

Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting

Stacy Hodgkinson, PhD,^a Leandra Godoy, PhD,^a Lee Savio Beers, MD,^a Amy Lewin, PsyD^b

Poverty is a common experience for many children and families in the United States. Children <18 years old are disproportionately affected by poverty, making up 33% of all people in poverty. Living in a poor or low-income household has been linked to poor health and increased risk for mental health problems in both children and adults that can persist across the life span. Despite their high need for mental health services, children and families living in poverty are least likely to be connected with high-quality mental health care. Pediatric primary care providers are in a unique position to take a leading role in addressing disparities in access to mental health care, because many low-income families come to them first to address mental health concerns. In this report, we discuss the impact of poverty on mental health, barriers to care, and integrated behavioral health care models that show promise in improving access and outcomes for children and families residing in the contexts of poverty. We also offer practice recommendations, relevant to providers in the primary care setting, that can help improve access to mental health care in this population.

Although it is 1 of the wealthiest nations, the rate of poverty in the United States continues to exceed that of many other industrialized nations. Poverty has been consistently linked with poor health and increased risk for psychological disorders in children and adults that can persist across the life span.¹⁻³ Despite the mental health needs of families living in poverty, few gain access to high-quality mental health services.⁴⁻⁶ There is a growing urgency to develop models of mental health care that are tailored to the needs of these vulnerable children and their families. Pediatric primary care providers (PCPs) are in a unique position to take a leading role in this effort because families often turn to them first for help with mental health concerns. Although there are a number of systemic, cultural, and

individual barriers to accessing mental health care, promising interventions and integrated behavioral health care models have emerged that can be implemented in the primary care setting to help PCPs close the enormous gap between mental health needs and access for children and families experiencing poverty.

This article briefly summarizes the current landscape of poverty in the United States, the relationship between poverty and compromised mental health, and barriers to care among children and families experiencing poverty. It also provides an overview of promising mental health service delivery models and strategies, based in the pediatric primary care setting, that can improve access to mental health care in this population and discusses practice

abstract



^aChildren's National Health System, Washington, District of Columbia; and ^bUniversity of Maryland School of Public Health, College Park, Maryland

Dr Hodgkinson conceptualized and designed the components of the review article, drafted sections of the initial manuscript, and revised and organized sections submitted by the coauthors; Drs Godoy, Beers, and Lewin drafted sections of the manuscript and reviewed and revised the manuscript; and all authors approved the final manuscript as submitted.

DOI: 10.1542/peds.2015-1175

Accepted for publication Oct 10, 2016

Address correspondence to Stacy Hodgkinson, PhD, Diane L. and Stephen A. Goldberg Center for Community Pediatric Health, Children's National Health System, 111 Michigan Ave, NW, Washington, DC 20010. E-mail: shodgkin@childrensnational.org

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2017 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: Preparation of this manuscript was supported by a grant from the National Institute on Minority Health and Health Disparities of the National Institutes of Health, under award P20MD000198. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. Funded by the National Institutes of Health (NIH).

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

To cite: Hodgkinson S, Godoy L, Beers LS, et al. Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting. *Pediatrics*. 2017;139(1):e20151175

recommendations relevant to PCPs. In this review, we use the terms psychological disorders and mental health to refer to a range of social-emotional and behavioral disorders, including internalizing, externalizing, and substance use disorders, while excluding developmental disorders such as autism.

POVERTY AND COMPROMISED MENTAL HEALTH

Living in a poor or low-income household is a disturbingly common occurrence that many Americans will experience over the course of their lives.⁷ The effects of poverty on families and children are extraordinarily complex. Although descriptive statistics do not reflect the nuances and individual variation inherent in this difficult condition, they do give some insight into the depth and breadth of its impact, which in turn inform intervention. In 2014, 46.7 million people were living at or below the federal poverty level (an income of \leq \$23 624 for a family of 4 with 2 children), well below the income level research suggests is generally needed to meet a family's needs.^{8,9} Children <18 years of age are disproportionately affected by poverty, making up 23% of the total population but 33% of all people in poverty.⁸ In 2014, 20% of all children lived in low-income households. Ten percent of children live in "persistent poverty" (spend at least half their childhood poor), putting them at greater risk for adverse outcomes across their life span.^{8,10}

There are disparities in poverty rates depending on age, race or ethnicity, family structure, and geographic location. Although the largest number of poor and low-income children are white, minority children are disproportionately affected, particularly African American, American Indian, and Hispanic children.⁹ In 2013, Hispanic and African American children were

~3 times more likely than white and Asian children to be poor.¹¹ Children raised by single parents and children raised in the South or West are also more likely to be poor or low income than children residing in the Northeast.⁸ Poverty status at birth and low parental educational attainment are the demographic factors most strongly associated with being persistently poor throughout childhood.¹¹

A wide range of research has linked poverty to lower ratings on measures of well-being across the life span.¹² Longitudinal research indicates that, compared with children of higher socioeconomic status (SES), children of low SES experience higher rates of parent-reported mental health problems and higher rates of unmet mental health needs.¹³ It is important to note that although poverty is often studied as a dichotomous variable, it can be more informative to instead examine multiple correlated social risk factors. It is evident that there is a strong gradient effect of social risk factors on child well-being; as social risk factors increase in number, so does the risk for poor mental health.^{14,15} This gradient is also seen specifically in the following relationship between family income and child health; increases in family income are associated with a corresponding increase in child physical health, behavioral health, development, and health care access and utilization.¹⁴ Thus, children from families across the spectrum of lower income levels incur some risk for adverse health outcomes, with children from families facing the greatest poverty experiencing the greatest risk.

Researchers have explored a number of pathways through which poverty is thought to affect children's development and social-emotional functioning. Yoshikawa et al¹⁶ discuss factors occurring at 3 levels, including the individual child level (eg, nutritional intake),

relational factors (eg, quality of family relationships), and institutional factors (eg, schools and neighborhoods). At the individual level, poverty is correlated with physiologic responses to stress, such as changes in blood pressure and cortisol levels, with longer exposure to poverty associated with more problematic responses.¹ Over time, the effects of early and chronic exposure to stressors can cause vulnerabilities, including physiologic disruptions and changes in brain architecture and functioning, which can lead to negative long-term physical and mental health consequences.^{17,18} Additionally, research suggests that exposure to stressors changes DNA methylation¹⁸ and that these changes may cause epigenetic alterations across generations.¹⁹

Poverty can also adversely affect children's mental health through family and community-level factors. Families living in poverty experience a unique array of stressors (eg, food insecurity, housing problems). These stressors can increase parental risk for mental health problems and substance abuse, which can diminish their capacity to engage in positive parenting practices (eg, warmth and responsiveness, nurturance, supervision)^{20,21} and increase the potential for child abuse and neglect.²² Low-income communities are often characterized by poor housing, limited resources, inadequate schools, and high crime and violence, all of which are associated with adverse mental health outcomes.^{3,23,24}

Although poverty is correlated with compromised mental health across the life span, the timing and extent of poverty affect outcomes. More extended exposure to poverty and exposure during childhood have been linked with poorer outcomes,^{10,12,25} suggesting that the benefits of prevention and intervention

might be best realized if focused on the early childhood period.¹⁷

BARRIERS TO ACCESSING AND USING MENTAL HEALTH SERVICES

Despite resounding evidence of the deleterious effects of poverty on the psychological well-being of children and families, there is a vast unmet need for mental health services in this population.^{5,6} It is estimated that among children experiencing poverty who are in need of mental health care, <15% receive services, and even fewer complete treatment.^{5,6}

Although there is no significant difference in the prevalence of mental health problems among children residing in poverty by race or ethnicity or geographic residence, after demographic and family variables are controlled for, there are statistically significant disparities in mental health service utilization across racial and ethnic groups and between children residing in urban and rural areas.⁴ Studies have generally found lower mental health service utilization among African American and Hispanic children, compared with white children.^{5,26} Native American children in urban areas are more likely to have received mental health care than white children, whereas African American children residing in urban areas and Latino children residing in both rural and urban areas are less likely to be connected to mental health care than white children. White children in rural areas are significantly less likely to receive mental health services than their counterparts in urban areas.⁴ These findings remain statistically significant even after income, family composition, and health insurance status are controlled for, and they suggest that there may be other determinants, such as communication, bias and discrimination, and practical barriers that may affect access to mental health services.

Children and families living in poverty face a range of barriers that reduce their ability to access mental health services, maintain compliance with treatment, and achieve favorable treatment outcomes.

Families in rural areas, in particular, often have to travel long distances to access mental health services.^{4,7} Additionally, lack of insurance or type of “carve out” and quantity of mental health services provided under managed care plans can prevent children and families from accessing needed mental health care services.²⁷

The conventional practice of most mental health agencies also contributes to disparities in access to mental health care. Clinic hours, which are more often during the day, do not accommodate people working in low-wage shift positions, who may not have the flexibility to consistently attend weekly mental health appointments held during business hours.²⁸ Mental health clinics often have long wait times for appointments and require multiple intake visits before treatment is rendered.²⁹ The effects of these barriers are exacerbated by the daily stressors and demands of living in poverty that can keep families from prioritizing mental health needs.⁶

Children and families experiencing poverty encounter additional social and psychological barriers. The stigma of mental health treatment and the stigma of living in poverty can engender self-blame and self-loathing, which can inhibit families from seeking care.³⁰ Parents raising children in poverty, particularly mothers, have real fears about being labeled “crazy,” concerned that a diagnosis may cause their children to be removed from their care.³¹ As a result, many families may have a general mistrust of the mental health care system, perceiving that any disclosure of mental health problems may result in hospitalization, overmedication, or separation from

children and family. Instead, families may rely on their own coping skills or support from family and friends whose disapproval of formal mental health treatment may also be a barrier to care.^{6,32,33}

PCPs are often the first encounter families have with mental health care, and this encounter can affect how families engage in treatment and future help-seeking behavior.^{34,35} However, research suggests that PCPs are not immune to the effects of culture and class-related biases.³⁶ For example, providers who were presented with clients described as having lower SES appeared less inclined to work with them and were more likely to view them as having a mental illness.^{30,37,38} Providers report many challenges in meeting the mental health needs of children and families generally, including lack of training, time, and external resources to which they can refer families. Additionally, they report challenges to addressing the needs of children living in poverty, including lack of training for practice in the context of poverty, facing their own personal biases and beliefs, stigma associated with working with families from low-income communities, and difficulties applying a traditional diagnostic framework with children and families struggling with poverty.³⁰

STRATEGIES TO IMPROVE MENTAL HEALTH ACCESS AND OUTCOMES IN PRIMARY CARE

There are a growing number of evidence-based treatments³⁹ for children experiencing mental health concerns, many of which have been implemented successfully (ie, demonstrated feasibility and statistically significant outcomes) with families from lower socioeconomic communities.^{40–45} Yet, as noted above, socioeconomically disadvantaged families face greater difficulties with treatment engagement^{45,46} and, even when they

complete treatment, may not benefit to the same extent as higher-income families.⁴⁷ Consequently, there is a need for more upstream, innovative, comprehensive approaches to addressing mental health problems among families experiencing poverty. Specifically, programs that are family driven, target children in their natural contexts, incorporate evidence-based interventions, and take a comprehensive approach to treatment that addresses relevant social determinants (eg, housing or food insecurity) may be associated with greater therapeutic changes,⁴⁸ decreased treatment attrition,⁴⁹ and increased engagement.⁵⁰⁻⁵² Despite the promise of these types of approaches and increasing recognition of their importance, their availability is limited. Although there is the beginning of a trend toward more transformative, comprehensive, preventive systems that span from communities to schools to health systems, we focus in this section on strategies that can be implemented in pediatric primary care settings.

Integrated behavioral health care within the patient-centered medical home (PCMH) is a particularly promising strategy to reduce barriers and increase access to mental health care across pediatric populations. The central characteristics of the PCMH, including a patient-centered orientation, comprehensive and coordinated team-based care, continuous access, and a system-based approach, reflect core elements that lead to improved mental health outcomes in primary care settings.⁵³ Integrated behavioral health care in the PCMH is a new concept that is still taking shape in practice and currently exists in many different forms, ranging from routine mental health screening as part of well child care to collocation of mental health providers within a primary care practice. These models of care, described in greater detail below, can decrease stigma, allow easier access

to services in a trusted setting, and facilitate better communication and collaboration between medical and behavioral health providers,^{34,53,54} addressing many of the barriers that children and families experiencing poverty face in accessing care.⁵³⁻⁵⁷ Families with children who have behavioral problems tend to use pediatric services more than other families,⁵⁸ thus increasing the opportunity for primary care to serve as an entryway into mental health care. Moreover, parents who discuss their children's social-emotional or behavioral problems with their pediatrician are more likely to obtain mental health services for their children than those who do not discuss these issues.⁵⁹

Routine, universal developmental and mental health screening, administered by the pediatric provider or other clinical staff (eg, nurses, social workers, mental health providers), has been highlighted as a way to identify potential concerns earlier among a wider range of families.^{60,61} Specifically, universal screening can help to address the fact that pediatricians tend to have low sensitivity rates in identifying mental health problems.⁶² Additionally, screening can help reduce disparities in health care because all children receive a similar assessment regardless of family characteristics or provider discretion. Expanding universal screening to include parent mental health and family adverse experiences can be beneficial in identifying families in need of additional support.²⁵ Despite the notable advantages of routine mental health screening, it is not being widely implemented by pediatricians, and a recent report from the American Academy of Pediatrics noted significant barriers to screening including lack of time, lack of reimbursement, lack of available mental health resources, and potential liability issues.⁶¹

Referral to external resources (eg, higher-acuity cases or those needing more specialty services) may also be facilitated by pediatric providers in a variety of ways. As a core concept, a PCP's awareness of the barriers to care, and ability to discuss them with families in a sensitive and culturally competent way, increases access by empowering families to engage in their child's mental health care.⁶³ Yet given limitations on providers' time, the complexity of most local mental health care delivery systems, and the needs of families living in poverty, targeted care coordination may increase successful linkages from primary care to the community. Care coordination, a collaborative and family-centered approach to organizing health care delivery, is considered to be an essential component of the medical home^{64,65} that has been effective for children in low-income households.⁶⁵ Care coordination involves the organization of patient care activities, often facilitated by information exchange between clinicians involved in a patient's care, ensuring that services provided across settings (eg, school and primary care) are well coordinated.⁶⁵ In mental health settings, care coordination by using either paraprofessionals or family associates (paraprofessionals with lived experience) is a promising strategy for engaging families in the use of mental health services after a referral has been made,^{51,66} although more research is needed on care coordination in primary care for children with mental health concerns. Care coordination is considered best practice in improving health care quality, yet payment for these supports remains a barrier, with great variability across states and third-party payers.

Ideally, direct mental health support and services are also available to families in the primary care setting, provided by either the PCP or a mental health specialist. Pediatric

providers can provide mental health care by using interventions intended for primary care settings. Examples of empirically supported interventions aimed at reducing social-emotional or behavioral problems implemented in primary care include Triple P Positive Parenting Program, a multilevel family preventive intervention program that includes a specific primary care component, and Brief Parent Child Interaction Therapy, a shortened version of a treatment that improves the parent-child relationship and interaction patterns by using live coaching.^{40,44} Modular or common factors treatments are also ideally suited for primary care because they use evidence-based principles to target underlying processes in a flexible manner that accounts for heterogeneous symptom presentations.^{67,68} Many pediatricians report lack of training and confidence treating mental health disorders.⁶⁹ Child mental health access programs, in which a mental health team (eg, psychiatrists, psychologists) provide real-time consultation to pediatricians, offer a cost-effective strategy to support pediatricians in implementing mental health intervention.⁷⁰

Mental health professionals integrated within primary care, who benefit from warm hand-offs and shared trust, can serve in a range of roles. For example, they can provide brief consultations to triage concerns, clarify diagnoses, inform treatment planning, and provide ongoing intervention services.^{55-58,70-73} In a cluster-randomized trial, on-site mental health care was associated with higher rates of treatment initiation and completion and with greater reductions in mental health symptoms and parental stress when compared with facilitated specialty care referral.⁵⁶

Integrated care models as described above hold promise for increasing access to mental health care for

children living in poverty, but they also face challenges. Barriers unique to the primary care setting may include pediatric provider time limitations, space limitations, billing restrictions, competing priorities, inadequate training, pediatric providers' understanding of the role of mental health specialists, and difficulty integrating new behavioral health systems into a busy, complex practice setting. In recognition of the complexity of these concerns and strategies needed to address them, resources exist to support providers in building integrated care models, including those available through the American Academy of Pediatrics.⁷³

RECOMMENDATIONS

There is a clear and growing consensus across the fields of pediatrics, psychiatry, psychology, and child advocacy that integrating mental health services into existing service settings, including pediatric primary care, is the most promising means of increasing access to mental health care, particularly for children from low-income families.^{38,54,74} However, optimal implementation requires changes in policies, workforce development, health care financing, community service system infrastructure, clinical workflow, and provider practices. The recommendations below focus on provider-level changes. A review of needed policy and regulatory change is beyond the scope of this article, but we encourage interested readers to contact their local professional societies, advocacy groups, or state agencies to learn about key issues and become involved in system transformation at a local or federal level.

Recommendations for provider-level change to improve access to mental health care for low-income families in the primary care setting are grouped into 3 main categories: education and training, clinical infrastructure,

and multidisciplinary teams. These recommendations are compiled from a review of mental health care delivery research, expert opinion, and policy recommendations from the American Academy of Pediatrics and others, tailored for the practicing pediatric PCP. Both the scientific and lay literature were reviewed, with special attention to expert recommendations that are evidence based and have been implemented in a variety of settings.

1. Education and training should focus on both cultural shifts and skill development, given the importance of the primary care physician in identifying and managing mental health concerns and in helping families to engage in mental health care. To overcome barriers to care faced by children from low-income families, PCPs, mental health professionals, and families all need to change their expectations of what mental health service delivery looks like and come to see the medical home as a source of behavioral as well as physical health care, recognizing the strong reciprocal relationship between them. Some specific areas for education and technical assistance include the following:
 - o Increasing the capacity of providers and staff to address practical, logistical, and psychological barriers to patient engagement in mental health care.⁷⁵ This includes increasing attention to social determinants of health (eg, housing, neighborhood conditions), and recognition and discussion of their role in both physical and mental health care.^{76,77} PCPs can seek additional training or collaboration with other clinical providers (eg, social workers and psychologists) to identify and address with families sources of toxic stress and to recognize

such topics as important components of pediatric care.²⁵

- Training and education that enable PCPs to identify and address emerging problems before they meet diagnostic criteria, including a focus on early childhood mental health (eg, Zero to Three).^{38,60}
 - Training to increase the PCP's comfort and competency in prevention, management, and treatment of frequently occurring and lower-acuity mental health conditions in childhood and adolescence, including medication management and knowledge of evidence-based mental health services.^{60,78}
 - Integrating education about mental health care into pediatric graduate medical education. This step may involve including mental health experts in training programs, coprecepting with mental health professionals in residency continuity clinics, and increasing the amount of time allocated to training in mental health within pediatric residency programs.⁶⁰
2. Clinical infrastructure is a critical factor in successfully increasing access to care by creating attainable and sustainable systems. Several changes can be implemented at the individual practice level, which supports the integration of mental health into primary care, including the following:
- Establishment of collaborative relationships that enable pediatric clinicians to better coordinate with mental health services.^{60,79} This change includes the creation of referral protocols that allow mental health providers to be available quickly, eliminate repetitive intake processes, and enable effective and specific communication between pediatric and mental health providers.⁸⁰
 - Creation of more effective mechanisms for communication and comanagement between providers including primary care clinicians, mental health professionals, school personnel, and case managers.^{60,74}
 - Assessment and adjustment of workflow to allow implementation of child and maternal mental health screenings, management of behavioral problems (eg, collaboration with front office staff, nursing, social work, and mental health clinicians), and potentially colocation or integration of mental health specialists.^{77,80}
 - Provision of routine screening for child social emotional problems and perinatal mood and anxiety disorders as standard components of well child care.^{25,38,79}
3. Multidisciplinary teams are essential to providing comprehensive, high-quality mental health care to children from low-income families, who face increased barriers to accessing care through traditional systems. Creating these teams can entail a greater investment of time and resources on the part of the pediatric provider; however, the payoff in improved outcomes and patient satisfaction can be great. Recommendations to support the development of these teams include the following:
- Integrate care coordination services into clinical settings to address the comprehensive needs of children and families. The collaborative care model is an example of a health care system-level intervention that emphasizes collaboration between providers and care managers to link PCPs and patients with mental health providers more efficiently, either within or outside the primary care setting.^{38,60,64,81} There is robust support for the use of collaborative care models as a means of managing mental health conditions in the primary care setting.⁸¹
 - Increase use of paraprofessionals (eg, family navigators, family support workers) in pediatric practices to facilitate access to care.⁵¹
 - Advocate for changes in policies or information technology to permit sharing and synthesis of physical and behavioral health data between these settings.⁷⁷
- These recommendations are not intended to be fully comprehensive but are targeted toward high-impact interventions that can be achievable in the typical primary care setting through a stepwise approach. Providers are encouraged to assess their own practices, implement small, incremental changes with continual reassessment, and partner with their local professional societies to improve access to mental health care for low-income families.

ABBREVIATIONS

PCMH: patient-centered medical home
PCP: primary care provider
SES: socioeconomic status

REFERENCES

- Evans GW, Kim P. Childhood poverty and health: cumulative risk exposure and stress dysregulation. *Psychol Sci*. 2007;18(11):953–957
- Falconnier L, Elkin I. Addressing economic stress in the treatment of depression. *Am J Orthopsychiatry*. 2008;78(1):37–46
- Leventhal T, Brooks-Gunn J. The neighborhoods they live in: the effects of neighborhood residence on child and adolescent outcomes. *Psychol Bull*. 2000;126(2):309–337
- Howell E, McFeeters J. Children's mental health care: differences by race/ethnicity in urban/rural areas. *J Health Care Poor Underserved*. 2008;19(1):237–247
- Kataoka SH, Zhang L, Wells KB. Unmet need for mental health care among US children: variation by ethnicity and insurance status. *Am J Psychiatry*. 2002;159(9):1548–1555
- Santiago CD, Kaltman S, Miranda J. Poverty and mental health: how do low-income adults and children fare in psychotherapy? *J Clin Psychol*. 2013;69(2):115–126
- Rank MR, Hirschl TA. The likelihood of experiencing relative poverty over the life course. *PLoS One*. 2015;10(7):e0133513
- DeNavas-Walt C, Proctor B. *Income and Poverty in the United States: 2014*. Report no. P60-252. Washington, DC: US Census Bureau, US Government Printing Office; 2015
- Jiang Y, Ekono M, Skinner C. *Basic Facts About Low-Income Children: Children Under 18 Years, 2013*. New York, NY: National Center for Children in Poverty; 2015
- Ratcliffe C, McKernan S. *Childhood Poverty Persistence: Facts and Consequences*. Washington, DC: The Urban Institute; 2010
- Child Trends. *Children in Poverty: Indicators on Children and Youth*. Bethesda, MD: Child Trends Databank; 2014
- National Center for Health Statistics. *Health, United States, 2011: With Special Feature on Socioeconomic Status and Health*. Hyattsville, MD: US Department of Health and Human Services, National Center for Health Statistics; 2012
- Wadsworth ME, Achenbach TM. Explaining the link between low socioeconomic status and psychopathology: testing two mechanisms of the social causation hypothesis. *J Consult Clin Psychol*. 2005;73(6):1146–1153
- Larson K, Halfon N. Family income gradients in the health and health care access of US children. *Matern Child Health J*. 2010;14(3):332–342
- Victorino CC, Gauthier AH. The social determinants of child health: variations across health outcomes—a population-based cross-sectional analysis. *BMC Pediatr*. 2009;9:53
- Yoshikawa H, Aber JL, Beardslee WR. The effects of poverty on the mental, emotional, and behavioral health of children and youth: implications for prevention. *Am Psychol*. 2012;67(4):272–284
- Center on the Developing Child at Harvard University. The foundations of lifelong health are built in early childhood. 2010. Available at: www.developingchild.harvard.edu. Accessed June 23, 2016
- McGowan PO, Sasaki A, D'Alessio AC, et al. Epigenetic regulation of the glucocorticoid receptor in human brain associates with childhood abuse. *Nat Neurosci*. 2009;12(3):342–348
- Whitelaw NC, Whitelaw E. How lifetimes shape epigenotype within and across generations. *Hum Mol Genet*. 2006;15(spec no 2):R131–R137
- Lugo-Gil J, Tamis-LeMonda CS. Family resources and parenting quality: links to children's cognitive development across the first 3 years. *Child Dev*. 2008;79(4):1065–1085
- Weaver IC, Cervoni N, Champagne FA, et al. Epigenetic programming by maternal behavior. *Nat Neurosci*. 2004;7(8):847–854
- Pelton LH. The continuing role of material factors in child maltreatment and placement. *Child Abuse Negl*. 2015;41:30–39
- Bradley RH, Corwyn RF. Socioeconomic status and child development. *Annu Rev Psychol*. 2002;53:371–399
- Fowler PJ, Tompsett CJ, Braciszewski JM, Jacques-Tiura AJ, Baltes BB. Community violence: a meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Dev Psychopathol*. 2009;21(1):227–259
- Garner AS, Shonkoff JP; Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health. *Pediatrics*. 2012;129(1). Available at: www.pediatrics.org/cgi/content/full/129/1/e224
- Zahner GE, Daskalakis C. Factors associated with mental health, general health, and school-based service use for child psychopathology. *Am J Public Health*. 1997;87(9):1440–1448
- Sterling S, Weisner C, Hinman A, Parthasarathy S. Access to treatment for adolescents with substance use and co-occurring disorders: challenges and opportunities. *J Am Acad Child Adolesc Psychiatry*. 2010;49(7):637–646, quiz 725–726
- Levy LB, O'Hara MW. Psychotherapeutic interventions for depressed, low-income women: a review of the literature. *Clin Psychol Rev*. 2010;30(8):934–950
- Goodman LA, Pugach M, Skolnik A, Smith L. Poverty and mental health practice: within and beyond the 50-minute hour. *J Clin Psychol*. 2013;69(2):182–190
- Smith L, Li V, Dykema S, Hamlet D, Shellman A. “Honoring somebody that society doesn't honor”: therapists working in the context of poverty. *J Clin Psychol*. 2013;69(2):138–151
- Copeland VC, Snyder K. Barriers to mental health treatment services for low-income African American women whose children receive behavioral

- health services: an ethnographic investigation. *Soc Work Public Health*. 2011;26(1):78–95
32. Huang B, Appel H, Ai AL. The effects of discrimination and acculturation to service seeking satisfaction for Latina and Asian American women: implications for mental health professions. *Soc Work Public Health*. 2011;26(1):46–59
 33. Lazear KJ, Pires SA, Isaacs MR, Chaulk P, Huang L. Depression among low-income women of color: qualitative findings from cross-cultural focus groups. *J Immigr Minor Health*. 2008;10(2):127–133
 34. Collins C, Levis HD, Munger R, Wade T. *Evolving Models of Behavioral Health Integration in Primary Care*. New York, NY: Milbank Memorial Fund; 2010
 35. Tai-Seale M, Kunik ME, Shepherd A, Kirchner J, Gottumukkala A. A case study of early experience with implementation of collaborative care in the Veterans Health Administration. *Popul Health Manag*. 2010;13(6):331–337
 36. Sue DW, Sue D. *Counseling the Culturally Diverse*. 5th ed. Hoboken, NJ: John Wiley and Sons; 2008
 37. Chalifoux B. Speaking up: white, working class women in therapy. In: Hill M, Rothblum ED, eds. *Classism and Feminist Therapy: Counting Costs*. New York, NY: Harrington Park; 1996:25–34
 38. Smith S, Stagman S, Blank S, Ong C, McDow K. *Building Strong Systems of Support for Young Children's Mental Health*. New York, NY: National Center for Children in Poverty; 2011
 39. Weisz JR, Jensen-Doss A, Hawley KM. Evidence-based youth psychotherapies versus usual clinical care: a meta-analysis of direct comparisons. *Am Psychol*. 2006;61(7):671–689
 40. Berkovits MD, O'Brien KA, Carter CG, Eyberg SM. Early identification and intervention for behavior problems in primary care: a comparison of two abbreviated versions of parent-child interaction therapy. *Behav Ther*. 2010;41(3):375–387
 41. Cohen JA, Deblinger E, Mannarino AP, Steer RA. A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *J Am Acad Child Adolesc Psychiatry*. 2004;43(4):393–402
 42. Eyberg SM, Nelson MM, Boggs SR. Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *J Clin Child Adolesc Psychol*. 2008;37(1):215–237
 43. Gross D, Garvey C, Julion W, Fogg L, Tucker S, Mokros H. Efficacy of the Chicago parent program with low-income African American and Latino parents of young children. *Prev Sci*. 2009;10(1):54–65
 44. Spijkers W, Jansen DE, de Meer G, Reijneveld SA. Effectiveness of a parenting programme in a public health setting: a randomised controlled trial of the Positive Parenting Programme (Triple P) level 3 versus care as usual provided by the Preventive Child Healthcare (PCH). *BMC Public Health*. 2010;10:131
 45. Webster-Stratton C, Jamila Reid M, Stoolmiller M. Preventing conduct problems and improving school readiness: evaluation of the Incredible Years Teacher and Child Training Programs in high-risk schools. *J Child Psychol Psychiatry*. 2008;49(5):471–488
 46. Kazdin AE, Holland L, Crowley M. Family experience of barriers to treatment and premature termination from child therapy. *J Consult Clin Psychol*. 1997;65(3):453–463
 47. Eamon MK, Venkataramam M. Implementing parent management training in the context of poverty. *Am J Fam Ther*. 2003;31(4):281–293
 48. Kazdin AE, Whitley MK. Treatment of parental stress to enhance therapeutic change among children referred for aggressive and antisocial behavior. *J Consult Clin Psychol*. 2003;71(3):504–515
 49. Prinz RJ, Miller GE. Family-based treatment for childhood antisocial behavior: experimental influences on dropout and engagement. *J Consult Clin Psychol*. 1994;62(3):645–650
 50. Gopalan G, Goldstein L, Klingenstein K, Sicher C, Blake C, McKay MM. Engaging families into child mental health treatment: updates and special considerations. *J Can Acad Child Adolesc Psychiatry*. 2010;19(3):182–196
 51. McKay MM, Bannon WM Jr. Engaging families in child mental health services. *Child Adolesc Psychiatr Clin N Am*. 2004;13(4):905–921, vii
 52. Nock MK, Kazdin AE. Randomized controlled trial of a brief intervention for increasing participation in parent management training. *J Consult Clin Psychol*. 2005;73(5):872–879
 53. Croghan TW, Brown JD. *Integrating Mental Health Treatment into the Patient Centered Medical Home*. Report no. 10-0084-EF. Rockville, MD: Agency for Healthcare Research and Quality; 2010
 54. World Health Organization. *Integrating Mental Health Into Primary Care: A Global Perspective*. Geneva, Switzerland: WHO Press; 2008
 55. Briggs RD, Racine A, Chinitz S. Preventive pediatric mental health care: a co-location model. *Infant Ment Health J*. 2007;28(5):481–495
 56. Kolko DJ, Campo J, Kilbourne AM, Hart J, Sakolsky D, Wisniewski S. Collaborative care outcomes for pediatric behavioral health problems: a cluster randomized trial. *Pediatrics*. 2014;133(4). Available at: www.pediatrics.org/cgi/content/full/133/4/e981
 57. Lieberman A, Adalist-Estrin A, Erinle O, Sloan N. On-site mental health care: a route to improving access to mental health services in an inner-city, adolescent medicine clinic. *Child Care Health Dev*. 2006;32(4):407–413
 58. Gadowski A, Wissow LS, Slade E, Jenkins P. Training clinicians in mental health communication skills: impact on primary care utilization. *Acad Pediatr*. 2010;10(5):346–352
 59. Briggs-Gowan MJ, Horwitz SM, Schwab-Stone ME, Leventhal JM, Leaf PJ. Mental health in pediatric settings: distribution of disorders and factors related to service use. *J Am Acad Child Adolesc Psychiatry*. 2000;39(7):841–849
 60. Committee on Psychosocial Aspects of Child and Family Health and Task Force on Mental Health. Policy statement--The future of pediatrics: mental health competencies for pediatric primary care. *Pediatrics*. 2009;124(1):410–421

61. Weitzman C, Wegner L; Section on Developmental and Behavioral Pediatrics; Committee on Psychosocial Aspects of Child and Family Health; Council on Early Childhood; Society for Developmental and Behavioral Pediatrics; American Academy of Pediatrics. Promoting optimal development: screening for behavioral and emotional problems. *Pediatrics*. 2015;135(2):384–395
62. Sheldrick RC, Merchant S, Perrin EC. Identification of developmental–behavioral problems in primary care: a systematic review. *Pediatrics*. 2011;128(2):356–363
63. Larson J, dosReis S, Stewart M, Kushner R, Frosch E, Solomon B. Barriers to mental health care for urban, lower income families referred from pediatric primary care. *Adm Policy Ment Health*. 2013;40(3):159–167
64. Brown NM, Green JC, Desai MM, Weitzman CC, Rosenthal MS. Need and unmet need for care coordination among children with mental health conditions. *Pediatrics*. 2014;133(3). Available at: www.pediatrics.org/cgi/content/full/133/3/e530
65. Council on Children with Disabilities and Medical Home Implementation Project Advisory Committee. Patient- and family-centered care coordination: a framework for integrating care for children and youth across multiple systems. *Pediatrics*. 2014;133(5). Available at: www.pediatrics.org/cgi/content/full/133/5/e1451
66. Koroloff NM, Elliott DJ, Koren PE, Friesen BJ. Linking low-income families to children's mental health services: an outcome study. *J Emot Behav Disord*. 1996;4(1):2–11
67. Chorpita BF, Becker KD, Daleiden EL. Understanding the common elements of evidence-based practice: misconceptions and clinical examples. *J Am Acad Child Adolesc Psychiatry*. 2007;46(5):647–652
68. Wissow L, Anthony B, Brown J, et al. A common factors approach to improving the mental health capacity of pediatric primary care. *Adm Policy Ment Health*. 2008;35(4):305–318
69. Horwitz SM, Kelleher KJ, Stein RE, et al. Barriers to the identification and management of psychosocial issues in children and maternal depression. *Pediatrics*. 2007;119(1). Available at: www.pediatrics.org/cgi/content/full/119/1/e208
70. Sarvet B, Gold J, Bostic JQ, et al. Improving access to mental health care for children: the Massachusetts Child Psychiatry Access Project. *Pediatrics*. 2010;126(6):1191–1200
71. Campo J, Shafer S, Strohm J, et al. Pediatric behavioral health in primary care: a collaborative approach. *J Am Psychiatr Nurses Assoc*. 2005;11(5):276–282
72. Williams J, Shore SE, Foy JM. Co-location of mental health professionals in primary care settings: three North Carolina models. *Clin Pediatr (Phila)*. 2006;45(6):537–543
73. Foy JM; American Academy of Pediatrics Task Force on Mental Health. Enhancing pediatric mental health care: report from the American Academy of Pediatrics Task Force on Mental Health. Introduction. *Pediatrics*. 2010;125(suppl 3):S69–S74
74. American Academy of Child and Adolescent Psychiatry Committee on Health Care Access and Economics Task Force on Mental Health. Improving mental health services in primary care: reducing administrative and financial barriers to access and collaboration. *Pediatrics*. 2009;123(4):1248–1251
75. Ingoldsby EM. Review of interventions to improve family engagement and retention in parent and child mental health programs. *J Child Fam Stud*. 2010;19(5):629–645
76. Williams DR, Costa MV, Odunlami AO, Mohammed SA. Moving upstream: how interventions that address the social determinants of health can improve health and reduce disparities. *J Public Health Manag Pract*. 2008;14(suppl):S8–S17
77. Stanek M. *Promoting Physical and Behavioral Health Integration: Considerations for Aligning Federal and State Policy*. Portland, ME: National Academy for State Health Policy; 2014
78. New Freedom Commission on Mental Health. *Achieving the Promise: Transforming Mental Health Care in America*. Report no. SMA-03-3831. Rockville, MD: US Department of Health and Human Services; 2003
79. Earls MF; Committee on Psychosocial Aspects of Child and Family Health American Academy of Pediatrics. Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. *Pediatrics*. 2010;126(5):1032–1039
80. Ward-Zimmerman B, Cannata E. Partnering with pediatric primary care: lessons learned through collaborative colocation. *Prof Psychol Res Pract*. 2012;43(6):596–605
81. Goodrich DE, Kilbourne AM, Nord KM, Bauer MS. Mental health collaborative care and its role in primary care settings. *Curr Psychiatry Rep*. 2013;15(8):383

Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting

Stacy Hodgkinson, Leandra Godoy, Lee Savio Beers and Amy Lewin
Pediatrics 2017;139;; originally published online December 12, 2016;
DOI: 10.1542/peds.2015-1175

Updated Information & Services	including high resolution figures, can be found at: /content/139/1/e20151175.full.html
References	This article cites 67 articles, 12 of which can be accessed free at: /content/139/1/e20151175.full.html#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Community Pediatrics /cgi/collection/community_pediatrics_sub Medical Home /cgi/collection/medical_home_sub Psychiatry/Psychology /cgi/collection/psychiatry_psychology_sub
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: /site/misc/Permissions.xhtml
Reprints	Information about ordering reprints can be found online: /site/misc/reprints.xhtml

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. PEDIATRICS is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting

Stacy Hodgkinson, Leandra Godoy, Lee Savio Beers and Amy Lewin
Pediatrics 2017;139;; originally published online December 12, 2016;
DOI: 10.1542/peds.2015-1175

The online version of this article, along with updated information and services, is located on the World Wide Web at:
</content/139/1/e20151175.full.html>

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. PEDIATRICS is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

