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Core Competencies in Integrative Pain Care for Entry-Level Primary Care Physicians

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Abstract

Objective. The objective was to develop a set of core competencies for graduating primary care physicians in integrative pain care (IPC), using the Accreditation Council for Graduate Medical Education (ACGME) domains. These competencies build on previous work in competencies for integrative medicine, interprofessional education, and pain medicine and are proposed for inclusion in residency training.

Methods. A task force was formed to include representation from various professionals who are involved in education, research, and the practice of IPC and who represent broad areas of expertise. The task force convened during a 1.5-day face-to-face meeting, followed by a series of surveys and other vetting processes involving diverse interprofessional groups, which led to the consensus of a final set of competencies.

Results. The proposed competencies focus on interprofessional knowledge, skills, and attitudes (KSAs) and are in line with recommendations by the Institute of Medicine, military medicine, and professional pain societies advocating the need for coordination and integration of services for effective pain care with reduced risk and cost and improved outcomes. These ACGME domain compatible competencies for physicians reflect the contributions of several disciplines that will need to be included in evolving interprofessional settings and underscore the need for collaborative care.

Conclusion. These core competencies can guide the incorporation of KSAs within curricula. The learning experiences should enable medical educators and graduating primary care physicians to focus more on integrative approaches, interprofessional team-based, patient-centered care that use evidence-based, traditional and complementary disciplines and therapeutics to provide safe and effective treatments for people in pain.

Key Words. Pain Management; Integrative Medicine; Core Competencies; Interprofessional; Curriculum; Education; Health Professions

Introduction

Chronic pain affects an estimated 100 million adults in America. This population is greater than those affected by heart disease, diabetes, and cancer combined. Costs for pain treatment and lost productivity are

estimated at between $565–635 billion each year not including those who experience acute pain, infants and children with acute and chronic pain, and institutionalized adults [1]. In the United States, pain is the most common reason for seeking healthcare services [2].

The use of prescribed opioid medications in the United States is 50 times more than the combined use in the rest of the world [3]. Currently, more people in the United States die from overdoses of prescription opioids than cocaine and heroin combined [4]. Between 2000 and 2010, interventional techniques for chronic pain increased overall 228% [5]. We have seen a 300% increase in surgical center utilization during this same period [6]. These efforts to improve the lives of people with pain have resulted in the combination of high risk, high costs, and poor outcomes. This has led the Institute of Medicine, the United States military, the Veterans Administration, and many of the professional pain societies to propose that pain treatment shifts to the use of integrative strategies in interprofessional team settings to deal with the complexity of pain management. The terms "complementary and alternative medicine" refer to health care disciplines and practices that fall outside of conventional medical practice. "Integrative health care" is the current favored term to refer to the practice of medicine that uses all appropriate conventional medical treatments as well as complementary and alternative disciplines for the benefit of the patient [7].

In 2012, John Loeser highlighted the impediments to improve quality of pain management in Pain: Clinical Updates "Five Crises in Pain Management [8]." He eruditely described the failure of the current system to adequately address the multitude of poorly defined factors impacting outcomes that have long kept pain medicine mired in an inadequate standard of care: prescribing drugs with known risks and unproven benefits and performing procedures with poorly defined criteria and outcomes. The inadequacy of pain education for primary care was one of the five identified crises. Although most pain management is delivered in primary care settings [1,9,10], it is widely acknowledged by many authors and collaborations that the pain education received by primary care practitioners is woefully lacking [1,11–17].

In United States medical schools, the number of hours devoted to pain medicine ranges from 1 to 31, with a mean of 11.13 and a mode of 4 hours [16]. It has also been recognized that medical residency curricula have not prepared physicians to manage pain competently [1,17]. Results of surveys conducted in 2002 and 2003 [18,19] revealed that graduate physicians are ill prepared to treat pain. It has also been noted that physicians' beliefs "about their ability to manage pain do not always match their actual competence, and physicians may not recognize deficits in their pain care knowledge [1]." Thus, this training system has left primary care practitioners with inadequate tools with which to deal with some of their most frequent and challenging patients.

The United States is facing a shortage of primary care physicians and the lack of preparation to deal with chronic pain may influence learners' career choices. A University of Washington study of medical student residency choices by Corrigan et al. found that medical students' negative feeling about chronic pain patients was cited as a major reason for students choosing not to enter family practice careers. The students expressed uncertainty in "all aspects of chronic pain; from its etiology and assessment to patient/provider interaction [20]." Radical change is being recommended within this health care education system to educate primary care practitioners to manage the growing numbers of chronic pain patients using more varied strategies to treat them.

Patients are already using complementary and integrative strategies extensively and primarily for pain complaints [21]. Yet, they often fear telling their medical practitioners [22]. Expanding the integration of medical practices with CAM disciplines is supported by the institute of medicine (IOM) report [1] on pain, the Veterans Health Administration's Pain Directive [23], the Army Surgeon General Task Force Report [12], the National Institutes of Health [24], and by several pain organizations. The American Pain Society [25] now has a CAM special interest group, American Academy of Pain Medicine [26] actively pursues integrative medicine content in its publication and annual meetings, International Association for the Study of Pain has included integrative content, and American Academy of Pain Management has long had an interprofessional membership. Currently, there is a mismatch between graduate physician competencies and population needs. Primary care practitioners will need more instruction and modeling of integrative strategies and collaborative care to take their places within the team-based interprofessional medical system that is evolving [27].

Fishman et al. [28] published a set of core competencies for pain assessment and management applicable to multiple professions involved in pain care and targets undergraduate education particularly. These competencies aimed to identify core values, principles, and educational objectives for an interprofessional practitioner community. In this article, a proposed set of competencies is described that was developed specifically for the primary care physician. These core competencies are structured around the Accreditation Council for Graduate Medical Education (ACGME) domains, to further facilitate their consideration by directors and faculty of primary care residency programs for inclusion in their core curriculum and clinical educational experiences for residents. The recent publication of the draft National Pain Strategy [29] has indicated the need for core competencies for primary care medicine education. A subsequent paper is planned to discuss these sets of competencies and their potential role in developing appropriate curricula for the myriad of health professionals.

Methods

In late 2011, with the support of several academic groups, one of the authors (H.T.) convened a national task force of practitioners, researchers, and educators, who represented various disciplines/specialties and areas of expertise, to develop a set of core competencies in integrative pain care (IPC) for primary care physicians (entry level primary care physicians were defined as M. D., and D. O. residency graduates in family medicine, general internal medicine, general pediatrics, internal medicine-pediatrics, general obstetrics and gynecology, and general surgery) that would combine conventional medical strategies with safe and effective integrative treatment approaches. As a whole, the task force reflected areas of expertise and practice in family medicine, pediatrics, pediatric pain management, physical medicine and rehabilitation, pain management, integrative medicine, palliative care, chiropractic medicine, physician assistant, human physiology, psychology, complementary and alternative medicine (CAM), mindfulness, patient safety, economics in healthcare, medical ethics, nutrition, research methods, and competency development.

Prior to commencing the work, consultation with the Institutional Review Board (IRB) Chair indicated that the competency development design was exempt because it did not qualify as human subject research and did not require formal committee review. The development of IPC competencies began with a 1.5-day retreat in January 2012 in which a national IPC task force (expert panel) participated in a facilitated, iterative consensus building process to draft an initial set of IPC core competencies and associated critical performance indicators (CPIs) (i.e., core knowledge, skills/behaviors, and attitudes/values (KSAs) for entry-level primary care physicians. Task force members reviewed and discussed relevant literature [1,4,8,9,11,12,14,16,20,30], for example, curricula and best IPC practices in their respective professions. A draft set of core competencies and CPIs was further refined using a three-point rating process to determine the extent to which each CPI was critical to the associated competency domain. The draft competencies from the retreat were compiled, and task force members remained engaged throughout subsequent work.

From January 2012–January 2014, two authors (H.T. and S.C.) and the task force conducted content verification surveys and multiple vetting processes to verify and finalize a proposed set of IPC core competencies for entry-level primary care physicians. An explicit decision was made to involve expert interprofessional panels with an integrative perspective, consistent with the movement to revise health care curricula to be more interprofessional and relevant to the development of competencies for team leaders.

The first-verification survey involved broadly representative primary care practitioner groups attending peer-reviewed conference presentations. Participants were asked to respond to the sets of IPC competencies and CPIs and filled out follow-up content surveys. Survey respondents indicated "the extent to which the competency was necessary for competent medical practice of a primary care physician" (Likert scale: 1 = Definitely No, 2 = Mostly No, 3 = Mostly Yes, 4 = Definitely Yes). When necessary, respondents could also respond "Insufficient knowledge to judge." These rankings and comments were used to further develop and refine competencies and CPIs. The competencies and CPIs were refined at each content verification step, and the updated version presented to the subsequent verification participants.

A second, similar but more detailed, content verification survey was administered to a group of informed primary care practitioners ($n = 29$, representing internal medicine, family medicine, pediatrics) identified in seven academic medical centers across the United States in which IPC was available (including one Army and one Veterans Administration Medical Center). Respondents rated each CPI regarding the extent to which it was a necessary component of competent practice in your specialty? (Necessary for Practice) and the extent to which physicians would require formal training and education to adequately incorporate the CPIs into future practice? (Need Training/Education). A seven-point Likert scale was used to maximize discrimination (1 = Definitely No, 2 = Mostly No, 3 = Minimally No, 4 = Neither No or Yes, 5 = Minimally Yes, 6 = Mostly Yes, 7 = Definitely Yes).

In the third survey, the IPC core competencies and CPIs were vetted in a peer-reviewed workshop during International Congress for Educators in Complementary and Integrative Medicine led by two of the authors (H.T. and S.C.). Workshop participants ($n = 28$), organized in six small groups (one per competency domain) completed a structured review and critique exercise to provide oral and written feedback.

Follow-up refinements were completed by H.T., S.C., and M.B. using an iterative method to achieve a final set of competencies and CPIs. A revision matrix and journal documented outcomes of iterative decisions leading to the final wording, removal of redundancies across indicators, and organization of CPIs within competency domains. The final set was submitted to task force members for endorsement.

Results

During 2013 and the early part of 2014, the results of the various competency development and vetting activities were used to guide additional rounds of refinements to produce a final set of proposed IPC core competencies and corresponding CPIs that is presented as Table 1.

Discussion

In the contemporary context of healthcare and health professions education, there is an emphasis on developing and enhancing interprofessional learning and

Table 1 Proposed core competencies for integrative pain care and the corresponding CPIs expected of entry-level primary care physicians* (June 2014)

General Patient Pain Care

Competency: Uses integrative care paradigms and an interprofessional team approach to practice competent, compassionate, and ethical patient care.

Critical performance indicators:

1. Engages in patient-centered therapeutic relationships that are characterized by trust, openness, and careful attention to patients' personal narratives of pain experiences.
2. Makes informed and ethical decisions about diagnostic and therapeutic interventions for pain care, based on scientific evidence, clinical judgment, and patient information and preference.
3. Grounds the assessment and treatment of patients' pain problems in the appropriate scientific bases, including the neurobiological science of pain (e.g., neuroplasticity, central sensitization and hypersensitivity, and psychoneuroimmunology) and the science of fascia and soft tissue pain syndromes.
4. Uses knowledge of comprehensive, IPC, and delivery systems (e.g., clinics) to optimize primary care to patients with pain.
5. Responds to patients' biopsychosocial consequences of pain through appropriate and reasonable accommodations that optimize abilities and quality of life.
6. Manages and adjusts patients' treatment plans based on standards of practice and appropriate integration of other relevant care providers to achieve optimal pain care and outcomes.
7. Uses and monitors appropriate measures to evaluate and achieve desired patient outcomes in pain care.

Interpersonal and Communication Skills

Competency: Communicates and interacts effectively with patients, their family/caregivers, healthcare providers, and other professionals in the context of providing quality care and facilitating both realistic expectations and optimal outcomes.

Critical performance indicators:

1. Uses effective communication to elicit and use patients' stories of pain to assess, diagnose, and treat patients' pain care needs
2. Motivates and sustains patients' commitment to use of appropriate self-care practices (e.g., diet, exercise, mind-body) that are important to pain care.
3. Specific to pain care, communicates and interacts effectively with patients, their families/caregivers, health care providers, and other professionals to maintain realistic expectations and optimal outcomes.
4. Uses system features appropriately to facilitate communication, coordination, and information exchange among care providers for patients with pain (e.g., referrals, coordinated care, and follow-up contacts).

Medical Knowledge for Assessment

Competency: Collaborates with other professionals to assess and evaluate the physical, psychological, social, behavioral, and functional aspects of patients with pain when developing a differential diagnosis and appropriate treatment plan.

Critical performance indicators:

1. Collaborates with other professionals to incorporate appropriate assessment systems for examining of physical, psychological, social/behavioral, and functional aspects of patients with pain that are necessary for accurate diagnosis and appropriate treatment of problems.
2. Monitors specific factors associated with signs and symptoms of pain to make informed decisions about adjustments and coordination of specific treatment options.
3. Uses a systematic, data-based approach to monitoring and evaluating expected and actual patient outcomes relative to treatment interventions, prospectively and retrospectively.

Medical Knowledge for Management

Competency: Develops a comprehensive, effective, goal-oriented and progressive care/management plan based on a well-conceived differential diagnosis that incorporates appropriate pharmacologic, nonpharmacologic, and integrative pain management strategies.

Critical performance indicators:

1. Develops a comprehensive differential diagnosis which includes interpretation of laboratory findings, diagnostic imaging, physical examination, and to obtain a comprehensive pain history.
2. Uses knowledge of healthcare systems, diverse providers, government-based aid and community resources to effectively meet patients' pain-related needs, as a whole (e.g., access, diagnosis, treatment, support services, financial).
3. Uses knowledge of healthcare systems and business operations (e.g., costs, reimbursement for pain management services) to provide and coordinate quality, cost effective pain care.

Table 1 Continued

4. Develops effective goal-oriented and progressive treatment plans that incorporate appropriate pharmacologic and nonpharmacologic pain management strategies, a stepwise approach to facilitate patient progress through the natural history and cycle of a pain syndrome and prevent unnecessary dependence on care.

5. Communicates effectively to others (e.g., patients) the risks, benefits, and implications of appropriate pain treatment options, including traditional procedural and surgical interventions and various CAM techniques, when making decisions about pain management.

6. Makes pain medication decisions based on sound principles of pharmacokinetics and pharmacodynamics and prescribing guidelines for use, adverse effects, and drug interactions for all major drug groups used in pain management (e.g., opioids, antidepressants, antiepileptics, antirheumatics, psychotropics, anti-inflammatory agents, and other adjuvant pain medication, including natural health products).

7. Draws on a broad base of alternative therapies, as appropriate, to minimize reliance on traditional opioid and pharmaceutical interventions for pain (e.g., nutrition, movement, application of physical medicine modalities, mind-body/cognitive therapies and natural health products).

8. Evaluates and documents patients' pain-related behavior (e.g., disability, fear avoidance, symptom magnification) and uses appropriate strategies to manage such behavior.

Practice-Based Learning and Improvement

Competency: Appraises and assimilates relevant scientific evidence and investigates and evaluates one's own patient care to drive ongoing improvements in the diagnosis, treatment, and outcomes for patients with pain.

Critical performance indicators:

1. Stays abreast and draws upon the full range of CAM and mind-body approaches, as appropriate, to address patients' pain care needs.

2. Appraises and assimilates relevant scientific evidence to enhance diagnosis, treatment, and outcomes for patients with pain.

3. Uses systematic methods of CQI as an integral part of self-directed learning and improvements to enhance clinical practice and patient-centered outcomes.

Professionalism

Competency: Uses inter-professional and integrative care paradigms as a primary driver for providing competent, compassionate, and ethical care of patients with pain.

Critical performance indicators:

1. Demonstrates knowledge of and an appreciation for integrative care paradigms and uses interprofessional team approach to diagnosing, treating, and managing patients' problems with pain.

2. Demonstrates competent, compassionate, ethical patient care that is characterized by a commitment to excellence through reflective practice and CQI.

3. Demonstrates sensitivity to their patients' personal qualities and needs (e.g., culture/ethnicity, age, gender, disability, and privacy).

4. Recognizes the limitations of one's scope of practice and incorporates expertise and alternative treatment paradigms to optimize patient pain care and outcomes.

5. Advocates for and educates others about IPC to enhance access, treatment, and patient outcomes.

6. Advocates for and facilitates patients' navigation toward optimal care and achievement of pain care goals.

* For the proposed core competencies, primary care is defined as the following medical specialties: family medicine, general internal medicine, general pediatrics, combined medicine-pediatrics, general obstetrics and gynecology, and general surgery.

teamwork in practice, continuous quality improvement (CQI), and patient safety. Such initiatives could facilitate adoption and further refinement of the proposed IPC core competencies and 31 corresponding CPIs. In particular, the CPIs within each competency domain can be used to communicate expectations, guide professional learning and development, and incorporate IPC competencies into existing and/or new curricula and assessment processes, as appropriate, across the continuum of medical education.

There has been agreement among the various analyses of the problem of pain and the inadequacy of the prevalent medical response to it [1,11,12,31]. There is also consensus that medical school and residency education, particularly for primary care disciplines, need improved curricula to enable providers to understand people with pain and provide comprehensive, effective pain care in interprofessional and collaborative settings [13–17,19,24,26,29] (entry level primary care physicians were defined as M.D., and D.O. residency graduates in family medicine, general internal medicine, general pediatrics, internal medicine-pediatrics, general obstetrics and gynecology, and general surgery). The focus of this current set of proposed competencies on interprofessional KSAs is in

keeping with the conclusions of the IOM, military medicine, and the professional pain societies about the need for coordination and integrations of services (1,12,21,23,25,26,32). Giving specific focus to integrative approaches using interprofessional team-based, patient-centered care using the full spectrum of evidence-based traditional and integrative disciplines and therapeutics could create positive influences on the future of healthcare and improve service for the large numbers of patients seeking solutions for living with pain [30,33]. This current set of core competencies and CPIs might stimulate the incorporation of such KSAs within current curricula and learning experiences. In doing so, medical educators and health practitioners could facilitate a shift in the culture of healthcare to focus on the health and well-being of the whole person—mind, body, and spirit, when making decisions with patients about their pain care options.

Although we used a systematic process for developing, verifying, and finalizing a proposed set of IPC core competencies, there are limitations to the interpretation and application of findings. First, while efforts were made to maximize the diversity of perspectives for both the IPC Task Force and the participants in various vetting processes, we may not have captured the full scope of what should be included in a competency framework for IPC among entry-level primary care physicians. Additional investigations and collaborations and early applications of the proposed competencies will help to assure that all relevant competencies and associated KSAs have been incorporated.

Second, some professionals may question the inclusion of general surgery and general obstetrics and gynecology as primary care specialties within the context of pain care. Similarly, had other researchers led this work, other specialties might have been included within the context of primary care services. Future work that expands opportunities for dialogue, review and comment, and application can illuminate the relevance of the proposed competencies and CPIs for these and other specialties.

Third, the selection of relevant experts for the IPC Task Force, the invited participants for content verification surveys, and the reliance on convenience samples in peer-reviewed discussions and workshop sessions at conferences targeting CAM and integrative medicine may have influenced the final products in ways that we did not consider. Consequently, the resulting IPC core competencies and corresponding CPIs have been proposed in this article for consideration by professionals and leaders in the primary care specialties and corresponding residency training programs. Taken as a whole, the processes used in competency development parallel those used by other research groups for competencies in integrative medicine and interprofessional collaboration (e.g., Lane and Ross, 1998 [34], Fishman, et al., 2013 [28], Ring, et al., 2014 [35], and IPEC [30]).

Conclusions

These proposed competencies for IPC for graduating primary care physicians were developed by an interprofessional group with diverse expertise in a multistepped vetting process of content verification and refinement. There is an overwhelming consensus that pain education must change to meet patients' pain care needs. The competencies presented in this article contribute further to the body of competencies that have been developed to date for the stages of pain education from undergraduate, graduate to post graduate, those on integrative medicine, and on interprofessional team care. We hope that this work will further the discussion of integrative health care strategies and the educational foundations for interprofessional collaboration in the field, leading ultimately to the development of effective curricula for pain education.

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