Meeting Evolving Workforce Needs: Preparing Psychologists for Leadership in the Patient-Centered Medical Home

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Behavioral health integration in the patient-centered medical home (PCMH) offers opportunities for psychologists to play leadership roles. Widespread practice transition to PCMH models of care are expected to substantially impact the psychology workforce. Conservative estimates suggest that approximately 90% of the 93,000 clinically trained psychologists would be required to meet projected need in these settings. This has implications for how health service psychologists are trained. In addition to relevant clinical competencies, they must be versed in system/program development, administration, evaluation, quality improvement, and interprofessional collaboration. Herein, the need to introduce psychologists to the many potential roles in the PCMH is underscored. Inherent to effective work in the PCMH is the synthesis of professional competences in addition to those traditionally included in psychology training. We offer a competency-based PCMH training framework adapted from levels of intensity in the Education and Training Guidelines: A taxonomy for education and training in professional psychology health service specialties (American Psychological Association, 2012). Practical examples of training activities, taking into account available programmatic resources, also are presented.

Keywords: patient-centered medical home, health service psychology, training

The health care landscape has been transforming rapidly over the past few decades, presenting both challenges and opportunities for psychology as a profession. The Patient Protection and Affordable Care Act (2010; hereafter, “ACA”) is a major contributor to the transformation and is designed to address the fragmented and uncoordinated health care system, while reshaping the ways in which physical and behavioral health care are conceptualized and delivered. A primary focus of the ACA is to address the health of the population at large through access-

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Correspondence concerning this article should be addressed to Kristi S. Van Sickle, School of Psychology, Florida Institute of Technology, 150 West University Boulevard, Melbourne, FL 32901. E-mail: kvansickle@fit.edu
sible and affordable care. A guiding principle for transformation of primary health care has been the Triple Aim (Berwick, Nolan, & Whittington, 2008). The Triple Aim is described as a “simultaneous pursuit of three aims: improving the experience of care, improving the health of populations, and reducing per capita costs of health care” (p. 759).

To this end, the ACA explicitly encourages a health care system that includes integration of behavioral health care into primary medical settings. This will require dramatic change in the models currently in place, affecting system structure, program development and evaluation, as well as the delivery of medical, behavioral, and mental health services (Rozensky, 2014). When there is a change this large, there are numerous opportunities for disciplines that have previously been underrepresented to take prominent roles. ACA’s focus on interprofessional education and practice, accountability, and cost effectiveness offers significant opportunities for psychologists to assume leadership roles locally and nationally, and offers guidance about the education and training that will optimally prepare psychologists for practice in this new health care environment (Rozensky, 2014).

Anticipating recent changes in health care delivery models, Belar (2009) speculated that our discipline could realize “a figure-ground reversal in psychology education and training in which the background [serves] as broad and general preparation in the domain of health, with mental health just one subset in that domain” (p. 58). Further, she suggested that the increased emphasis on primary health care would be a catalyst in the process of a shift in curriculum reversal. This has come to fruition, with competency-based education and training in health service (Health Service Psychology Education Collaborative [HSPEC], 2013) and primary care psychology (McDaniel et al., 2014) receiving heightened attention.

The patient-centered medical home (PCMH), a term coined in pediatrics in 1967 (American Academy of Pediatrics Council on Pediatric Practice, 1967), is a critically important structure in which psychology should lead the integration of behavioral and physical health in primary and specialty care contexts (Beacham, Kinman, Harris, & Masters, 2012; Kaslow, Kapoor, Dunn, & Graves, 2015). Although often thought of as being housed in a discrete physical space (e.g., primary care clinic), the PCMH embodies a comprehensive philosophy of whole-person care that extends beyond space (Kazak, Nash, Hiroto, & Kaslow, 2015). The spirit of the model fosters seamless access to, and coordination of, care centered on the needs, circumstances, values, and preferences of the patient. The care coordination should be based in a hub, which should be where the patient most comfortably “resides.” The hub may be based on life cycle stage, such as pediatrics (Asarnow, Kolko, Miranda, & Kazak, 2015) or geriatrics (Hiroto, Rasin-Waters, Wray, & Glueckauf, 2015), or in a specialty area most relevant to the patient, such as women’s health, infectious disease, or mental health (Druss et al., 2010).

Psychologists have a long history in primary care of providing education to primary care providers, performing assessment and intervention services, and studying a wide variety of biopsychosocial issues (Newman & Rozensky, 1995). Although some believe that parsing behavioral health competencies by discipline is not useful, given the growing emphasis on the PCMH, other authors have heralded the unique and substantive contributions psychologists trained in integrated care can make to interprofessional PCMH practices and systems (Blount & Miller, 2009; McDaniel & Fogarty, 2009; Rozensky, 2012, 2014; Runyan, 2011). However, in order to increase their numbers and impact in these settings, psychologists must be equipped with foundational and functional competencies specific to psychology in the PCMH that overlap with and extend beyond those applicable to general psychology and primary care psychology in both breadth and depth (Nash, Khatri, Cubic, & Baird, 2013). They must also solidly grasp the primary care ethic that reflects an appreciation, openness, and willingness to engage in the interprofessional primary care environment (Cubic, Mance, Turgesen, & Lamanna, 2012).

Inclusiveness of the language and workforce is a crucial element for optimal functioning in the PCMH. The workforce in primary care and the PCMH is diverse and includes myriad behavioral health professions, including psychology, psychiatry, social work, marriage and family therapy, and others, for whom interprofessional provider-level competencies were recently delineated (Kinman, Gilchrist, Payne-Murphy, & Miller, 2015). It is estimated that psy-
Psychologists currently represent about one fifth of the behavioral health workforce (Miller, Petterson, Burke, Phillips, & Green, 2014); thus, psychologists alone will not and cannot fulfill the rapidly emerging workforce needs for integrated behavioral health expertise. However, psychologists with specific training in the PCMH can facilitate and lead integration efforts at the local, organizational/systems, and policy levels.

This article addresses three questions: (a) What are the competencies that comprise the knowledge, skills, and attitudes necessary for psychologists to facilitate and lead behavioral health integration in the PCMH?; (b) What is the anticipated workforce need for the PCMH?; and (c) What is the current status and need for training in PCMH competencies at the internship and postdoctoral levels? Practical examples of PCMH training activities are offered by level of training intensity and availability of training resources.

**PCMH Competencies**

Preparedness for work in the PCMH involves the “integration” of multiple sets of competencies (see Figure 1). Psychologist competencies in the PCMH extend horizontally and vertically. Certainly, it is necessary to train psychologists to provide hands-on clinical care in various collaborative care and integrated models with a variety of populations (horizontal). Additionally, psychologists must acquire vertical competencies to train and supervise other behavioral health providers, and contribute to the interprofessional health care team and larger systems in which the team resides, such as through program development, administration, and evaluation. Taken together, the foundation of health service psychologist training (HSPEC, 2013) and the competencies related to primary care (McDaniel et al., 2014) and interprofessional collaborative practice (Interprofessional Education Collaborative [IPEC], 2011) provide the learner (i.e., student, psychologist, and/or trainer) with the knowledge, skills, and attitudes required for work and leadership in PCMHs and other health care systems.

**Health Service Psychologist Training**

The HSPEC blueprint for education and training provides a strong basis for PCMH training by specifying a developmental framework for all health service psychology education and training that includes competencies to be achieved at each level of the training sequence (HSPEC, 2013). Inherent in the training blueprint is the explicit goal of preparing psychologists to “engage in evidence-based practice that is patient-centered, culturally competent, effective, and informed by population-based data” (p. 1). This blueprint as a foundation for health service psychology training is remarkably consistent with elements of training for the PCMH. Health service psychologists are informed about health research and the context of health service delivery across contexts and systems. Another crucial emphasis is on development of psychologists who demonstrate a capacity for leadership within these systems and on interprofessional care provider teams. As shown in Figure 1, training psychologists to perform competently in PCMH practice, systems, and interprofessional cultures requires this health service psychologist foundation plus the additional PCMH-specific competencies.

**Figure 1.** Complementary and intersecting knowledge and competencies sets for optimal performance of psychologists in the patient-centered medical home.
Primary Care and Interprofessional Collaborative Practice Competencies

Competencies for psychology practice in primary care. The first of the pertinent competency domains and guidelines is articulated in the report of the Interorganizational Work Group on Competencies for Psychology Practice in Primary Care (McDaniel et al., 2014). These competencies are essential for individuals beginning their training in a primary care setting, as well as those shifting from a traditional mental health setting to a primary care context, as the two differ significantly with regard to the referral process and structure, goals for care, approach to intervention, and nature of documentation. The competencies outlined fall within six identified clusters: Science, Systems, Professionalism, Relationships, Application, and Education. The authors outlined essential components and behavioral anchors for primary care psychology practice for each of the competencies within these clusters.

Certainly, for trainers and educators of psychologists as health service psychologists (HSPEC, 2013), this valuable resource may be the logical reference from which to work in developing curricula and competency benchmarks. However, the role of psychologists in the PCMH is an extension of this field and requires additional focused education and training. Thus, although competencies for primary care practice are necessary, they are not wholly sufficient for psychologists to become integral and indispensable members of PCMH teams, practices, and systems. Additional competencies outlined in the Core Competencies for Interprofessional Collaborative Practice can be seamlessly combined with the competencies for primary care psychology practice to comprise an ideal combination of knowledge, skills, and attitudes for the PCMH.

Core Competencies for Interprofessional Collaborative Practice (IPEC, 2011). Primary care and behavioral health providers are generally trained in discipline-specific silos with limited opportunities to train in delivering collaborative, patient-centered care (Hall et al., 2015). The Core Competencies for Interprofessional Collaborative Practice document (IPEC, 2011) underscores the need to extend beyond discipline-specific education to interactive training of interdisciplinary health care professionals. Created by professional associations representing nursing, medicine, public health, pharmacy, and dental education, and endorsed by the American Psychological Association (APA) and other professional associations, this document emphasizes learning the competencies necessary for team functioning at various levels of professional development across four domains: (a) Values/Ethics for Interprofessional Practice; (b) Roles/Responsibilities; (c) Interprofessional Communication; and (d) Teams and Teamwork. The competencies outlined are general so as to be adapted to each professional’s setting and organization, with a goal of training individuals from various health professions together in order to provide safer, better, patient-centered care and improve population health outcomes (IPEC, 2011).

In addition to identifying key competency domains needed to prepare psychologists for interprofessional work, the IPEC (2011) document also explicitly acknowledges barriers to the adoption of these competencies that are especially salient to health service psychology training programs, including inadequate administrative support, need for opportunities for collaboration, time considerations for students, faculty training in interprofessional education, standards of assessing interprofessional competencies, and recognition by accrediting bodies. Nonetheless, to adequately prepare trainees for work in the health care arena, it is imperative that health service psychology training programs are aware of the interprofessional competencies and consider ways in which they may expand opportunities for interprofessional training (Cubic et al., 2012). This includes exposure to PCMH competencies and standards/guidelines by increasing levels of training intensity (recommendations are shown in Table 1), along with relevant training activities at each level of desired training intensity and program resources (suggestions are shown in Table 2).

Joint Principles: Integrating Behavioral Health in the PCMH

Beyond training as health service psychologists and developing the requisite competencies for primary care and interprofessional practice, psychologists require specific knowledge, skills, and attitudes to lead integration efforts within the PCMH context, which is characterized by (a)
comprehensive, team-based care; (b) patient/family-centered care with a “whole person orientation;” (c) coordinated care across the health care system and community; (d) accessible health care services; and (e) quality and safety (NCQA, 2014, 2016). More recently, the PCMH context has become characterized by an integration of behavioral and physical health care. Specifically, in 2014, the Joint Principles: Integrating Behavioral Health in the Patient-Centered Medical Home (hereafter, “Joint Principles”; Baird et al., 2014) honed the PCMH model by explicitly integrating behavioral health into each principle. The Joint Principles explicitly declare the need for evidence-based screening, assessment and intervention for (a) mental/behavioral health, (b) substance use, and (c) health behavior change. The National Committee for Quality Assurance’s (NCQA’s) Standards and guidelines for NCQA’s patient-centered medical home (NCQA, 2014) designed for the PCMH serve to operationalize the Joint Principles. Since 2008, the NCQA has offered the largest PCMH recognition program for primary care practices aiming to adopt the model based upon specific, well-defined criteria. Further, such practices may be incentivized to gain recognition, such as through the Health Resources and Services Administration’s (HRSA’s) Patient-Centered Medical/Home Initiative (http://bphc.hrsa.gov/). The Joint Principles have implications for health service psychologists practicing in PCMH settings and for how psychologists are trained (Baird et al., 2014).

NCQA standards and guidelines underscore the need to introduce psychology trainees to the relevant domains and their essential components, as well as to the breadth and depth of their potential roles in the PCMH. Not only must they have the requisite knowledge, skills, and attitudes related to evidence-based approaches for clinical application in direct clinical service delivery, they also must be trained to facilitate program development, implementation, evaluation, and quality improvement efforts on a population health level. Of particular import to the psychologist working in the PCMH, four of the six 2014 NCQA PCMH Guidelines and Standards involve robust behavioral health integration criteria, including elements and factors specific to behavioral health practices, some of which are “must pass” or “critical elements” to achieve recognition (e.g., identifying patients for care management based on criteria that include behavioral health conditions and social determinants of health). In addition, a recent report jointly released by HRSA and the Substance Abuse and Mental Health Services Administration (SAMHSA; SAMHSA-HRSA Center for Integrated Health Solutions, 2014) offers an interpretation of all six of the NCQA standards from a behavioral health perspective, regardless of whether or not the standard requires behavioral health integration for NCQA recognition. For example, Standard 6 requires practices to measure and report its performance with respect to clinical quality, resource use, care coordination, and patient experience, as well as to have a continuous quality improvement plan. The report suggests that these measures could include specific behavioral health foci, such as behavioral health and substance use screenings, behavioral health emergency department visits, measures of behavioral health integration, and patient satisfaction surveys that ask questions about behavioral health concerns and self-management support (SAMHSA-HRSA Center for Integrated Health Solutions, 2014). Thus, a review of the PCMH Standards and Guidelines through a health-service-psychology training lens makes clear that additional targeted training in program evaluation, outcomes assessment, quality improvement, and population health management strategies is warranted for psychologists to perform optimally in the PCMH (see Table 1).

Additionally, in 2014, patient-centered specialty practice (PCSP) program recognition became available. PCSP program recognition highlights specialty medical practices—including the traditional mental health practices for which most practicing psychologists and health service psychology trainees have been trained—that meet specific quality standards, and thus facilitates health care decision-making by employers, health plans, and patients. Although pursuing such recognition requires a significant commitment of resources, psychology practices may benefit from this recognition in terms of increased referrals via agreements with PCMHs, improved patient outcomes (Foy et al., 2010), and enhanced payment initiatives (Taylor, Lake, Nysenbaum, Peterson, & Meyers, 2011).
Projecting to Address the Need

Widespread practice transition to PCMH models of care are expected to substantially impact the psychology workforce as a result of decreased payment barriers and increased demand for mental and behavioral health services (Baird et al., 2014). Estimates for the actual number of psychologists needed to meet increased workforce demand do not yet exist, despite longstanding demands for a comprehensive workforce analysis to identify workforce needs in various areas as well as goodness-of-fit between needs and competencies of newly trained psychologists (Rozen- sky, Grus, Belar, Nelson, & Kohut, 2007). Recent recommendations regarding PCMH staffing (Dorrance, 2009, as cited in Hunter & Goodie, 2010) suggest a ratio of a 0.25 full-time behavioral health provider for every one full-time Primary Care Health Provider (e.g., physician or nurse practitioner). Thus, a conservative estimate of the behavioral health workforce need in primary care based on 209,000 primary care physicians (excluding physician extenders such as physician assistants and nurse practitioners) working in direct patient care (Miller et al., 2014) is 83,600 behavioral health clinicians. This is equivalent to approximately 90% of the 93,000 clinically trained psychologists estimated by APA’s Center for Workforce Studies 2015. Professional listservs and position announcement websites are replete with positions for psychologists who are trained in these settings, and results of a recent observational cross-case comparison study of 19 U.S. integrated primary care practices (Hall et al., 2015) suggest organizational difficulty in recruiting behavioral health clinicians with sufficient skills and experience for team-based care. Further, although the practice of psychology in the private sector will still be needed, a new emphasis on behavioral health in primary and secondary care settings undoubtedly will be associated with a substantial shift in jobs from independent practice to systems and integrated care practices (Nordal, 2012), many of which will be seeking PCMH recognition.

Training to Meet the Need

Given the anticipated demand and exceptional opportunities for health service psychologists in PCMHs (Beacham et al., 2012), there is an unprecedented need for psychologists to develop the competencies necessary for optimal levels of function in these settings. However, the requisite experience for psychology trainees to attain these competencies requires additional development, and when in the developmental sequence such education and training should occur must be determined.

Current Status of Training

There has been debate about when training in integrated care for psychologists should begin across the developmental spectrum of psychology education comprising graduate school, doctoral internship, and postdoctoral residency. For example, some have suggested that this aspect of training should be reserved for the postdoctoral period to preserve the generalist nature of predoctoral training (Talen, Fraser, & Cauley, 2005). However, increasing numbers of internship programs explicitly request that trainees have exposure to and/or experience in primary and/or secondary care settings prior to beginning internship. Consequently, an increasing number of doctoral and internship programs have begun to offer this training earlier in the developmental sequence to position their trainees competitively in the internship and health care marketplace. Similarly, a growing number of postdoctoral residencies offer such training. More specifically a search of the term “Primary Care” among internship sites in the Association of Psychology Postdoctoral and Internship Centers directory for 2016–2017 yielded a total of 440 (56.7%) sites that include the term “primary care” in their program description. This percentage was higher (64.7%; n = 121) in postdoctoral sites. For specific information on programs offering primary care training experiences, the Association of Psychology Postdoctoral and Internship Centers offers a Directory of Doctoral, Internship, and Postdoctoral Education and Training Programs in Primary Care Psychology.

One mechanism designed to meet this crucial need for workforce development is the Graduate Psychology Education (GPE) program, funded by the federal government at $7.9 million in Fiscal Year 2015. The GPE supports integrated health care training for underserved populations at the graduate, internship, and postdoctoral training levels
Doctoral internships and postdoctoral residencies in interdisciplinary health care delivery environments, such as Veterans Affairs Medical Centers, the Department of Defense, academic health science centers, children’s hospitals, and community health centers, provide resource rich environments to facilitate advanced psychology training in interprofessional practice, an increasingly critical competency in the current health care environment. Training in such settings, in which the clinical model of care involves close collaboration and coordination within a team of interdisciplinary health care professionals, provides enhanced preparation for emerging psychologists to practice in or in close collaboration with a PCMH (American College of Physicians, 2010).

Proposed Training Activities for the PCMH

Those who devote their careers to training health service psychologists are well versed in the challenges of keeping up with rapid changes in the health service delivery environment that affect individuals across all stages of professional development (i.e., doctoral education, internship, postdoctoral training, and post licensure). The overarching goal is to create opportunities for learners to acquire the necessary and developmentally sequenced levels of knowledge, skills, and attitudes to be competent psychologists and integral team members within the evolving health care marketplace.

Certainly, working in primary care and the PCMH does not suit everyone’s skill set or preferred way of practicing. Professional psychology is a diverse enterprise comprised of a multiplicity of practice domains and career pathways.

Thus, among the key challenges in developing a cadre of health service psychologists to meet the rising service need is to identify those individuals who have the requisite interest and expertise for health care practice settings. Conversations with health system behavioral health administrators underscore this point. They emphasize that although they have an immediate need to hire, meeting that demand with competent, experienced, knowledgeable, and skilled psychologists significantly lessens the risk of poor fit for the work, high turnover, and poor patient care. This then allows time and financial resources that otherwise would be utilized in repair to instead be allocated to moving toward excellence in serving the needs of patients (M. Whittingham, personal communication, September 23, 2014).

Efforts to incentivize psychologists to work in integrated care settings with underserved populations have also been implemented, such as the National Health Service Corps loan repayment program. These efforts have had mixed results; it remains difficult to attract and retain psychologists, particularly licensed, with the necessary competence to work effectively in integrated care. Training programs cannot be relied upon solely to meet demand if it is to be met in a timely fashion. Creating the needed workforce requires training future psychologists, practicing psychologists, and trainers themselves. However, organizations new to integration frequently lack the internal expertise and resources to train new employees in integrated care, and practice leaders may not understand the requisite competencies. Thus, they may underestimate the time and resources needed for training new clinicians until integration efforts fail or there is significant employee turnover (Hall et al., 2015).

Organizations would be well advised to invest in an “internal expert” who can help train other employees and contribute to the creation of a “common integrated care training manual, that includes significant opportunities for provider shadowing and “on-the-fly supervision” for on-boarding clinicians (Hall et al., 2015). Development of an “internal expert” may involve enrolling employees in existing behavioral health certification programs (e.g., University of Massachusetts—Worcester). Further, a practical strategy of systematically employing a grassroots approach through state psychological associations to offer training for practicing psychologists and trainers may provide the necessary reach to achieve broader impact.

Competency-Based Training Framework for PCMH

Given the variability in opportunities, training situations, and venues, and financial and personnel resource availability, we acknowledge that the range of training intensity and activities along the developmental sequence from predoctoral (graduate school and internship) and postdoctoral ex-
experiences will inevitably differ across training programs and settings. It may be helpful to begin conceptualizing training for psychology practice in the PCMH in terms of levels of training intensity for the three sets of intersecting competencies shown in Figure 1.

Toward this end, we propose a competency-based training framework that incorporates levels of intensity adapted from the *Education and Training Guidelines: A Taxonomy for Education and Training in Professional Psychology Health Service Specialties* (APA, 2012). The goal of the guidelines is “to facilitate clear and consistent communication in the use of terminology for training programs, students, professional organizations, and members of the public” (p. 4). It is noteworthy that the guidelines and taxonomy were developed to inform training in specialties versus broad and general training. The organizational structure specified by this APA (2012) taxonomy includes the following levels of educational experience, organized by level of training intensity from least to most: (a) exposure, (b) experience, (c) emphasis, and (d) major area of study. Our purpose in the use of this taxonomy is essentially the same as the taxonomy’s original purpose: “to help to describe the recommended type and intensity of education and training opportunities within each stage of the education and training sequence” (p. 4).

Training for the PCMH does not constitute training for a psychology specialization per se, as per the original usage of the taxonomy particularly if one regards health service psychology as experiencing a figure-ground reversal (Belar, 2009). Rather, we regard training in primary care, and the PCMH, minimally at the level of exposure, as essential to broad and general training in psychology. Nonetheless, we noted that the taxonomy was used by APA to categorize training programs in primary care (Rozensky et al., 2015), and thus we believe that utilizing an adapted version of the existing taxonomy promotes consistency and provides a solid platform from which to build. The taxonomy also provides a common language that can be applied broadly to training in health service psychology (Rozensky et al., 2015).

A Proposed Taxonomy for Competency-Based PCMH Training

The taxonomy, organized by level of training intensity from lowest to highest is: (a) exposure, (b) experience, (c) emphasis, and (d) major area of study. Herein, we reviewed the three distinct but overlapping and intersecting areas of competencies and standards/guidelines as elements of training that would be considered “optimal” for psychologists in the PCMH (shown in Figure 1). These are presented in Tables 1 and 2.

**Exposure.** All health service psychologists, regardless of their interest in working within a PCMH, can benefit, via enhanced referral and improved interprofessional communication from awareness of NCQA’s PCMH (NCQA, 2014) and PCSP recognition programs (NCQA, 2016). Similar to the application of the taxonomy to primary care psychology, the exposure level of intensity (limited introduction of 1 to 4 hr per week; e.g., one to two courses) represents an education and training opportunity that is limited but is identified by the program as a structured activity and would be seen as an opportunity to acquaint an individual with PCMH practices and systems (APA, 2012). Beyond knowing that primary care, interprofessional, and PCMH competencies/standards/guidelines exist, individuals at this level need to demonstrate a knowledge of the content of each of these important documents, some minimal skill acquisition, and a more enhanced appreciation for the value of these practices and the role of psychologists in these contexts (attitudes).

**Experience.** The experience level (one or more minor rotations 1 day a week; e.g., one to two courses and a practicum) offers learning opportunities that are clearly distinct in type and intensity, with the specific parameters of knowledge acquisition, scientific study encountered in PCMH practice settings and associated systems, and practical experience associated with greater skill acquisition and more sophisticated attitudes. A programmatic “experience” would go beyond simply acquainting a student with a specialty, but would allow more acquisition of knowledge, skills, and attitudes than simply an exposure to actual PCMH function, designation and systems. Experience at this level of intensity necessarily includes in vivo or real world experience in the PCMH likely in the form of a practicum or clinical rotation (APA, 2012, p. 7).
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<th>Level of training intensity</th>
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| **Exposure**               | **Knowledge of**: PCMH definitions, designation, and relevance to health care and psychology. Commonalities and differences between integrated models of health care and PCMH. Different types and relevance of competencies from different policy bodies, including: 1. Competencies for Psychological Practice in Primary Care (American Psychological Association, 2012; McDaniel et al., 2014) 2. Core Competencies for Interprofessional Collaborative Practice (Interprofessional Education Collaborative [IPEC], 2011) 3. PCMH Guidelines and Standards (National Committee for Quality Assurance [NCQA], 2014) 4. Patient-Centered Specialty Practice Guidelines and Standards (NCQA, 2014) **Competencies for Psychological Practice in Primary Care** Familiarity with essential knowledge, skills, and attitudes, as well as behavioral anchors delineated within each of six competency clusters (refer to Tables 2 & 3 in McDaniel et al., 2014) Cluster 1. Science Cluster 2. Systems Cluster 3. Professionalism Cluster 4. Relationships Cluster 5. Application Cluster 6. Education **Core Competencies for Interprofessional Collaborative Practice** Knowledge of core competency domains: Domain 1: Values/Ethics for Interprofessional Practice Domain 2: Roles/Responsibilities Domain 3: Interprofessional Communication Domain 4: Teams and Teamwork PCMH Guidelines and Standards (NCQA, 2014) Knowledge of standards and summary of requirements for each: Standard 1: Patient-Centered Access Standard 2: Team-Based Care Standard 3: Population Health Management Standard 4: Care Management Support Standard 5: Care Coordination and Transitions Standard 6: Performance Measurement and Quality Improvement **Experience** **Competencies for Psychological Practice in Primary Care** In addition to Knowledge components listed in Exposure, trainees should Demonstrate Skills and Attitudes inherent to Essential Components and Behavioral Anchors in at least half of six Clusters. Competencies may be demonstrated in simulated or in vivo experiences (refer to Tables 2 & 3 in McDaniel et al., 2014). **Interprofessional Competencies** Familiarity with components of IPEC Core Competencies Learning Continuum 1. Articulate Knowledge, Skill/Behaviors included in Learning Continuum including Elements of “Exposure: Introduction”, “Immersion: Development” and “Competence: Practice” 2. Apply elements to each of Constructs: Collaboration, Communication Values and Ethics to Roles and Responsibilities of psychologists as part of interprofessional team 3. Participate in and demonstrate skills/behaviors as stipulated by “Immersion: Development” level of learning continuum across each of three constructs **Standards and Guidelines (NCQA, 2014)** Knowledge of basic structure of Guidelines and Standards, including understanding of concept of “must-pass” elements and “critical factors” **Knowledge and Skills** related to Standards (including Elements) Specific to Behavioral Health Integration: Standard 2: Team-Based Care Element 2B: Medical Home Responsibilities Element 2D: The Practice Team Standard 3: Population Health Management Element 3B: Clinical Data Element 3C: Comprehensive Health Assessment Element 3E: Implement Evidence Based Decision Support Standard 4: Care Management Support Element 4A: Identify Patients for Care Management Standard 5: Care Coordination and Transitions Element 5B: Referral Tracking and Follow-up
Emphasis. Defined as one major rotation (16 to 40 hr per week; e.g., four courses and two practicums), a programmatic emphasis permits a structured, in-depth opportunity for knowledge acquisition, scientific study in a given specialty area, and practical experience. This level of intensity includes more depth and breadth of in vivo or real-world experience in the PCMH than would be offered at the experience level. Again, these training activities would include not only clinically focused practicum or rotations but also system-level experiences (e.g., interprofessional team involvement, PCMH administration participation). As a result, there would be not only greater knowledge, skill, and attitude acquisition, but also an integration of the three.

Major area of study. This is the highest, most comprehensive level of education and training opportunity with respect to the development of knowledge, skills, and attitudes relative to the intensity and amount of involvement in training to acquire those competencies. This level of training is defined as the equivalent of two or more major rotations (16 to 40 hr per week; e.g., 2 to 3 years of involvement, PCMH administration participation). As a result, there would be not only greater knowledge, skill, and attitude acquisition, but also an integration of the three.

### Table 1 (continued)

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<th>Level of training intensity</th>
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<td><strong>Emphasis</strong></td>
<td><strong>Competencies for Psychological Practice in Primary Care</strong></td>
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<td>In addition to Knowledge and Skills listed in Exposure and Experience, trainees should Demonstrate Skills and Attitudes inherent to Essential Components and Behavioral Anchors in each of six Clusters. Competencies should be demonstrated in “real world” clinic environments within context of interprofessional teams and PCMH practices (refer to Tables 2 &amp; 3 in McDaniel et al., 2014).</td>
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<td><strong>Interprofessional Competencies</strong></td>
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<td>Demonstrate of components of IPEC Core Competencies Learning Continuum as defined by Entry-Level and Summative Assessment across each of three constructs.</td>
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<td><strong>Guidelines and Standards (NCQA, 2014)</strong></td>
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<td>Knowledge, Skills, and Attitudes to interpret and apply Guidelines and Standards from a behavioral health integration perspective (SAMHSA-HRSA, 2014)</td>
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<td>Major area of study</td>
<td><strong>Includes components and competencies of all less intensive levels.</strong></td>
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<td></td>
<td>Addition of acquisition of programmatic, system and population-based outcomes research and policy formation (Kaplan, Spittel, &amp; David, 2015)</td>
</tr>
</tbody>
</table>

**Note.** Adapted from Education and Training Guidelines: A Taxonomy for Education and Training in Professional Psychology Health Service Specialties (APA, 2012). Refer to “Competencies for Primary Care Psychology Practice Competencies for Psychology Practice in Primary Care” (McDaniel et al., 2014), Core Competencies for Interprofessional Collaborative Practice (IPEC, 2011), and NCQA’s (2014) Standards and Guidelines. PCMH = patient-centered medical home.

### Table 2

**Training Activities by Level of Intensity and Program Resources**

<table>
<thead>
<tr>
<th>Level of training intensity</th>
<th>Program resources</th>
<th>Possible training activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure</td>
<td>Modest</td>
<td>Reading assignments in existing courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trainees belong to relevant listservs for discussions of timely topics and threads</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissemination of PCMH information and resources</td>
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<tr>
<td></td>
<td></td>
<td>Health psychology course that includes assignment in interprofessional and/or PCMH assignments</td>
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<tr>
<td></td>
<td></td>
<td>Attend clinical didactics/colloquia by PCMH experts</td>
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<tr>
<td></td>
<td></td>
<td>Shadow PCMH providers in clinic</td>
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<tr>
<td></td>
<td></td>
<td>Directed readings; discussion groups</td>
</tr>
<tr>
<td>Experience</td>
<td>Moderate</td>
<td>Primary care psychology course or modules</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCMH training for interested faculty members</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practicum/rotation in PCMH setting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments in PCMH program development and outcomes evaluation</td>
</tr>
<tr>
<td>Emphasis</td>
<td>Substantial</td>
<td>Multiple PCMH clinical placements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collaboration with PCMH practice team and administration on:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outcomes evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality improvement</td>
</tr>
<tr>
<td>Major</td>
<td>Immersion</td>
<td>Half- to full-time PCMH clinical placements, including clinical service delivery and administrative functions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supervision of predoctoral and internship trainees as well as other health professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Population health research (including system and broad population)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demographic, medical, and social epidemiological perspectives on population health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality improvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy development related to PCMH formative and summative outcomes relative to system, community, and broader population.</td>
</tr>
</tbody>
</table>

**Note.** PCMH = patient-centered medical home.
didactics, supervised experience, and dissertation or research project). Given the requisite generalist focus of accredited health service psychology doctoral programs, a major area of study would most likely be considered a specialization offered at internship and/or postdoctoral fellowship training. The primary distinction of this level from emphasis, besides the number of PCMH practice hours required, would be the inclusion of relevant research/scientific and policy-level activities.

**Challenge of Training and Resource Availability**

Availability of experienced trainers and the availability of training opportunities present significant barriers to workforce development in primary care behavioral health (Hall et al., 2015), let alone the challenge of finding psychologists with expertise in PCMH. Therefore, directors of training, faculty, and supervisors may find the prospect of incorporating additional and constantly evolving health care system topics into already exhaustive training curricula to be particularly daunting. A common concern voiced by trainers and those responsible for training in medical settings, primary care, and the PCMH is the lack of available resources to adequately support training activities. Available resources may be in the form of financial support, available time to devote to topics within the curriculum, sufficient faculty PCMH expertise, and clinical setting availability.

Preparing psychologists for the PCMH need not be an “all or none” proposition. For example, in Spring 2016, APA Division 38, the Society for Health Psychology, introduced the Integrated Primary Care Psychology Curriculum Gunn et al. (2016), developed by The Clinical Health Services Council of APA Division 38, Society for Health Psychology (2016). The goal of the curriculum is to expose psychology graduate students to the field of primary care psychology and to broaden the understanding of the unique behavioral health skill sets and competencies required for work and leadership roles in integrated primary care. The curriculum is freely available and can be used as a resource by psychology graduate programs and training sites to prepare students for work in the newly developing models of collaborative, population-based health care. The course itself is comprised of four foundation modules introducing students to the field of integrated primary care, the PCMH, and the levels of integration with a focus on common patient presentations and useful clinical skills. Additionally, 11 topic-specific modules with more in-depth training options are initially available, with additional topic modules to be offered over time. Notably, the modules are designed to be “plug and play” but can be modified and/or supplemented to meet individual program needs. Finally, the curriculum is designed in the spirit of “train-the-trainer methodology,” with myriad faculty resources including handouts, readings, and mentor consultation availability. Topics related to PCMH and psychologists within the PCMH are embedded throughout the curriculum (B. Ward-Zimmerman & W. Gunn, personal communication, December 17, 2015). This flexible type of curriculum is an example of how training from both bottom-up and top-down can maximize reach for workforce development.

As illustrated in Table 1, inclusion of training in the form of knowledge, skills, and attitudes in the PCMH may be woven into training in a variety of ways. Embedding content into existing curricula, or using a standardized “plug and play” introductory course, can be a meaningful first step in creating a solid base of exposure. Subsequent to the inclusion in curricula and coursework at the level of exposure, ongoing efforts to build on this baseline can occur over time. For example, the inclusion of a review of effects of medical conditions and treatment on psychological symptoms, mental status, and functioning in people with comorbid health/mental health conditions in existing courses can be quite valuable, even at the level of cursory review. We provide additional examples of training activities by level of training intensity and available resources in Table 2 (see also Beacham, Polaha, & Van Sickle, 2014; Cubic & Beacham, 2014).

**Summary and Conclusions**

Herein, we have attempted to addresses three overarching questions regarding psychology in the PCMH. First, we addressed policy-driven changes in health care and PCMH from which arise identification of competencies necessary for psychologists to facilitate and lead behavioral health integration in the PCMH. Second, we have emphasized the projected workforce need for the PCMH as it pertains to the training of psychologists. Finally we addressed the current status and need for training in PCMH competencies at the graduate school, internship, and postdoctoral levels. Recognizing the need for concrete content and steps toward the implementation of training in this area, practical examples of PCMH training activities have been offered by level of training intensity and availability of training resources.

Despite the new and rapidly expanding need for training in the PCMH, it should not be viewed as an all-or-none proposition. Rather, minimal inclusion of PCMH competency training at must begin early in the doctoral training sequence. Furthermore, training of future psychologists and consumers about PCMH concepts should occur early, including at the undergraduate and possibly even high school levels. We recognize that training in primary care psychology and, moreover, a PCMH training emphasis, may not be of interest to, or possible for, everyone. However, with the emerging need for health service psychologists in the evolving health service delivery environment, continuing to rely primarily on traditional models of training will be insuffi-
cient to meet the current and rapidly expanding workforce demand.

As psychology training directors and trainers, we readily acknowledge that additions and enhancements to training curricula and experiences are formidable tasks, especially when the settings and competencies are not second nature to those who are coordinating such efforts. Initially, perhaps, the most accessible wide scale training adaptation can occur at the internship and postdoctoral levels.

To optimally position health service psychologists to meet the health care workforce needs, we urge trainers across doctoral levels of training to explore novel ways in which they can identify, cultivate, and utilize available resources to provide training in the area of PCMH and interprofessional practice at any possible level of intensity from the proposed training taxonomy. At the very least, this effort should include meaningful conversations, with the ultimate goal of structured in-depth placement and learning activities beyond didactics and clinical placement. Additional training components such as program development and evaluation, population-based outcome assessment, implementation of population health management strategies, and health policy understanding and involvement are necessary. We acknowledge that these efforts require time, effort, and commitment. Historically, our professional pre-dilection may be toward contemplation and slow, deliberative action. In this instance, however, a delayed response may well result in missing the “speeding train” of health care transformation.

References


Belar, C. (2009), Preparing tomorrow’s health work force. Monitor on Psychology, 40, 64.


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