ORIGINAL ARTICLE

Interprofessional Competencies in Integrative Primary Healthcare

综合初级卫生保健的跨专业技能

Competencias interprofesionales en la atención primaria integral

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ABSTRACT

In October 2014, the National Center for Integrative Primary Healthcare (NCIPH) was launched as a collaboration between the University of Arizona Center for Integrative Medicine and the Academic Consortium for Integrative Health and Medicine and supported by a grant from the Health Resources and Services Administration. A primary goal of the NCIPH is to develop a core set of integrative healthcare (IH) competencies and educational programs that will span the interprofessional primary care training and practice spectra and ultimately become a required part of primary care education. This article reports on the first phase of the NCIPH effort, which focused on the development of a shared set of competencies in IH for primary care disciplines. The process of development, refinement, and adoption of 10 "meta-competencies" through a collaborative process involving a diverse interprofessional team is described. Team members represent nursing, the primary care medicine professions, pharmacy, public health, acupuncture, naturopathy, chiropractic, nutrition, and behavioral medicine. Examples of the discipline-specific sub-competencies being developed within each of the participating professions are provided, along with initial results of an assessment of potential barriers and facilitators of adoption within each discipline. The competencies presented here will form the basis of a 45-hour online curriculum produced by the NCIPH for use in primary care training programs that will be piloted in a wide range of programs in early 2016 and then revised for wider use over the following year.

摘要

2014 年 10 月，国家综合初级卫生保健中心（NCIPH）启动，该中心是亚利桑那大学结合医学中心以及结合医学与健康学术联盟的合作产物，并得到了健康资源和服务管理局拨款支持。NCIPH 的主要目标是开发一组跨专业基层医疗培训的核心综合健康（IH）技能和教育方案，以及实践论坛，并最终成为基层医疗培训的一个必要部分。本文报告了 NCIPH 工作的第一个阶段，此阶段集中开发一组可以共享的综合医疗护理技能，用于基层医疗学科。本文描述了 10 种"元胜能力"的开发、改进和应用流程，此流程由一个多元化跨专业合作团队完成。团队成员包括护理、初级医疗保健专业、药学、公共卫生、针灸、物理疗法、脊椎按摩疗法、营养学和行为医学专业人员。本文提供了所涉及的每个专业学科的专属子技能示例，并提供了对每个学科的潜在障碍和应用协调者评估的结果。本文显示的技能将形成 NCIPH 45 小时网络课程的基础，用于基层医疗培训计划，2016 年初，此课程将面向不同领域的受众试开放，修改后将继续面向更多受众开放。

SINOPSIS

En octubre de 2014, se inauguró el Centro nacional de atención primaria integral de salud (National Center for Integrative Primary Healthcare, NCIPH) como una colaboración entre el Centro de medicina integral de la Universidad de Arizona y el Consorcio académico de salud y medicina integral, y fue subvencionado con fondos de la Administración de Recursos y Servicios de Salud. El objetivo principal del NCIPH es desarrollar un conjunto básico de competencias de asistencia sanitaria integral (SI) y programas educativos que abarquen los espectros de formación y práctica en atención primaria interprofesional y se integren en última instancia en la educación en atención primaria. Este artículo detalla la primera fase de la iniciativa del NCIPH, que se centra en el desarrollo de un conjunto de competencias compartidas en asistencia sanitaria integral para las disciplinas de atención primaria. Se describe un proceso de desarrollo, perfeccionamiento y adopción de 10 "metacompetencias" a través de un proceso de colaboración en el que participa un equipo interprofesional heterogéneo. Los miembros del equipo representan al personal de enfermería, las profesiones médicas de atención primaria, farmacia, salud pública, acupuntura, naturopatía, quiropráctica, nutrición y medicina de la conducta. Se ofrecen ejemplos de las subcompetencias específicas de cada disciplina en fase de desarrollo en cada una de las profesiones participantes, junto con los resultados iniciales de la evaluación de los posibles obstáculos y los facilitadores de la adopción dentro de cada disciplina. Las competencias que se presentan aquí constituirán la base de un plan de estudios en línea de 45 horas elaborado por el NCIPH para su uso en programas de formación en atención primaria que se pondrán a prueba a principios de 2016 y serán posteriormente revisados para la generalización de su uso el año siguiente.

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Key Words
Interprofessional education, primary care, integrative medicine

Disclosures
The authors completed the ICMJE Form for Disclosure of Potential Conflicts of Interest, and Drs Kligler, Brooks, Goldblatt, Klatt, Koithan, Kreitzer, Lee, Lopez, McClafferty, Rhode, Saper, Taren, Wells, and Lebensohn disclosed the receipt of grants from the Health Resources and Services Administration (HRSA) during the conduct of this study. Dr Sandvold is the project officer for the cooperative agreement awarded to the University of Arizona to provide funding for the National Center for Integrative Primary Healthcare. Dr Sandvold is an employee of HRSA.

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INTRODUCTION

Integrative healthcare (IH) "reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing."[1] By definition, IH addresses the biomedical as well as sociocultural determinants of health and takes a broad view of health creation and disease prevention. In focusing on prevention, patient empowerment and activation, and treating not only the patient but the family and the community, IH has the potential to significantly contribute to the prevention and treatment of many if not all of the chronic health problems causing morbidity and mortality in our society today, including obesity, cancer, cardiovascular disease, diabetes, violence, and depression.

IH includes both conventional and licensed complementary and alternative medicine (CAM) practitioners. According to the US Centers for Disease Control and Prevention (CDC) national surveys conducted between 2002 and 2012, one-third of adults[2] and 12% of children and adolescents[3] in the United States use CAM. The Institute of Medicine has recommended that all healthcare providers become familiar with CAM approaches, so they can properly counsel their patients regarding their use.[4]

Published evidence is accumulating regarding both the clinical effectiveness[5] and cost effectiveness[6] of IH. Yet due to a shortage of trained providers and limited resources, the principles and practice of IH have not been widely incorporated into the conventional healthcare delivery system in the United States. This is particularly true for the medically underserved communities most at risk for health disparities.

To address this gap in access to Integrative healthcare, the federal Health Resources and Services Administration (HRSA) during the past 4 years has supported an educational initiative to incorporate evidence-based integrative medicine curricula—initially into preventive medicine residency education and expanding to primary care residency and other health professions training programs through interprofessional learning strategies. The first phase of this initiative was the HRSA-funded Integrative Medicine Program that targeted preventive medicine residency training programs in an effort to develop physician education and tools for the application of integrative medicine to preventive medicine and public health training programs.[7]

The second phase, begun in the fall of 2014, is a more inclusive effort to build on these tools. The goals include developing a core set of IH competencies and educational programs that will span the interprofessional primary care training and practice spectra to help produce a workforce prepared to close this gap. This second phase of HRSA funding was awarded to the University of Arizona Center for Integrative Medicine which, in collaboration with the Academic Consortium for Integrative Health and Medicine (the Consortium), has now established the National Center for Integrative Primary Healthcare (NCIPH). This article reports on the first phase of the NCIPH effort, which focused on the development of a shared set of competencies in integrative healthcare for primary care disciplines. The competencies presented here will form the basis of a 45-hour online curriculum produced by the NCIPH for use in primary care training programs.

Integrative Healthcare Training Needs of Health Professionals in the Affordable Care Act Era

The ultimate goal of the NCIPH is education of interprofessional teams that will be highly effective in embedding the principles of IH[8] (Table 1) with a focus on prevention and elimination of health disparities in primary care. This goal is especially critical given the shifts in the healthcare landscape being brought about by the implementation of the Affordable Care Act (ACA). As our healthcare system struggles to provide quality care for more than 30 million potential new patients and moves toward team-based, collaborative, interprofessional care with a stronger emphasis on prevention, it becomes more critical that our primary care workforce be versed in the principles of whole-person, patient-centered, IH. The development of the

new evolving infrastructure for healthcare in the United States—based on the medical/health home model and the role of Accountable Care Organizations that will focus on prevention and patient engagement as strategies to control cost and deliver quality care—provides a tremendous opportunity to incorporate these principles more deeply into our system. Some of the new skills needed for IH-trained practitioners include how to work with an interprofessional team; how to engage patients and care partners in preventive self-care strategies to stay healthy rather than wait for disease to develop; and how to actively incorporate the patients' perspectives, experiences, strengths, and resources into the plan of care.[8] These are just a few of the core skills of IH that have generally been absent or underemphasized in conventional primary care training, yet they are critical for successful functioning in the new healthcare delivery model.[9]

The NCIPH will advance the incorporation of competency and evidence-based IH curricula and best practices into primary care education and practice. Targeted primary care disciplines include family medicine, internal medicine, pediatrics, preventive medicine, nursing, public health, behavioral medicine, pharmacy, chiropractic, acupuncture, naturopathy, physician assistants, nutrition, and others. In order to accomplish our goal of building effective and knowledgeable interprofessional integrative team care and to begin to break down the "silos" that divide the professions in terms of training and practice standards,[10] the NCIPH leadership made a strategic decision to engage as wide a spectrum as possible of professions involved in primary care to create a common set of competencies in IH.

Addressing Disparities in Access to Integrative Healthcare Among Diverse Populations

Although complementary and integrative therapies are used by approximately one third of US adults, use among most minorities and individuals with lower income or education is less common.[2,11-14] For example, in 2012, 38% of non-Hispanic whites reported CAM use in contrast to only 19% of blacks and 22% of Hispanics.[2] Using yoga as an exemplar, national usage increased substantially from 3.8% in 1998 to 8.4% in 2012.[15] However, in 2007 yoga was used by 6.5% of whites vs 3.3% of blacks; 6.6% of non-Hispanics vs 2.9% of Hispanics; 9.5% in college-educated individuals vs 1.9% in non–college educated individuals; and 8.6% of individuals in the highest income quartile vs 4.9% of individuals in the lowest quartile.[16] Barriers to accessing complementary and integrative therapies among diverse populations include affordability, availability, and awareness. Limited disposable income, lack of integrative services in low-income, racially diverse neighborhoods, and lack of knowledge about IH often prevent low–socioeconomic status minority populations from benefitting from complementary and integrative therapies. This disparity is concerning given increased evidence of the safety and effectiveness of different complementary and integrative therapies. For example, yoga is now considered moderately effective and safe for chronic low back pain, which disproportionately impacts racial and economically diverse populations.[17] Yoga is just one example; the same is true for numerous other integrative approaches. Moreover, racially diverse populations are amenable to trying new integrative approaches if they are made affordable and available and if patients are made aware of and understand them.[18,19] As federal, private, and academic stakeholders invest millions of dollars into IH research, education, and clinical services, it is imperative that diverse socioeconomic and multicultural communities and vulnerable populations have equal access to evidence-based complementary and integrative therapies.

The NCIPH will provide adequate training in integrative primary healthcare to the interprofessional workforce and offer services to these patient populations, particularly in federally qualified community health centers. This will address multiple challenges. Vulnerable patient populations experience risk from potential interactions and adverse effects of some integrative approaches when their primary care providers are not routinely trained in complementary and integrative therapies. In addition, ethnically diverse and medically underserved populations are deprived of potentially beneficial approaches when their healthcare team lacks training. For example, the NCIPH curriculum will train primary care professionals to offer sound advice on such topics as herb-medication interactions; dietary supplement contamination and adul-

Table 1 The Defining Principles of Integrative Medicine[8]

1.	Patient and practitioner are partners in the healing process.
2.	All factors that influence health, wellness, and disease are taken into consideration, including mind, spirit, and community, as well as the body.
3.	Appropriate use of both conventional and alternative methods facilitates the body's innate healing response.
4.	Effective interventions that are natural and less invasive should be used whenever possible.
5.	Integrative medicine neither rejects conventional medicine nor accepts alternative therapies uncritically.
6.	Good medicine is based in good science. It is inquiry-driven and open to new paradigms.
7.	Alongside the concept of treatment, the broader concepts of health promotion and the prevention of illness are paramount.
8.	Practitioners of integrative medicine should exemplify its principles and commit themselves to self-exploration and self-development.

teration; the role of mind-body therapies in treatment of chronic pain and stress-related conditions; and the applications of acupuncture, manual, and movement therapies. Our specific conclusions and recommendations regarding the competencies that will guide this curriculum are described below.

METHODS

During the past 15 years, several primary care professions have developed and published competencies for IH practice. Family medicine, preventive medicine, and nursing in particular have done substantive work in this area.[7,20-23] Competencies have also been published for medical student education[24] as well as for fellowship training in integrative medicine.[25] A small group from our NCIPH Interprofessional Leadership Team (InPLT; see Table 2 for InPLT team members) began the process of developing the NCIPH competencies by examining these previous efforts for common elements and themes. We found a surprising degree of concordance between the professions, and an initial set of 9 areas of focus emerged that had been explicitly identified and addressed by these earlier efforts. We brought these 9 "meta-competencies" to the InPLT for discussion and feedback on biweekly conference calls over a 3-month period, revising and clarifying language to make them relevant across the interdisciplinary spectrum. After each call, revisions were posted online for further asynchronous feedback and comment before the next call.

Once the InPLT reached preliminary consensus, we encouraged members to solicit feedback on the meta-competencies from colleagues in their own disciplines to be confident we were adequately incorporating the diverse perspectives. While a number of additional changes in language and wording were suggested, overall there was a high degree of concordance among the professions regarding these concepts.

The InPLT met in person in February 2015 to further revise the meta-competencies. During this process, a tenth competency on the ethical issues raised by IH was added. Following some final revisions to the language, the InPLT reached consensus on the 10 NCIPH meta-competencies.

Table 2 Interprofessional Leadership Team Members : Roles and Affiliations

Name	Role	Affiliation
Ben Kligler, MD, MPH	Chair, Family Medicine Representative	Vice Chair, Mount Sinai Beth Israel Department of Integrative Medicine; Icahn School of Medicine at Mount Sinai
Patricia Lebensohn, MD	Principal Investigator, Family Medicine Representative	Professor of Family and Community Medicine, Arizona Center for Integrative Medicine, University of Arizona
Audrey Brooks, PhD	Project Director	Research Associate, Arizona Center for Integrative Medicine, University of Arizona
Maryanna Klatt, PhD	ACIMH Representative	Associate Professor, Department of Family Medicine, The Ohio State University College of Medicine
Victoria Maizes, MD	Family Medicine Representative	Executive Director, Arizona Center for Integrative Medicine, Professor of Clinical Medicine, Family Medicine and Public Health, University of Arizona
Hilary McClafferty, MD, FAAP	Pediatrics Representative	Director Pediatric Integrative Medicine in Residency, Interim Fellowship Director, Assistant Professor, Pediatrics and Medicine, University of Arizona
Eden Wells, MD, MPH, FACPM	Preventive Medicine Representative	Clinical Associate Professor, Epidemiology, Director, Preventive Medicine Residency, University of Michigan School of Public Health
Ana Marie Lopez, MD, MPH, FACP	Internal Medicine Representative	Professor of Medicine and Pathology, Medical Director, Arizona Telemedicine Program, University of Arizona Cancer Center
Mary Jo Kreitzer, PhD, RN, FAAN	Nursing Representative	Director, Center for Spirituality & Healing; Professor, School of Nursing, University of Minnesota
Mary S. Koithan, PhD, RN, CNS-BC, FAAN	Nursing Representative	Associate Dean for Professional and Community Engagement, Associate Professor, University of Arizona College of Nursing
Jeannie K. Lee, PharmD, BCPS, CGP, FASHP	Pharmacy Representative	Assistant Professor, Department of Pharmacy Practice & Science, University of Arizona College of Pharmacy
Doug Taren, PhD	Public Health Representative	Associate Dean of Academic Affairs, Professor of Public Health, Mel and Enid Zuckerman College of Public Health, University of Arizona
Robert Rhode, PhD	Behavioral Health Representative	Adjunct lecturer in Department of Psychiatry, Arizona Health Sciences Center, University of Arizona
Elizabeth Goldblatt, PhD, MPA/HA	ACCAHC Representative	ACCAHC Chair, American College of Traditional Chinese Medicine (ACTCM) & Doctor of Acupuncture and Oriental Medicine (DAOM) Academic Council and Faculty
Irene Sandvold, DrPH, FACNM, FAAN	HRSA Representative	Project Officer, Medical Training and Geriatrics Branch, Division of Medicine and Dentistry, Bureau of Health Workforce, Health Resources and Services Administration, US Department of Health and Human Services

ACCAHC: Academic Consortium for Complementary & Alternative Health Care; ACIMH, Academic Consortium for Integrative Medicine & Health; HRSA, Health Resources and Services Administration.

RESULTS

The Competencies

The following 10 meta-competencies for training in integrative primary healthcare were endorsed by the NCIPH InPLT in February 2015. As the online curriculum develops over the next 2 years, these meta-competencies will guide the knowledge and skills that will be incorporated into the curriculum.

Integrative Health Competencies for Primary Care Professionals

1. Practice patient-centered and relationship-based care.
2. Obtain a comprehensive health history that includes mind-body-spirit, nutrition, and the use of conventional, complementary, and integrative therapies and disciplines.
3. Collaborate with individuals and families to develop a personalized plan of care to promote health and wellbeing that incorporates integrative approaches including lifestyle counseling and the use of mind-body strategies.
4. Demonstrate skills in utilizing the evidence as it pertains to IH.
5. Demonstrate knowledge about the major conventional, complementary, and integrative health professions.
6. Facilitate behavior change in individuals, families, and communities.
7. Work effectively as a member of an interprofessional team.
8. Engage in personal behaviors and self-care practices that promote optimal health and wellbeing.
9. Incorporate IH into community settings and into the healthcare system at large.
10. Incorporate ethical standards of practice into all interactions with individuals, organizations, and communities.

Discipline-specific Competencies

Having established these shared competencies, we are now engaged in the process of working to elaborate the discipline-specific sub-competencies that will translate the meta-competencies into the specific, measurable integrative health knowledge, skills, and behaviors required for practice in each profession. Under the leadership of the InPLT member within each discipline and with support from the NCIPH staff, a committee has been assembled within each of the participating disciplines. Each committee is working to develop the elements that will ultimately define how their primary care profession integrates into their training programs the concepts described in the meta-competencies. For example, the training for pharmacists in IH might require more depth of knowledge around the use of dietary and herbal supplements than that needed for behavioral health professionals. An acupuncturist knows Chinese herbs very well and has a working knowledge of supplements and herb-drug interaction but has limited knowledge of pharmaceuticals. Similarly, there will be differences between the specific competencies for pediatricians and internists. Within nursing, competencies of nurse practitioners and nurse-midwives will differ from those of registered nurses working within primary care settings. In public health, the meta-competencies were mapped to the appropriate public health competencies and standards[26] to guide how IH can be more integral within healthcare systems. Some examples of the discipline-specific sub-competencies are provided in Table 3.

Although the 45-hour NCIPH online curriculum will not be able to address every sub-competency defined for every discipline, our goal is to identify the elements that are shared across the professions and use these as a map to guide curriculum development. This process is underway, with many of the particpating disciplines having already completed their work in writing and refining the sub-competencies. Our hope is that in addition to providing a framework for NCIPH curriculum development, the work done by each discipline will serve to move its profession forward—toward wider concensus on the importance of IH and ultimately to adoption of these competencies as part of the discipline-specific accreditation process.

Competencies Adoption Process

To identify the potential facilitators and obstacles to adoption of the meta-competencies and discipline-specific sub-competencies within the participating disciplines, a competencies adoption questionnaire was created. The questionnaire was designed as a tool for mapping the initial competencies adoption strategy for each discipline and then following that process over time. The questionnaire was administered at the InPLT meeting in February 2015. Responses were discussed at the meeting and stimulated a brainstorming process around adoption among attendees.

The competencies adoption questionnaire consisted of 6 primarily open-ended questions: (1) identify specific goals to facilitate adoption in your field; (2) assess the readiness of your field to adopt IH competences using a 10-point rating scale (1=not at all ready to 10=extremely ready); (3) list 3 factors to facilitate adoption; (4) list 3 potential obstacles; (5) identify strategies to facilitate adoption and overcome potential obstacles in your field; and (6) identify organizations or individuals to facilitate dissemination. Thirteen InPLT members completed the questionnaire. Participants completing the questionnaire were from family medicine (n=4), pediatrics (n=1), internal medicine (n=1), preventive medicine (n=1), nursing (n=2), pharmacy (n=1), public health (n=1), behavioral health (n=1), and the Academic Consortium of Complementary and Alternative Health Care (ACCAHC) representing the licensed CAM professions (n=1). The questionnaires were collected and responses reviewed after the meeting by NCIPH staff to identify themes across the disciplines and items.

Table 3 Examples of Profession-Specific Sub-competencies by Meta-competency

Meta-competency/Sub-competency	Profession
1. Practice patient-centered and relationship-based care.	
• Recognize the value of relationship-centered care as a tool to facilitate healing. • Demonstrate respect and understanding for patients' interpretations of health, disease, and illness that are based upon their cultural beliefs and practices. • Demonstrate the ability to reflect on elements of patient encounters, including personal bias and belief, to facilitate understanding of relationship-centered care.	Family Medicine
• Provide care that is person-centered and relationship-based. • Employ effective educational strategies that encourage patient engagement in symptom self-management and strategies that improve whole-person wellbeing.	Nursing
7. Work effectively as a member of an interprofessional team.	
• Demonstrate respect for peers, staff, consultants, and CAM practitioners who share in the care of patients. Knowledge and acceptance need to begin within medical culture. Consider the importance of school coaches/instructors if appropriate for the child's wellbeing: most commonly needed for mental health/ behavioral issues.	Pediatrics
• Engage diverse health professionals who complement pharmacists' expertise to develop strategies to meet specific patient, care partner, and community health needs. • Demonstrate respect for diverse conventional, complementary, and integrative professionals who share in the care of patients. • Identify differences among diverse health systems and models used by conventional, complementary, and integrative professionals. • Participate in professional and interprofessional development that improves team performance and quality of care while ensuring that care is delivered safely, effectively, and efficiently.	Pharmacy
9. Incorporate integrative healthcare into community settings and into the healthcare system at large.	
• Evaluate outcomes of integrative healthcare in community settings. • Establish performance management systems for delivering integrative healthcare services. • Include the use of cost-effectiveness, cost-benefit, and cost-utility analysis in programmatic prioritization and decision making.	Public Health
• Demonstrate a working understanding of available healthcare resources, both conventional and complementary, in order to address patient and community needs. • Influence community or population health through education, community initiative, and other efforts to shape public and professional healthcare policy. • Practice cost-effective healthcare through evidence-informed management, preventive strategies and lifestyle management with an aim of alleviating the overall healthcare burden.	Naturopathy

Despite the diversity of fields represented and varying degrees of development of IH competencies in the fields, several common themes emerged from this informal analysis. The necessity of wide dissemination via multiple avenues was a common goal and identified as an important factor in promoting adoption. Dissemination strategies ranged from traditional avenues such as publications and presentations at national conferences to more grassroots avenues such as lectures, networking with colleagues, faculty and program directors, and working within professional organizations to garner support. Suggestions for widespread dissemination included obtaining the support of specific influential organizations, such as national councils of colleges or educational organizations, accrediting bodies and program directors, and aligning sub-competencies with educational goals and competencies of national organizations within the field. Specific attributes of the proposed curriculum thought to facilitate adoption were identified, including high-quality content, cost, ease of use, and ability to meet an existing curricular need. Systemic factors influencing adoption, including the presence of an evidence base for curriculum content and the need for reimbursement for IH services in primary care, were also identified. Readiness for adoption ratings ranged from 3 to 10, with an average of 7 indicating that most participants believed fields were leaning toward adoption.

Obstacles to adoption were also identified. The most frequently mentioned pertained to competing priorities and finding time in the curriculum. Also mentioned was a lack of knowledge of or interest in IH. Bias against or resistance to IH principles was also viewed as an obstacle. Curriculum attributes such as medically-focused language, educational level, and implementation costs may either facilitate or impede adoption.

The competencies adoption form generated discussion and cross-fertilization of ideas for moving the IH competencies forward within specific disciplines. Srategies for adoption and dissemination were described and will be used to evaluate and track the adoption process moving forward. Identification of potential obstacles provided insight for both the adoption process and curriculum development.

DISCUSSION

As the competencies adoption process described above indicates, although we have succeeded in developing a set of consensus competencies for the primary care professions in IH, the next phase of the NCIPH project promises new challenges. The competencies will have an impact only if they are coupled with a high-

quality, relevant curriculum that can be incorporated into primary care training programs across the country in order to prepare trainees to actually become competent in IH. The NCIPH team is now working to develop an online program keyed to the interprofessional meta-competencies, which will be piloted later this year in training programs and subsequently revised and refined for wider distribution by 2017. The course will be available online, free of charge, during the grant period. Currently, 186 primary care educational training programs have expressed interest in piloting the course.

A number of potential barriers will need to be addressed during the course of this project, including finding time in already overloaded schedules, securing buy-in and commitment from overextended faculty and program directors, and addressing the lingering criticisms of IH as non–evidence-based that persist in some sectors of the primary care system. One major challenge in the implementation of this new curriculum will be the fact that, as we have learned from other curriculum development projects such as the "Integrative Medicine in Residency" programs for family medicine and pediatrics,[27-29] gaps in training programs cannot be filled by online educational content alone. Significant attention must also be paid to developing needed onsite experiential and clinical activities in order to assess the impact of the knowledge in IH skills. Faculty development to prepare onsite faculty for this role is an essential piece of this process as well. A final challenge will be the development of effective strategies to assist educators in measuring the degree to which their learners have mastered the competencies. Despite these challenges, our intent is that these competencies will become required material for all primary healthcare professions, embraced by accrediting agencies as a critical and necessary element of primary healthcare training, and that the availability of a high-quality, evidence-based curriculum will facilitate the implementation of these competencies with long-term benefit to the healthcare system.

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