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Psychology in Patient-Centered Medical Homes: Reducing Health Disparities and Promoting Health Equity

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With persisting health disparities contributing to a disproportionate impact on the health and well-being of socially disenfranchised and medically underserved populations, the emerging patient-centered medical home (PCMH) model offers promise in bridging the health disparities divide. Because behavioral health care is an important component of the PCMH, psychologists have significant opportunity to contribute to the development and implementation of PCMH services in settings that primarily serve medically underserved communities. In this article, after briefly defining the PCMH model and its role in clinical settings for medically underserved populations for whom health disparities are present, roles of psychologists as interprofessional collaborators on PCMH medical care teams are explored. Next, the constellation of competencies that position psychologists as behavioral health specialists to contribute to PCMH care teams for medically underserved groups are characterized. The article concludes with reflections on the prospects for psychologists to make tangible contributions as health care team members toward reducing health disparities and promoting health equity in patients served in the PCMH.

Keywords: patient-centered medical home, health disparities, behavioral health

In recent decades, public health investigators have illuminated significant disparities in health based on social and economic advantage or disadvantage. Health disparities are avoidable and preventable differences in health outcomes and longevity rooted in inequities linked to social disadvantage. Specifically, these disparities impose a disproportionate adverse burden on persons with limited economic resources or opportunities, individuals from marginalized social groups, and those whose environmental circumstances are socially and/or economically disadvantaged (Adler, 2009; Braveman, 2014).

Research has elucidated a socioeconomic status (SES) gradient in which prevalence of disease and mortality risk is greatest among individuals living at the lower end of the SES spectrum, with health status improving incrementally as social and economic position rises (Adler & Stewart, 2010; Braveman & Gottlieb, 2014). The SES–health relation involves interactions of individual, social, and structural factors across biopsychosocial domains (Adler & Stewart, 2010; Braveman & Gottlieb, 2014). The intersection of SES with race and ethnicity also is key to understanding the unequal impact of disease and mortality across groups, most notably among African Americans (Adler & Stewart, 2010; Klonoff, 2009; Myers, 2009; Williams, Mohammed, Leavell, & Collins, 2010).

Additionally, social discrimination contributes to disparities for specific social groups (Williams & Mohammed, 2009). For example, discrimination predicts functional

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health limitations in older men of color (Brown, Hargrove, & Griffith, 2015) and is associated with disparities in mental health outcomes for Black sexual minority women (Calabrese, Meyer, Overstreet, Haile, & Hansen, 2015). Systemic racism, involving societal hierarchies and institutional structures that create obstacles to resources and opportunities for certain racial and ethnic groups, is critical to understanding health disparities (Feagin & Bennefield, 2014). Systemic racism includes the impact of implicit racial bias and discrimination in health care settings on such factors as patient–provider transactions, medical decision-making, health literacy, treatment adherence, unmet health care needs, perceptions of care quality, and overall health outcomes (Benjamins & Whitman, 2014; Mantwill, Monestel-Umaña, & Schulz, 2015; Hall et al., 2015). Psychological science, including research on social attitudes and biases (e.g., in-group and out-group biases), has a significant role to play in both understanding the impact of systemic racial discrimination on health disparities and implementing solutions that promote culturally responsive health care environments (Dovidio et al., 2008).

Health disparities exact a substantial financial toll. Disparities among minorities in the United States between 2003 and 2006 resulted in $1.24 trillion in direct medical costs and indirect costs associated with illness and early mortality (LaVeist, Gaskin, & Richard, 2011). Health care reform in the United States under the Patient Protection and Affordable Care Act (ACA) of 2010 is yielding fresh opportunities to promote health equity via the development of new health care delivery approaches. Among these is a reconceptualization of primary care in accord with the patient-centered medical home (PCMH) model of health service provision. Within the PCMH health care rubric, an integrated interprofessional clinical team provides timely, accessible, efficient, and equitable health care services holistically tailored to the needs of consumers and their families (Alexander et al., 2015; Kazak, Nash, Hiroto, & Kaslow, 2017). So defined, the comprehensive PCMH approach, including its focus on promoting equity in care access and quality, suggests a critical role for the model in efforts to reduce health disparities (Anderson & Olayiwola, 2012).

The PCMH framework supports the Institute of Health Care Improvement's "triple aim" of enhanced patient experiences, improved population health, and reduced per capita health costs (Berwick, Nolan, & Whittington, 2008). Expansion to a "quadruple aim" recently has been suggested (Bodenheimer & Sinsky, 2014), with the fourth aim centered on improving the experience and meaning that health providers derive from their work.

The 2014 Joint Principles for Integrating Behavioral Health Care into the Patient-Centered Medical Home ". . . recognizes the centrality of behavioral health care as part of the PCMH" (Baird et al., 2014, p. 184) and defines behavioral health care as encompassing mental health and substance abuse treatment, health behavior intervention, and a focus on salient psychosocial considerations such as family support. In response to this key role for behavioral health (Rozensky, 2014; Runyan, 2011), behavioral health specialists, including psychologists, have opportunities to contribute to the evolution and implementation of the PCMH approach, including optimizing the delivery of care for medically underserved populations. This article examines professional roles and competencies psychologists can bring as members of interprofessional provider teams within the PCMH framework to enhance health care services for medically underserved populations disproportionately affected by health disparities.

Potential of the PCMH for Reaching Medically Underserved Populations

As opportunity to receive health care in PCMH practices grows, the model shows promise for improving access to primary care, use of preventive services, and chronic disease management for medically disadvantaged groups (Anderson & Olayiwola, 2012; Beal, Hernandez, & Doty, 2009; O'Toole et al., 2011). The research in this area is limited but compelling. For example, in an investigation comparing access to an initial primary care appointment in PCMH and non-PCMH practices, research staff acting as patients calling for new primary care appointments (and identifying as self-pay, private insurance, or Medicaid recipients) were more likely to secure appointments with a PCMH than non-PCMH practice (Aysola, Rhodes, & Polsky, 2015). A study of access to care in Medicaid-insured low-income breast cancer patients showed a positive association be-



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tween PCMH enrollment and accessing of primary care and necessary nononcology specialty services (Kohler, Goyal, Lich, Domino, & Wheeler, 2015). A longitudinal investigation of access to preventive medical services showed that PCMH implementation was associated with improvements in preventive cancer screening across socioeconomic contexts, with the highest rates of screening in the lowest socioeconomic group (Markovitz, Alexander, Lantz, & Paustian, 2015). The PCMH model also is associated with increased provider and patient satisfaction in safety net medical settings and substantive cost savings (Fillmore, DuBard, Ritter, & Jackson, 2014; Hochman et al., 2013; Lewis et al., 2012). However, disparities in care can persist even with PCMH implementation, underscoring the importance of monitoring PCMH performance in reducing disparities relative to sociodemographics (Aysola, Bitton, Zaslavsky, & Ayanian, 2013; Beal et al., 2009). Unfortunately, policy decisions by numerous U.S. states to opt out of Medicaid expansion under the ACA may significantly mitigate the potential for the PCMH to reach medically underserved communities already most affected by health disparities. Estimates suggest that community health centers in those states will have fewer financial resources to provide key services, including behavioral health services (Jones, Zur, Rosenbaum, & Ku, 2015). Health providers, including psychologists, can lend their expertise to advocate for health policies that reduce these health coverage gaps.

The National Committee for Quality Assurance (NCQA, 2014), which offers the most commonly used mechanism nationally through which primary care practices can achieve PCMH recognition (Auxier, Hirsh, & Warman, 2013), specifies criteria that have explicit relevance for reducing health disparities in underserved populations. For example, evaluating disparities in care for vulnerable populations served by PCMHs is regarded as a routine component of practice assessment (NCQA, 2014). This includes obtaining feedback from members of vulnerable groups regarding their experiences as patients and setting goals to address practice disparities identified through performance measurement. NCQA standards specify that PCMH practices use culturally and linguistically appropriate care strategies, identify health insurance options and financial resources to support people's health care, and respond to patient needs and preferences relative to diversity characteristics. The standards specify that PCMH practices should consider family, social, and cultural background characteristics in comprehensive health assessments, including evaluation of needs, preferences, assets, and constraints that may have health implications. PCMH practices must proactively ensure patients remain engaged in ongoing routine, preventive, and/or chronic care services, strategies that presumably can support retention of patients from vulnerable and underserved populations. Identifying patients based on social determinants of health also is specified, along with collaborative care plans that consider patient preferences, treatment, and self-management goals, and anticipate barriers to achieving goals.

The Health Resources Services Administration (HRSA) has supported NCQA PCMH recognition for community health centers, a principal vehicle for primary health service for millions of medically underserved and uninsured individuals and a key resource for expanding the reach of primary care services with appropriations provided through the ACA (Adashi, Geiger, & Fine, 2010; Auxier et al., 2013). With their focus on providing accessible, high-quality, whole person, and culturally informed care, community health centers are well positioned to implement a PCMH framework of care for individuals disproportionately affected by health disparities (Adashi et al., 2010; Anderson & Olayiwola, 2012). Application of the PCMH model with socioeconomically vulnerable populations also is occurring in the Veterans Health Administration, which has implemented the Patient-Aligned Care Team initiative aimed at establishing patient-centered team-based care, improved access, and enhanced management and care coordination (Nelson et al., 2014). Patient-Aligned Care Team programs have been associated with improved outcomes pertaining to patient satisfaction, quality of service delivery, hospitalizations, emergency department visits, and staff burnout (Nelson et al., 2014). PCMH implementation in community health centers and the Veterans Health Administration include behavioral health specialists as part of interprofessional teams, with significant employment opportunities for psychologists (Auxier et al., 2013; Kearney, Post, Pomerantz, & Zeiss, 2014).



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Potential of PCMH Behavioral Health Integration for Vulnerable Populations

Behavioral and physical health are inseparable (Dickinson & Miller, 2010). Modifiable behaviors such as tobacco use, poor dietary habits, physical inactivity, and alcohol consumption, are among the leading causes of death in the United States (Mokdad, Marks, Stroup, & Gerberding, 2004). Psychological factors, such as anxiety and depression, are linked to disease outcomes (e.g., Watkins et al., 2013); yet, too often care provision is fragmented, as highlighted by a recent study showing that fewer than 14% of individuals with poor mental health received combined services from both mental health and primary care providers (Petterson et al., 2014). Fragmentation of care contributes to striking health disparities affecting persons living with serious psychological disorders, who compared to the general population experience poorer overall health, evidence disparities in multiple health conditions (e.g., cardiovascular disease, cancer; Muirhead, 2014), and have lifespans that may on the average be 25 years shorter (Piatt, Munetz, & Ritter, 2010). This increased mortality is associated with modifiable risk factors and preventable medical conditions (e.g., obesity, hypertension, metabolic disorders) and limitations in access to the appropriate type and level of medical intervention.

Along with these observed disparities in health outcomes for persons with severe mental illness, disparities in mental health care have been shown for racial and ethnic minority populations for most mental health disorders (Blanco et al., 2007; Holden et al., 2014; Manseau & Case, 2014). Factors contributing to these disparities are complex and include such barriers as cost, mobility, time, mistrust of health professionals, and lack of knowledge about where to access mental health services (Alang, 2015; Holden et al., 2014). Stigma is also a vexing barrier to mental health service seeking and utilization (Corrigan, Druss, & Perlick, 2014).

Health reform under the ACA offers the potential for tangible progress in addressing health disparities in persons living with mental health conditions through behavioral health integration with primary care (Druss & Mauer, 2010). With the estimated adult prevalence of mental health disorders at 30% and findings that primary care is the most common venue for mental health care (Petterson, Miller, Payne-Murphy, & Phillips, 2014), behavioral health integration with primary care increasingly is advocated as a means of offering accessible, comprehensive, continuous, and coordinated care in the PCMH model (Dickinson & Miller, 2010). Integrated care has the potential to ameliorate critical barriers to mental health service access. Coordinating mental health and primary care visits simplifies the logistics of scheduling and reduces burden for individuals who may lack reliable transportation resources, particularly if appointments require travel to multiple health service locations. Acute mental health concerns also can receive timely attention on site rather than being deferred to a later date and/or referred to a separately located outside provider. Importantly, normalizing behavioral health evaluation and mental health intervention as elements of comprehensive primary care in the PCMH setting has the potential to reduce concerns about mental health stigma (Alang, 2015).

Mounting evidence demonstrates that integrated management contributes to improved clinical outcomes (e.g., Katon et al., 2010) and can help reduce mental health service disparities (Amiel & Pincus, 2011; Bridges et al., 2014). One recent study showed that having a regular health provider who works within in a PCMH framework is associated with increased likelihood of gaining access to and using needed mental health services (Jones et al., 2015). A second study revealed that, relative to a service as usual comparison group, low-income persons living with severe mental illness in a PCMH evidenced greater increases over time in illness management and overall mental health recovery (Sklar, Aarons, O'Connell, Davidson, & Groessl, 2015).

Potential Psychologist Roles on PCMH Care Teams for the Medically Underserved

Integrated care stands to benefit individuals from diverse medically underserved groups who, owing to the disproportionate impact of health disparities in their communities, are vulnerable to adverse health outcomes at the intersection of the physical, psychological, social, and cultural aspects of health (Petersen, Hutchings, Shrader, & Brake, 2011). It creates potential to improve health service accessibility, service coordination, and referral processes. It can enhance



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health provider ability to develop integrative diagnoses of physical, behavioral, sociocultural, and systemic aspects of health and illness; assess for psychological disorders; address modifiable health behavior practices; offer timely initiation of mental health treatment; and promote patient empowerment, adherence and retention in care (Petersen et al., 2011). Integrated care can increase focus on the intersection of health care delivery practices with contextual social and cultural dimensions that influence patient experiences of health and illness, patient health behavior practices, and patient-health provider communication and relationships.

While there is increasing evidence that integrating behavioral interventions with medical care for underserved populations is associated with improved medical outcomes (e.g., Villablanca et al., 2010), such integration with primary care remains underdeveloped and substantive effort is needed to expand the reach and potential of integrated health care delivery approaches (Kessler et al., 2014; Lewis et al., 2014). Psychologists and other behavioral health providers have the opportunity to contribute to advancing behavioral health integration with primary care, including in the PCMH (Kazak et al., 2017; Ward, Miller, Marconi, Kaslow, & Farber, 2015). Through interprofessional collaborations with their behavioral health and primary care colleagues, psychologists with the requisite training and expertise can support the scaling up of PCMH programs that enhance the health of medically underserved communities through innovative, culturally centered approaches for reducing health disparities and promoting health equity in the changing landscape of primary care.

Given the heterogeneity of the field, there is apt to be considerable variability in the degree to which psychologists are prepared for this work, which represents a paradigm shift in professional practice requiring the attainment of key specialty competencies (Nash, Khatri, Cubic, & Baird, 2013). For example, psychologists must understand the culture and systems of the PCMH, have experience with interprofessional care models, develop a basic working knowledge of medical nomenclature, and be skilled at providing rapid clinical assessment and brief intervention (Nash et al., 2013). Building a psychology workforce with the requisite competencies is essential for positioning the discipline to participate in the design and implementation of integrated primary care programs for underserved groups. Toward this end, formal psychology training and continuing professional development pathways to expand the cadre of psychologists prepared to work in PCMHs are under development (Beacham, Kinman, Harris, & Masters, 2012; Beacham et al., 2017).

As a part of this work, specific competencies have been articulated for psychological practice in primary care settings, including the PCMH (McDaniel et al., 2014; Nash et al., 2013). While some of these competency domains reflect traditional aspects of practice, others correspond to the requirements of the primary care setting. Foundational competencies include population-based, patient-centered, and evidence-based care; systems, teamwork, and communication; professional behavior and identity as a psychologist; and reflective practice, diversity, and practice standards (Nash et al., 2013). Functional competencies include assessment, intervention, and consultation; supervision and training; management and administration in patient care and practice operations; and research methods for quality improvement and outcomes initiatives (Nash et al., 2013). Recognizing that optimal functioning of interprofessional provider teams in integrated care environments requires not only discipline- specific professional knowledge, skills, and attitudes but also shared competencies across health service disciplines, HRSA and the Substance Abuse and Mental Health Services Administration jointly developed core competencies for behavioral health and primary care integration: interpersonal communication, collaboration and teamwork, screening and assessment, care planning and care coordination, intervention, cultural competence and adaptation, systems oriented practice, practice-based learning and quality improvement, and informatics (Hoge, Morris, Laraia, Pomerantz, & Farley, 2014). These competencies build upon the core competencies for interprofessional collaborative practice (Interprofessional Education Collaborative Expert Panel, 2011). Along with providing a common foundation for the practice of integrated care and interprofessional collaborative practice, these competencies support and complement the specialty competency domains of each health care discipline.

Anchored by these constellations of competencies, psychologists with the necessary specialty background and training have opportunities to contribute as clinicians, consultants/educators, administrators, and/or researchers to interprofessional efforts to optimize care and improve health outcomes for medically underserved populations (for examples see Table 1). Consistent with the team-based care framework of PCMH practice, psychologist contributions are firmly embedded in a commitment to interprofessional consultation (seeking input from and providing input to interdisciplinary colleagues), coordination (synchronizing professional roles and activities), and collaboration (synergistic interprofessional partnering) relative to each of these professional roles and activities (Cohen et al., 2015). As is illustrated presently, opportunities for psychologists to participate as interprofessional team members on behalf of underserved populations span the range of PCMH core elements designated by the Agency for Healthcare Research and Quality (AHRQ, 2014) as comprehensive, patient-centered, coordinated, accessible, and committed to quality and safety.

Comprehensive Care

One advantage of the PCMH for addressing health disparities is its comprehensive framework of care that encompasses the full range of health concerns (including behavioral health), and prioritizes health promotion and disease prevention along with care for acute and chronic health conditions (AHRQ, 2014). The capacity of the PCMH to offer comprehensive care requires an interdisciplinary provider team. Team-based care favorably influences patient and provider behaviors, improves outcomes for people with complex clinical presentations, and enhances patient perceptions of quality of care and health outcomes (Jesmin, Thind, & Sarma, 2012; Lin et al., 2012). Qualitative research with medically underserved populations suggests that support received from care team providers is among the key components of the care experience (Mead, Andres, & Regenstein, 2014).

Behavioral health providers on PCMH teams, including psychologists, can support efforts to address the clinical needs of medically underserved populations in several ways. Those equipped with competencies in population-based care, rapid assessment, and brief intervention are well positioned to identify and treat behavioral health disorders for which significant disparities in medical morbidity and mortality has been shown (Muirhead, 2014), as well as ensure ready access to behavioral health services for minority groups that historically have experienced disparities in mental health care (Holden et al., 2014). Consistent with the PCMH population-based care orientation toward maximizing the reach of services to ensure the health of the overall clinical population served, a key role of psychologists and other behavioral health specialists on PCMH teams is to provide patient mental health screenings as part of routine primary care visits. They also can offer brief evidence-based psychotherapy interventions to treat psychological disorders where clinically indicated (Alexander, Arnkoff, & Glass, 2010). For patients who may require ongoing intensive mental health services outside the PCMH setting, psychologists can work with social workers on the PCMH team to link patients to mental health specialty practices and serve as liaisons between the PCMH and specialty

Table 1
Possible Psychologist Roles in the Interprofessional Patient-Centered Medical Home Practice Environment for Underserved Populations

PCMH elements	Clinical	Education/Consultation	Administrative	Research/Evaluation
Comprehensive care	Mental health screening and treatment; preventive interventions	Systemic processes in team–patient relationships; team-based management of behavioral disorders	Programmatic resources for behavioral health integration; team building and support	Integrated care outcomes research; evaluation of team functioning
Patient-centered services	Collaborative working alliance; culturally responsive patient–provider relationships	Building collaborative patient–provider relationships; managing complex patient-provider relationship dynamics	Culturally responsive environment of care; alignment of program structure with patient needs	Evaluation of patient-centeredness; patient–provider relationship research
Care coordination	Liaison with outside behavioral health providers; promote adherence and retention	Behavioral aspects of adherence; health literacy in patient–provider communications	Development of care coordination protocols; infrastructure support for adherence and retention	Monitoring of care coordination efforts; adherence and retention research
Service accessibility	Flexible appointment scheduling; ease of communication	Assessing access needs of persons with severe mental illness	Match points of service to patient needs; ensure environment is inclusive	Evaluation of access points; monitoring of ease of appointment-making
Quality/Safety	Use of evidence-based protocols appropriate to clinical needs; obtain patient input on quality	Monitoring patient experiences of care and trust in care team	Infrastructure accommodations to support quality and safety monitoring	Quality monitoring; focused process and outcome evaluation of disparities in care

providers to ensure continuity of care. Psychologists also can coordinate care with psychiatry colleagues when psychiatric medications are indicated or when neuropsychiatric complications are present.

Given evidence that the integrated management of mental health and medical concerns improves health outcomes (e.g., Katon et al., 2010), these collective activities on the part of psychologists and other behavioral health specialists on PCMH care teams are essential to the provision of high-quality population-based comprehensive care for underserved groups. These activities normalize behavioral health services as a routine part of primary care in the PCMH, which can lessen stigma-related barriers to care that may contribute to health disparities (Hatzenbuehler, Phelan, & Link, 2013; Petersen et al., 2011), and also may reduce racial disparities in access to mental health care (Ayalon, Areán, Linkins, Lynch, & Estes, 2007).

In addition to treating mental health disorders, psychologists with the requisite intervention competencies in health behavior management and coaching can support the disease management and illness prevention efforts of the PCMH team by identifying unhealthy behavior patterns and using evidence-based behavioral interventions to modify them. Health behavior change through evoking motivation (e.g., reducing tobacco use, improving dietary habits, enhancing physical activity levels) can improve health outcomes and reduce costs (Spring et al., 2013). Targeting improvements in health behavior practices can be invaluable for persons from medically underserved groups who may be at increased risk of engaging in unhealthy lifestyle habits. Additionally, with members of racial and ethnic minority groups less likely than majority group members to receive adequate pain intervention (Anderson, Green, & Payne, 2009), psychologists versed in culturally responsive and evidence-based behavioral pain interventions as complements or alternatives to traditional pharmacological methods, can support PCMH team efforts to reduce these disparities.

For psychologists on PCMH care teams, competencies in interprofessional teamwork and communication are critical for disseminating psychological findings to primary care team members, coordinating patient care activities, collaborating on patient management tasks, and consulting on best practices for successfully managing behavioral disorders. Along with their behavioral health colleagues (e.g., psychiatrists, clinical social workers), psychologists can assist the interprofessional PCMH team in conceptualizing interconnections of physical, psychological, and social/cultural contributors to health and disease in the service of comprehensive care planning and implementation.

Patient- and Family-Centered Services

Among the pathways to addressing disparities at the level of care delivery is promoting accessible, welcoming, and flexible health care environments that are responsive to the needs of a diverse clientele and their loved ones. In the PCMH model the team seeks to understand how the needs, cultural background, values, and preferences of patients and their families influence their conceptions of health and experiences of the health care environment (AHRQ, 2014).

Consumers of medical services value providers who communicate openly, are respectful, seek to know them as persons, and encourage them and their families to be partners in the care process (Van Berckelaer et al., 2012; Mead et al., 2014). Provider behaviors that contribute to patient and family centeredness include conveying a commitment to the patient's well-being, being cognizant of power dynamics in the patient-family-provider relationship (including degree of collaboration and directiveness), demonstrating awareness of the influence of culture on health beliefs and behaviors, encouraging open communication and dialogue, and facilitating patient/family education about health-related concerns and treatment options in the service of shared decision-making where feasible (Peek, 2010). Presumably these behaviors encourage patients and their families to engage as partners in care by proactively communicating about health concerns, seeking opportunities to learn, engaging in collaborative decision-making, adhering to treatment protocols, and self-monitoring treatment responses (Peek, 2010).

Psychologists and other behavioral health providers can serve as valuable consultants on the PCMH team with respect to cultivating a patient-centered focus. Many behavioral health specialists have knowledge of factors that contribute to productive psychotherapy relationships that can be adapted in the primary care context to guide efforts by the PCMH team to forge successful patient- and family-centered relationships. Examples of factors from the evidence-based psychotherapy relationships literature include the working alliance, empathy, genuineness, positive regard, and collaboration (Norcross & Wampold, 2011). Behavioral health specialists with the requisite competencies in communication, systems functioning, and diversity can offer consultation to the PCMH team to facilitate and optimize patient- and family-centered interactions, troubleshoot interaction patterns that may be adversely affecting patient–provider relationships, and develop culturally responsive team-based care strategies. Undergirded by psychological science in the areas of attitude formation and change, prejudice, stereotyping, and implicit biases, psychologists and their behavioral health colleagues can both lead and support efforts by the care team to understand and address overtly or implicitly discriminatory modes of interacting with patients and develop practice strategies aimed at

ameliorating the adverse impact of discrimination on patient experience and health outcomes (Dovidio et al., 2008). Examples include team discussions about race and racism and activities aimed at promoting awareness of implicit discriminatory attitudes and beliefs, understanding in- and out-group biases that contribute to stereotyping and prejudice, enhancing empathy, and increasing provider efficacy in working with a diverse clientele, including facilitating health literacy (Burgess, van Ryn, Dovidio, & Asha, 2007; Murray-García, Harrell, García, Gizzi, & Simms-Mackey, 2014; Lie, Carter-Pokras, Braun, & Coleman, 2012).

Psychologists with administrative expertise may assume leadership roles in PCMH practices and leverage their skills to facilitate productive working relationships among clinical team members, including mutual empathy and respect, knowledge sharing, collaboration, effective communication, and conflict resolution. Through these activities, psychologists in leadership can bolster the health care team's capacity to provide high-quality patient- and family-centered care for underserved patient populations. They also can work to ensure that institutional and operational structures and policies of the PCMH practice engender an inviting, safe, empowering, and culturally responsive care environment. This includes creating systemic norms that encourage staff dialogue about race and diversity, addressing potentially discriminatory institutional structures that contribute to inequities in patient care, cultivating a diverse provider team, and ensuring avenues for consumer input on PCMH services and structures.

Care Coordination

Coordinating care involves synchronizing the elements of care both within the PCMH setting itself and in relation to outside health care resources and institutions (AHRQ, 2014). Care coordination is anchored by the interprofessional team-based care framework and communication among patients, their families, the care team, and outside health care systems and resources. Coordination of care for people with complex medical conditions within the PCMH care team and with subspecialty providers can reduce care fragmentation and gaps that contribute to health disparities in medically underserved individuals (Anderson & Olayiwola, 2012).

Behavioral health providers, including psychologists, serve important care coordination functions on PCMH teams, especially as this relates to behavioral health aspects of care. In collaboration with social workers and nurses on the PCMH team, psychologists can help to coordinate behavioral health care activities between the PCMH and outside health care entities (e.g., hospitals, medical specialists), community service organizations, and institutions. For example, psychologists can make referrals, consult with outside providers about behavioral health concerns, and provide both emotional and problem-solving support to patients in navigating systems of care. These services are especially critical for patients with severe mental illness for whom the challenges of navigating health care systems can be a significant barrier contributing to disparities in receiving needed health services (Lawrence & Kisely, 2010).

A key function of care coordination among PCMH team members is to ensure that patients and their families are fully engaged to maximize medical adherence and retention in care. Nonadherence to prescribed regimens may contribute to health disparities in underserved populations, and behavioral factors influence patterns of nonadherence. For example depressive and anxiety symptoms are associated with decreased adherence in persons with coronary artery disease (Dempe et al., 2013). Beliefs, attitudes, interpersonal, and cultural factors, as well as provider sensitivity, can also affect adherence (Martin, Williams, Haskard, & Dimeter, 2005; Tucker, Marsiske, Rice, Nielson, & Herman, 2011).

Psychologists and other behavioral health specialists who possess the necessary functional assessment and intervention competencies as well as foundational competencies pertaining to patient-centered care, collaborative relationships, and diversity considerations, are well suited for providing oversight and support for PCMH team-based behavioral strategies to optimize patient adherence and retention in care. For instance, behavioral health providers, including psychologists, can both directly apply patient-centered motivational enhancement techniques as well as coach their medical colleagues in their use (W. R. Miller & Rollnick, 2013). Psychologists and their behavioral health colleagues can also direct coordinated care team strategies that support patient autonomy, which are associated with autonomous motivation for medical adherence (Kennedy, Goggin, & Nolen, 2004). Additionally, they can consult with the team regarding evidence-based collaborative patient-family-provider communication strategies that can enhance medication adherence in vulnerable populations (Schoenthaler et al., 2009).

Drawing upon specialized expertise in contextual social and cultural influences affecting service utilization, behavioral health providers on PCMH teams can coordinate implementation of team-based strategies that promote retention in care for medically underserved individuals. For example, cultivating trust in medical providers is a key variable (e.g., Van Berckelaer et al., 2012); distrust of medical systems by members of some racial and ethnic minority groups based on experiences with discrimination may lead to inconsistent participation in care with adverse health care outcomes (Klonoff, 2009; Myers, 2009).

Given the impact of upstream social determinants of health (i.e., social, economic, and environmental conditions in which people live) on health outcomes and health disparities, efforts are underway to develop strategies to coor-

dinate health care services with public health, social service, and community-based resources. Accountable health communities, supported by the Centers for Medicare and Medicaid Services, emphasize shared accountability across the community of stakeholders in addressing the complex factors contributing to health conditions and outcomes of patients. (Alley, Asomugha, Conway, & Sanghavi, 2016). Psychologists and their behavioral health colleagues can contribute to PCMH efforts to evaluate and address, via coordination with community partners, relevant social determinants of health and mental health that may influence health outcomes, including such factors as family system functioning, social support networks, material resource security (e.g., food, housing), socioeconomic conditions, and environmental context (Shim et al., 2014). Psychologists also can participate in public policy advocacy for the needed infrastructure and financial resources to support broad community-based strategies to reduce health disparities and promote health equity.

Service Accessibility

Enhanced access, a core component of a PCMH, refers to having flexibility in scheduling of appointments; expanding service hours; and facilitating communication between the patient and family, health provider, and health care team (AHRQ, 2014). Access is a major barrier for those experiencing a disproportionate burden of health disparities, as they live in communities with few available health services, have increased concerns with health care costs, encounter competing time demands that contribute to inconsistent health care access and intervention delays, and may not seek medical care because of concerns about stigma and/or discrimination (Hatzenbuehler et al., 2013; Petersen et al., 2011). Reliable access is critical to care quality, as people for whom a consistent relationship with a provider is variable are less likely to receive care consistent with guidelines (Atlas, Grant, Ferris, Chang, & Barry, 2009).

While efforts are underway to implement PCMH programs for the medically underserved (Sugarman, Phillips, Wagner, Coleman, & Abrams, 2014), unfortunately little is known about differences in PCMH access between the underserved and those with ready access to health care. It is possible that PCMH practices are less available in communities where the medically underserved reside, in part because they typically have more limited health care access in general (e.g., Wilper et al., 2008) and also because of a tendency for underserved communities to experience lags in the availability of state-of-the-art health care innovations (e.g., Glied & Little, 2003). However, it also is possible that PCMH services are increasingly available to the medically underserved because of efforts such as those of HRSA to support PCMH implementation by community health centers (Anderson & Olayiwola, 2012). Systematic appraisal of PCMH availability in underserved communities is sorely needed and there are opportunities for psychologist researchers to participate in such efforts. Where limited financial resources pose a barrier to PCMH access, psychologists and their interprofessional colleagues can advocate for sensible policies that promote health equity locally, regionally, and nationally. Such advocacy is critical in states where large segments of the population are under- or uninsured because of policymakers' decisions not to expand Medicaid.

Evidence is accruing that PCMH engagement in care and health outcomes can be improved by matching points of service access with the needs of specific vulnerable populations, such as increasing telehealth services for the elderly and others who cannot easily attend office visits, scheduling flexibly for homeless patients, or coordinating medical and behavioral health visits for those with severe mental illness (O'Toole et al., 2011). Psychologists with the requisite competencies in the administration and management of patient care and operations of the PCMH practice can combine this expertise with their behavioral health backgrounds to assist practices in creating accessible care environments for medically underserved populations. In addition to helping to synchronize points of access to the needs of the populations served, diversity factors must be considered in PCMH program design and implementation. Behavioral health providers in clinical and administrative roles can offer input to help ensure that clinic environments are accessible and welcoming to persons from diverse backgrounds, health education materials match the linguistic and health literacy needs of the populations served, and services are delivered in a culturally sensitive manner.

Quality and Safety

Among the chief aims of the PCMH model is to improve the quality and safety of services via evidence-based practice standards, quality performance and outcomes monitoring, and consumer satisfaction evaluation (AHRQ, 2014). Offering high-quality primary care is a principle mechanism for reducing health disparities for medically underserved groups (Anderson & Olayiwola, 2012). In addition to their clinical training, most psychologists also receive formal training in research methods, and some develop specialized expertise undergirded by functional competencies in scientific methods for quality monitoring and improvement, program evaluation, and clinical outcomes evaluation. Working with medical and nursing administrators and clinician colleagues, these psychologists bring a unique combination of clinical, administrative, and scientific competencies that situate them well to participate in and oversee the design and implementation of ongoing quality assessment, quality improvement, and safety monitoring initiatives aimed at ensuring PCMH patients receive safe, high-quality care.

This includes evaluating patient and family experiences of and satisfaction with the PCMH practice, assessing disparities in services to vulnerable populations, and engaging in programmatic efforts to address these disparities per NCQA (2014) PCMH recognition specifications.

Quality monitoring activities to which appropriately trained psychologists may contribute that also are pertinent to addressing disparities in care for underserved groups are those that evaluate programmatic efforts to promote health care retention within the PCMH, such as monitoring initial retention and implementing strategies to reengage patients who fall out of care. Examples of health-system level variables pertinent to retention are health literacy; accommodation of language and communication differences; and a care environment that respects individual, family, and cultural diversity (Myers, 2009; Petersen et al., 2011). Evaluating adherence to scheduled follow-up appointments may be critical to addressing health disparities in light of findings that certain ethnic groups are more variable in keeping planned medical appointments with concomitant poorer clinical outcomes (Parker et al., 2012).

Finally, the extant evidence base on PCMH efficacy and effectiveness in reducing health disparities and promoting health equity remains small, with an urgent need for additional research in this area. There is a significant role for academic psychologists with expertise in health outcomes research to collaborate with interprofessional colleagues on clinical trials that could inform future implementation of the PCMH model for medically underserved populations.

Conclusions: Toward Reducing Health Disparities and Promoting Health Equity

Health disparities, a vexing and persistent concern, reflect deeply rooted social inequities affecting patterns of health and disease (Holden et al., 2014). The ascendance of the PCMH in the context of reform of the U.S. health care system presents new opportunities to ameliorate gaps that disproportionately and adversely affect the health and well-being of those who experience social disenfranchisement and are medically underserved.

The pathways and mechanisms that contribute to disparities in health are multifactorial. As a result, joint efforts of multiple disciplines are required to address the health disparities problem, and bridges must be created between scientific efforts, practice strategies, and policy making to make progress toward eliminating health disparities (Dankwa-Mullan et al., 2010). Psychological science can inform the knowledge base at the biopsychosocial intersection of the health disparities problem (Adler, 2009). At the individual and family level, psychology can illuminate the roles of health beliefs, health behavior, motivational processes, and stress responses in the health disparities calculus. At the social and systemic levels, psychology can

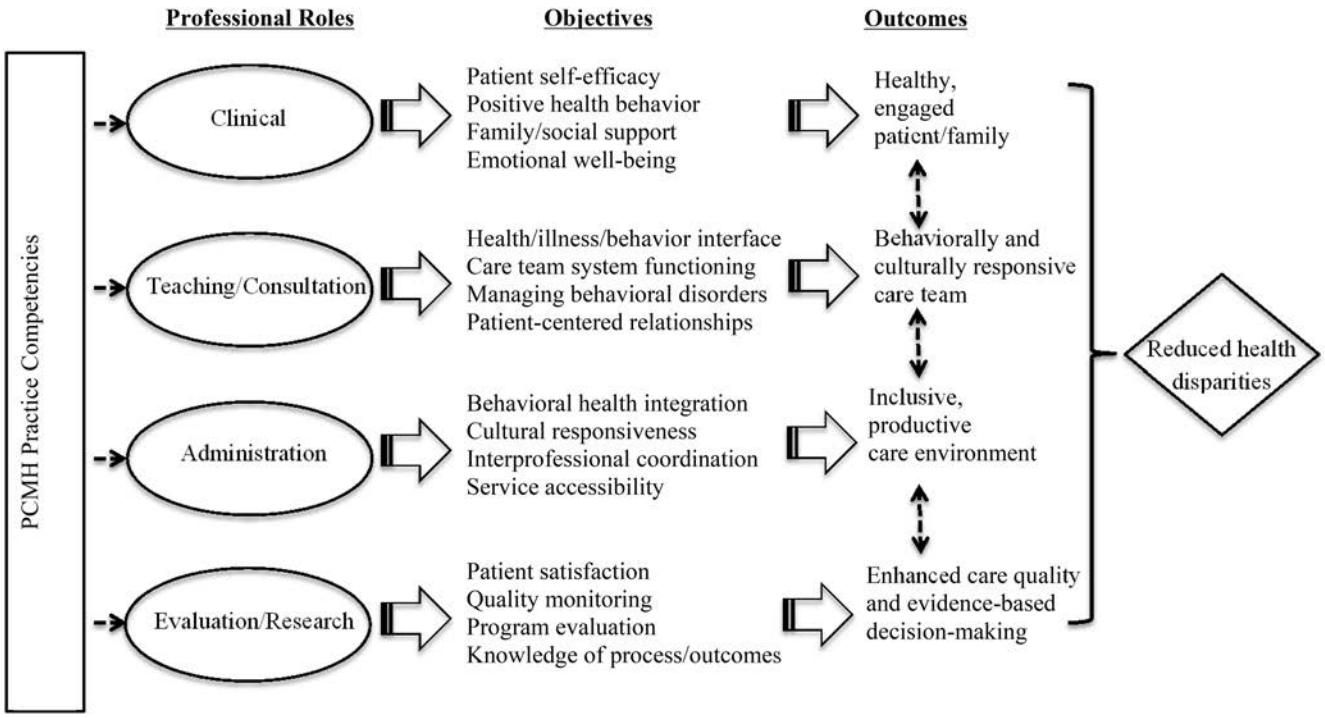


Figure 1. Potential pathways for psychologist contributions as interprofessional collaborators to reducing health disparities in the patient-centered medical home.

elucidate relationships between individual behavior and structural and social contributors to health disparities. In the public policy arena, psychologists can employ their scientifically grounded insights regarding the dynamic interaction of individual behavior with social and structural conditions to advocate for health policies that facilitate the implementation of culturally centered PCMH models that are accessible to those disproportionately affected by health disparities, including payment reforms that support systems of care that are financially viable and cost-effective (Miller et al., 2017).

Psychologists bring a unique breadth and depth of competencies to their work that can substantively enrich PCMH innovation related to improving the health and well-being of medically underserved populations. As seen in Figure 1, this includes evidence-based clinical expertise that helps ensure that all parties engage in patient- and family-centered care, experience as educators and consultants that can enhance understanding by interprofessional colleagues of the intersection of physical and behavioral aspects of health, administrative knowledge of institutional structures and policies that can promote inclusive and culturally responsive environments of care, and scientific understanding with applications for quality monitoring and program evaluation efforts. Of critical importance to the advancement of behavioral health integration within the PCMH is partnerships between psychologists and providers from different behavioral health and other health care disciplines who offer vital complementary and overlapping competencies and expertise. Collaborating as members of interprofessional health care teams, psychologists can help shape the evolution of evidence-based integrative care strategies in the PCMH that tangibly reduce health disparities and promote health equity. Such collaborations will advance the creation of health care homes that optimally support a healthy and thriving community.

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