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## Disparities in Pediatric Mental and Behavioral Health Conditions: A State-of-the-Art Review

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### Abstract

Mental and behavioral health conditions are common among children and adolescents in the United States. The purpose of this State-of-the-Art review article is to describe inequities in mental and behavioral health care access and outcomes for children and adolescents, characterize mechanisms behind the inequities, and discuss strategies to decrease them. Understanding the mechanisms underlying these inequities is essential to inform strategies to mitigate these health disparities. Half of U.S. children with a treatable mental health disorder do not receive treatment from a mental health professional. Children and adolescents in racial, ethnic, sexual, gender and other minority groups experience inequities in access to care and disparities in outcomes for mental and behavioral health conditions. Suicide rates are nearly twice as high in Black compared to White boys 5–11 years old and have been increasing disproportionately among adolescent

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Dr. Hoffmann conceptualized and designed the study, drafted the initial manuscript, led revisions of the manuscript, and critically reviewed the manuscript for important intellectual content.

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Black girls 12–17 years old. Children identifying as a sexual minority have greater than three times increased odds of attempting suicide compared to heterosexual peers. Adverse experiences of children living as part of a minority group, including racism and discrimination, have immediate and lasting effects on mental health. Poverty and an uneven geographic distribution of resources also contribute to inequities in access and disparities in outcomes for mental and behavioral health conditions. Strategies to address inequities in mental and behavioral health among U.S. children include investing in a diverse workforce of mental health professionals, improving access to school-based services, ensuring equitable access to telehealth, and conducting quality improvement with rigorous attention to equity.

## Article Summary

This review describes inequities in access and outcomes for pediatric mental and behavioral health conditions, characterizes underlying mechanisms, and discusses strategies to mitigate inequities.

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Mental and behavioral health (MBH) conditions are common in children in the United States (U.S.), affecting approximately 1 in 6 children (7.7 million) under 18 years old.<sup>1</sup> Suicide is the second leading cause of death among U.S. adolescents 12–18 years old.<sup>2</sup> Since the onset of the COVID-19 pandemic, children's MBH has worsened as a result of social upheaval and emotional stressors, including the loss of caregiving adults to COVID-19.<sup>3,4</sup> Emergency department (ED) visit rates for MBH conditions increased 24% among children 5–11 years and 31% among adolescents 12–17 years old from March to October 2020, with continued increases in ED visit rates by adolescent females through January 2022.<sup>5,6</sup> In 2021, children's MBH was declared a national emergency by the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children's Hospital Association.<sup>7</sup> Shortly afterwards, the U.S. Surgeon General Dr. Vivek Murthy issued an advisory statement about the pediatric MBH crisis.<sup>8</sup>

Many groups of children experience inequities in access to MBH services and disparities in MBH outcomes. A health disparity is a difference in health care use or health outcomes between vulnerable and less vulnerable populations in terms of social, economic, or environmental advantages.<sup>9,10</sup> There is a growing body of evidence demonstrating that children and adolescents in racial, ethnic, sexual, and gender minority groups experience worse MBH outcomes than their peers.<sup>11–16</sup> Other groups vulnerable to MBH disparities include children with autism spectrum disorder (ASD) and other developmental disorders, children living in rural and under-resourced areas, and those involved in the child welfare or juvenile-justice systems.<sup>17–21</sup> MBH disparities may be evident at multiple points along the service continuum, including in access to MBH care; in the prevention, screening, and initial diagnosis of MBH conditions; in the quality and quantity of MBH treatment received; and in MBH outcomes.

This State-of-the-Art review article aims to describe inequities in MBH care access and disparities in outcomes for children and adolescents, to characterize mechanisms behind these disparities, and to discuss strategies to decrease them. By describing health disparities in vulnerable populations, we can begin to understand determinants and mechanisms at the individual, clinician, healthcare system, and policy levels. Only then can we work to develop

effective interventions to reduce pediatric MBH disparities.<sup>10</sup> In this review, we highlight critical emerging evidence from the last five years in MBH disparities faced by children from racial, ethnic, sexual, gender, and other minority groups.

## Existing Disparities in Children's Mental and Behavioral Health

### Disparities by Race and Ethnicity

Compared with White peers, racial and ethnic minority children have a higher prevalence of several common MBH conditions (Table 1) but are less likely to use MBH services.<sup>22,23</sup> Compared with White peers, Black and Hispanic children have fewer MBH visits, lower MBH medical expenditures, and are less likely to be seen by MBH specialists.<sup>24,25</sup> Moreover, Black and Hispanic children are less likely than White children to be prescribed psychotropic medications, based on national medical expenditure and claims data.<sup>26</sup> High quality, evidence-based care is less commonly provided to racial and ethnicity minority, compared to White, children for several common MBH conditions including anxiety, depression, attention deficit hyperactivity disorder, and substance use.<sup>4,27-30</sup> Children whose MBH conditions remain inadequately treated in the outpatient setting may be at greater risk of developing a MBH crisis. From 2011 to 2016, ED visits for MBH conditions increased at faster rates for Black and Hispanic children than White children.<sup>31,32</sup>

These inadequacies in access to MBH services and quality of care have led to worse MBH outcomes among racial and ethnic minority children. Three examples of MBH conditions with particularly notable disparities by race and ethnicity are externalizing behavior disorders, ASD, and suicide. With respect to externalizing disorders, Black and Hispanic children are less likely than White peers to receive outpatient treatment.<sup>33</sup> In contrast, children referred from schools to EDs for agitation or aggression are more likely to be Black or Latinx.<sup>34</sup> While receiving treatment in EDs, Black children experience increased utilization of pharmacologic and physical restraints relative to White children.<sup>35,36</sup>

A second MBH condition with notable racial and ethnicity disparities in diagnosis and treatment is ASD. As the prevalence of autism spectrum disorder (ASD) has increased in the U.S., diagnoses of ASD among non-Hispanic Black children have exceeded rates among White children since 2018.<sup>37-40</sup> However, Black children experience significant delays in ASD screening and diagnosis, with an average of a three-year delay in ASD diagnosis after parents first raise concerns about their child's development with a medical professional.<sup>41</sup> Early, intensive, and evidence-based services can ameliorate ASD associated disabilities;<sup>42</sup> however, at the time of diagnosis, many Black children are beyond the period when these early intervention programs are most effective.<sup>41,43</sup> Correspondingly, Black children with ASD have significantly higher rates of intellectual disability comorbidity compared with non-Hispanic White children (44% versus 22%).<sup>44</sup>

Suicide represents the most serious MBH outcome, with notable differences in pediatric suicide rates by race and ethnicity. A nationally representative survey of U.S. high school students found that suicide attempts for Black adolescents increased from 1991–2017, with a significant increase in injury by attempt among Black adolescent boys.<sup>45</sup> Between 2003 and 2017, the largest rise in suicide rates among Black children occurred in 15–17 year-olds

and in females (with annual percentage changes of 4.9% and 6.6%, respectively).<sup>46</sup> Among younger Black children 5–11 years old, suicide rates are twice as high as White children of the same age.<sup>47</sup> Across racial and ethnic groups, suicide rates remain highest among American Indian or Alaska Native children.<sup>22</sup>

### **Disparities by Sexual and Gender Minority Status**

Sexual and gender minority adolescents, including those identifying as lesbian, gay, bisexual, transgender, queer, or questioning (LGBTQ), account for 4–17% of U.S. adolescents.<sup>48</sup> These children face numerous barriers to accessing MBH services.<sup>49</sup> They may be deterred by fear of discrimination by providers, invalidation by misgendering, and the perceived burden of needing to educate clinicians.<sup>50</sup> Delays in access to care are furthered by geographic distances to clinics offering appropriate services, lengthy wait times, and numerous legal, economic, and social barriers.<sup>50,51</sup> For instance, insurance denials for gender-affirming care are common, with one retrospective study finding that less than one-third of transgender youth who were prescribed puberty blocking medication received insurance coverage.<sup>52</sup> Recent political influences have also contributed to restricted access to gender-affirming medical care, including among children meeting rigorous criteria indicating potential for benefit of such services.<sup>53</sup>

Compared to heterosexual cisgender peers, sexual and gender minority children report higher rates of MBH conditions, including anxiety, depression, and suicidal ideation.<sup>50,54</sup> Sexual and gender minority youth who experience biased-based bullying or family rejection are at particular risk for adverse MBH outcomes.<sup>55</sup> Of particular concern are higher odds of attempted suicides among sexual minority children compared with heterosexual peers.<sup>56,57</sup> Specifically, compared to heterosexual cisgender peers, the odds of attempting suicide is more than three times higher for homosexual children (odds ratio [OR] 3.71, 95% CI 3.15, 4.37), more than fourfold higher for bisexual children (OR 4.87, 95% CI 4.76, 4.98), and over five times higher for transgender children (OR 5.87, 95% CI 3.51, 9.82).<sup>57</sup> In 2019, 46.8% of high school students who identified as lesbian, gay, or bisexual reported having seriously considered suicide, and 23.4% reported having attempted suicide.<sup>58</sup>

### **Mechanisms Underlying Racial and Ethnic Disparities in Children’s Mental and Behavioral Health**

Identification of plausible mechanisms of MBH disparities at the societal, organizational, and individual levels is the first step to uprooting and dismantling the influences that continue to create differential health outcomes for racial and ethnic minority children.<sup>59</sup> It is essential to examine how systemic racism, which is centrally entrenched within U.S. policy, programs, and practice, influences children’s MBH.<sup>60</sup> Racial and ethnic minority children disproportionately face adversity and toxic environmental stressors early in life.<sup>61–63</sup> Over time, cumulative lived experiences and cultural hardships of racial and ethnic minority children can culminate in worse MBH outcomes.<sup>64</sup> One conceptual framework delineates mechanisms at the policy, institutional, neighborhood, family and individual levels, which may contribute to disparities (Figure 1).<sup>65</sup> While we focus this section on mechanisms underlying MBH disparities among racial and ethnic minority children, we also recognize

social stratification based on sexual and gender identity, disability, geography, and other characteristics also impacts pediatric MBH outcomes.<sup>66</sup>

### **Societal-Level Mechanisms of Disparities**

Macro-societal factors, including historical, political, economic, and legal conditions, contribute to health disparities via redistribution of wealth, opportunities, and power. A key factor repeatedly identified in shaping children's opportunities to thrive has been poverty<sup>67</sup> and associated income inequality.<sup>68</sup> Recent work evidences the role of income inequality in the incidence of schizophrenia and other MBH disorders,<sup>69</sup> with suggestions that societal income inequality might constrain social cohesion, thus losing the effects of social capital that can buffer stress for children. Similarly, a systematic review suggests the mechanisms linking income inequality to depression can be associated with internalizing a lower social position and the erosion of social capital.<sup>68</sup> This can result in further social isolation for socioeconomically disadvantaged families. Different components of wealth can also shape health trajectories. Family savings, stock ownership, and homeownership are associated with improved health outcomes for families by reducing psychological distress, while debt is associated with worse outcomes.<sup>70</sup> Likewise, policies such as raising the minimum wage and extending the earned income tax credit have been shown to prevent adverse childhood experiences in children, which in turn may impact MBH outcomes.<sup>71–73</sup>

Historical and contemporary structural racism also drive MBH outcomes for racial and ethnic minority children.<sup>74</sup> Specifically, the practice of redlining, or systematic denial of loans to Black residents, led to racial residential segregation and broad social disinvestment in the infrastructure of neighborhoods with large Black populations.<sup>75</sup> Resultant neighborhood environmental factors including noise, pollution, crowding, exposure to violence, and lack of green and recreational spaces may augment allostatic load and damage MBH over time through what has been called the “weathering hypothesis.”<sup>76–78</sup>

Social relationships in neighborhoods and in schools are other mechanisms underlying structural racism and MBH disparities. Neighborhood prejudice, stereotypes, and in-group preferences appear early for children from racial and ethnic minority groups and impact their racial and ethnic identities,<sup>79</sup> inhibiting socioemotional development. In one longitudinal study, neighborhood-level racial discrimination predicted the development of major depressive disorder, and this relationship was moderated by the quality of individuals' relationships with others.<sup>80</sup>

### **Organizational-Level Mechanisms of Disparities**

The organizational, or meso level, which includes formal organizations and lay sectors, may serve either to buffer or worsen disparities in children's MBH outcomes. School disciplinary actions, which may cause significant emotional and psychological distress, disproportionately affect Black children.<sup>81</sup> In contrast, institutional programs like afterschool and school-based mentoring programs promote prosocial behavior, provide supervision, and help children develop life goals that have shown to ultimately reduce violence and promote well-being.<sup>82,83</sup> Similarly, investments in safe, stable, and nurturing relationships through parenting education and support may improve long-term MBH

outcomes. For instance, family-centered programs in preschool significantly lower teacher-reported MBH problems in second grade.<sup>84</sup> Programs preventing or mitigating exposure to adverse childhood events<sup>85</sup> are likely to have the greatest impact on the MBH of racial and ethnic minority children, given high-quality evidence from natural experiments of public policies<sup>86–88</sup> and cluster randomized controlled trials of built environment interventions.<sup>89,90</sup>

### Individual-Level Mechanisms of Disparities

The interactions of individuals with institutions, service systems, and society also shape their overall well-being. Adverse experiences of racism and discrimination among racial and ethnic minority children have immediate and lasting effects on their MBH and development, from the prenatal period through adulthood.<sup>91</sup> Two theoretical models, the Developmental and Ecological Model of Youth Racial Trauma<sup>92</sup> and the Culturally Informed Adverse Childhood Experiences Model,<sup>93</sup> describe the impact of racism as a traumatic experience in childhood. Another model addresses mechanisms via which racism impacts child development,<sup>94</sup> focusing on the role of relationships and on the contexts of poverty, communities, schools, families, and peers. This model further breaks down specific contextual factors of chronic stress, institutionalized racism, stereotype threat, and racial identity. Stronger effects of discrimination in socioemotional well-being appear to be greater for children than for adults, and for Asian and Latinx children than for Black children. This may be explained by Black parents' socialization efforts to help their children cope with bias.<sup>95</sup> However, Black males report more severe academic and institutional experiences of discrimination that might curtail their opportunities to succeed in school and work.<sup>96</sup> Intersectionality must also be considered; for instance, in a survey of Black children identifying as LGBTQ, 67% reported verbal insults because of their LGBTQ identity and 90% had experienced racial discrimination.<sup>97</sup> Finally, a relatively newer area of study is the impact of vicarious exposure to racism,<sup>98</sup> including in online spaces, on children's MBH.<sup>99</sup>

Toxic stress, defined as intense, frequent, or prolonged activation of stress response systems occurring without shielding from a supportive relationship, has been advanced as a key mechanism of MBH disparities among children.<sup>62</sup> When these biological disruptions persist during sensitive periods of development, they can result in enduring structural changes and physiologic deregulations that lead to problems in learning, behavior, and physical and MBH.<sup>62</sup> Considering that parents and caregivers are often in the position of providing supportive buffering relationships, societal factors reducing parental functioning may contribute to toxic stress in children. There is increasing evidence that parents' experiences of racism and discrimination impacts their children's social-emotional development and MBH.<sup>100,101</sup> For example, anti-immigrant discrimination and punitive U.S. immigration policies are a source of toxic stress for some families, leading to family separations via deportation and chronic uncertainty and instability for undocumented and mixed-status families.<sup>102</sup> In one study, detention or deportation of a family member in the prior year was associated with higher odds of suicidal ideation, alcohol use, and clinically significant externalizing symptoms among Latinx adolescents.<sup>103</sup>

MBH disparities also occur at the level of individual interactions with MBH service systems, including whether services are available, structural barriers, and perceptual barriers

to care. Factors contributing to lack of access to MBH care among racial and ethnic minority children include insurance barriers and community-level shortages of MBH professionals.<sup>104–106</sup> Structural barriers may include distance, time, financial resources, and competing demands of work and other responsibilities. Perceptual barriers may include parent's awareness of their children's MBH problems, beliefs that MBH problems should be addressed within the family, stigma in seeking MBH care, and the impact of past negative experiences with MBH service systems.<sup>107–110</sup>

## **Interventions and Policy Strategies to Promote Equity in Children's Mental and Behavioral Health**

To address disparities related to access and outcomes for pediatric MBH conditions, well designed interventions and policies are needed that address underlying mechanisms. These interventions must be tested with rigorous research designs to ensure that resources are allocated to approaches with the greatest evidence of benefit. A multipronged approach to addressing pediatric MBH disparities must be employed at the levels of the individual patient, clinician, healthcare system, and society (Table 2).<sup>111</sup> For individual patients, clinicians should deliver care that is trauma-informed, culturally sensitive, and tailored to unique needs of specific populations. At the systems level, clinicians should partner with families to advocate at the local and state levels for increased access to MBH services in primary care, schools, communities, and in healthcare systems.<sup>91</sup> Policy areas to improve MBH outcomes include expansion of the MBH workforce, with particular attention to diversity, and supports for telehealth services for MBH care. Policies should promote systems for care linkages and achieve service and financial parity for MBH conditions with physical disorders. As strategies are implemented, it will be essential to advance research to analyze the effectiveness of interventions and policies to reduce pediatric MBH disparities (Table 3).<sup>112</sup>

### **Individual Patient-Level Interventions**

Recent work has shown progress in identifying effective psychosocial interventions for Hispanic/Latino and Black children with MBH conditions.<sup>113</sup> For therapeutic interventions to be effective, they need to be adapted to the child and family's specific cultural setting, belief system, and language.<sup>114</sup> Trauma-informed approaches, with interventions integrating social and cultural factors related to intergenerational trauma and discrimination, have resulted in better engagement and improved MBH outcomes among Black children.<sup>115–117</sup> Approaches integrating racial socialization into trauma-focused cognitive behavioral therapy can mitigate negative impacts of trauma exposure among Black children.<sup>116</sup> There is also emerging evidence to support the effectiveness of dispositional mindfulness (a mindfulness-based approach) on reducing acculturative stress and negative automatic thoughts in Latinx children.<sup>118,119</sup> Furthermore, trauma interventions acknowledging certain cultural beliefs such as faith and spirituality as central to resilience may be particularly helpful for Black, Latinx and immigrant families.<sup>120</sup> While there is growing evidence for some approaches for racial and ethnic minority children, many clinical effectiveness studies have primarily assessed outcomes among White children.<sup>121</sup>

For gender minority children, provision of gender-affirming care can have immediate, significant effects on MBH.<sup>49</sup> Among transgender adolescents desiring treatment, pubertal suppression is associated with favorable MBH outcomes including decreased lifetime suicidal ideation (adjusted OR 0.3, 95% CI 0.2, 0.6).<sup>122</sup> Initiation of puberty blockers or gender-affirming hormones is associated with 60% lower odds of depression and 73% lower odds of suicidality in the first 12 months of treatment.<sup>123</sup> A handful of studies have begun to test approaches to MBH treatment addressing the specific MBH needs of sexual and gender minority youth.<sup>55</sup> For instance, in one randomized controlled trial, an adapted cognitive-behavioral therapy approach focused on stigma-related stressors led to reduced depressive symptoms and alcohol use problems among young gay and bisexual men.<sup>124,125</sup> In a small pilot trial, attachment-based family therapy tailored for suicidal sexual minority adolescents significantly reduced suicidal ideation.<sup>126</sup> Additional rigorously conducted research is needed to identify effective MBH interventions for sexual and gender minority children.

### **Clinician and Healthcare System-Level Solutions**

To reduce pediatric MBH disparities, clinicians must first recognize and acknowledge their own implicit biases. The use of standardized MBH screening and diagnostic tools can reduce clinician bias in the initial detection of MBH conditions in outpatient clinics and EDs.<sup>127–129</sup> Clinicians can better care for diverse children with MBH disorders by using a trauma-informed approach that is culturally-sensitive, and by promoting an open and inclusive therapeutic environment.<sup>91</sup> To reduce disparities in MBH treatment, such as in the application of physical and pharmacologic restraints, clinicians should systematically review their institutional practices and work to develop standardized treatment guidelines to ensure equity.<sup>35,36</sup> Systematic reevaluation is needed to ensure that clinical decision-making tools, such as algorithms and practice guidelines, do not misuse race as a corrective or risk-adjusting variable to the detriment of minority patients.<sup>130</sup> Progress towards equity goals should be tracked over time by stratifying quality measures by race, ethnicity, and socioeconomic markers, with use of rigorous quality improvement methodology to narrow disparities in care.<sup>131</sup>

Integration of behavioral health care into primary care settings as part of the medical home is another promising approach to improving access to MBH care for all children.<sup>132–135</sup> Primary care physicians can play an integral role in parenting education and support, screening for early evidence of MBH challenges, and initiation of treatment.<sup>136</sup> One exemplar model of MBH integration transformed primary care practices by adding on-site behavioral health services, psychiatric specialty consultation services, and a behavioral health learning community for clinicians. This design facilitated the knowledge, skills, and resources needed to effectively identify, assess, and treat mild and moderate presentations of common pediatric MBH disorders in the primary care setting. After five years, this model was associated with increased MBH care integration, medical and psychotherapy MBH visits, and guideline-congruent psychiatric medication prescriptions by primary care clinicians for anxiety, depression, and attention deficit hyperactivity disorder.<sup>137</sup> When this model was integrated into 59 practices involving 354 primary care clinicians, MBH



screenings increased along with MBH visits and guideline-congruent psychiatric medication prescriptions.<sup>138</sup>

### Policy-Level Solutions and Recommendations

Policy plays a critical role in advancing pediatric MBH health equity and transforming care delivery.<sup>139</sup> Over the last decade, the Affordable Care Act and MBH parity legislation have increased access to insurance coverage and MBH treatment, resulting in improved MBH outcomes, particularly for low-income populations.<sup>140</sup> However, despite these advances, there continues to be an urgent need to address inequities in children's MBH. Implementation of the following policies may increase access to high quality MBH care and reduce disparities in MBH outcomes:

1. **Invest in a diverse workforce:** In the U.S., only half of children with a treatable MBH disorder receive treatment from a MBH professional.<sup>1</sup> Access to MBH services is particularly limited in rural and high poverty areas. For instance, more than 50% of children in rural counties and 41% in low-income counties experience insufficient access to child psychiatrists.<sup>141–143</sup> While a shortage of a diverse MBH clinicians in the U.S. has been longstanding,<sup>141,144,145</sup> the COVID-19 pandemic has exacerbated this problem. The need for pediatric MBH service utilization has increased,<sup>146,147</sup> while attracting and retaining a trained MBH health workforce has simultaneously become more challenging. Investments in the MBH workforce must include strategies to attract individuals from diverse cultural and linguistic backgrounds.<sup>139</sup> Targeted recruitment of clinicians to practice in rural and underserved areas via policies such as educational loan repayment may increase accessibility and promote health equity.<sup>148</sup> Increased reimbursement for MBH services, expansion of loan-forgiveness programs, educational grants, and enhanced training opportunities also hold promise to address workforce shortages and remove socioeconomic barriers to entry into the MBH field.<sup>149–151</sup>
2. **Invest in school-based behavioral health:** Children spend a significant portion of their lives at school; however, only 7% of children receive school MBH services.<sup>152</sup> This represents an unparalleled opportunity for schools to promote MBH equity and wellness, recognize MBH needs, and refer children for evidence-based MBH treatments.<sup>153,154</sup> Given that low-income children on Medicaid and CHIP are more likely to receive school-based MBH services than privately insured peers,<sup>155</sup> investing in school-based MBH services could narrow racial, ethnic, and socioeconomic disparities in MBH outcomes. In addition to offering MBH services, schools can establish policies to promote an affirming and protective environment for learning. School antibullying policies explicitly addressing bullying due to sexual orientation and gender identity have been associated with reduced victimization and harassment of sexual and gender minority youth.<sup>156</sup>
3. **Invest in telehealth for MBH care:** During the COVID-19 pandemic, the need for social distancing spurred policy changes expanding access to telehealth

services for MBH care (“tele-behavioral health”). With the Coronavirus Aid, Relief, and Economic Security Act of 2020, the Centers for Medicare and Medicaid Services enabled reimbursement of care delivered over telehealth platforms at the same level as in-person visits, and at least 22 states followed suit with legislation supporting more robust insurance coverage of telehealth services.<sup>157–159</sup> As a result of these policy changes, access to MBH care in the U.S. has increased, in part by eliminating various socioeconomic barriers to care, such as access to reliable transportation.<sup>160–162</sup>

Nevertheless, barriers remain that prevent universal access to tele-behavioral health services for children. Broadband internet is least accessible in isolated rural and high poverty areas of the U.S., as well as in geographic areas with larger Black and American Indian/Alaska Native populations.<sup>163,164</sup> Expanding broadband will help to bridge the “digital divide” by better connecting low-income and racial and ethnic minority children to high-quality tele-behavioral health care.<sup>165</sup> Access to tele-behavioral health services could be further enhanced by removing geographic restrictions, eliminating originating site restrictions (such as those requiring patients to be physically located in a healthcare facility during telehealth visits), and lifting restrictions requiring completion of an in-person visit prior to receiving telehealth care.<sup>166</sup>

## Conclusions

Children’s MBH is vital to their cognitive, social, and emotional development.<sup>8</sup> MBH conditions are common among children and adolescents in the U.S., with children from racial, ethnic, sexual, gender, and other minority groups experiencing inequities in access to care and disparities in outcomes for MBH conditions. Individual and familial factors, as well as system and environmental contexts of where children live, influence pediatric MBH outcomes.<sup>75,167</sup> Thus, solutions to reduce disparities in children’s MBH must include not only efforts by individual clinicians, but also health systems, schools, and state and national policymakers. Strategies for addressing pediatric MBH inequities include increasing MBH care access, improving the quality of MBH care provided, implementing community and hospital-based prevention and intervention programs, and advancing legislative policy. A multi-pronged strategy is essential to ensure all children and adolescents can achieve equitable access to MBH care and the ability to achieve optimal MBH outcomes.

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## Abbreviations:

<b>U.S.</b>	United States
<b>MBH</b>	Mental and behavioral health
<b>ASD</b>	Autism spectrum disorder

<b>LGBTQ</b>	Lesbian, gay, bisexual, transgender, queer, or questioning
<b>OR</b>	Odds ratio

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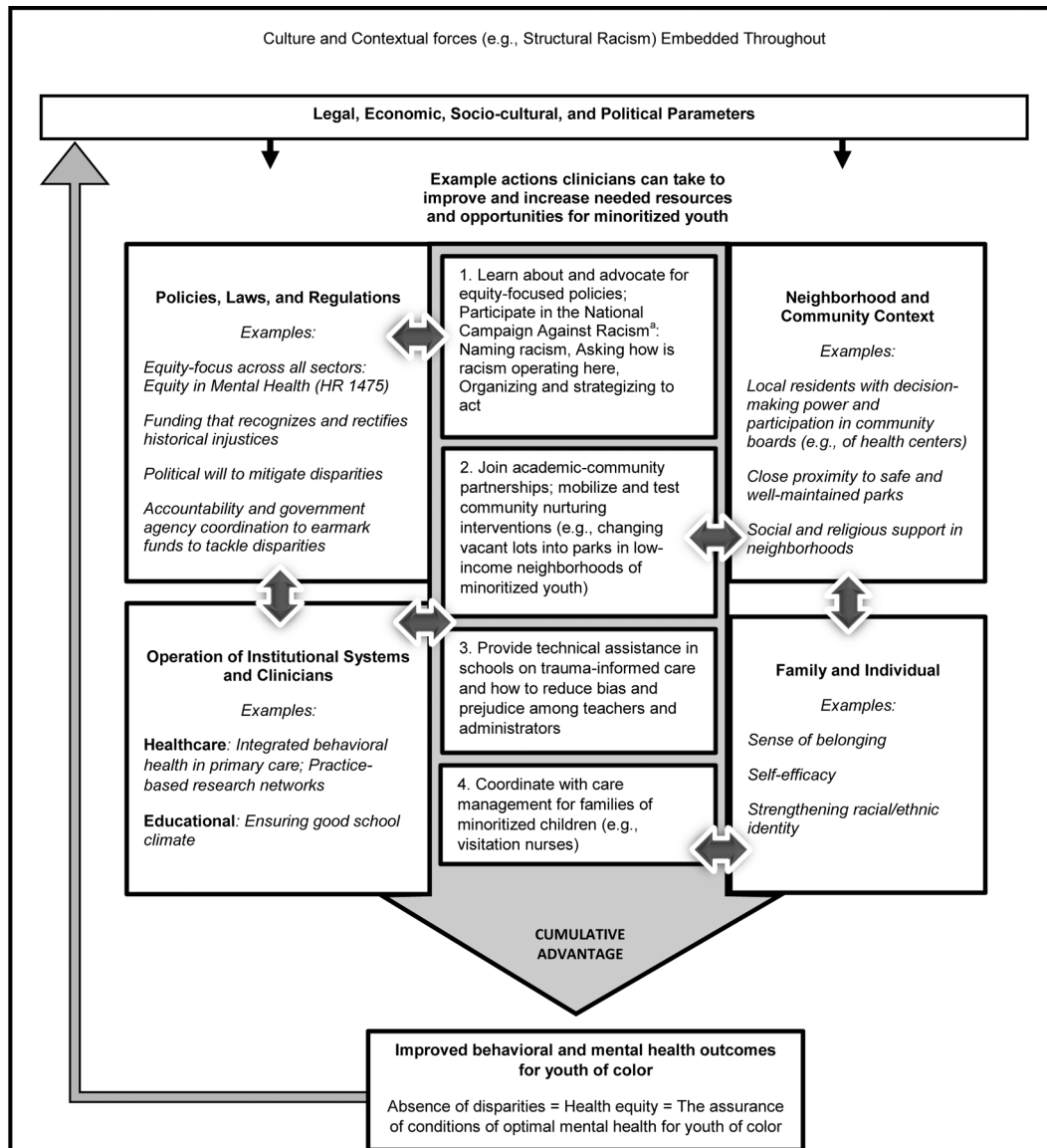
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**Figure 1. Sociocultural framework for understanding and addressing racial and ethnic disparities in children’s mental health (Alegría et al., 2022)**

This figure is reprinted from *Child and Adolescent Psychiatric Clinics of North America*, 31 (2), Alegría M, O’Malley I, DiMarzio K, Zhen-Duan J. A framework for understanding and addressing racial and ethnic disparities in children’s mental health, 179–191, Copyright (2022), with permission from Elsevier.

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**Table 1.**

Weighted prevalence estimates of mental health conditions and treatment among children and adolescents by race/ethnicity and geography, United States, 2016–2019

Mental health condition, age group	Race and Ethnicity				Geographic Classification	
	Hispanic	Black, non-Hispanic	White, non-Hispanic	Asian, non-Hispanic	Urban/Suburban	Rural
ADHD, 3–17 y, % (95% CI) <sup>a</sup>	6.6 (5.9–7.5)	10.5 (9.4–11.8)	9.9 (9.5–10.3)	2.2 (1.7–2.9)	8.4 (8.0–8.8)	10.7 (9.9–11.6)
Behavioral or conduct problems, 3–17 y, % (95% CI) <sup>a</sup>	5.6 (4.9–6.4)	10.1 (9.0–11.4)	7.0 (6.7–7.4)	2.5 (1.9–3.3)	6.6 (6.2–7.0)	8.6 (7.9–9.4)
Depression, 3–17 y, % (95% CI) <sup>a</sup>	2.7 (2.2–3.2)	3.7 (3.1–4.4)	3.8 (3.6–4.1)	1.3 (0.8–2.0)	3.2 (3.0–3.5)	4.4 (3.8–5.0)
Anxiety problems, 3–17 y, % (95% CI) <sup>a</sup>	6.1 (5.3–6.9)	5.3 (4.6–6.1)	9.7 (9.4–10.1)	2.2 (1.7–2.9)	7.4 (7.1–7.8)	8.7 (7.9–9.4)
Autism spectrum disorder, 3–17 y, % (95% CI) <sup>a</sup>	3.4 (2.7–4.3)	3.1 (2.6–3.8)	2.7 (2.5–2.9)	1.9 (1.4–2.6)	2.9 (2.6–3.2)	2.6 (2.2–3.0)
Attempted suicide, 14–18 y, % (95% CI) <sup>b</sup>	8.9 (7.1–11.1)	11.8 (8.7–15.9)	7.9 (6.9–9.1)	7.7 (4.8–12.3)	8.9 (7.7–10.2)	9.1 (7.3–11.3)
Suicide, 10–19 y, rate per 100,000 (95% CI) <sup>c</sup>	4.7 (4.4–5.0)	5.0 (4.6–5.4)	8.1 (7.9–8.4)	5.5 (4.8–6.1)	6.3 (6.1–6.5)	10.2 (9.6–10.7)
Professional mental health treatment, % (95% CI) <sup>d</sup>	8.7 (7.8–9.6)	9.8 (8.8–10.9)	11.4 (11.0–11.8)	4.3 (3.5–5.4)	9.9 (9.5–10.4)	10.2 (9.4–11.1)
Medication for mental health problems, % (95% CI) <sup>e</sup>	5.3 (4.6–6.0)	8.7 (7.7–9.8)	9.2 (8.9–9.6)	1.9 (1.4–2.5)	7.4 (7.1–7.8)	10.3 (9.4–11.1)

Table adapted from Bitsko RH, Claussen AH, Lichstein J, et al. Mental Health Surveillance Among Children — United States, 2013–2019. *MMWR Suppl* 2022;71(Suppl-2):1–42.

<sup>a</sup>. National Survey of Children’s Health, 2016–2019. Current mental health condition based on parent report of diagnosis by a health care provider.

<sup>b</sup>. National Youth Risk Behavior Survey, 2019. During the 12 months before the survey, actually attempted suicide 1 time. Survey participants were public and private high school students in grades 9–12 (i.e., primarily aged 14–18 years). Attempted suicide among American Indian or Alaska Native, non-Hispanic youth: 25.5% (95% CI 12.6–44.6); Native Hawaiian or other Pacific Islander, non-Hispanic: 8.8% (95% CI 2.4–27.2).

<sup>c</sup>. National Vital Statistics System, 2018–2019. Suicides per 100,000 American Indian or Alaska Native, non-Hispanic youth: 24.0 (95% CI 20.7–27.4).

<sup>d</sup>. National Survey of Children’s Health, 2016–2019. Received treatment or counseling from a mental health professional in the past 12 months.

<sup>e</sup>. National Survey of Children’s Health, 2016–2019. Took medication because of difficulties with emotions, concentration, or behavior in the past 12 months.

**Table 2.**Advocacy Areas to Reduce Mental and Behavioral Health Disparities in U.S. Children<sup>139,151</sup>

- Advocate for policies to reduce child poverty and address social determinants of health
- Support legislation to reduce discrimination on the basis of race, ethnicity, sexual orientation, gender expression, and other identifying characteristics
- Promote inclusive environments for children with disabilities, including autism spectrum disorder and other developmental disabilities
- Ensure that all children have health insurance coverage
- Improve reimbursement for mental and behavioral health services
- Increase funding to train a clinically, culturally, and geographically diverse workforce of pediatric mental and behavioral health specialists
- Expand capacity for community-based mental and behavioral health services, crisis intervention services, and higher levels of psychiatric care
- Provide incentives and technical assistance for culturally and linguistically relevant care, such as Medicaid reimbursement for interpreter services
- Expand access to early intervention programs and school-based mental and behavioral health services
- Improve reimbursement of telehealth mental and behavioral health services
- Fund additional research on risk and protective factors that influence children's mental and behavioral health

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**Table 3.**

Future directions for research to understand and reduce disparities in mental and behavioral health (MBH) conditions among children

- Identify and test structural-level mechanisms of MBH disparities among minority groups,<sup>168,169</sup> including studies accounting for the complexity of intersectionality.<sup>170</sup>
- Determine the impact of perceived and observed discrimination on MBH outcomes.<sup>91</sup>
- Further delineate risk and protective factors for MBH outcomes among children who identify as sexual and gender minorities, with intellectual and developmental disorders, in the juvenile justice and child welfare systems, and living in rural and under-resourced geographic areas.<sup>65</sup>
- Assess models of integrated MBH with primary care, especially among diverse populations.<sup>65,133,137,171</sup>
- Determine methods for increasing the diversity of pediatric MBH clinicians.<sup>91</sup>
- Design non-traditional models of care, including school-based models,<sup>154,172,173</sup> and telehealth,<sup>165,174,175</sup> that work to reduce MBH disparities.
- Evaluate innovative payment models for MBH care.<sup>65,133</sup>
- Assess whether medical-legal and medical-financial partnerships improve access to care, financial resources, and outcomes for children with MBH conditions.<sup>176–178</sup>
- Understand the role of neighborhoods and communities in reducing MBH disparities.<sup>65,179</sup>
- Evaluate how state and federal policies, such as those focused on improving social determinants of health, modify MBH disparities.<sup>65,111</sup>