Child Health Equity and Primary Care

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Child health disparities in terms of access to high-quality physical and behavioral health services and social needs supports are rampant and pernicious in the United States. These disparities reflect larger societal health inequities (social injustice in health) and lead to preventable population-specific differences in wellness outcomes with marginalized children facing substantial and systematically disproportionate health burdens. Primary care, and specifically the *pediatric patient-centered medical home* (P-PCMH) model, is a theoretically well-positioned platform to address whole-child health and wellness needs, yet often does so in a way that is inequitable for marginalized populations. This article delineates how the integration of psychologists within the P-PCMH can advance child health equity. This discussion emphasizes roles (i.e., clinician, consultant, trainer, administrator, researcher, and advocate) that psychologists can undertake with explicit intentionality toward promoting equity. These roles consider structural and ecological drivers of inequities and emphasize interprofessional collaboration within and across child-serving systems of care using community-partnered shared decision-making approaches. Owing to the multiple intersecting drivers implicated in health inequities—*ecological* (e.g., environmental and social determinants of health), *biological* (e.g., chronic illness, intergenerational morbidity), and *developmental* (e.g., developmental screening, support, and early intervention)—the *ecobiodevelopmental model* is used as an organizing framework for psychologists' roles in promoting health equity. This article aims to advance the platform of the P-PCMH to address and promote policy, practice, prevention, and research in child health equity and the important role of psychologists within this model.

Public Significance Statement
Child health inequities in the United States are deeply rooted in and perpetuated by structural and social ecologies pertaining to *where* children are born, live, and learn; *what* they experience; and *how* they receive care. Thus, child health inequity is an intersectional problem that calls for intersectional solutions. The pediatric patient-centered medical home model is well-positioned to promote health equity by coordinating health care across a team of providers, including psychologists, and across the many community systems in which children and their families interact.

Keywords: primary care, patient-centered medical home, pediatrics, psychology, health equity

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Child health disparities in terms of access to high-quality physical and behavioral health[1] services and social needs supports are rampant and pernicious in the United States (Montoya-Williams et al., 2020; Robinson et al., 2017). These disparities reflect larger societal health inequities (social injustice in health) and lead to preventable population-specific differences in wellness outcomes with marginalized children (e.g., ethnically and racially minoritized, those with limited English language skills, those with disabilities, LGBTQIA+ youth, children living in low-socioeconomic status [SES] urban/rural communities) facing substantial and systematically disproportionate health burdens. These inequities are deeply rooted in and perpetuated by structural and social ecologies pertaining to *where* children are born, live, and learn; *what* they experience; and *how* they receive care. Thus, child health inequity is an intersectional problem that calls for intersectional solutions. The *pediatric patient-centered medical home* (P-PCMH) is a theoretically well-positioned platform to address whole-child health and wellness needs given that it is a common touchpoint for the many intersecting child-serving systems of care (e.g., early childhood, family, schools, community, and hospitals). The P-PCMH model emphasizes coordination of physical and behavioral health as well as social needs services within a unified delivery system that is accessible, patient-centered, comprehensive, coordinated across an interdisciplinary team and emphasizes quality and safety (National Academies of Sciences. Engineering and Medicine [NASEM], 2021). Although the P-PCMH has been generally successful in providing accessible and coordinated care to the larger population, the model has unfortunately contributed to perpetuating health inequities within marginalized populations (Liljenquist & Coker, 2021). We propose that the integration of psychologists within the P-PCMH, when conducted with equity-focused intentionality, has the capacity to contribute to improved health for *all* children. This article offers a framework for the roles that psychologists can undertake in behaviorally integrated PCMH models to help disrupt systemic drivers of child health inequities (Figure 1).

First, we overview health inequities and why intervening in childhood is essential. Next, we highlight how the P-PCMH platform is theoretically well-positioned to address whole-child health and wellness needs, yet often does so in a way that exacerbates inequities for marginalized populations. Then, we delineate how the integration of psychologists within the P-PCMH can advance child health equity. This discussion emphasizes innovations within integrated psychologists' roles (i.e., clinician, consultant, trainer, administrator/team lead, researcher, and advocate; Asarnow et al., 2017) with explicit intentionality toward promoting health equity. These roles consider structural and ecological drivers of inequities and emphasize interprofessional collaboration within and across child-serving systems of care using community-partnered shared decision-making approaches. The ecobiodevelopmental model (EBD; Garner, 2016) is used to elucidate the multiple intersecting drivers implicated in child and family health[2] inequities: *ecological* (e.g., environmental and social determinants of health), *biological* (e.g., chronic illness, intergenerational morbidity), and *developmental* (e.g., developmental screening, support, early intervention).

Inequities in Children's Health

Given the changing demographics of America's population, the demand for high-quality pediatric health care services is projected to grow proportionally faster for ethnically and racially minoritized (henceforth "minoritized") and marginalized groups (Arcaya & Figueroa, 2017; IHS Markit, 2018). Latinx children account for a steadily rising proportion of the child population (Federal Interagency Forum on Child and Family Statistics, 2018). Rising numbers of children are foreign-born or have a foreign-born parent, live in limited English-speaking households and require interpreter services (Migration Policy Institute, 2015, 2019), and experience living in poverty (Jiang et al., 2016). The percentage of children receiving public coverage through Medicaid or the Children's Health Insurance Program has increased sharply since the start of the COVID-19 pandemic—reflecting the increasing number of families experiencing job loss and declines in income (Centers for Medicare and Medicaid Services, 2021). Latinx

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[1] *Behavioral health* includes the promotion of mental health, resilience, and well-being; the treatment of mental and substance use disorders; and the support of those who experience and/or are in recovery from those conditions, along with their families and communities.

[2] *Child health* includes *adolescent health* and will henceforth be used to also imply overall *family health* given the intertwined nature of these concepts.

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children are more than twice as likely as White children to be uninsured (U.S. Census Bureau, 2021).

Children from marginalized groups (e.g., minoritized, LGBTQIA+, low-income communities) face greater stigma in care-seeking and poorer access to high-quality physical and behavioral health services and social needs supports, which has systematically contributed to their having poorer health outcomes (e.g., Hadland et al., 2016; McLaughlin et al., 2010; Trent et al., 2019). LGBTQIA+ persons have higher rates of psychiatric disorders and suicide (e.g., Remafedi et al., 1998). Transgender students are more likely than cisgender students to report substance use and suicide risk (Centers for Disease Control and Prevention, 2019). Compared with White children, Black and Latinx children face greater exposure to social risk factors for physical, behavioral, and social problems. Many of these social risk factors, such as child poverty, have increased since the COVID-19 pandemic as 1.2 million more children were living in poverty in 2020 compared to 2019, with Black and Latinx children experiencing the largest increase (Chen & Thomson, 2021).

Minoritized children are systematically affected by trauma-related mental health difficulties (Andrews et al., 2015), internalizing problems (Anderson & Mayes, 2010), and suicide risk including suicidal behavior (Sheftall & Miller, 2021). However, for conditions like attention-deficit/hyperactivity disorder (ADHD), Black and Latinx children are less likely than White children to be diagnosed and less likely to receive treatment after diagnosis (Coker et al., 2016; Shi et al., 2021). This trend continues with other mental health diagnoses as Black and Latinx children have significantly lower overall use of psychotropic medications to treat mental health concerns (e.g., Leslie et al., 2003). Despite Latinx children having lower overall use of psychotropic medications, this group receives

prescriptions for antipsychotic drugs at a higher rate than other populations, and these drugs have more metabolic side effects than other medication classes (Cataife & Weinberg, 2015). Although being less likely to receive appropriate treatment, Black children tend to use emergency mental health services disproportionately, are more likely to be hospitalized for psychiatric crisis stabilization compared to White children, and are less likely to have timely follow-up after a mental health hospitalization (e.g., Bardach et al., 2020). Disparities also exist regarding pediatric physical health (e.g., obesity, asthma). The prevalence of obesity is significantly higher among Black and Latinx children compared with White children (Anderson & Whitaker, 2009). The prevalence of asthma is higher in Black and Latinx children who also face greater risks for emergency department visits and death compared to White children (e.g., Akinbami et al., 2011). High-quality ambulatory care for asthma management is critical for reducing asthma-related hospitalizations; unfortunately, Black and Latinx children do not receive the same level of ambulatory and primary care services. Large SES and racial disparities exist in parental perceptions and experience of receiving central tenets of the medical home (i.e., personal doctor or nurse, usual source of care, family-centered care, referrals, care coordination, e.g., Coker et al., 2010). Poor access to the medical home contributes to minoritized children systematically receiving fewer preventive visits and being more likely to rely on emergency departments to receive care for nonurgent needs, particularly in urban areas (e.g., Long et al., 2012; Moon et al., 2005).

Understanding Drivers of Child Health Inequity: The EBD Model

Drivers of these health inequities are rooted in structural and social ecologies pertaining to *where* children are born, live, and learn; *what* they experience; and *how* they receive care. Structural ecologies include long histories of discriminatory public policies and practices (e.g., segregated schooling, forced busing, housing discrimination, racial steering, "White Flight" from urban centers, underfunded city schools and public health services, redlining, Jim Crow laws, harsh criminal sentencing, voter suppression). As a result of these discriminatory policies and practices, marginalized families have disproportionately accumulated burdens of family economic hardship, exposure to violence, incarceration of a family member, and caregiver substance abuse or mental illness, among others (Bailey et al., 2017). Social ecologies that drive health disparities include racism that is endemic within social, educational, and health care systems (e.g., Bailey et al., 2017; Johnson, 2020). One ecological driver of inequity is that the current ethnic and racial makeup of the mental health workforce does not reflect the population. While the diversity of the psychology workforce is improving, the field remains overwhelmingly White, heterosexual,

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cisgender, and nondisabled (American Psychological Association [APA], 2019). Studies reveal that seeing a provider who demographically matches a salient part of identity improves satisfaction and willingness to access care, even when providers in unmatched provider–patient dyads utilize culturally responsive care components (e.g., Cheng et al., 2021). Thus, the lack of representation likely contributes to ongoing inequity within physical, psychological, and educational health.

Additionally, implicit and explicit bias and racism systematically perpetuate physical health, behavioral health, and educational disparities. In schools, Black and Latinx children are more likely to receive office disciplinary referrals and suspensions than White students starting as early as preschool (e.g., Skiba et al., 2011). In health care, providers often demonstrate bias in terms of more positive attitudes toward cisgender, heterosexual, nondisabled, White patients and more negative attitudes toward patients of color and those who are LGBTQIA+ (Hadland et al., 2016; Sabin et al., 2015; Schnierle et al., 2019). This bias affects patient–provider communication, patient–family satisfaction, disparities in treatment, and adherence to treatment recommendations (Bailey et al., 2017). This long-standing bias and discrimination (both implicit and explicit) also contribute to mistrust of the health care system, particularly among marginalized populations (e.g., poor, urban, minoritized; Kennedy et al., 2007).

These structural and social ecologies are deep-seated drivers that perpetuate health inequity in ways that actually get "under the skin" and alter gene expression and explain increased biological vulnerability to a range of health problems through the life span (Shonkoff et al., 2009). The effects of racism, toxic stress, trauma, and other early-life adversity are implicated in heightened inflammation across several biomarkers that can lead to physical and mental health

conditions such as diabetes and depression; these changes are then genetically passed down, leading to epigenetic and intergenerational morbidity in future generations (Lê-Scherban et al., 2018; Shonkoff et al., 2009). Fortunately, the negative effects of structural and social ecologies do not always lead to irreparable damage. There are several resiliency or protective factors (e.g., experiencing safe, stable, nurturing relationships and environments; developing strong executive function, planning, problem-solving, and life skills) that buffer against negative effects and lead to some children having better outcomes than other children who experience similar stressors (e.g., Masten et al., 2021). Early developmental experiences are particularly critical in fostering resilience and in shaping future health, behavior, and learning as this time is the most sensitive for a child's developing brain and body (see Masten & Cicchetti, 2010; Shonkoff, 2017).

As *adverse childhood experiences* are implicated in negative health trajectories across the life span (e.g., chronic health problems, mental illness, substance misuse), *benevolent childhood experiences* may serve to modulate these effects while promoting more positive health trajectories (Bethell et al., 2019). Thus, primary and secondary prevention (e.g., developmental screening, support, and early intervention; developing safe, stable, and nurturing relationships; early literacy promotion and exposure to quality language) can promote health and wellness and also proactively build resilience by fostering adaptive skills needed to buffer against future life adversity (Garner, 2016; McClain et al., 2021). However, we cannot simply rely on children and families to be resilient to adverse circumstances perpetuated by health inequities. We must act to create systems that challenge and dismantle oppressive health care practices to reduce the burden of resiliency for marginalized populations.

Reaching Societal Threshold for Action

The *Harvard Business Review* estimates that health disparities result in an annual economic impact of at least $245 billion in excess health care expenditures, illness-related lost productivity, and premature death in the United States (Ayanian, 2015). Prevention programs targeting childhood yield the highest societal return on financial investment of all developmental periods (Campbell et al., 2014); however, the United States spends two times more on health care for working-aged adults and five times more on those 65 and older than on pediatric care (Lassman et al., 2014). The recent U.S. Surgeon General Advisory (Office of the Surgeon General, 2021) is a call to action that underscores the transactional influence between biological and environmental factors that requires broad cross-sector investment, coordination, and intervention during childhood to build a healthier society. Dismantling inequities in the health care system requires a reprioritization of health care spending, with an emphasis on programs that prevent health morbidities

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on a population level with targeted emphasis on the most vulnerable groups. Access to high-quality primary care is associated with improved quality of care, patient experience, and outcomes including lower mortality (Basu et al., 2019) as well as lowered health care spending (Friedberg et al., 2010). Given that prevention and care coordination are underlying functions of primary care, this platform is well-positioned to reduce sickness, improve health and wellness, and decrease the reliance on specialty, emergency, and hospital care. In the context of child health being predictive of adult health and disproportionate health burdens for marginalized populations, there is a need for primary care models that explicitly focus on the equitable promotion of child health.

The P-PCMH

The P-PCMH, also known simply as "the medical home," was first described in *Standards of Child Health*, a book published in 1967 by the American Academy of Pediatrics' Council on Pediatric Practice. The medical home was defined as a single, central source of a child's medical records and critical to the care of children with chronic disease, who may have multiple providers and places of care. Our current understanding and conceptualization of the medical home as accessible, family-centered, coordinated, comprehensive, continuous, compassionate, and culturally effective are rooted in the approach to care for children with special health care needs developed in Hawaii by Dr. Calvin Sia (2004), which served as a continuous system of comprehensive and coordinated care based in the pediatric primary care office and reliant on a bidirectional, trusting partnership between the primary care clinician (PCC) and the caregiver.

In the recent report on *Implementing High-Quality Primary Care*, NASEM (2021) defined high-quality primary care as "the provision of whole-person, integrated, accessible, and equitable health care by interprofessional teams that are accountable for addressing the majority of an individual's health and wellness needs across settings and through sustained relationships with patients, families, and communities." In its report, NASEM recognized that behavioral health integration in primary care is a key element of providing whole-person care; various models for the inclusion of behavioral health in the P-PCMH have been described and evaluated (e.g., Asarnow et al., 2015, 2017).

Evidence demonstrates that the P-PCMH improves health and health care outcomes, among children with and without special health care needs; the P-PCMH is associated with improved health status, more effective health care utilization (greater preventative care use, less emergency department use), fewer unmet needs, and patients with access to the P-PCMH are more likely to receive care that is timely and family-centered; thus, the medical home has great potential to reduce health and health care disparities for minoritized children and children living in poverty (Akobirshoev et al., 2019; Hadland & Long, 2014; Homer et al., 2008; Long et al., 2012). However, due to the structures of racism and discrimination that are pervasive in the United States, the medical home has largely maintained and perpetuated inequitable care for marginalized children (e.g., Liljenquist & Coker, 2021; Trent et al., 2019). Wide inequities in access to the medical home, as well as its individual elements, have been documented for Black and Latinx children and for children living in families with low-income (Guerrero et al., 2018; Weller et al., 2020). Incorporating interprofessional team-based care with explicit focus on health equity and emphasizing community partnerships within the P-PCMH may improve whole-person primary care that addresses the comprehensive needs of underserved families, thereby reducing existing disparities by race, ethnicity, gender, sexual orientation, and income in care and health outcomes.

To achieve this goal of health equity, however, the P-PCMH must also fulfill its function as a platform for care coordination across intersecting child-serving systems of care including schools, daycare centers, secondary and tertiary medical care, juvenile justice, social service agencies, and community-based organizations. The interprofessional nature of the P-PCMH provides a unique opportunity to support children and families, as team members can take on specific roles related to direct provision of care and coordinating care across systems. The following sections review key concepts related to behavioral health integration and then focus on psychologists' roles related to equitable team-based care and cross-systems collaboration using the EBD framework.

Behavioral Health Integration Within the P-PCMH

Collaborative approaches between psychologists and the P-PCMH can increase access to high-quality behavioral health

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services and ensure a "one-stop shop" for physical health, behavioral health, and social needs, thereby reducing structural barriers to care (e.g., time, transportation, work leave). The longitudinal relationships and trust many families have with their PCC can also help reduce perceptual barriers to behavioral health care (e.g., stigma). Collaborative approaches can be broadly categorized into three distinct "levels of integration": providing behavioral health services from a *separate* location, with some level of communication across providers (coordination); providing behavioral health care in the *same* physical location as the P-PCMH (colocation); or by working as an *integrated* member of the P-PCMH team as a standardized component of care (integration; Asarnow et al., 2017).

Historically, coordinated models have focused on developing relationships between the P-PCMH and off-site behavioral health providers in the community. More recently, coordinated approaches have leveraged technology to allow PCCs to obtain on-demand, individual consultation (Bettencourt et al., 2021) or group-based telementoring (e.g., Hostutler et al., 2020) to develop behavioral health competencies and comfort. These models focus on building the capacity of the P-PCMH to reduce the need for patients to travel outside of their community to obtain care in specialty settings. This is particularly important in ecologies where availability and transportation make accessing specialty care difficult. On-site models range in their scope with some targeting specific developmental periods (e.g., psychology-adapted Healthy Steps early childhood programming; Briggs, 2016), some targeting a narrow range of conditions (e.g., collaborative care model; Asarnow et al., 2005), and others providing generalist practice across a wide range of developmental periods and presenting concerns that arise in primary care (e.g., primary care behavioral health model; Reiter et al., 2018). Growing literature supports

the on-site integration of psychologists into the P-PCMH in improving both behavioral health outcomes (Asarnow et al., 2015) and increasing P-PCMH service use, including improved attendance at well visits and receipt of immunizations (e.g., Ammerman et al., 2022). In fact, behavioral health intervention integrated within the P-PCMH may be differentially more effective for some groups of marginalized children. For example, Weersing et al. (2017) found that Latinx children benefited most when treatment was colocated within primary care. Ngo et al. (2009) found that Black children had the most symptom reduction; Latinx children had the highest satisfaction with services; and Black and Latinx children had more engagement and service use compared to White children in a collaborative care model addressing internalizing disorders.

Psychologists' Roles in the P-PCMH in Promoting Child Health Equity

Although the integration of psychologists into the P-PCMH may result in improved access to and utilization of services as well as improved outcomes for marginalized children, there must be intentional efforts focused on health equity and informed by the EBD model to ensure those outcomes are equitable. Psychologists fill wide-ranging roles in the P-PCMH (clinician, consultant, trainer, administrator, team lead, researcher, and advocate; Kaslow et al., 2015; Nash et al., 2013) and engage in multiple activities (e.g., screening/ assessment, prevention, intervention, consultation, collaboration; Hoffses et al., 2016). The following sections delineate innovative applications of these roles to promote child health equity.

Clinician

Integrated psychologists should follow the general recommendations of culturally humble direct patient care (e.g., acknowledging the role of intersecting identities and biases of patients, families, and team members in treatment, engaging in self-reflection, and seeking additional ongoing training and support; Mosher et al., 2017). Assessment measures, clinical care models, and interventions should be designed or adapted for the populations served (e.g., Mautone et al., 2020; Snider et al., 2020). Integrated teams should learn and implement models that are specifically designed to address cultural biases in health care delivery. For example, the LET UP model provides health care providers a systematic approach of responding to cultural bias (Crawford et al., 2019). LET UP is an acronym for the key skills used within the model: Listen, Empathize, Tell your Story, Understand, and Psychoeducate. These skills support health care providers manage their reactions to cultural bias and be strategic and mindful in response.

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As previously described within the EBD model, experience of discrimination can result in intergenerational transmissibility of morbidity through epigenetics (Goosby & Heidbrink, 2013). Thus, incorporating multigenerational approaches to risk mitigation and health promotion can be particularly meaningful for marginalized populations. Two-generation approaches (i.e., focusing on caregivers and their children) targeting "high-risk" families are most common (e.g., McLanahan et al., 2014). These acknowledge the primacy of the family in shaping health and developmental outcomes for children by supporting pregnant people and new parents with parenting and job skills and addressing more immediate social needs for the whole family. Three-generation approaches (i.e., focusing on caregivers and their children while supporting planning for future generations) take multigenerational risk mitigation and health promotion one step further to recognize and disrupt cycles of intergenerational risk transmission (e.g., Cheng et al., 2016). As a primary prevention strategy, three-generation approaches can support caregivers and youth with an additional focus on issues related to emerging adulthood (e.g., career/vocational planning, supporting youth independence in health decisions, fostering healthy communication skills, preconception health and related education/reproductive planning, socioeconomic skill development). Although there is no denying the role of bias and discrimination in patient–provider interactions and structural inequities within health care, much of health is determined by factors *outside* the exam room. Thus, equity-focused P-PCMH teams are attentive to structural and social ecologies (e.g., housing and food insecurity) that exacerbate biological underpinnings for health disparities in minoritized and marginalized children (Farber et al., 2017). Psychologists who intentionally focus on ecological-/systems-level needs are well-positioned
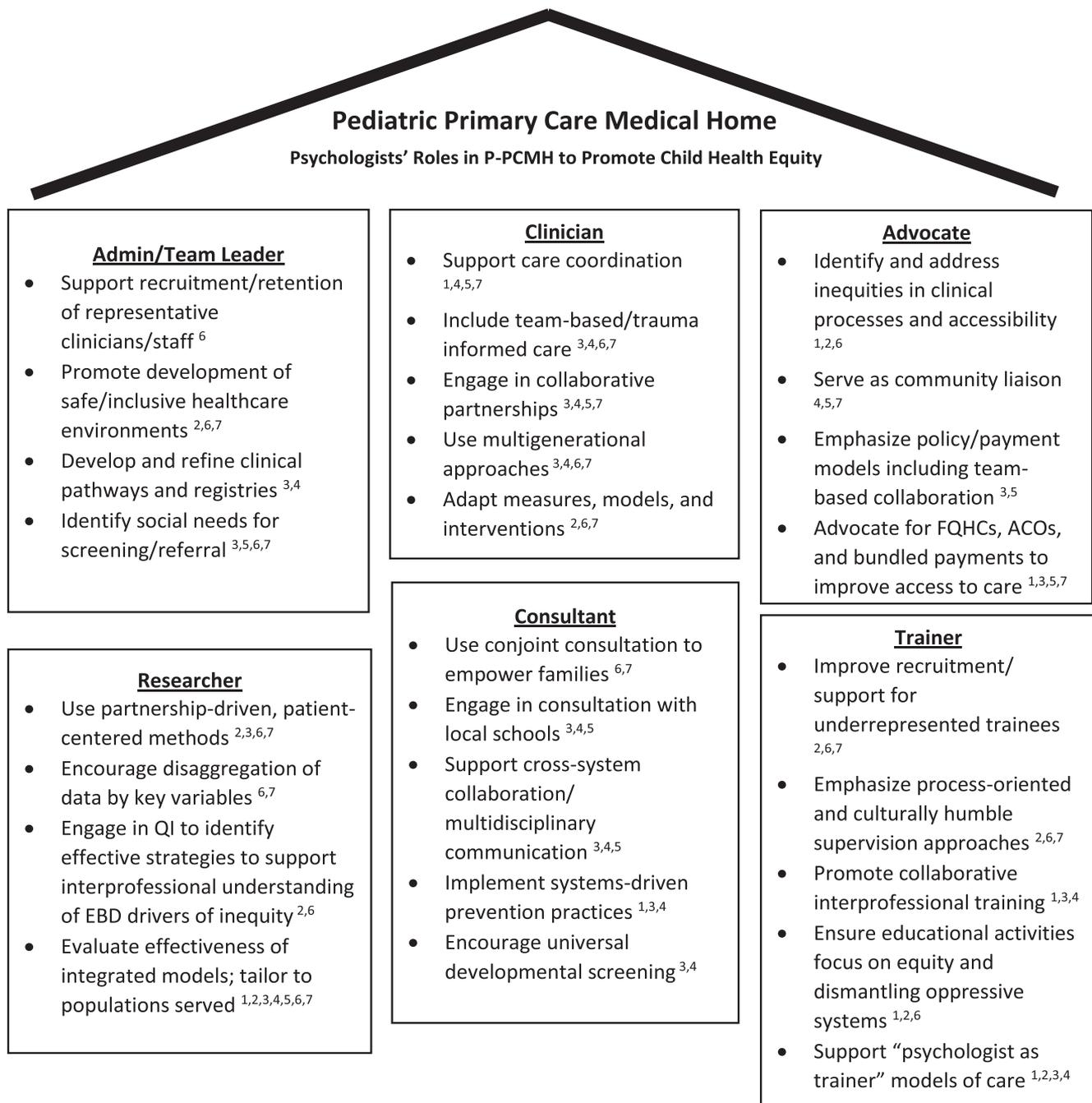
to foster collaborative partnerships within and across systems (e.g., schools, families) to expand the reach of the P-PCMH to address these issues (e.g., McClain et al., 2021; Power et al., 2014). Psychologists can collaborate with care coordinators to support families as they navigate siloed systems that are uniquely challenging for prohibited populations. Substantial evidence demonstrates the effectiveness of care coordination for chronic medical illness and there is emerging evidence to support its effectiveness in addressing behavioral health concerns (Godoy et al., 2019), including within integrated models (e.g., Sheldrick et al., 2022).

One example of a multimodal, P-PCMH-integrated intervention that aligns with the EBD model and that is intentionally designed for the population it serves is the Partnering to Achieve School Success (PASS) program (Power et al., 2014). In PASS, the psychologist works closely with the PCC and a community health partner (i.e., care coordinator) to facilitate family engagement in care, family–school–health system collaboration early in schooling (i.e., kindergarten through Grade 5), and effective, trauma-informed, team-based care in the P-PCMH. PASS was designed with input from caregivers, clinicians, and educators. The care team and family collaborate to implement a treatment plan that includes family-centered goals related to promoting child competence (development), family–school partnership (ecology), and health behavior (biology).

Consultant

As many drivers of inequity are structural and intersectional, psychologists in the P-PCMH can leverage their consultative skills with community collaborators (e.g., P-PCMH team members, organization leaders, schools, child protection agencies) to encourage meaningful inter- and intra-systemic change. For example, psychologists could encourage a focus on EBD drivers of presenting concerns and ensure systems-driven prevention practices (e.g., neonatal intensive care unit [NICU] and early childhood partnerships to streamline screening and referral practices; aligning universal developmental screening in primary care with school readiness expectations; promoting inclusive, affirming, and trauma-informed processes for all patients; or helping select screening tools that have been adequately validated for the population; McClain et al., 2021). When consulting with team members or cross-sector partners, consideration of conjoint consultation approaches can empower families to be equal members in the process (over expert-based approaches) and further the team's understanding of the situation while strengthening the relationship between the family and the systems of care in which they interact (Garbacz & McKenney, 2020). Consultation with local schools on building population-based approaches through multitiered systems of support (e.g., response-to-intervention or positive behavioral intervention and supports) can enhance

Figure 1
Psychologists' Roles in P-PCMH to Promote Child Health Equity

Pediatric Primary Care Medical Home
Psychologists' Roles in P-PCMH to Promote Child Health Equity

Admin/Team Leader
- Support recruitment/retention of representative clinicians/staff [6]
- Promote development of safe/inclusive healthcare environments [2,6,7]
- Develop and refine clinical pathways and registries [3,4]
- Identify social needs for screening/referral [3,5,6,7]

Clinician
- Support care coordination [1,4,5,7]
- Include team-based/trauma informed care [3,4,6,7]
- Engage in collaborative partnerships [3,4,5,7]
- Use multigenerational approaches [3,4,6,7]
- Adapt measures, models, and interventions [2,6,7]

Advocate
- Identify and address inequities in clinical processes and accessibility [1,2,6]
- Serve as community liaison [4,5,7]
- Emphasize policy/payment models including team-based collaboration [3,5]
- Advocate for FQHCs, ACOs, and bundled payments to improve access to care [1,3,5,7]

Researcher
- Use partnership-driven, patient-centered methods [2,3,6,7]
- Encourage disaggregation of data by key variables [6,7]
- Engage in QI to identify effective strategies to support interprofessional understanding of EBD drivers of inequity [2,6]
- Evaluate effectiveness of integrated models; tailor to populations served [1,2,3,4,5,6,7]

Consultant
- Use conjoint consultation to empower families [6,7]
- Engage in consultation with local schools [3,4,5]
- Support cross-system collaboration/multidisciplinary communication [3,4,5]
- Implement systems-driven prevention practices [1,3,4]
- Encourage universal developmental screening [3,4]

Trainer
- Improve recruitment/support for underrepresented trainees [2,6,7]
- Emphasize process-oriented and culturally humble supervision approaches [2,6,7]
- Promote collaborative interprofessional training [1,3,4]
- Ensure educational activities focus on equity and dismantling oppressive systems [1,2,6]
- Support "psychologist as trainer" models of care [1,2,3,4]

Note. P-PCMH = pediatric patient-centered medical home; QI = quality improvement; EBD = ecobiodevelopmental; FQHC = federally qualified health center; ACO = accountable care organization. Superscripts are used to denote the components of the P-PCMH addressed by each activity to advance health equity; 1 = accessible; 2 = compassionate; 3 = comprehensive; 4 = continuous; 5 = Coordinated; 6 = culturally competent/humble; 7 = family-centered.

screening and support mechanisms to improve access to care (McClain et al., 2021). To fully engage in cross-system collaboration, information sharing systems and processes must be designed to maintain patient privacy and allow for communication in a shared record. For example, the ADHD Care Assistant (Power et al., 2016) and myADHDportal (Epstein et al., 2013) are examples of Health Insurance Portability and Accountability Act (HIPPA) compliant electronic information sharing platforms that facilitate cross-sector care coordination between pediatricians, schools, and families.

Trainer

Psychology training programs must embrace their "institutional responsibility" to promote health equity (Braveman, 2019) and consider factors that have perpetuated the development of a nonrepresentative workforce (IHS Markit, 2018). There are models for systematically improving the diversity of training programs. For example, Hoff et al. (2022) used a quality improvement framework to recruit a more diverse training class and significantly improved representativeness. Effective strategies included improving visibility and support through intentional marketing, recruiting from diversity-oriented groups, developing a student visitation program, and creating supports for existing underrepresented trainees.

In addition to strategic recruitment practices, as trainers, psychologists can ensure that educational activities explicitly focus on health equity and breaking down oppressive systems of care across the training curriculum. This work requires intentionality in training and supervision to promote cultural humility, continuous self-reflection both for learners and trainers, and strategic practices for retaining a diverse workforce. The APA's (2015) *Guidelines for Clinical Supervision in Health Service Psychology* specifies issues of diversity as imperative for supervision competency and provides recommendations for psychologists to engage in ongoing and lifelong training related to understanding the effects of bias, prejudice, and stereotyping within systems to support the development of a more diverse workforce and provision of equitable care. Additionally, process-oriented supervision approaches, open dialogue, integration of the sociopolitical context into supervision discussions, and development of safe and liberated spaces for trainees and supervisors from minoritized backgrounds are key components of culturally humble supervision and training that are essential to retain diverse trainees across the workforce pipeline (Upshaw et al., 2020).

Given current and projected workforce shortages (particularly in areas that serve marginalized populations; IHS Markit, 2018), increasing diversity of the U.S. population, and existing payment models that may view psychologists as more expensive than masters-level providers, interprofessional solutions are necessary. Psychologists within P-PCMHs would benefit from training and collaborating with other behavioral health clinicians (e.g., social workers, licensed professional counselors), allied health professionals, and paraprofessionals (e.g., community health workers, care coordinators, system navigators, health coaches, family peer advocates, and peer connectors; Kaslow et al., 2015; NASEM, 2021). Interprofessional training models can be consistent with a lower cost profile and may ultimately increase workforce capacity (e.g., Talmi et al., 2016). For example, it is unlikely that universal prevention programs, such as Healthy Steps, can be scaled nationally if only delivered by doctoral-level clinicians. However, psychologists could undertake roles in training, consultation, and program development/evaluation while allied behavioral health professionals provide the direct clinical care. Chacko et al. (2020) demonstrated that this "psychologist as trainer" approach was effective at expanding interventions for ADHD within pediatric primary care.

Administrator/Team Lead

Psychologist leaders can encourage systems-level implementation of strategies to address EBD drivers of health inequity. For example, they can support institutional accountability for recruitment and retention practices, promoting hiring of clinicians and staff that are representative of clinic populations. Additionally, leaders informed by the EBD model will be attentive to power imbalances and act to challenge them. Mentorship of team members from underrepresented and marginalized groups must also include sponsorship (i.e., active support in navigating power structures). Leaders may have opportunities to refine clinical pathways (e.g., equitable ADHD diagnosis and treatment), operational procedures (e.g., adding pronouns to staff identification badges, offering evening clinic hours for working families), and renovation of physical spaces (e.g., displaying inclusive artwork and signage) to promote the development of safe and inclusive health care environments. Psychologists can work jointly to identify marginalized populations in their ecologies through social needs screening and referral.

Administrative leaders should ensure that equity is built into the mission of their program and therefore into their model, clinical, training, and evaluation activities. For example, leaders of integrated P-PCMH programs may consider developing a clinical patient registry, a computer database that tracks care delivery and patient outcomes (see Hostutler & Ramtekkar, 2020). To promote equity, clinical registries can be reviewed regularly by the team, disaggregated by multiple demographic categories to purposefully assess, monitor, and attenuate demographic disparities. These regular, team-based reviews of the registry with a focus on equity communicates the importance of equity to the teams through action.

Researcher

Conducting research and quality improvement (QI) activities that evaluate the EBD drivers of child health outcomes is a vital role for psychologists consistent with the quality and safety goals of the P-PCMH. Representative and participatory research (Sheridan et al., 2017) is needed to elucidate the ways that the structures and processes built into the P-PCMH itself contribute to health inequity and restructure the P-PCMH to serve all children more equitably. For example, what are best practices in cross-systems consultation, policy, and payment to address the EBD drivers of inequity from within the P-PCMH? What types of consultation methods work best to disrupt implicit and explicit bias and discrimination within the P-PCMH? What educational curricula are

most effective at teaching P-PCMH teams to understand and attenuate the EBD drivers of inequity? How can QI methods and interventions be used to improve access, service use, and quality of care for diverse children and families?

In addition to understanding which interventions improve which outcomes, for which patients, we also need to better understand which behavioral health integration models—or components of models—improve which outcomes, for which patient populations. For example, highly integrated, team-based models that prioritize psychologists and PCCs working together in joint appointments *may* work better for patient populations where transportation makes separate appointments difficult, and stigma makes seeing the psychologist for a separate appointment less preferable; however, this remains largely untested. By further understanding and comparing the effectiveness of various models and components, future models can be better tailored to the populations served. P-PCMH integration research has focused on direct clinical intervention outcomes to date, and research questions and findings are typically driven by researchers, rather than fully including all team members throughout the process. Several methodologies and processes, such as patient-centered methods, that help ensure that the work represents the goals and needs of the community, are underutilized (Sheridan et al., 2017). By including community members on the research team, psychologists can promote inclusive methodologies for research recruitment, analysis, norming, and database creation. Psychologists can encourage disaggregation of data by key variables, such as race, language, gender identity, and sexual orientation.

As described by Lion et al. (2022), "all quality improvement is health equity work." Specifically, QI work within integrated P-PCMH models should (a) examine, identify, and understand existing disparities, regardless of the focus area of the work by disaggregating data; (b) engage communities that are experiencing the disparities on QI teams, not as bystanders or informants but as codesigners of equity-focused improvement efforts; and (c) track changes across demographic groups (Lion et al., 2022).

Advocate

Psychologists engaging in equity-focused advocacy efforts will be a visible and active presence in discussions related to provision of equitable care for systematically marginalized populations. Internally, psychologists can emphasize clinical and operational structures that identify, support, and elevate marginalized voices. Psychologists must also identify current inequities in clinic processes (e.g., wait-lists, transportation and work–leave barriers, language interpretation service accessibility) and rebuild those that center on the most privileged. Externally, psychologists should demonstrate intentionality in recognizing the strengths and drivers of inequity within the community served by the P-PCMH as

well as the local leaders working to support the community. As an advocate, psychologists serve as liaisons with community leaders (e.g., faith communities, recreation leagues, coaches, housing and food alliances, local government workgroups, community advisory boards) to build healthier, more equitable communities (Kelleher et al., 2018). Acknowledging the role that policy and payment play as structural drivers of health inequities, there is a need for psychologists to recognize potential avenues for advocacy. The Patient Protection and Affordable Care Act recognized the role that health inequity plays in the increasingly exorbitant costs of health care in the United States and advanced several initiatives (e.g., increasing funding to expand community health centers, making available new health insurance options to uninsured individuals in low- and middle-income households, expanding Medicaid; Glied & Jackson, 2017). There is a continued need for shifts in policy and payment to incentivize financing models that emphasize treatment in the P-PCMH, team-based collaboration with behavioral health clinicians, and care coordination. Policy and payment infrastructures must emphasize value-based models that base payment on performance indicators (e.g., addressing social risk factors). The use of incentives can reward models that address disparities in mental health services and outcomes.

There is additional need for state and federal advocacy to increase access to a range of integrated P-PCMH models that allow flexibility to leverage the full range of the behavioral health workforce and to meet the unique needs of children in marginalized communities. This can be done through increased funding for federally qualified health centers (venues that provide services to patients with low-income and in medically underserved areas) to function as fully integrated medical homes and to expand integrated behavioral health services within P-PCMHs. Clinics and health systems may need to leverage other methods to transform health delivery such as creating accountable care organizations and bundled payments. The shift from fee-for-service to value-based care using bundled payments or capitated models, which provide sufficient payment to provide comprehensive and integrated behavioral health care, can reward resource stewardship, care coordination across clinicians and systems of care, and efforts to improve quality of care.

A recent example of pediatric psychologist advocacy includes efforts around the passing of House Bill 303 in Delaware which, beginning in 2024, requires insurance to cover annual behavioral health wellness checks with a behavioral health clinician (see https://legis.delaware.gov/BillDetail/79148). This requirement put behavioral health care on par with other routinely covered preventative health services such as physical wellness checks and cancer screenings. Under the bill, wellness checks would be required to include the use of validated mental health screeners. This bill also included language that ensures behavioral health professionals are reimbursed on par with physicians.

Conclusion

Child health inequities in the United States lead to disproportionate, yet avoidable, health burdens for minoritized and marginalized children. Equity-focused psychology integration within the P-PCMH is uniquely positioned to address the structural and social ecologies that perpetuate health disparities. Advancing the P-PCMH platform to address child health equity will require thoughtful navigation of the structural and social ecologies of the health care system that hamper equitable access to high-quality physical and behavioral health services and social needs supports. Psychologists embedded in the medical home are uniquely positioned to undertake several roles specific to advancing health equity through direct care, consultation, care coordination, training, advocacy, and research. However, the sustained and widespread opportunity for psychologists to function in these roles will require systems-level transformations and thoughtful interprofessional and cross-sector partnerships.

For the behaviorally integrated P-PCMH to reach scale and realize its full potential in addressing child health inequities, considerable attention to creating a larger, more culturally humble and diverse psychology workforce is needed. Psychologists will also need to collaborate with other professional and paraprofessional team members to maximize reach and impact. Efforts to implement interventions need not be tied to specific professions or practice guilds, but instead the focus should be on providing high-quality, equitable, and sustainable interventions. Research will be needed to continue developing, evaluating, and disseminating equitable models of care. Although we have emerging evidence that integration may improve equity for Black and Latinx mental health, we also need to extend our research and clinical models to address the full range of inequity and the ways inequities intersect. Clinicians and administrators should continually evaluate their work through an equity lens. Payment models and policy will need to be aligned with these team- and value-based approaches to care. There will also need to be thoughtful consideration of barriers such as workforce availability, payment structures, time and administrative pressures, and preexisting institutional norms and values that may run counter to advancing a health equity agenda.

We acknowledge there is much to learn and much to accomplish before integrated P-PCMH models can achieve their full potential in improving the health of all children in our country. We hope this article continues to advance the important work focused on more intentional approaches to advancing health equity within integrated P-PCMH models, capitalizing on the wide-ranging roles psychologists can play within these models. It is beyond time for health care systems to ensure comprehensive, quality care for *all* children and families—right care, right time, right place.

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