared with the no-intervention control group. Direct advice was described as telling the subject about benefits of physical activity and the dangers of sedentary behavior, instructing the subject to work toward 30 mins of brisk walking (or a similar activity) during at least 5 days of the week. If a caregiver is going to spend the time (20–30 mins) counseling the patient about increasing physical activity, the most efficient and effective use of time will be to hold brief negotiations and to collaborate with the patient rather than persuading and coercing the patient to follow set guidelines.[21]

The coach approach centers on a collaborative partnership between provider and patient. The physician coach and the patient start with an empathetic acceptance of the past, an affirmation of lessons learned, and a move to a focus on possibilities and new hope. They work together to create a compelling vision for the future and set specific, measurable, action-oriented, realistic, and time-sensitive (SMART) goals, which are interesting, engaging, and appropriate for the patient's readiness to change in each behavioral area. Importantly, the coach approach helps the patient determine whether he or she is in a precontemplative ("I won't" or "I can't"), contemplative ("I may"), preparation ("I will"), action ("I am"), or maintenance ("I will continue") stage before any goals are set. The action steps that are cocreated are tailored to the patient's stage of change. For example, someone in a precontemplative stage for exercise would be best served with a cognitive goal such as reading a powerful, brief article about the benefits of exercise that includes inspiring stories or talking to a role model about her personal journey. However, someone in the preparation stage of change would be best served with the action goal of researching local fitness programs.

By using appreciative inquiry strategies such as focusing on what is going well in the patient's life and deploying the patient's strengths, talents, and interests, the coach approach allows the patient to increase self-motivation and self-efficacy and begin to build on past success.

The key to the coach approach is to create a self-fulfilling cycle with small accomplishments setting the stage for larger ones. The cycle relies on utilizing the patient's internal motivation as the force behind the behavior change. Eliciting this internal or intrinsic motivation often requires extra time expressing empathy, developing positive emotions and mindfulness, asking open-ended questions, responding with reflections, and supporting the patient. Physicians can use these skills even in short visits in their practices.

To start the five-step cycle (Fig. 1) in the coaching model, the healthcare provider must spend some time understanding the patient's current situation. Feeling and expressing compassion is critical to the success of this approach. Reflections are a good way to let the patient know you are listening to them and that you understand their predicament. An example of a reflection is, "From what I am hearing, it sounds like you are having a hard time finding time to exercise." Using a nonjudgmental tone will convey acceptance and promote productive collaborations.

Once empathy is in place, it is time to work on motivation. Motivation plays a critical role in coaching. The focus is on internal motivation, not on external motivation. Threatening the patient with heart disease, diabetes or cancer, may work for some patients in the short term, but the fear these threats conjure up is not enough to instill lasting change in the long term, in most cases. In the vein of collaboration and negotiation, the healthcare provider needs to ask the patient what motivates him or her. Why she feels making this change might be important. How her life would be different if this change were already part of her lifestyle.

After motivation comes confidence. When a patient does not feel confident in his ability to make lifestyle change, it is hard to achieve progress. Using a scale is a good way to gauge a patient's confidence and quantify a subjective concept. The healthcare provider can simply ask the patient to rate his own confidence in his ability to make a particular change by using a scale from 1 to 10. If the patient's confidence level is lower than 7, then he is not ready to proceed, and he needs to build his confidence. Helping a patient develop more positive emotions, targeting a positive-to-negative emotion ratio of 3:1 or greater is an important part of the path to developing confidence, resilience, and creativity.[22] Focusing on the patient's strong points and past triumphs in attaining goals is another way to empower patients. Identifying obstacles to change and brainstorming solutions around them also helps increase self-reliance.

Once self-acceptance, motivation, and confidence are high, the patient is ready to set "SMART" goals. Goals that are engaging, interesting, and challenging are intrinsically motivating. Setting SMART goals is important because success breeds success. It is empowering to reach a goal, no matter how small. Working toward a target and reaching it leads to more self-efficacy (the belief that one has the ability to accomplish a particular goal) and often translates to more energy as well as interest in continuing to pursue future goals related to that behavior change.

Without monitoring and accountability, the goals are much less likely to be realized. If you set

FIGURE 1 *Five-step cycle in the coaching model.*

goals with a patient, you need to check in on the patient's progress. This can be as simple as a telephone call, an email, or a postcard to the patient. The physician, a nurse, or other healthcare provider from the physician's practice can complete this follow-up. Using online monitoring devices or simply having the patient track his own workouts or diet is useful. However, most patients need to know that these results will be shared publicly with another person for the patients to believe that this tracking is important. When a patient knows that he will be held accountable for his actions and that someone really cares about what happened in relation to his goals, he will be moved to put his best effort forward to achieve the goals.

When reviewing a patient's progress on their SMART goals, start by celebrating any success, no matter how small. If the patient was supposed to walk briskly on Friday but never completed the walk even though he was all dressed and ready with is walking shoes on, there is still something to celebrate. He prepared successfully and planned properly to make the time. In a nonjudgmental way, it is important to find out why the goal was not completed. This is not a failure. Rather, it is an opportunity to learn. Instead of looking for the mistakes or failures that lead to the unachieved goals, look for openings to find out more about the patient and for the patient to discover more about himself. This new information will serve to inform future actions, future goals, and will help guide the patient on a path of self-discovery in addition to lasting behavior change.

After accountability comes deeper understanding and the ability to put one's self in another person's shoes. Compassion is required when reviewing the goals that were previously set. Afterward, we are back to square one, with empathy. The cycle starts and ends with this critical step, which requires the healthcare provider to be in tune with the patient. It is easy to visualize how one pass through the cycle leads to more motivation, more confidence, more goals, more accountability, more celebration, and finally, more empathy.

To ensure the success of your intervention, it is essential to have the patients recruit their own social networks. Support from family and friends can go a long way to support success with behavior change. Having a sibling or a friend check in with the patient and ask about the weekly goals is another way to implement accountability on a frequent and ongoing basis. Having an exercise partner or joining group classes can provide additional motivation and support. Group coaching sessions are often effective as well.

Training in Coaching

Physicians can train in health and wellness coaching by taking classes, attending live CME courses, completing online CME courses, or participating in a health coach or wellness coach training program that can range from two 2-hr training sessions a week for 8–12 wks or a series of four full-day sessions for four different weekends to 1- and 2-yr training programs. Some programs are in-person and some are teleconferences that can be completed from a distance. Some programs offer certification after passing an oral examination, written examination, and client write-up. A nurse or other members of the physician's office can be trained to become a certified health and wellness coach.

The International Coaching Federation (www.coachfederation.org) is the largest credentialing body for life, business, and executive coaches. To adapt coaching standards to meet the demands upon professional coaches in health care, a national consortium of academic and industry leaders, supported by the Institute of Coaching (www.instituteofcoaching.org) at McLean Hospital (affiliated with Harvard Medical School) is developing a consensus on the definition, scope of practice, tasks and skills, and training and education standards of health and wellness coaches, and is expanding the coaching research agenda. The consortium plans to establish national credentialing of health and wellness coaches and support the integration of basic coaching skills into many health professions, including physicians.

Training in health coaching appears to be effective and has been demonstrated to improve patients' adherence to treatment plans for those trained clinicians,[23] particularly when those patients were being treated for diabetes.[24] Patients of physicians employing motivational interviewing techniques (collaboration, empathy, and open questions) lost more weight 3 mos after the physician visit than did the patients of physicians who used a conventional approach.[25] Training in health coaching techniques has also been demonstrated to help physicians improve their communication skills and has been used to help resolve disagreements using a coach approach.[26] Additional studies have demonstrated the efficacy of nurse training in coaching techniques.[27–29] Medical students can be successfully trained in effective communication skills using empathy and noninterrogation activities.[30]

Even without formal training, a physician can work toward adopting the coach approach through following the five-step cycle in the coaching model in Figure 1. In addition, there is a simple Road Map

TABLE 3 Two key aspects of the coach approach: asking open-ended questions and delivering reflections are each essential for the health and wellness coaching cycle

Step	Open-Ended Questions	Reflective Comments
Identify the need/desire	How would your life be different if you were exercising on a regular basis? What do you treasure most in life and how would being fit contribute to that?	From what I just heard you say, I gather that being with your grandchildren is important to you, and I heard you say that you would have more energy to play with them if you were more physically fit.
Assess readiness to change	What are you currently doing for physical activity?	It sounds like you are getting out for a walk every once in a while, and you enjoy that and would like to do more.
Understand previous positive experience and knowledge	What physical activity have you enjoyed in the past? How were you feeling when you were engaging in an exercise routine? What benefits do you personally get from exercise?	From what I understand, you used to enjoy regular walks with your wife in the past.
Acknowledge strengths	When you have met a difficult challenge in the past, what helped you overcome it?	It sounds like you used your creativity and perseverance to help you quit smoking in the past. Congratulations!
Identify shared targets	How would you like to start? What would be your choice of physical activity? How many minutes do you think you could successfully complete in a week?	Repeat the specific goal that your patient creates.
Anticipate obstacles	What might get in your way of achieving your physical activity goal this week?	You seem to be aware that the television is an obstacle to getting off the couch.
Brainstorm strategies around obstacles	If you do run up against an obstacle to meeting your goal, what could you do to get around it?	I heard you say that you could unplug your TV and keep it unplugged until you have taken your morning walk.
Agree on accountability plan	How would you like to be accountable for this goal?	Am I correct in saying that you would like to create a chart of your physical activity and share it with me at your next appointment?
Follow-up	How did things go with your goal?	It sounds like you had some success with this aspect of your goal and this other part proved to be a more of a challenge.

Sample open-ended questions and reflective comments for a sedentary patient are provided.

to the Coach Approach (Table 3). It reviews some key aspects of taking the coach approach and provides concrete suggestions on how to get started. If a physician does nothing more than focus on asking open-ended questions and concentrate on delivering reflections that demonstrate empathy, he or she will be one step closer to empowering behavior change in a coach-like manner.

Collaborating With a Professional Health Coach

Coaching can be readily introduced into a physiatrist's practice even if the clinicians themselves do not do the coaching. Physiatrists can collaborate with a well-trained professional health or wellness coach who can spend the time working with the patient one-on-one on a regular basis to help guide the patient in their journey toward behavior change. In addition to robust coach training on how to deliver a change-promoting relationship, health and wellness coaches also have diverse credentials in health and wellness, including nurses, exercise physiologists, physical therapists, dietitians, mental health professionals, and occupational therapists.

Ask coaches about their training, certification, number of years of coaching, and their health and wellness experience. To ensure that your goals are aligned, ask the coach about the approach and techniques that they use. Ask them to share the results of their database of outcomes and their experience dealing with the kind of patient problems the clinician typically refers. Another idea is to ask the coach to give the physician a sample coaching session. This way, the physician gets to experience the coach approach first hand.

CONCLUSIONS

Adopting healthy behaviors is critical for patients with stroke, coronary artery disease, hypertension, diabetes, metabolic syndrome, and those who are overweight or obese. Health and wellness

coaches have effectively used the coach approach to help patients get motivated to start and sustain exercise programs, to make healthy dietary choices, to better manage stress, to stop smoking, and to lose weight. Physiatrists treat patients who could benefit from these behavior changes. In addition, physiatry has been identified as a specialty well suited to help patients maintain health, wellness, and fitness.[31] To accomplish this goal, physiatrists need to become knowledgeable and confident in counseling patients about physical activity, healthy eating, stress management, and other behavior changes. The coach approach will help physiatrists to become catalysts in promoting healthy lifestyles for their patients. When necessary, physiatrists can partner with well-trained professional health and wellness coaches to help their patients tackle unhealthy habits and make lasting behavior change. There are a number of different paths leading to a healthy lifestyle, and the key is to get your patients started on their personal journeys to optimal health, working with their current state of health and level of function.

REFERENCES

1. Ryan RM, Deci EL: Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol* 2000;55: 68–78
2. Prochaska JO, Norcross JC, DiClemente CC: *Changing for Good: A Revolutionary Six-Stage Program for Overcoming Bad Habits and Moving Your Life Positively Forward*. New York, NY: HarperCollins; 1994
3. Miller WR: Motivational interviewing: Research, practice, and puzzles. *Addict Behav* 1996;21:835–42
4. Miller WR, Rollnick S: *Motivational Interviewing: Preparing People for Change*. New York, NY: The Guilford Press; 2002
5. Watkins JM, Cooperrider D: Appreciative inquiry: A transformative paradigm. *OD Pract* 2000;32:6–12
6. Latham G, Locke E: Building a practically useful theory of goal setting and task motivation. *Am Psychol* 2002;57:705–17
7. Bandura A: *Social Foundations of Thought & Action: a Social Cognitive Theory*. Upper Saddle River, NJ: Prentice-Hall; 1986
8. Taylor K: Autonomy and self-directed learning: A developmental journey. In: Hoare C. *Handbook of Adult Development and Learning*. Oxford, UK: Oxford University Press; 2006:201
9. Dobson KS, Dozois DJA: Historical and philosophical bases of the cognitive-behavioral therapies. In: Dobson KS. *Handbook of Cognitive-Behavioral Therapies*. ed 2. New York, NY: Guilford Press; 2001: 3–39
10. Seligman MEP, Steen TA, Park N, et al: Positive psychology progress: Empirical validation of interventions. *Am Psychol* 2005;60:410–21
11. Frederickson B, Cohn MA, Finkel SM, et al: Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *J Pers Soc Psychol* 2008; 95:1045–62
12. Wolever RQ, Dreusicke M, Fikkan J, et al: Integrative health coaching for patients with type 2 diabetes: A randomized clinical trial. *Diabetes Educ* 2010; 36:629
13. Whittemore R, Melkus GD, Sullivan A, et al: A nurse-coaching intervention for women with type 2 diabetes. *Diabetes Educ* 2004;30:795–804
14. Edelman D, Oddone EZ, Liebowitz RS, et al: A multidimensional integrative medicine intervention to improve cardiovascular risk. *J Gen Intern Med* 2006; 21:728–34
15. Vale MJ, Jelinek MV, Best JD, et al: Coaching Patients On Achieving Cardiovascular Health (COACH). *Arch Intern Med* 2003;163:2775–83
16. Vale MJ, Jelinek MV, Best JD, et al: Coaching patients with coronary artery disease to achieve the target cholesterol: A method to bridge the gap between evidence-based medicine and the 'real world'—randomized controlled trial. *J Clin Epidemiol* 2002; 55:245–52
17. Oliver JW, Kravitz RL, Kaplan SH, et al: Individualized patient education and coaching to improve pain control among cancer outpatients. *J Clin Oncol* 2001; 19:2206–12
18. Debar LL, Ritenbaugh C, Aickin M, et al: A health plan-based lifestyle intervention increases bone mineral density in adolescent girls. *Arch Pediatr Adolesc Med* 2006;160:1269–76
19. Fisher EB, Strunk RC, Highstein GR, et al: A randomized controlled evaluation of the effect of community health workers on hospitalization for asthma. *Arch Pediatr Adolesc Med* 2009;163:225–32
20. Holland SK, Greenberg J, Tidwell L, et al: Community-based health coaching, exercise, and health service utilization. *J Aging Health* 2005;17:697–716
21. Hillsdon M, Thorogood M, White I, et al: Advising people to take more exercise is ineffective: A randomized controlled trial of physical activity promotion in primary care. *Int J Epidemiol* 2002;31: 808–15
22. Frederickson B: *Positivity*. New York, NY: Crown Publishers; 2009
23. Butterworth SW: Influencing patient adherence to treatment guidelines. *J Manage Care Pharm* 2008;14: S21–5
24. Koenigsberg MR, Barlett D, Cramer JS: Facilitating treatment adherence with lifestyle changes in diabetes. *Am Fam Physician* 2004;69:309–16, 319–20, 323–4

25. Pollak K, Alexander S, Coffman C, et al: Physician communication techniques and weight loss in adults. *Am J Prevent Med* 2010;39:321–8

26. Egener B: Addressing physicians' impaired communication skills. *J Gen Intern Med* 2008;23:1890–5

27. Fahey KF, Rao SM, Douglas MK, et al: Nurse coaching to explore and modify patient attitudinal barriers interfering with effective cancer pain management. *Oncol Nurs Forum* 2008;35:233–40

28. Hayes E, Kalmakis KA: From the sidelines: Coaching as a nurse practitioner strategy for improving health outcomes. *J Am Acad Nurs Pract* 2007;19:555–62

29. Hayes E, McCahon C, Panahi MR, et al: Alliance not compliance: Coaching strategies to improve type 2 diabetes outcomes. *J Am Acad Nurs Pract* 2008;20: 155–62

30. Wagner PJ, Jester DM, Moseley GC: Medical students as health coaches. *Acad Med* 2002;77:1164–5

31. Weinstein SM: Maintaining health, wellness, and fitness: A new niche for physiatry? *PM R* 2009;1:793–4