Promoting Health and Wellness: Implications for Physical Therapist Practice

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The leading cause of morbidity and mortality in the United States is chronic, or noncommunicable, diseases. The impact of chronic diseases on health and wellness can be significantly altered by individual health and behavior choices or modifications. Furthermore, the burden of chronic disease goes beyond health and the health care system and may influence an individual's wellness. The purposes of this article are: (1) to provide a basis for understanding the terms "health" and "wellness," (2) to identify the knowledge and skills physical therapists need to address behaviors that promote health and wellness and treat and protect against chronic disease, and (3) to discuss barriers and opportunities associated with integrating the promotion of health and wellness into physical therapist practice.

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Noncommunicable diseases (NCDs), also called lifestyle or chronic diseases, are the major cause of morbidity and mortality in the United States and in most countries around the world.[1,2] Noncommunicable diseases, such as heart disease and stroke, cancer, diabetes, and lung disease, negatively affect millions of people worldwide and cost billions of dollars annually in treatment and loss of productivity.[1,2] Because these diseases are strongly associated with risk factors or behaviors, such as physical inactivity, unhealthy diet, and tobacco use, they are largely preventable.[1–3] Yet, the medical system in the United States continues to be oriented toward treating illness and disease, rather than prevention or wellness, and the incidence and prevalence of lifestyle diseases continue to grow. As a result, the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) have labeled lifestyle diseases both epidemic and pandemic and have identified the need for the development of new solutions to address this growing problem.[1–3] A call to action has been issued for all health care providers to address these health concerns with their patients and clients in order to better manage health and health care costs.[4]

Physical therapists are in an ideal position to promote health and wellness in their patients and clients.[5] Physical therapists can reduce risk factors and prevent and treat NCDs by providing patient and client education; prescribing physical activity and exercise; and performing noninvasive, hands-on interventions consistent with a biopsychosocial paradigm.[6,7] However, patients and clients often fail to recognize the role of the physical therapist in promoting health.[8] To encourage patients and clients to view physical therapists as promoters of health, we should take a more active role in educating patients and clients about our role.[8]

This perspective article will address the following: (1) defining the terms *health* and *wellness* within the context of physical therapist practice; (2) the knowledge and skills that physical therapists require to encourage and support patients and clients to adopt 5 health-promoting behaviors; (3) the role of counseling, behavior change, and the environment in supporting health and wellness; and (4) barriers to and opportunities for incorporating health promotion and wellness into physical therapist practice.

Defining the Terms "Health" and "Wellness"

In an effort to thwart the growth in and burden of NCDs, a major focus has been placed on ameliorating modifiable risk factors. Programs that aim to support people to become regularly physically active, improve their nutritional intake, and stop smoking, among other interventions, are numerous and are commonly labeled "health programs," "wellness programs," or "health and wellness programs." The terms "health" and "wellness" are commonly used interchangeably, yet are not synonymous and thus require clarification.

Health

The WHO developed what has become the most commonly referenced definition of health: "a state of complete physical, mental and social well-being and not merely the absence of disease."[9] This definition, dating back to the 1940s, recognizes that health is more than physical health, and efforts to improve health thus should be comprehensive.

Wellness

Wellness is defined as "the sense that one is living in a manner that permits the experience of consistent, balanced growth in the physical, spiritual, emotional, intellectual, social, and psychological dimensions of human existence."[10,11(p169)] There is some agreement among authors that wellness is positive, or salutogenic (health-causing); multidimensional and interactive (ie, the dimensions of wellness influence each other); and subjective (based on perceptions).[10,12–17] There have been multiple proposals for the dimensions that encompass wellness, including physical, emotional, intellectual, psychological, spiritual, and social domains[10] (Tab. 1).

Agreement about which dimensions are included in wellness and how they are defined seems less important than the recognition that there are multiple dimensions and that these dimensions interact with one another in a dynamic fashion. The literature is replete with examples of the interactions of the dimensions of wellness, both positive and negative. For example, positive physical wellness (eg, increased physical fitness) can produce a positive impact on emotional wellness (eg, self-esteem), and poor social wellness (eg, social connectedness) can produce a negative impact on psychological wellness (eg, increase depression).[18–20]

Comparison of Health and Wellness

Although some authors do not distinguish between health and wellness,[12] others differentiate between the terms, advocating that health is a broader concept[10,13]; still others believe that wellness is more comprehensive.[14] From the definitions, we can safely conclude that both terms are multidimensional, and each influences the other. An individual can be healthy yet ill, such as a person who exercises compulsively, neglecting relationships, spiritual endeavors, and intellectual pursuits (Figure). The opposite also is

Table 1.
Definitions of the Dimensions of Wellness[10] and Questions in Each Dimension to Facilitate Identification of Resources

Dimension of Wellness	Definition	Questions to Consider With Patients and Clients
Emotional	The possession of a secure sense of self-identity and a positive sense of self-regard	Is the patient or client self-aware? Is the patient or client self-confident and secure? Does the patient or client use negative self-talk?
Intellectual	The perception that one is internally energized by the appropriate amount of intellectually stimulating activity	Is the patient or client interested in the pathology of his or her illness or disease? Does the patient or client ask questions and demonstrate curiosity about his or her health status? Does the patient or client engage in intellectually stimulating activities?
Physical	Positive perceptions and expectancies of physical health	Does the patient or client demonstrate interest in improving his or her physical health? How does the patient or client rate overall health (excellent, good, fair, poor)?
Psychological	A general perception that one will experience positive outcomes to the events and circumstances of life	Is the patient or client optimistic or pessimistic? Does the patient or client have negative thoughts or feelings about the ability to recover or reach a level of better health?
Social	The perception that family or friends are available in times of need, and the perception that one is a valued support provider	Does the patient or client have family and friends to provide support? Does the patient or client provide support to others?
Spiritual	A positive sense of meaning and purpose in life	Does the patient or client have goals and ambitions beyond himself or herself? Does the patient or client demonstrate a belief in something beyond himself or herself? Is the patient or client involved in a church or religion?

possible. A person can be well yet diseased, like many of the patients and clients who physical therapists treat for chronic disease and disability who live productive, fulfilled lives. The important take-home message for physical therapists and other health care providers is that both health and wellness encompass more than physical health, and efforts that focus primarily on physical health (eg, physical activity, weight management, nutrition), although important, fail to recognize the influence of the other dimensions to overall well-being.

Recognizing the influence of emotions, social support, spirituality, and other factors on the patients and clients who we treat can assist in our efforts to create more individualized and appropriate treatment plans to improve overall health and wellness. In other words, understanding what motivates the patient or client, what strengths he or she has in the dimensions of wellness, and what is important to him or her provides the physical therapist with valuable additional information to inform a treatment program. For patients and clients who are asymptomatic, understanding and recognition of wellness is critical. Patients and clients who are asymptomatic are typically not motivated to engage in healthy behaviors to improve their health; however, they can be motivated to improve their wellness. Understanding and assessment of a patient's or client's wellness enables the physical therapist to guide the patient or client to make connections between healthy behaviors and values or perceptions (eg, wellness) that he or she holds, which can be a strong motivator for adopting healthy behaviors.[21] Guiding a patient or client through a conversation emphasizing that physical activity and other healthy behaviors are a means to an end, rather than an end or outcome, promotes the development of intrinsic motivation that has been shown to be associated with habitual engagement in healthy behaviors.[21]

Information about a patient's or client's wellness can be gathered through his or her history and casual conversations with the patient or client, or it can be collected by using specific wellness questionnaires (eg, Perceived Wellness Survey).[10] Table 1 provides questions to facilitate the collection of information from patients and clients about the dimensions of wellness that can be used to develop more personalized and effective treatment plans. Recognizing that engagement in healthy behaviors can improve health *and* wellness enables the physical therapist to more effectively promote the

Figure.
Health-disease/wellness-illness continuum. Relationships between health, disease, wellness, and illness illustrating that an individual can be diseased and well at the same time, like an individual can be healthy and ill simultaneously.

adoption of these behaviors in their patients and clients.

Health Promotion by Physical Therapists

The American Physical Therapy Association (APTA) has recently undertaken an effort to identify and create resources to support physical therapists and physical therapist assistants to incorporate approaches that promote health and enhance wellness into physical therapist practice. *Health promotion* refers to "the process of enabling people to increase control over, and to improve, their health. The concept of health promotion moves beyond a focus on individual behavior, toward a wide range of social and environmental interventions."[22] The American Physical Therapy Association asserts that physical therapists need to be competent in their ability to identify and instruct patients and clients in the basic principles of health promotion, including personal hygiene, skin care, dental hygiene, sanitation, tobacco avoidance or cessation, immunizations, avoidance of infectious and contagious diseases, diet, rest, exercise, and weight control (Lisa Ruane, CAE; email communication; February 2, 2014). In order to educate patients and clients about these topics, physical therapists need knowledge in the epidemiology of injury and disease, risk factors, and factors influencing safety and injury prevention (Lisa Ruane; email communication; February 2, 2014). Recently published articles support these recommendations and identify physical therapy as the "quintessential established noninvasive health profession"[4(p537)] and thus conclude that physical therapists are well positioned to encourage their patients and clients to stop smoking, adopt positive nutrition habits, manage weight, engage in regular physical activity, obtain adequate sleep quantity and quality, and reduce stress.[4,6,7,14,23–25]

Health and Wellness Knowledge and Skills

Amassing knowledge and skills about health promoting behaviors is imperative for physical therapists to incorporate health and wellness into their practices. Five important physical behaviors—physical activity, nutrition and weight management, smoking cessation, sleep, and stress management—will be reviewed, with a general discussion of the behavior, the current state of physical therapist knowledge and skills regarding the behavior, and approaches to promoting the behavior with patients and clients. (Tab. 2)

Physical Activity

The most studied area of health promotion in which physical therapists should have knowledge and skills is physical activity promotion.[26–31] This focus on physical activity stems from the recognition of the expertise of physical therapists in physical activity and exercise prescription.[6,26–31] Supported by unequivocal evidence that physical activity positively affects a wide variety of diseases that erode health and that physical activity improves wellness,[29] physical activity appears to be the most important and effective intervention physical therapists can incorporate into every patient or client plan of care to promote health and wellness. Furthermore, physical therapists engage in physical activity at a higher rate than the general public, making them ideal messengers and role models for their patients and clients.[24,30]

Current state of physical therapist knowledge and skills. Research has revealed that it is not routine for physical therapists to address the physical activity habits of their patients and clients.[25,29,31] Recent evidence indicates that entry-level physical therapist education programs provide more hours of instruction in exercise prescription than any other health promotion topic,[23] yet evidence also suggests that additional standards and content are needed regarding physical activity promotion.[23,28] Specifically, physical therapists need more instruction in how to prescribe physical activity for lifestyle-related conditions in the context of health promotion.[28] Physical therapists and physical therapist students believe it is their role to encourage patients and clients to adopt a regular physical activity habit, and a brief counseling session integrated into the intervention session is thought to be a feasible way to promote physical activity.[26] However, additional research is needed regarding the outcomes associated with physical therapists counseling patients and clients to engage in physical activity.

Physical Activity–Promoting Approaches

An evidence-based overall approach to improving the physical activity levels of patients and clients requires that physical therapists possess the knowledge and skills outlined in Table 2 and engage in the following steps:

1. Educate patients and clients about the health benefits of physical activity.
2. Make patients and clients aware of the current recommended minimum guidelines for physical activity.[32]
3. Explore perceived barriers to physical activity.
4. Promote self-efficacy for exercise.
5. Encourage goal setting and monitoring outcomes.

Table 2.
Health and Wellness Knowledge and Skills for Physical Therapists[a]

For all behaviors: normal and abnormal pathophysiology, epidemiology of injury and disease, risk factors, protective health behaviors, theories of health behavior change, ecological approaches to behavior change, counseling skills, local and community resources, history taking, rapport building, ability to assess readiness to change		
Behavior	**Knowledge**	**Skill**
Physical activity	Age- and disease-specific exercise prescription for lifestyle-related conditions Physical activity guidelines[32]	Ability to ask the question "Are you physically active?" and provide guidance when the answer is "no" Personal experience with physical activity; role modeling Screening for physical activity Exercise prescription Counseling skills, including skill in motivational interviewing Time management (ie, fitting regular physical activity into daily lifestyle)
Nutrition and weight management	Population-based nutrition trends and data[36] Overweight and obesity guidelines (eg, BMI) Basic nutritional information and resources (eg, ChooseMyPlate.gov)	Ability to ask questions like "Do you eat 5 servings of fruits and vegetables per day?" and "Do you drink at least 6–8, 8-oz glasses of water per day?" and provide guidance when the answer is "no" Role modeling healthy eating habits Screening for malnutrition, under nutrition, and obesity[36] Assessment of BMI Counseling skills, including skill in motivational interviewing Ability to recognize need to refer to a nutrition specialist
Smoking cessation	Smoking information and resources "5 A's"[40] "5 R's"[40]	Ability to ask the question "Do you smoke cigarettes?" and provide guidance when the answer is "yes" Role modeling not smoking Screening for tobacco use and desire to quit Counseling skills, including skill in motivational interviewing Interprofessional collaboration Physical activity prescription to promote and support smoking cessation
Sleep	Etiology, pathophysiology, diagnosis, treatment, prevention, and public health burden of sleep loss and disorders[47] Recommended sleep habits and conditions conducive to sleep	Ability to ask the questions "Do you get 7–8 hours of sleep each night?" "Are you tired in the morning?" "Do you fall asleep quickly?" "Are you sleepy during the day?" "Do you wake up at night?" and provide guidance if the answers indicate poor sleep hygiene Role modeling healthy sleep habits Screening for sleep disorders Ability to provide instructions about optimal sleep habits[65] Ability to recognize need to refer to another provider Physical activity prescription to enhance sleep
Stress management	Difference between positive and negative stress Theory supporting relaxation techniques Role of physical activity in managing stress Resilience theory[55]	Ability to ask the question "Do you feel stressed?" and provide guidance when the answer is "yes" Role modeling stress management Screening for stress Ability to instruct in relaxation techniques (eg, deep breathing, PMR, visualization, meditation, autogenic training, biofeedback, massage) Physical activity prescription to manage stress, including t'ai chi and yoga Time management techniques Ability to recognize need to refer to another provider

[a] BMI=body mass index, PMR=progressive muscular relaxation.

6. Include strategies for helping patients and clients to prevent relapse.

7. Build social support.[33]

As most adults with disabilities can participate in physical activity, this approach also should be used for patients and clients with disabilities. Nearly half of the 21 million US adults with disabilities are sedentary and susceptible to chronic diseases that develop as a result of inactivity.[34]

In addition to assisting patients and clients to be more physically active, physical therapists can and should encourage patients and clients to be *less sedentary*—in particular, to reduce the time they spend sitting. Emerging evidence has connected prolonged sitting with poor health outcomes, including increased risk for diabetes, obesity, weight gain, cardiovascular disease, and cancer.[35] The strategy message "Stand Up, Sit Less, Move More, More Often"[35] can be imparted to patients and clients in a way that is efficient and consistent with the profession's expertise in movement and movement-related disorders.

Nutrition and Weight Management

Physical therapists should be competent and confident to provide basic

nutritional advice and related information to patients and clients, given the substantial prevalence of obesity in the United States.[36,37] Given that a greater percentage of physical therapists maintain a healthy weight and consume more than 5 servings of fruits and vegetables per day compared with the general population, it could be argued that physical therapists appear to be more cognizant of and value healthy nutrition and weight control and actively role model lifestyles consistent with achieving health nutrition and body weight standards.[24] This approach adds credibility to any nutrition and weight management messages that physical therapists impart to their patients.[24]

Current state of physical therapist knowledge and skills. Evidence exists identifying that theoretical information about basic nutritional counseling is included in 80% of entry-level physical therapist programs and that practical information is included in 30% of programs.[23] However, researchers have shown that physical therapists do not assist patients and clients with nutrition and weight issues very often.[25] Physical therapists have been found to be underrecognized and underused in school settings to address obesity prevention in children, despite the fact that they are most likely the most knowledgeable and appropriate professional in the school to educate teachers, parents, and preschoolers about obesity prevention.[38]

Nutrition-Promoting Approaches

Specific nutrition counseling for medical conditions such as diabetes and obesity is outside the scope of practice of the physical therapist. However, physical therapists can fulfill an important role in screening for and identifying health problems that may be related to nutritional deficits and thus should have the requisite knowledge and skills to do so.[36] Competencies physical therapists should have in this area are outlined in Table 2. The assessment of body mass index (BMI) as a primary measure of obesity is a quality measure for the Centers for Medicare and Medicaid Services (CMS) Physician Quality Reporting System (PQRS). Physical therapists can receive a bonus payment from CMS for measuring and reporting BMI.[39] Clearly, the ability of physical therapists to attend to their patients' and clients' nutrition and weight management status will enhance interventions for traditional physical therapy–related diagnoses as well as health and wellness.

Smoking Cessation

The single greatest cause of morbidity and premature mortality in the United States is tobacco use or smoking.[40] When compared with interventions for other health behaviors, behavior change interventions that address smoking in primary care settings have been shown to be very effective, and several treatments exist to reverse tobacco dependence.[41] Thus, guidelines suggest that clinicians and health care systems consistently and intentionally identify tobacco use and encourage patients and clients to quit.[41,42] Recommendations have been made to include tobacco cessation competencies in the education of physical therapists because:

1. Physical therapists have regular contact with patients and clients during a typical course of physical therapy.
2. Tobacco use affects multiple body systems and thus can negatively influence healing time and response to physical therapist interventions.
3. Physical therapists use noninvasive measures (education, counseling) that have been shown to be effective approaches to smoking cessation.
4. The prevalence of smoking in patients and clients with disabilities has been shown to be twice as high as in those without a disability.[6,42–45]

Indeed, physical therapists recognize the perils of tobacco use. A recent study identified that 98% of physical therapist and physical therapist student respondents reported they did not smoke (compared with 84% of the adult US population).[24] Respondents felt strongly that it was important to model smoking abstinence.[24]

Current state of physical therapist knowledge and skills. Efforts to promote health by addressing smoking cessation are practiced infrequently by physical therapists.[25] Physical therapists have reported that they do not feel prepared to provide smoking cessation counseling, although they agree that they should ask patients and clients about smoking habits and provide advice to stop smoking.[44] Additional training in smoking cessation is warranted, which will increase the self-efficacy of physical therapists to provide this intervention. The knowledge and skills physical therapists require to address smoking behaviors in patients and clients are included in Table 2.

Smoking Cessation Approaches

The US Department of Health and Human Services has created clinical guidelines to assist individual clinicians and teams of clinicians to deliver smoking cessation intervention.[40] Organized as the "5 A's," the steps are: asking about tobacco use ("ask"), providing advice to quit ("advise"), assessing the patient's or client's willingness to quit ("assess"), assisting the patient or client to quit

through referral or counseling ("assist"), and arranging for follow-up ("arrange").[40,44] For patients and clients who indicate they are not ready to quit, the guidelines suggest counseling interventions based on the "5 R's":

1. exploring the ways in which quitting can be personally relevant to the patient or client ("relevance"),

2. asking the patient or client to identify potential negative consequences or risks of tobacco use ("risks"),

3. asking the patient or client to identify potential benefits or rewards of smoking cessation ("rewards"),

4. asking the patient or client to identify barriers or roadblocks to quitting and ways to overcome the barriers ("roadblocks"), and

5. using repetition at every patient or client visit by engaging the patient or client in additional conversation about quitting ("repetition").[40]

Physical therapists possess an advantage in using the "5 R's" approach because the practice pattern of physical therapy commonly involves repetition in terms of patient or client visits over an episode of care. Thus, the physical therapist has the opportunity to build a relationship based on trust with the patient or client and to repeat and reinforce the smoking cessation message.[42] Given that approximately 1 out of 5 patients and clients seeking outpatient physical therapy likely smoke,[46] and that smoking is the leading cause of preventable death in the United States,[40] physical therapists have a valuable role to play to assess and address smoking behavior in their patients and clients.

Sleep

Sleep deprivation is a growing and underrecognized public health issue. In addition to their association with a number of serious health problems, including obesity, heart attack, stroke, and diabetes, sleep disorders negatively affect wellness and longevity and thus overall daily functioning.[47] As an estimated 50 to 70 million Americans experience a chronic sleep disorder, it is probable that patients and clients receiving physical therapy are among those affected; therefore, it is important for physical therapists to be knowledgeable about and able to support optimal sleeping habits.[4,6,47,48] Developing evidence also supports the importance of adequate sleep in improving functional motor learning and chronic pain.[49,50]

Current state of physical therapist knowledge and skills. The Institute of Medicine has suggested that health science education program curricula and postgraduate training include information about sleep loss and sleep disorders, including the etiology, pathophysiology, diagnosis, treatment, prevention, and public health burden of sleep loss and sleep disorders.[47] There is a paucity of evidence in the literature to indicate the frequency with which physical therapists are currently evaluating the sleep habits of patients and clients and providing counseling to improve sleep and is thus a topic for future research. Table 2 includes the knowledge and skills necessary for physical therapists to address sleep hygiene.

Sleep Interventions

Most adults require 7 to 8 hours of sleep each night.[51] As sleep is a behavior, cognitive-behavioral interventions have proven to be effective, including following instructions such as:

- do not go to bed until you are sleepy;
- use the bedroom or room where you sleep only for sleeping (do not watch TV, read, eat, etc);
- get out of bed if you are unable to sleep after 15 minutes and do something relaxing while avoiding stimulating activities;
- get out of bed at the same time every day; and
- do not take naps late in the day (after 3:00 pm).[47,51]

Additional suggestions to enhance sleep include participating in regular daytime physical activity; ensuring the patient's or client's bed and bedroom are comfortable, dark and quiet; reducing evening caffeine, nicotine, and alcohol intake; reducing fluid intake in the evening; and eating regular meals to avoid going to bed hungry.[47,51] By addressing sleep quality and quantity with patients and clients, physical therapists have the capacity to enhance physical therapy treatment outcomes and improve overall health and wellness.

Stress Management

Stress is defined as "the nonspecific response of the body to any demand"[52(p15)] and can occur in response to positive or negative circumstances.[52] *Stress management* refers to the techniques aimed at addressing *distress*, or situations viewed negatively, that can lead to chronic stress-related illnesses and poor coping skills. Positive stress, or *eustress,* is stress that is typically motivating, short-term, and within our coping abilities.

Negative stress (distress), or *chronic stress*, is stress that has a negative impact on health and wellness. Both wellness and stress are perceptions, and stress can be perceived in any of the dimensions of wellness (eg, emotional, psychological, physical). Interventions to manage stress are varied and broad and can include

physically, emotionally, psychologically, socially, spiritually, and intellectually focused activities, depending on the etiology of the stress and the ways in which the stressor is affecting the individual.

Current state of physical therapist knowledge and skills. Interventions to reduce stress have historically been included in entry-level physical therapist curricula due to the known relationship between illness or injury and stress.[53] Recent studies have identified that stress management topics are included in entry-level physical therapist curricula, with increasing health and wellness as the primary focus,[23] and stress management has been suggested as an important competency for physical therapists to apply in daily practice to promote health.[6]

Stress Management Interventions

Many of the interventions that enhance health and wellness discussed in this article, such as physical activity, sleep hygiene, positive nutrition, can be used to manage stress. These approaches primarily affect the physical dimension of wellness. In addition, approaches that can be categorized in the nonphysical dimensions of wellness, such as time management, a positive attitude, resilience, thriving, hardiness, and optimism, can be used to manage stress.[14,54,55]

A helpful framework to address stress includes:

1. identifying the stressor;
2. relieving the stress by incorporating a relaxation or coping strategy;
3. seeking solutions to avoid, control, or manage the stress;
4. improving overall fitness and health; and
5. thinking differently to respond differently to the stressor.[14]

Relaxation techniques are commonly included in entry-level physical therapist education and continuing education offerings and are shown in Table 2. As eustress can enhance healing and lead to greater wellness, whereas distress can detract from healing and wellness, physical therapists should be competent in recognizing and managing both types of stress to enable patients and clients to achieve optimal health and well-being.[53]

Counseling and Behavior Change

Determining what to say and do when we realize there is an opportunity to help a patient or client adopt a healthy behavior is a daunting task. In addition to the knowledge, skills, and interventions discussed to promote the 5 behaviors, physical therapists should be competent in counseling and behavior change approaches. C*ounseling* has been defined as "patient consultation aimed at health behavior change."[56(p571)] Effective counseling requires knowledge of strategies to encourage behavior change, including theories of behavior change and motivational inteviewing.[6,33,57,58] Findings show that physical therapists and physical therapist students believe that a brief counseling session integrated within a clinical visit is the most feasible way to promote behavior change, at least with respect to physical activity.[27] Researchers also have shown that physical therapists can effectively counsel patients and clients in the short term (less than 2 years), but more research is needed to assess which behavior change strategies are most effective.[56]

Although patients and clients being treated by a physical therapist for a specific diagnosis (eg, shoulder tendinitis, lumbar strain) and who may benefit from being more physically active are typically motivated to become more active because of their current functional limitations that are interfering with gainful participation in life, not all patients and clients who could benefit from regular physical activity will be ready to engage.[58] Furthermore, health habits, such as regular physical activity, are complex behaviors influenced by personal, environmental, and cultural factors. Cognitive-behavioral theories have been developed and applied to guide the science of behavior change, providing understanding of the knowledge, attitudes, beliefs, intentions, and behaviors that underlie the adoption and maintenance of health behaviors.[59] Theories of behavior change—such as social cognitive theory, a widely used theory whose central tenet is self-efficacy—have been applied in the physical therapy literature and have been found to have utility.[25,27,60] A literature review of the contribution of health behavior change theories to rehabilitation identified that more knowledge of health behavior change by rehabilitation professionals could benefit the treatment of patients with disabilities and the promotion of health and well-being.[60] However, knowledge and competency in applying behavior change theories to practice are lacking in physical therapy, and authors have suggested that the science of behavior change be included in both entry-level and continuing education physical therapy courses.[6,23,24,28,29,61,62]

Motivational interviewing is an intervention that has been shown to be useful to develop motivation to change a health behavior. As a client-centered counseling style, motivational interviewing can be learned by

physical therapists and applied to encourage patients and clients to change behaviors, specifically those who appear ambivalent about changing a behavior,[58,63] yet motivational interviewing is underutilized.[62] Applying health behavior change theories and using motivational interviewing will enable physical therapists to effectively counsel and support the patient or client to adopt healthy behaviors. At the same time, physical therapists can ask a simple question of every patient and client they encounter: "Are you engaging in health promoting activities?" If the answer to this question is "no," physical therapists must be able to provide guidance to patients and clients. Details about health behavior change theories and motivational interviewing are beyond the scope of this perspective article and are available elsewhere.[21,58–61,63,64]

Role of the Environment in Supporting Health and Wellness

In addition to knowledge about behavior change and counseling skills, physical therapists must recognize the contribution of the environment to the promotion of health and wellness. The term "ecological model" is used to describe the interaction between individuals and their physical and sociocultural environments.[65] The principles of an ecological approach to behavior change include the recognition that there are multiple influences on specific health behaviors (intrapersonal, interpersonal, organizational, community, public policy) and that multilevel interventions are most effective in changing behavior.[65] The implications of the ecological model for the physical therapist are that interventions at the individual level, although necessary, may be inadequate and that we need to look for and create resources at the other levels of the model to support our individual approaches.[66] For example, a patient or client who desires to become more physically active may not have access to a safe place to walk or run regularly. In addition to prescribing an evidence-based walking or running program, it is also the responsibility of the physical therapist to identify community or organizational resources where the patient or client can be physically active. If these resources do not already exist, the physical therapist should consider engaging in efforts to create them. Dean[7] has suggested that physical therapists seek opportunities to be involved with city planners to provide input on the design of public spaces that support physical activity for all people, regardless of ability. Involvement in policy development and health planning at the local and federal levels is one of the many ways physical therapists can influence the environment to support health.

Summary

The basic knowledge and skills physical therapists need to promote health and wellness in the patients and clients they serve is a topic included in entry-level curricula; however, the information provided is primarily theoretical.[23] Increased attention to application of theory and the development of clinical competency in skills such as counseling, health behavior change, and motivational interviewing across a range of health behaviors (eg, physical activity, nutrition and weight management, smoking cessation, sleep hygiene, stress management) will enhance the ability of physical therapists to incorporate interventions to increase health and wellness into the physical therapy plan of care.[23,64]

Barriers and Opportunities for Incorporating Health Promotion and Wellness Into Physical Therapist Practice

Physical therapists are well positioned to enhance health and promote wellness.[5,6,24,26,31,36,44,56,67,68] Barriers limiting the integration and delivery of health promotion and wellness interventions in physical therapist practice must be identified and reduced in order to increase the number of physical therapists providing these services and the frequency with which these services are provided[26,38,43,67] (Tab. 3).

Barriers

Barriers to incorporating health promotion and wellness into physical therapist practice are well known in the literature. The most commonly identified and cited barriers include time[16,26,43,44]; lack of interest or awareness of the patient or client, the public, and other health care providers that physical therapists provide these services[8,16,29,31,38,69]; lack of education or knowledge[16,24,67,69]; lack of reimbursement[16,26,44]; and lack of resources.[16,43,44] Additional barriers include limited counseling skills,[26] lack of self-efficacy,[25] the focus on secondary and tertiary prevention by physical therapists,[31] and the perception that the physical therapy work environment is not suitable for health promotion.[16] Examining how best to enhance the delivery of health promotion and wellness services in the context of daily physical therapist practice, Dean et al identified the theme of "lack of profile and visibility of the profession and capacity to practice based on evidence."[6(p266)] Subthemes generated by Dean et al included the lack of involvement of physical therapists in research, policy, and action related to health promotion and wellness; payment systems based on

Table 3.
Approaches for Incorporating Health Promotion and Wellness Into Physical Therapist Practice[a]

Individual	Organizations (APTA, Chapters, Sections)	Professional Physical Therapist Education Programs
Shift from a biomedical paradigm to a biopsychosocial paradigm	Seek opportunities for members to engage in national and local discussions about NCDs	Include content on the definitions of health, wellness, and health promotion
Build awareness of current public health priorities and causes of morbidity and mortality	Engage in education of other health care providers about the role of physical therapists in primary prevention	Include content on health behavior change theories
Discuss healthy behaviors with patients and clients and provide information and education about health-causing behaviors	Create resources to educate physical therapists and facilitate the integration of health promotion and wellness into physical therapist practice	Include content on counseling skills, including motivational interviewing
Gain knowledge and skills in health behavior change and counseling	Educate the public about the role of the physical therapist in health promotion and wellness	Include content on ecological approaches to health promotion and wellness
Partner with other providers to coordinate support for and reinforce health-causing behaviors	Advocate for changes to state and federal laws and regulations to support the provision of and payment for primary care services by physical therapists	Integrate health and wellness content into and across curriculum
Engage in private and public community health promotion efforts	Support physical therapists to participate in local and federal government initiatives/roles that promote health	Provide primary care and community-based clinical education experiences beyond service learning

[a] APTA=American Physical Therapy Association, NCDs=noncommunicable diseases.

illness rather than wellness; lack of recognition of physical therapists as primary care practitioners; and lack of emphasis of health promotion in entry-level education programs.[6] Few, if any, of these barriers are outside the realm of influence of the individual physical therapist or APTA.

Opportunities

Physical therapists have the opportunity to shift the way they view themselves relative to health promotion and wellness.[70] A primary focus on the disease or injury with which a patient or client presents (a biomedical approach) limits the ability of the physical therapist to think and act holistically and within a larger context outside the patient/client model (a biopsychosocial or ecological approach). Health behavior change is a complex phenomenon, and the adoption of healthy behaviors requires an ecological approach in which environmental factors are often more important than the characteristics, motivations, and attitudes of the individual.[56,66] Accomplishing this paradigm shift starts with awareness of the current public health priorities and causes of morbidity and mortality and the role of interventions within the realm of the physical therapist to address the causes of poor health. Physical therapists must accept, embrace, and act on their role in primary prevention to first assess and then discuss healthy behaviors with patients and clients and provide education about the connection between behaviors such as physical activity and smoking and health. Physical therapists should seek opportunities to fill gaps in their knowledge and skills related to promoting health and wellness by engaging in continuing professional education to build competency in health behavior change. Furthermore, physical therapists should partner with other health care practitioners to ensure that health promoting interventions are coordinated and reinforced across all health care encounters so that the patient or client feels supported and care is coordinated rather than disjointed and contradictory.

At the same time, APTA, its state chapters, and its sections can engage in efforts to support their members to build health promotion and wellness competencies and to create new opportunities for practice, including, but not limited to, the suggestions in Table 3. Currently, in states that allow direct access to physical therapist services, 20 state physical therapist practice acts include language specifically related to wellness, fitness, and health promotion.[71] Another state that does not have direct access provisions has wellness, fitness and health promotion language included in its practice act.[71] The perceived payment barrier may be more fiction than fact; physical therapists typically bill and are paid for education and physical activity, which encompass the vast majority of the interventions indicated to promote health and wellness. Even so, professional organizations at all levels can advocate for changes to state and federal laws and regulations to support the provision of and payment for primary care services by physical therapists. Finally, entry-level physical therapist education programs must enhance the time and resources they devote to developing competencies in health promotion and wellness interventions and ensure physical therapist graduates

understand their role in reducing the burden of NCDs.[23,28,29] Table 3 summarizes the opportunities to increase the frequency with which physical therapists integrate health promotion and wellness into physical therapist practice across multiple loci of control.

Conclusions

The biggest burden on our health care system and on the lives and abilities of Americans is related to a handful of chronic diseases that are largely the result of modifiable behaviors. Physical therapists encounter patients and clients daily in their practices who have unhealthy behaviors such as lack of physical activity, smoking, poor nutrition, inadequate sleep, and stress. Like all health care providers, physical therapists are being challenged to address the health and wellness status of our patients and clients, especially in situations in which these behaviors may not be directly related to the diagnosis for which the patient or client is being seen. An amazing opportunity awaits individual physical therapists, their professional organizations, and physical therapist professional education programs to answer the call to prevent behaviors leading to death, disability, and rising health care costs. There is a desperate need to create a shift from a medical system based on illness to one based on health and wellness. Embracing the role of the physical therapist in promoting health and wellness will respond to this need, make a lasting contribution to society, and ensure the viability of the physical therapy profession far into the future.

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