Given their enormous socioeconomic burdens, lifestyle-related noncommunicable diseases (heart disease, cancer, chronic lung disease, hypertension, stroke, type 2 diabetes mellitus, and obesity) have become priorities for the World Health Organization and health service delivery systems. Health care systems have been criticized for relative inattention to the gap between knowledge and practice, as it relates to preventing and managing noncommunicable diseases. Physical therapy is a profession that can contribute effectively to patients'/clients' lifestyle behavior changes at the upstream end of prevention and management. Efforts by entry-to-practice physical therapist education programs to align curricula with epidemiological trends toward best health care practices are varied. One explanation may be the lack of a frame of reference for reducing the knowledge translation gap. The purpose of this article is to provide a current perspective on epidemiological indicators and societal priorities to inform physical therapy curriculum content. Such content needs to include health examination/evaluation tools and health behavior change interventions that are consistent with contemporary values, directions, and practices of physical therapy. These considerations provide a frame of reference for curriculum change. Based on 5 years of experience and dialogue among curriculum stakeholders, an example of how epidemiologically informed and evidence-based best health care practices may be systematically integrated into physical therapy curricula to maximize patient/client health and conventional physical therapy outcomes is provided. This novel approach can serve as an example to other entry-to-practice physical therapist education programs of how to align their curricula with societal health priorities, specifically, noncommunicable diseases. The intentions are to stimulate dialogue about effectively integrating health-based competencies into entry-level education and advancing best practice, as opposed to simply evidence-based practice, across professions and health services and to establish accreditable, health promotion practice standards for physical therapy.
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The ultimate knowledge translation gap in health service delivery has been described as a gap that exists between what health professionals know unequivocally about the relationship between people’s lifestyles and noncommunicable diseases (NCDs) and their implementation of this knowledge, specifically, enabling patients/clients to change their lifestyle-related health behaviors. Noncommunicable diseases supplanted communicable diseases in the latter half of the 20th century as the leading causes of premature mortality globally. They include conditions—such as ischemic heart disease, smoking-related chronic obstructive lung disease, hypertension, stroke, obesity, type 2 diabetes mellitus, and, to a somewhat lesser degree, cancer—that are largely related to lifestyle behavior choices. These NCDs have been described by a United Nations action group and the World Health Organization as being of epidemic proportions and largely preventable.

For addressing NCDs, much has been documented about lifestyle behavior changes to maximize health and reduce disease risk through initiatives such as smoking cessation and promotion of a healthful diet and physical activity. The uptake of this evidence by health professionals, including physical therapists and their educators, policy makers, and the public, has not been commensurate with the knowledge base. Despite the rhetoric and urgency about this topic, how health professional curricula should respond to changing needs and adapt accordingly has received less attention in the health professional entry-to-practice education literature than topics such as technology-enabled learning and education methodology.

Historically, physical therapy has focused on reducing signs and symptoms at the body function and structure level of the International Classification of Functioning, Disability and Health (ICF); the association of a reduction in signs and symptoms with health and health-related quality of life, as well as functional capacity, has largely been assumed. However, with healthful lifestyle practices, the risk of NCDs diminishes—and in proportions not typically reported in drug trials.

Health-related quality of life increases in a dose-dependent manner with healthful living practices even in people with cancer. The benefits of maximum health may not only improve the outcomes of conventional approaches to care but also decrease a person’s overall disease risk. By aligning contemporary physical therapist practice and education with societal needs, the profession may not only lead the way for other health professions but also help curb the burden of NCDs on society.

The role of physical therapy in health promotion practice has been the topic of a special issue and 3 physical therapy summits on global health. The physical therapy international community has concurred that physical therapy, as the leading established nonpharmacological health profession, is in a unique position to lead the way with respect to integrating evidence-based health promotion practices into standard practice. In addition, nonpharmacological approaches have been shown to be those of choice for preventing and reversing most chronic NCDs and for maximizing a person’s health over the life cycle. These compelling arguments support the role of physical therapy in addressing society’s health priorities by aligning entry-to-practice education with these needs and, hence, standards of practice.

The purpose of this article is to provide a current and novel perspective for physical therapy curricula in entry-to-practice education programs; this perspective involves bridging the knowledge translation gap and aligning curricula with societal needs. In this context, collaborating stakeholders are represented by administration, clinical field work, rural and northern Canadian practice, content streams (predominant areas of physical therapist practice), interprofessional practice and education, technology-enabled learning, and knowledge translation. Such a collaborative approach can serve as an example to other physical therapist education programs of how...
they can systematically align their curricula with epidemiological indicators, with the values of the physical therapy profession, and with evidence-informed health promotion practices. We provide examples, including a case scenario, showing how such content can be integrated into physical therapy curricula. We conclude with a discussion about the need for the pursuit of best practice across health professions versus a narrow focus on evidence-based practice within each health profession; how the profession of physical therapy is well positioned to lead in this endeavor; and the need for agreed-upon, accreditation health-focused competencies in physical therapy.

Frame of Reference for Physical Therapy Curriculum Change

The alignment of the prevalence of chronic lifestyle-related NCDs in society, the evidence supporting the first-line prevention and management of these NCDs through nonpharmacological lifestyle behavior changes, and physical therapy being the leading established nonpharmacological health profession has placed the profession on the forefront in terms of its responsibility to assume leadership in addressing these priorities in the health professions. Physical therapy has a practice pattern characterized by frequent, prolonged visits, often over days, weeks, or months. This pattern affords opportunities for multiple teachable moments, requisite for shifting a person’s readiness to change health behaviors, and for effective long-term lifestyle behavior changes through follow-up. Triangulation of these factors provides a frame of reference for physical therapy curriculum change that is consistent with voluntary global targets of the World Health Organization global action plan for the prevention and control of noncommunicable diseases (2013–2020):

- 25% reduction in mortality from cardiovascular disease, cancer, diabetes, and chronic respiratory disease
- At least a 10% reduction in harmful use of alcohol
- 10% reduction in the prevalence of insufficient physical activity
- 30% reduction in population intake of salt/sodium
- 30% reduction in the prevalence of tobacco use
- 25% reduction in the prevalence of increased blood pressure or its contained prevalence
- 50% reduction in the prevalence of diabetes and obesity
- At least 50% of eligible people receiving drug therapy and counseling to prevent heart attacks and strokes
- 80% availability of affordable basic technologies and essential medicines required to treat major NCDs

The typical structure of physical therapy curricula consists of horizontal and vertical streams that comprise a curriculum matrix. The horizontal streams consist of the various content areas (theory and practice) relevant across the life cycle and professional issues such as ethics. The vertical streams consist of a progression from basic to advanced concepts and increasing complexity of problem solving and critical thinking. Within this matrix, changes are being integrated into the curriculum at the Department of Physical Therapy, Faculty of Medicine, University of British Columbia, to raise the priority of NCDs in response to recent trends.

Although not necessarily caused by lifestyle factors, NCDs such as ischemic heart disease, cancer, high blood pressure, stroke, type 2 diabetes mellitus, chronic obstructive lung disease, liver disease, Alzheimer disease, arthritis, and kidney disease are strongly associated with lifestyle practices, chronic morbidity, and premature death. In addition to the role of healthful living in preventing disease, effective lifestyle behavior changes in patients/clients with chronic lifestyle-related NCDs or other chronic conditions hold the promise of unequivocal health benefits for those patients/clients, as well as potentially superior outcomes of conventional physical therapy and biomedical management. Depending on the needs of patients/clients, referral to one or more health professionals may also be indicated. The work of Blanchard et al provides compelling evidence to support the interprofessional practice of core health promotion competencies and consistent messaging, as opposed to vague and inconsistently administered simplistic advice, such as “stop smoking,” “lose weight,” or “exercise more.” These investigators reported that even when people received the proverbial “wake-up call,” such as a diagnosis of cancer, their adherence to healthful living recommendations was alarmingly poor.

Throughout our curriculum, we emphasize that physical therapists are established health professionals who specialize largely in nonpharmacological approaches to developing, maintaining, and restoring people’s movement and functional abilities to maximize health and the quality of the human experience, on the basis of established evidence-based guidelines. They specialize in therapeutic exercise and education interventions that can obviate or minimize the use of medications and surgery; such interventions represent established best practice for preventing, reversing, and managing lifestyle-related NCDs. In addition, contemporary definitions of physical therapy refer to the elements of the ICF and the values embedded within it, including health, holistic care, interprofessional collaboration and team work, and patient/client-centered care. Moreover, like other health professions, the profession of physical therapy has a responsibility to adapt to the changing needs of society, especially given that adults and even children often have one or more risk factors or manifestations of lifestyle-related NCDs.

Our program stresses to students the priority of attention to the health status of patients/clients from the outset. First, knowledge of health status and lifestyle behaviors enables the physical therapist to address deficits in health education and identify the need for referral to other professionals. This perspective is consistent with the ICF and the World Health Organization’s definition of health that underpins the ICF. Students are introduced to the ICF during orientation week for the program, and the ICF is emphasized horizontally and vertically.
behavior change theoretical principles that are amenable to integration into health care practice have been well documented in the health professional literature.\textsuperscript{22–23} With the use of such theoretical principles, physical therapists can implement a range of interventions, as illustrated in the case scenario described later in this article. Such principles are important for targeting health education to people with diverse backgrounds, needs, and health literacy. With multiculturalism and the importance of cultural sensitivity and awareness of vulnerable populations, strategies to effect lifestyle behavior changes must be adapted. To facilitate the uptake of health behavior change approaches and initiatives by health professionals, the World Health Professional Alliance has assembled a tool kit that provides easy-to-use strategies to effect lifestyle behavior changes within the constraints of busy practices.\textsuperscript{24}

The content must address examination/evaluation of the patient’s/client’s health and prescription of interventions/treatments consistent with those indicated by the examination/evaluation. In addition, the examination/evaluation should identify whether the physical therapist should refer a patient/client to other health professionals and whether the physical therapist should monitor a patient/client who has been referred to another health professional for health behavior change interventions. Specific competencies include health examination/evaluation, lifestyle behavior assessments, and lifestyle-related disease risk factor assessments. If health behavior changes are indicated, then fundamental theoretical knowledge of and approaches to lifestyle behavior changes consistent with the practice pattern of physical therapy are needed; targeted health behavior change interventions/treatments can include smoking cessation, basic dietary counseling, weight reduction counseling, physical activity counseling, and sleep hygiene and stress management counseling.

Although physical activity and structured exercise have long been physical therapy priorities, sedentary behavior, now considered the “new” smoking, warrants particular attention. Over the past decade, prolonged periods of sitting have been shown to be a health and a disease risk, independent of people’s activity and exercise levels.\textsuperscript{25–29} This issue is increasingly becoming a focus in pediatrics and is increasingly being emphasized for people who are aging because general inactivity and often poor health habits (including poor nutrition), which are risk factors for lifestyle-related NCDs, further compromise the quality of life of people living with one or more chronic conditions.\textsuperscript{30–32} Thus, reducing prolonged periods of sitting is a distinct therapeutic goal, independent of increased physical activity or structured exercise.

A common development across physical therapy curricula is the prevalence of integrated courses, including case-based and problem-based methodologies, that foster the integration of content with best practice and clinical reasoning in the context of a given patient/client. Case studies can be used to focus systematically on the health baseline of every patient/client. With this method, students can become familiar with identifying and addressing the influence of health status and lifestyle practices on the patient’s/client’s presentation and responses to interventions in the short term and the long term.

We propose that addressing lifestyle behaviors (smoking cessation, nutrition, healthy body composition, optimal sleep, and mental health, as well as physical activity/exercise recommendations) as conscientiously in patients/clients who are not athletes as in athletes who are not patients/clients will improve physical therapy and biomedical outcomes and improve the lifelong health of patients/clients. Improving biomedical outcomes with nonpharmacological interventions is an important, yet little considered, independent physical therapy goal and is an approach consistent with interprofessional practice.

Our program promotes health examination/evaluation for every patient/client, an approach that is consistent with recommended practice standards for physical therapist practice in Canada and the
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United States\textsuperscript{53,54} but that has been reported to be infrequently practiced.\textsuperscript{55,36} This scenario could reflect reimbursement structure, desire, or competency. However, health-based competencies (eg, smoking assessment, nutrition, body mass, inactivity and activity profiles, sleep quality and quantity, and stress) are not systematically and consistently taught across physical therapist education programs in a manner comparable to that of other competencies, such as musculoskeletal examination and intervention. Musculoskeletal competencies, such as evidence-based conventional management of low back pain,\textsuperscript{57} have been well described and standardized; for example, standards are reflected in accreditation and clinical practice guidelines and in position articles.

The proportion of health promotion content in physical therapy curricula has not been extensively studied. A recent international study of the curricula of several physical therapist education programs revealed that the proportion of content consistent with primary and secondary disease prevention was generally low and that there was marked variability in the inclusion of health examination/evaluation and lifestyle-related health behavior change competencies across programs.\textsuperscript{58} The need to establish accreditable, evidence-informed practice standards for health promotion competencies in physical therapy and the means of integrating these competencies into physical therapy curricula have been the focus of 3 world physical therapy summits on global health.\textsuperscript{8,9,59}

Given the increasing complexity of contemporary physical therapy curricula and the need for these curricula to be dynamic and responsive to multiple factors, we considered several factors to help ensure that our curriculum reflects changes in societal needs and consistency with our professional mandate. To this end, stakeholders include the department head, the associate department heads for the curriculum and for clinical field work, content stream coordinators (clinicians who are also educators) for the major service delivery areas in the profession, the health stream coordinator (to ensure that the construct of health as a distinct focus is reflected horizontally and vertically throughout the curriculum matrix), the coordinator for rural and northern cohorts and distributing learning, the interprofessional education and practice liaison, the technology-enabled and virtual patient/client learning liaison, and the knowledge broker.

We value and emphasize interprofessional practice throughout the program as a means of promoting respect for the roles of other health care team members, in turn better defining the scope of physical therapist practice. Collaborative interprofessional practice through education initiatives has been proposed as being essential to addressing the complex conditions seen in health care\textsuperscript{40} and ensuring that evidence-informed best practice is delivered. Team members may change according to the needs of a given patient/client. Team members may include, but are not limited to, home care workers, mental health workers, nurses, occupational therapists, pharmacists, physical therapists, physicians, social workers, surgeons, and the patient/client and family or social support network.

The juxtaposition of nonpharmacological and pharmacological evidence-based practices must be clear, with the goal of best practice for the patient/client being superior outcomes overall. In the practice of health-based competencies, physical therapists must know when to refer a patient/client to others on the team and when to collaborate with others on the team. This scenario can happen only when practitioners or students have a clear understanding of the range of interprofessional roles and responsibilities. Even when a patient/client has been referred to others, as long as the patient/client remains under their care, physical therapists should maintain the continuity of the health behavior change process with structured follow-ups.

Finally, to ensure that health promotion practice is integrated into standard physical therapist practice, students must be systematically evaluated on such practice. Although written examinations have a role, particularly in a problem-based or case-based context, health-based content also must be integrated into objective structured clinical examinations. Only in this way will students and instructors see health promotion practice elevated to a level of importance comparable to that of conventional physical therapy competencies.

Health Competencies: Examination/Evaluation and Interventions

The ICF has been used as a means of highlighting the need for examination/evaluation and outcome evaluation at a range of levels for entry-to-practice physical therapist students and clinicians. Standards for health examination/evaluation and health behavior change interventions, strategies, and approaches have yet to be agreed upon within the profession. Nonetheless, trends are emerging. There is no single metric for health status. Quality-of-life and life satisfaction questionnaires provide indexes of health-related well-being. Autonomy, self-efficacy, and resiliency measures inform clinicians about the predispositions and capacities of patients/clients not only to live with their chronic health conditions but also potentially to thrive. Another level of health examination/evaluation is lifestyle practices and health behaviors. Achieving the positive effects of health behavior changes takes time; therefore, changing health behaviors even minimally is ideally suited to the physical therapy clinical context and practice pattern.

Health behavior changes require a lifelong commitment; therefore, a long-term approach to lifestyle behavior change interventions is needed. By adhering to simple healthful living recommendations, patients/clients can be reasonably assured of multisystem benefits\textsuperscript{41–45} commensurate with improved health-related quality of life—even if health outcomes are not assessed directly. The physical therapist has a role in supporting ongoing positive healthful lifestyle practices and in initiating such practices.
Integration of Health Promotion Content Into Physical Therapy Curricula: Case Scenario

A case scenario illustrating health-focused physical therapy is provided in the eAppendix (available at ptjournal.apta.org). The scenario describes a typical patient/client treated clinically by a physical therapist. Examination/evaluation tools and lifestyle behavior change interventions and approaches for the patient/client are presented in the eAppendix, along with references.

The case scenario illustrates a health focus in physical therapist practice, including the examination/evaluation of health status, lifestyle practices, and common risk factors and manifestations of NCDs. It shows how health-focused practice can be integrated into conventional physical therapist management with a view to improving physical therapy outcomes, including long-term overall health. In the case scenario, the patient/client has low back pain. The risk factors for various musculoskeletal conditions, including low back pain, parallel those for NCDs; therefore, the promotion of healthful lifestyles can help avert musculoskeletal conditions as well as NCDs.

The patient/client in the case scenario (eAppendix) is a 58-year-old man with low back pain affecting his sleep and causing mobility impairments. His secondary complaints include a history of angina and being overweight. He resumed smoking despite having quit habitual smoking for many years. In addition to the standard physical therapy examination/evaluation and management of the presenting subacute low back pain and mobility impairments, the physical therapist can integrate a health focus with examination/evaluation tools, including quality of life, vital signs, body mass index, waist-to-hip ratio, disease risk, self-efficacy, and readiness to change behaviors. In addition, a short smoking assessment (because the patient/client resumed smoking) is needed to gauge residual obstructive lung pathology that may be coupled with restrictive lung pathology from being overweight and need for smoking cessation. A 3-day nutrition log can establish whether daily nutritional requirements are being met. A diabetes risk questionnaire can establish the likelihood of diabetes given the presence of obesity. This information is especially important given that the patient/client has risk factors that will affect his cardiovascular and peripheral vascular status and, in turn, his capacities to exercise and to heal.

The physical activity examination/evaluation questionnaire focuses on sedentary behavior, general regular physical activity, and structured exercise. Given the impact of disability on sleep and reaction to stress, as well as other potential contributors to sleep deprivation and stress, short questionnaires on sleep quality and quantity and on acute and chronic stress are included. On the basis of the examination/evaluation, the physical therapist can knowledgeably target health education and prescribe health behavior change interventions commensurate with the patient’s/client’s readiness to change and needs. The health-focused examination/evaluation also establishes whether the patient/client should be referred to other professionals and the degree to which the physical therapist should remain involved with the health behavior change recommendations.

Special attention should be paid to the patient’s/client’s history of angina (and the effectiveness of standard management) and modifiable risk factors to reduce the risk of recurrence. The patient’s/client’s impaired sleep should be examined to determine its relationship to the presenting low back pain and to determine whether it is an independent problem or a combination. This information is important given the association of sleep with several chronic conditions. Living with chronic conditions often is associated with some degree of mental health impairment (anxiety or depression) and stress, and these may fluctuate over time. Establishing the sources of any impairment and stress and their interrelationship with presenting conditions can yield insight into optimal patient care. For example, improving mental health with recommendations and supports to reduce stress may help alleviate the experience of back pain. In addition, people who sleep poorly have lower pain thresholds than those who sleep well.

Finally, the physical therapist’s role is to provide an overall view of the patient’s/client’s health and lifestyle risk factors. With respect to lifestyle behavior changes and reduction of risk factors, the intentions are to identify what is being addressed by other providers, what the results are, what gaps need to be addressed, and who should address those gaps. Health behavior changes are the responsibility of all health professionals, not just physical therapists. The minimal expectations of the physical therapist are to determine the patient’s/client’s status and needs, what is being implemented and adhered to already, and the extent to which these initiatives can be strengthened, if needed.

Minimum Health Competencies in Physical Therapy Entry-Level Curricula

Although universal standards for health-focused practice have yet to be endorsed by the World Confederation for Physical Therapy and its member organizations, the 3 physical therapy summits on global health so far have provided insight into practices that are being adopted across World Confederation for Physical Therapy regions on the basis of a synthesis of evidence and regional expert opinion. The Table shows elements of practice that have emerged with respect to examination/evaluation of health and lifestyle behaviors and strategies to address smoking, nutrition, body mass index, sitting, physical activity and structured exercise, sleep, and mental health issues (eg, anxiety, stress, and depressive symptoms).

Challenges

Compared with the self-efficacy of patients/clients to make behavior changes, the self-efficacy of physical therapists to effect such changes in their patients/clients has been less well studied. In one study of 738 physical therapists, participants acknowledged that smoking cessation was important to health, but they also reported a lack of
### Table.
Proposed Minimum Health Competencies for Physical Therapist Practice and Inclusion in Curriculum of Entry-to-Practice Professional Education

<table>
<thead>
<tr>
<th>Lifestyle Health Behavior</th>
<th>Goals</th>
<th>Examinations/Assessments</th>
<th>Interventions/Behavioral Strategies and Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>Not smoking (smoking cessation)</td>
<td>Smoking history Quit attempts, methods, and outcomes (successes and failures) Readiness to change</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s(^a) If at the precontemplative stage of behavior change, then 5 R’s Brief advice Potential recommendation or referral to other health professionals Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Nutrition/diet</td>
<td>Healthful diet Weight loss</td>
<td>Brief nutritional assessment determining: Body mass index Waist-to-hip ratio Readiness to change Ongoing supports and success</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Brief advice Potential recommendation or referral to other health professionals Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Sitting</td>
<td>Breaking up sitting with 2-min walks hourly</td>
<td>Profiles of daily sitting on weekdays and weekends (hours and minutes) Readiness to change</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Advice and intervention Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Activity</td>
<td>Increased regular physical activity throughout the day</td>
<td>Profile of general physical activity Readiness to change</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Advice and intervention Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Structured exercise (eg, resistance and aerobic)</td>
<td>Healthy muscle strength Healthy aerobic conditioning</td>
<td>Profile of regular structured exercise regimen (type, intensity, duration, frequency, and time) Readiness to change</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Advice and intervention Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Sleep (quality and quantity)</td>
<td>Optimal 7–9 h of mostly uninterrupted night’s sleep</td>
<td>Profile of sleep quality and quantity over several successive representative days (eg, not on days off or vacation, no visitors staying)</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Potential recommendation or referral to other health professionals Follow-up, re-evaluation, and progression as needed</td>
</tr>
<tr>
<td>Anxiety, stress, and depressive symptoms</td>
<td>Manageable anxiety, stress, and depressive symptoms (ie, that do not persistently compromise daily activities and quality of life)</td>
<td>Hospital Anxiety and Depression Scale Psychological Stress Measure</td>
<td>If at least at the contemplative stage of behavior change, then 5 A’s If at the precontemplative stage of behavior change, then 5 R’s Potential recommendation or referral to other health professionals Follow-up, re-evaluation, and progression as needed</td>
</tr>
</tbody>
</table>

\(^a\) Physical therapists should be competent in the standardized measurement of vital signs (resting heart rate and blood pressure) (2 repeated measures at least 2 minutes apart).

\(^b\) The 5 A’s are as follows: ask, advise, assess (readiness to change), assist, and arrange.

\(^c\) The 5 R’s are as follows: relevance, risks, rewards, roadblocks, and repetition.
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confidence in enabling patients/clients to quit. Whether this perception extends to their self-efficacy for initiating changes in other health behaviors in their patients/clients—such as with advice about nutrition, weight reduction, or both—warrants elucidation. Other areas of education that must be included in physical therapy curricula concern the role and responsibility of physical therapists in addressing the overall health of patients/clients. Health must be viewed as a professional responsibility and a distinct focus of physical therapist service.

These issues affect the capabilities of clinical supervisors to support and encourage a health perspective in students’ clinical field work. Thus, continuing education is needed to ensure continuity between classroom instruction and the practical experiences of students.

**Accreditation Standards**

Accreditation standards have played an important role in quality assurance for physical therapist practice. However, the degree to which such standards may inadvertently limit the responsiveness and adaptability of curricula to changes is not clear. Accreditation standards may not be keeping pace with new knowledge or even with the translation and uptake of long-standing existing knowledge. We recommend that accreditation standards have built-in mechanisms to facilitate the expedient implementation of changes in response to epidemiological indicators and evidence.

**Remuneration**

The physical therapy profession must continue to lobby for alternate fee payment schedules commensurate with the evidence-informed alignment of nonpharmacological competencies with societal needs. Unlike universal health care systems in most western countries, American health care services largely depend on an individual’s capacity to reimburse providers. Payment for health care services should encompass lifestyle examination/evaluation, lifestyle recommendations, and follow-up, either alone or in conjunction with conventional physical therapy, and referrals to other health professionals.

**Conclusion**

The goal of bridging the ultimate knowledge translation gap that exists between knowledge about lifestyle-related causes of and contributors to NCDs and standard physical therapist practice may be achievable through collaboration of curriculum stakeholders (including specialists in knowledge translation/uptake), interprofessional practice, and education. Using a case scenario as an example in an entry-to-practice physical therapy curriculum, we showed how evidence-based health examination/evaluation and lifestyle behavior change interventions can be integrated into conventional physical therapist practice to address burgeoning NCDs. Our intentions are to generate discussion among educators, physical therapist education stakeholders, and other health professions about shared competencies related to preventing and reversing as well as managing chronic lifestyle-related NCDs. Such discussion will lay the foundation for establishing agreed-upon, accountable health promotion practice standards within the profession of physical therapy.

Central to best practice across health professions, rather than evidence-based practice within individual health professions, is the need to elucidate the balance of nonpharmacological and pharmacological interventions in terms of demonstrable short- and long-term outcomes. Elucidation of this balance will help inform the merging and titrating of nonpharmacological and pharmacological approaches systematically within an interprofessional framework. Such a collaborative approach offers the potential for best practice in its truest sense with respect to economics and ethics as well as outcomes. This approach is consistent with the time-honored tenets of the Hippocratic Oath articulated more than 2,500 years ago: “First, do no harm” and “The function of protecting and developing health must rank even above that of restoring it when it is impaired.”

All authors contributed conceptually and provided ideas. Dr Dean drafted the article, and all authors had input into revisions, redrafting, and review of the article before submission.

**References**


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