ADDRESSING THE CHILD AND ADOLESCENT MENTAL HEALTH CRISIS

A Report of the Aspen Health Strategy Group

HEALTH STRATEGY GROUP
aspen institute

Foreword by Kathleen Sebelius and William Frist

Edited by Alan R. Weil

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The mission of the **Aspen Health Strategy Group (AHSG)**, an initiative of the Health, Medicine & Society Program at the Aspen Institute, is to promote improvements in policy and practice by providing leadership on complex health issues. AHSG brings together senior leaders representing a mix of influential sectors, including health, business, philanthropy, and technology, to tackle a single health issue annually through year-long, in-depth study. Co-chairs are Kathleen Sebelius, 21st US Secretary of Health and Human Services and former Governor of the State of Kansas, and William Frist, former US Senator from Tennessee and former Senate Majority Leader.

The topic of AHSG's ninth annual report is addressing the child and adolescent mental health crisis. This compilation opens with a consensus report based on the group's in-depth learning process, followed by a set of background papers. Taken together, these materials describe the risk and protective factors associated with youth mental health and offer ideas to advance evidence-based approaches for tackling the current crisis.

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April 2025

I am honored to introduce the ninth annual report of the Aspen Health Strategy Group (AHSG). With its findings and recommendations on youth mental health, the AHSG continues to explore some of the most complex health threats facing the nation, as it has done since 2015.

Some two dozen senior leaders in health, business, media, and technology came together at the Aspen Institute's campus in Aspen, Colorado in June 2024 to take a deep dive into the urgent topic of child and adolescent mental health. Kathleen Sebelius, former US secretary of health and human services and former governor of Kansas, and William Frist, a physician and former US Senate majority leader, serve as the AHSG co-chairs.

This team of experts is all too aware of some grim statistics—one in five adolescents has had a major depressive episode and one in eight has reported serious thoughts of suicide. Yet, access to mental health treatment is inadequate and inequitable and far too few of our young people receive the help they need. AHSG members believe that solutions to the challenges of youth mental health are at hand and that the health sector is well-positioned to take a leadership role in identifying and implementing them. Through their personal and professional networks, members are playing an important role in advancing evidence-based strategics for tackling the current crisis.

AHSG is housed within the Aspen Institute's Health, Medicine & Society Program. In previous years, its reports have advanced big ideas in end-of-life care, the opioid epidemic, chronic disease, antimicrobial resistance, maternal mortality, the health harms of incarceration, data privacy, and firearm injury.

AHSG members and co-chairs dedicate a significant amount of time to their work here, and I am personally very grateful to them all. Their wisdom and expertise is essential to lessen the toll of mental health disorders on our young people and grow them into the productive, engaged citizens our nation so badly needs.

Dan Porterfield
President and CEO
Aspen Institute

Contents

Foreword

As the scope of the youth mental health crisis intensifies, the need for thoughtful and actionable solutions has never been greater. The ninth annual report of the Aspen Health Strategy Group (AHSG), takes aim at the many dimensions of this acute problem and identifies concrete approaches to change.

This report is the product of a year-long process of research, a three-day convening to foster dialogue, and an iterative process that allowed AHSG members to reach consensus. There is some good news here—we already know a lot about how to prevent and treat youth mental health challenges and can offer a package of practical strategies for doing so. But the rising rates of anxiety, depression, and suicide ideation among children and adolescents underscore the imperative of action. AHSG offers five big ideas to point the way, built around prioritizing prevention, improving access to care, improving the caliber of mental health services, supporting community institutions, and embracing the potential of technology.

Four background papers, included as part of this report, allowed AHSG members to launch their discussions from a common baseline of knowledge. These papers describe the risk and protective factors associated with child and adolescent mental health; the particular burdens on people of color; current reimbursement strategies and possible alternatives; and the need to build new evidence-based approaches to service delivery. Our thanks to authors Margarita Alegria, Jonathan Cantor, Ann Garland and Janine Jones, who joined us in Aspen to talk further about their findings.

The conversation was also enriched by a commissioned survey on public opinion related to youth mental health and behavioral health. That data was presented by Mollyann Brodie, who leads KFF's Public Opinion and Survey Research Program.

Health policies and practices have a very direct impact on the lives of individuals and communities, and AHSG has always made it a point to center those voices in our conversation. This year, our special thanks go to three young people—Morgann Noble (Arlington, Virginia), Rohan Satija (Austin, Texas), and Audrey Wang (Oakland, California)—for their willingness to talk about their own journeys and offer insights about peer pressure, cyberbullying, stress, panic attacks, and the importance of inclusive and equitable support. Zainab Okolo of the JED Foundation, an expert in trauma-informed mental health care, helped to guide their discussion.

Our efforts to tackle some of the nation's most pressing health problems would not be possible without our generous funders. The Robert Wood Johnson Foundation and the Laurie Tisch Illumination Fund have been supporting AHSG since its launch, and Google Health has stepped in with support again this year. The findings and recommendations in this report, however, reflect the viewpoints of AHSG alone. We also owe a debt of gratitude to the ever-insightful Alan Weil, former editor-in-chief of *Health Affairs* and now senior vice president of public policy at AARP, who moderated the discussions, and then drafted and revised this report in response to member input.

And finally, our warmest thanks to all AHSG members for directing their influential voices to the cause of strengthening youth mental health. Their commitment recognizes that supporting our children and adolescents is an imperative for the entire society.

Kathleen Sebelius
AHSG Co-Chair

William Frist
AHSG Co-Chair

ASPEN HEALTH STRATEGY GROUP REPORT

Five Big Ideas on Addressing Child and Adolescent Mental Health

Part 1

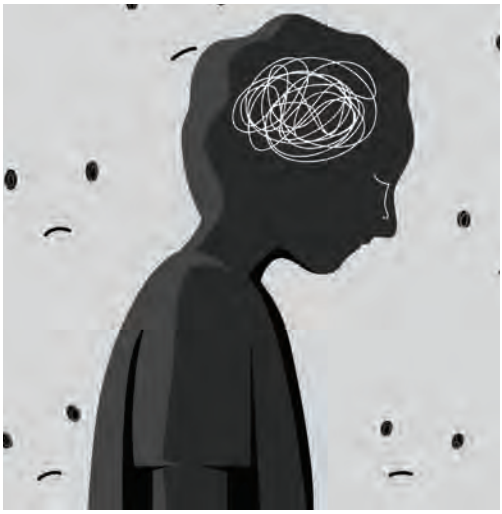
"What makes youth mental health a crisis is the combination of growing rates of mental health conditions and a woefully inadequate societal response…. It is difficult to think of another health condition for which undertreatment is so common."

– THE ASPEN HEALTH STRATEGY GROUP

Five Big Ideas on Addressing Child and Adolescent Mental Health

Introduction

The mental health of children and adolescents in the United States has worsened substantially over the past decade, with rates of suicide, diagnosed mental health disorders, and self-reported feelings that reflect poor mental health on the rise.[1] This serious decline led the US surgeon general to issue an advisory in 2021 calling attention to the urgent public health issue of youth mental health.[2] The Aspen Health Strategy Group selected child and adolescent mental health as its topic for 2024, its ninth year, reflecting the severity and urgency of this issue.



The multisectoral group of leaders met and discussed the topic with the assistance of subject matter experts to inform the discussion. What emerged is a mixed picture. On one hand, the roots of the crisis are not entirely clear, with many contributing factors, none of which explains the entirety of the rise in poor youth mental health. On the other hand, promising practices abound, providing a source of optimism that, with the correct response, our nation can address and reverse the scale and the effects of the crisis.

1 Mental health is a multidimensional phenomenon. Our work focuses on mood disorders, most notably anxiety and depression. A comprehensive examination of mental health would be much broader. It would include examination of attention deficit hyperactivity disorder, autism spectrum disorders, serious mental illnesses such as bipolar disorder and schizophrenia, substance use disorders, and more. It would also encompass dimensions of positive mental health and well-being. Our narrower focus is due to time and resource limitations. It should not be interpreted as a lack of interest in or a statement regarding the importance of these broader dimensions of mental health.

2 The periods referred to as "childhood" and "adolescence" do not reflect precise age ranges. This report focuses on ages 10 to 25. The terms "youth," "children," and "adolescents" are all used for space and convenience.

As with all topics the Aspen Health Strategy Group has tackled, our focus is on the health sector. Many social institutions, including schools, technology companies, and community organizations, can contribute to addressing the crisis. Yet leadership addressing this public health crisis must come from the health sector. Our report is a call to action for leaders from different sectors to tackle this multifaceted crisis.

The group emerged with five big ideas to address the child and adolescent mental health crisis. We call for a major investment in preventing poor mental health, concrete steps to improve access to mental healthcare services, initiatives designed to improve the quality of mental healthcare, support for community-based efforts to address mental health needs, and exploration of the appropriate role technology can play in improving child and adolescent mental health.

The Aspen Health Strategy Group's goal is to promote improvements in health policy and practice by providing leadership, ideas, and direction on important and complex health issues. Co-chaired by Kathleen Sebelius, former governor of Kansas and former US secretary of health and human services, and William Frist, a physician and former US Senate majority leader, the group comprises 24 senior leaders across sectors, including health, business, media, and technology. More information about the Aspen Health Strategy Group can be found at http://www.aspeninstitute.org/aspen-health-strategy-group.

This report captures the conversations of the group, but no specific section or statement in the report should be considered to represent the opinion of any individual group member.

Background

Our work builds on four papers written by subject matter experts in advance of our meeting, which are published in conjunction with this report.[3] We also benefited from a presentation by Mollyann Brodie of KFF on public opinion regarding youth mental health. We are particularly grateful to Morgann Noble, Rohan Satija, and Audrey Wang, who shared their personal stories in a panel led by Zainab Okolo of The Jed Foundation.

In "Understanding and Improving Mental Health in Adolescence and Youth," Margarita Alegría and Michelle Cheng document growing rates of anxiety disorders, depressive disorders, and suicidality among youth. While trends worsened during the height of the COVID-19 pandemic, negative trends predate the emergence of COVID-19. In 2022, almost one in five adolescents had a major depressive episode, and a similar share reported anxiety symptoms in the prior two weeks. More than one in eight adolescents reported serious thoughts of suicide. In 2022, almost one in three adolescents ages 12–17 received mental health treatment, with the vast majority in an outpatient setting, and more than one in eight took prescription medications for their mental health. Yet more than 40 percent of adolescents with a past-year major depressive episode received no mental health treatment at all.

There are no overall differences in the prevalence of mental health conditions by race or ethnicity, but there are significant differences in receipt of mental health services. Black children had one-third fewer visits to psychiatrists and half as many visits to any mental health professional than White children, with rates even lower for Hispanic children. Inequities in mental health service use are growing. There have

3 Unless noted otherwise, the data in this report come from the background papers prepared by subject matter experts and published in conjunction with this report.

been significant increases over the past decade in the use of mental health services for youth who are White, non-Hispanic, and female and have higher income and private insurance, while there have been decreases among youth who are Black, non-Hispanic, and male and have lower income and public insurance. Rates of anxiety and depression are three times higher among lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) adolescents than non-LGBTQ+ adolescents, while mental healthcare service options for LGBTQ+ adolescents are limited.

Alegría and Cheng review the rapidly growing base of evidence, describe the risk and protective factors associated with adolescent mental health, and offer suggestions for interventions based on this evidence. They call for a range of individual-level, family-level, and population-wide mental health interventions delivered in the community, through schools, and virtually.

Janine M. Jones describes the highly inequitable burden of poor adolescent mental health borne by people of color in "Adolescent Mental Health Equity." Jones identifies multiple dimensions of inequity experienced by marginalized communities, such as Black, Indigenous, and people of color and those who are LGBTQ+. Disparities also exist by geography, socioeconomic factors, and cultural influences. Jones notes that "these disparities manifest in various ways, including differences in prevalence rates, access to care, quality of care, and mental health outcomes."

These inequities can only be eliminated with an intentional approach to close the gaps that exist. Jones calls for a multidimensional approach with elements for "providing culturally informed interventions; enhancing the cultural competence of healthcare providers; and fostering community-based initiatives that cater to the specific mental health needs of diverse populations while also expanding access to comprehensive, culturally competent, and region-specific healthcare." Culturally responsive care is essential,

requiring the mental health provider to understand and respect the experience of the client and adapt therapeutic techniques to integrate the client's cultural context.

Jones highlights opportunities for schools and communities to play a central role in addressing adolescent mental health needs. Schools can reduce inequities through the universal role they play in children's lives and their ability to reduce transportation, financial, and parental availability barriers that exist for traditional mental health settings. Community-based approaches can reduce inequities by focusing on the entire population, particularly for prevention activities. Community-based models also offer opportunities to address the root causes of mental health disparities and reduce stigma around mental health.

"Paying for Child and Adolescent Mental Healthcare in the United States" by Jonathan Cantor and Ryan K. McBain begins by noting that the estimated $31 billion spent on mental health services for children and adolescents in 2021 represents almost half of all medical spending on that population.

Medicaid is the largest payer for mental health services overall and one of the largest payers for mental health services for children and adolescents. No recent national spending estimates specific to children and adolescents are available, but in 2009–2011 Medicaid paid an estimated $5.1 billion annually on mental health disorders for children ages 5–17. Medicaid coverage for mental health services is broad, including hospital and physician services, prescription drugs, case management, and more for enrollees under age 21 regardless of which state they live in. About half of all children are covered by employer-based health insurance. Covered services are far more variable in these plans, although inpatient and outpatient hospital services,

physician services, and prescription drugs are typically covered. Among youth ages 18 years or younger who are enrolled in employer-based insurance, about 18 percent of spending is for mental health and substance use disorder services.

Almost all public schools offer mental health services. Yet comprehensive data on how much is spent on this care and the degree to which services are evidence based are unavailable, and the specific services provided in schools are highly variable. School-based services can include preventive services offered to the entire student body, counseling services that may have a mental health component, and school-based therapists providing mental health services that might otherwise be obtained in the community.

Substantial federal funds support mental health services, but those funds are generally provided through block grants that cover a wide range of needs, making it impossible to isolate support for child and adolescent mental health. For example, Community Mental Health Services Block Grants, which totaled $832 million in 2023, support services for people of all ages. Similarly, Maternal and Child Health Services Block Grants, which exceeded $2.6 billion in 2022, support a broad range of services including prenatal care and health promotion.

Ultimately, not only is it difficult to quantify levels of spending on mental health services for children and adolescents, but, the authors explain, spending does not accurately reflect need since so many youth with mental health conditions do not actually receive care due to a combination of inability to find care and pay for it and factors such as stigma that prevent people from even seeking it.

Cantor and McBain identify various sources of inefficiency in child and adolescent mental health spending, including excessive use of emergency and inpatient services due to the lack of available lower-intensity settings, high rates of provision of care that does not adhere to the available evidence, excessive reliance on the most highly trained professionals when services could be provided equally well by those with less training, and high administrative costs due to system fragmentation. Building on a review of various policies designed to address the youth mental health crisis, they recommend expanding school-based mental health services, increasing enforcement of mental health parity laws, improving mental health quality metrics, assessing the potential of telehealth, investing in prevention, and improving the quality of data on mental health spending.

Ann F. Garland provides guidance for future policy in “Promising Approaches to Address the Youth Mental Health Crisis: Rethinking When, What, Where, How,

and by Whom Services Are Delivered." As the article title suggests, Garland argues that mental healthcare needs cannot be met solely by building on the current care delivery model; instead, all dimensions of care delivery need to be reexamined to align with a solid evidence base for what works. In particular, Garland notes, "Barriers in effectiveness of care center on the lack of alignment between research-supported interventions and routine clinical practice."

Garland argues for increasing resources dedicated to primary and secondary prevention, which includes mental health promotion and prevention along with screening and support for those identified as at risk for mental health conditions. These investments are appropriate due to a growing evidence base of effective population-wide interventions, such as home visitation programs for new parents, and early interventions, such as training parents of children in foster care.

Schools are a natural location for rethinking mental healthcare provision given nearly universal youth access to them. Schools can provide the full range of preventive services, deploying smyriad evidence-based options such as social-emotional learning and screening and intervention around anger management. Garland also suggests changes in how care is provided, explaining the need for treatments that cross diagnostic boundaries and showing the value, in some instances, of brief interventions rather than seeking to engage youth in long-term therapeutic care, which they often do not see through to completion. Garland also notes the need for and evidence behind shifting some care provision to community members, families, and peers.

Garland concludes with an exploration of technology-based opportunities for changing where, how, and by whom care is provided. While acknowledging concerns about social media use, a broad range of evidence-based applications exist that can meet the needs of youth. These range from digital therapeutics that can facilitate diagnosis and treatment to virtual reality applications that show promise in addressing anxiety and posttraumatic stress disorder.

Framing the Issue

Five themes emerged in the group's discussion that helped guide the development of this year's big ideas. The themes are as follows:

- **Our nation faces a youth mental health crisis**

  Recent trends in child and adolescent mental health are alarming. Rates of anxiety and depression are high and increasing. Suicidality, which includes suicidal ideation and suicide attempts, is on the rise. Underreporting of poor mental health due to stigma and limited interactions with the healthcare system means the actual levels are certainly higher. Substance use disorders, which are not the focus of this report, in part reflect the mental health challenges adolescents experience.

  Poor child and adolescent mental health burdens our society in many ways. Children and adolescents bear the greatest burden through lost opportunities to learn, develop, grow, and enjoy what should be a happy and relatively carefree time of life. In the worst instances, the burden leads to permanent injury or loss of life. Families struggle emotionally with the stress of having a family member facing such difficulty and with challenges finding needed services. Families also face financial burdens due to the costs of care and time lost from work due to caretaking and care-arranging activities.

  Communities are affected by the loss of resources from families straining financially and emotionally. Businesses lose worker productivity. And entire communities are affected when poor child and adolescent mental health culminates in suicide.

  Yet childhood and adolescence are times of great change and present opportunities for healthy development. If our nation responds appropriately to this crisis, we can minimize these negative consequences and improve the life course for current and future young people.

- **The causes of the crisis are complex and not fully understood**

  Dramatic social change seems to be at the root of the child and adolescent mental health crisis. Much attention has been focused on the rise of social media use and increased screen time, which have occurred simultaneously as the worsening of adolescent mental health. Strong evidence shows that there are negative overall mental health effects of social media exposure and large amounts of screen time, with particular concerns regarding bullying, reducing young people's self-esteem due to unrealistic social comparisons, exposure to inappropriate content, and interruption of normal social development due to isolation. At the same time, social media has been shown to increase positive social connections, particularly for people who might otherwise be isolated due to differences from their peers in their racial, ethnic, sexual, or gender identity. In addition, technology can connect young people to mental health services that would otherwise be unavailable. Importantly, policy responses such as limitations on social media use are few and recent, meaning there are no evidence-based policy interventions related to social media use that have been shown to yield benefits.

  Broader societal trends, including political polarization, income inequality, racism and anti-immigrant sentiment, and anxiety about firearm-related violence and climate change seem to be contributing to negative mental health trends as well. Each of these sources of stress is not new, but their intensity has grown.

The crisis manifests in different ways among different children and adolescents. Significant differences exist in the experiences of boys and girls, young people in urban and rural communities, and those who are members of historically or currently marginalized groups. These differences suggest a complex, multidimensional phenomenon, rather than a single cause for growing mental distress.

Families and communities play an important role in children and adolescents' mental health. Supportive families and community institutions provide a critical buffer against factors that would otherwise cause stress and strain. They also make it more likely that youth experiencing mental health concerns will be connected to and receive services to address those concerns. Family strain, often rooted in financial stress, intergenerational trauma, or unaddressed mental health or substance use issues, can contribute to youth mental health problems. It is critical to focus on supporting families to meet their children's needs rather than blaming families for circumstances that are often largely outside of their control.

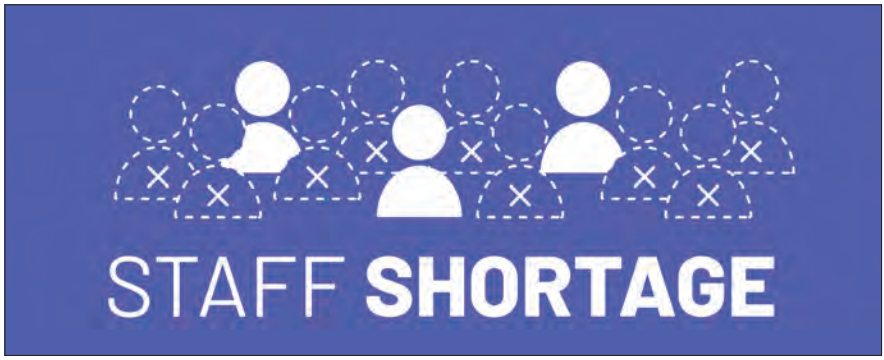
Ultimately, for all that research has shown about the risk factors associated with poor youth mental health, it is impossible to paint a precise portrait of why youth mental health indicators have declined so precipitously. What is clear is that no single intervention will reverse current trends.

- **The crisis persists due to systematic failures in the health system and society at large**

  Not all problems warrant the term "crisis." What makes youth mental health a crisis is the combination of growing rates of mental health conditions and a woefully inadequate societal response. The most glaring evidence of inadequate response is that most youth who need mental health services do not receive any at all. It is difficult to think of another health condition for which undertreatment is so common.

There are many reasons underlying the nation's inadequate response. Key among them include the following:

- The nation has an insufficient workforce to provide mental healthcare services to all who need them. The primary model of mental health treatment—individual counseling and therapy—requires a larger skilled workforce than currently exists.



- Insurance coverage for mental health services is often inadequate and does not align well with patient or provider needs. Despite legal requirements of coverage parity between mental and physical health, various barriers exist to realizing the benefits of insurance coverage. Key among those barriers is that the workforce shortage means many mental health professionals choose not to join preferred networks due to what they consider to be inadequate payment rates, leading to high out-of-pocket costs for patients and their families. Ultimately, the mental health resources that exist often go to those with sufficient resources to pay for them and not necessarily to those with the greatest need for them.

- Mental health service needs are on a continuum, from brief counseling interventions to intensive inpatient and residential care. Youth move in both directions along the continuum, but the service delivery system has difficulty recalibrating services as needs change. As a result, many youth are either overtreated or undertreated as they are stuck at a level of care that is no longer necessary or adequate for their needs. Waiting lists for services are common, culminating in wasteful and harmful practices such as emergency department boarding (being held in a hospital emergency department while awaiting a residential placement).

- Even when youth initiate mental health treatment, they are unlikely to remain in treatment for the length of time necessary to achieve results. This likely reflects a range of factors, including access barriers, financial barriers, and stigma.

- Much of the mental health system operates separately from other aspects of healthcare and other systems that children and adolescents interact with, such as education, child welfare, and juvenile justice. This fragmentation translates into missed opportunities to link youth with the services they need.

- Long-standing stigma, biases, and assumptions regarding mental health have created a misperception among some families and clinicians that mental health practice is all art and no science. In fact, a large body of evidence-based treatment modalities exists. Yet the vast majority of youth treated in community settings do not receive evidence-based care. Given capacity limitations and the difficulty of connecting youth to treatment, this is a particularly damaging phenomenon as it represents a waste of limited resources and a lost opportunity to improve youth mental health.

- Related to misperceptions regarding treatment effectiveness is the paucity of quality metrics associated with mental healthcare. Patients and payers do not typically expect clinicians to collect data to assess the quality of mental healthcare being provided. A small minority of clinicians undertake formal assessments of the quality of their care.

Ultimately, the failures listed above fall more heavily on marginalized groups than on the population as a whole. Members of racial and ethnic groups that have been marginalized, LGBTQ+ youth, and youth in families with limited financial means are more likely to face access barriers and are less likely to obtain mental health services. When they do so they are less likely to receive high-quality services than others. To make matters worse, dominant treatment modalities fail to account for the particular sources of mental health stress borne by those who have been subject to racism, anti-LGBTQ+ sentiments, anti-immigrant targeting, and other forms of social exclusion.

- **Expanding the current mental health system will not resolve the crisis**

  A larger mental health workforce with appropriate training practicing evidence-based medicine is needed. Yet even though provider shortages are the root of many of the challenges in the youth mental health system, a single-minded focus on increasing provider supply will not resolve the crisis. In the first instance, the time horizon and resource needs for increasing provider supply make this far too slow a response to a current and pressing crisis. Perhaps equally important, training more clinicians may reduce some of the squeeze points but will not address the other system failures that lead to low levels of effective treatment provided to youth. In addition, trained clinicians primarily engage in treatment, but addressing the mental health crisis will require increased attention to prevention and risk reduction.

  A larger supply of clinicians will not necessarily yield a more equitable response to the crisis. Financial and geographic access, quality, and cultural competency barriers will remain in place until specific steps are taken to address them, even if the overall supply of trained mental health professionals increases.

- **Evidence points to actions that can address the crisis**

  There has been a recent explosion in understanding what works in the prevention and treatment of mental health conditions. An extensive appendix to the Alegría and Cheng paper catalogs the vast literature on risk and protective factors affecting youth mental health. These factors play out at the individual, family, peer, community, and system-wide levels. Even when the precise mechanism by which a factor affects mental health is not known, insight into how these factors align with mental health challenges or resilience can inform policy and practice. Each of the companion papers provides examples of policies and programs that have been studied and demonstrated success.

  Two areas of emerging evidence stand out. Understanding of risk and protective factors for mental health is profoundly richer today than it was just a decade ago. Similarly, the evidence demonstrating effective prevention and early

intervention strategies has multiplied in the past couple of decades. This new evidence means there are known benefits to focusing on prevention and early intervention, and prevention efforts can be shaped and targeted in ways that will yield significant improvement. There are evidence-based policies and treatments that will help children and adolescents experience better mental health and be more resilient in the face of mental health challenges.

Five Big Ideas to Address the Youth Mental Health Crisis

Our nation must take concrete steps to address the child and adolescent mental health crisis. The Aspen Health Strategy Group offers five big ideas for doing so. We recommend that the nation prioritize prevention, improve access to mental healthcare services, improve the quality of mental healthcare services, support community-based efforts to address mental health needs, and embrace the potential of technology to improve mental health.

1. Prioritize Prevention

Primary prevention, which reduces the incidence of poor mental health, and secondary prevention, which screens for and identifies people at risk and delivers services before conditions worsen, should play a prominent role in the nation's response to the youth mental health crisis. Most mental health resources today are devoted to the treatment of individual patients, and, as important as that care is, the emphasis needs to shift toward prevention.

Primary prevention requires a society-wide response. The largest step the nation could take to improve youth mental health would be to reduce poverty, material hardship, and financial strain among families. Poverty creates mental distress, increases myriad risk factors for poor mental health, and impedes an effective response at the individual, family, and community levels. Similarly, dismantling racist and sexist structures, behaviors, and assumptions and eliminating the targeting of out-groups such as immigrants and people who identify as LGBTQ+ would dramatically reduce the emotional strain many young people experience. Reducing family and community

violence and engaging youth in community institutions would significantly improve youth mental health. Action steps to achieve these society-wide goals are beyond the scope of this report, but we believe it is critical to highlight these fundamental issues that underlie the youth mental health crisis.

In addition, myriad interventions have a demonstrated evidence base for their effectiveness in reducing the incidence of mental health challenges for children and adolescents. We call on schools, communities, and mental health professionals to expand their use. The first step in this direction will often need to be community-based conversations that normalize discussion of the topic and build understanding that improvement is possible.

A few categories of proven or promising interventions that could be expanded (specific examples of these and other interventions appear in the companion papers) include the following:

- School-based social-emotional learning programs that help children navigate their feelings deployed at an early age show lasting positive mental health effects.
- School-based mental health literacy programs that help children understand and name what they are feeling have been shown to improve the identification of mental health needs and to facilitate connection to mental health services.
- School-based universal screening for depressive symptoms and suicidality can open up discussion of these topics, help identify the sources of these burdens, and accelerate connecting youth to needed services.
- School-based mental health first aid training for teachers can expand the frontline identification and treatment of mental health conditions.
- Parent education programs help families support the mental health needs of their children by reducing stressful conditions and child maltreatment, facilitating the identification of youth mental health needs, and connecting families with needs to resources.
- Home visiting programs support parents navigating the challenges of parenting and can better link parents to services they or their children need.

- Antibullying campaigns reduce behaviors that lead to children experiencing poor mental health.

- Screening of children in high-risk settings, such as juvenile justice or the child welfare system, enhances opportunities for early intervention among children where rates of poor mental health are disproportionately high.
- Evidence regarding the negative mental health consequences of screen time and social media reveals complex findings, but the weight of evidence points to negative outcomes. Specific interventions to reduce this harm have not yet been tested, but as evidence evolves, a clearer path may emerge.
- Substance use can be a consequence of underlying mental health conditions that have not been diagnosed and/or treated, but it can also contribute to poor mental health. While not the focus of this report, effective interventions that reduce substance use among youth should be viewed as contributing to addressing the mental health crisis.

2. Improve Access to Care

Leaders in the health sector should prioritize the redesign of the nation's youth mental healthcare delivery system to overcome the massive access barriers that exist today with the goal of assuring access to the most appropriate evidence-based level of care for everyone who needs mental healthcare services.

Central to improving access is strengthening the role of primary care clinicians, particularly pediatricians. These clinicians should screen their patients for mental health needs, educate themselves on mental health resources available to their patients, deliver evidence-based services themselves, and integrate mental health services into their practices through direct engagement with and/or employment of mental health professionals or formal alignment with outside mental health providers.

The key role Medicaid plays in paying for youth and adolescent mental health services also warrants particular focus. Long-standing access barriers within the Medicaid program due to low payment rates require attention and must be overcome to reduce inequities in access to services.

Areas for action where health sector leaders should work with policymakers to develop appropriate policies and resources to support them include the following:

- Leadership of the mental health community should convene and apply lessons from implementation science to identify organizational, financial, and workflow barriers to effective mental health practice, yielding a road map for better care and policy suggestions to support implementation of the road map.
- All healthcare providers and others who interact with youth should do their part to reduce the stigma and shame families and youth face when confronting mental health issues to make it more likely that those who need assistance will seek it out. Healthcare providers should help youth and their families become literate in mental health, allowing them to recognize signs of poor mental health and take action as those signs emerge.

- Mental health providers and systems should view linguistic access as a core element of providing care.
- Mental health and primary care providers should expand the availability of brief interventions to address milder and emerging mental health conditions in a manner that is more accessible and affordable than guiding all people screened as in need of care to lengthy courses of treatment.
- Mental health systems should deploy mobile crisis units to help reduce stigma and overcome access barriers faced by many children and adolescents.
- Mental health providers should expand their training of peer and family support personnel who can substantially extend the professional workforce and offer more accessible and culturally concordant care.
- Regulators should clearly define and enforce mental health parity laws and network adequacy standards to assure meaningful financial and geographic access to mental health services for people regardless of where they live.
- The small number of states that have not yet expanded Medicaid should do so as a mechanism for improving financial access to mental healthcare services for young adults.
- The nation should continue to support and promote the 988 crisis response hotline as a source of access to mental health services for children and adolescents and as a mechanism for assessing the need for services.

3. Improve the Quality of Mental Healthcare Services

The leadership of the mental health community, including health systems, specialty societies, state departments of health, and licensing boards, should push for a quality framework regarding child and adolescent mental health that includes examining existing quality measures, developing additional performance measures as needed, and adopting those measures in payment and licensing policy—the following in particular:

- Mental health professionals should be expected to employ evidence-based measurement of progress toward clinical goals of mental health treatment, and adherence to this expectation should be embodied in payment policy and supported by appropriate legislative and regulatory guidance.

- Greater attention should be given to the development of and adherence to treatment approaches for patients with multiple mental health conditions, as comorbidities of this type are common.
- Mental health providers should be expected to adapt techniques and interventions to accommodate the cultural experiences and preferences of their clients and their clients' families. Dimensions of cultural competency should be an integral part of quality measurement in mental health.
- As is increasingly the case in the physical healthcare arena, providers of mental healthcare services should incorporate an understanding of their patients' unmet social needs into their approach to care. They should identify resources available in their communities to help their patients meet those needs.
- Appropriate use of medication is an essential component of high-quality mental healthcare. Yet instances of overuse and underuse abound. Primary care clinicians and mental health specialists must adhere to evidence-based practices when it comes to prescribing. It is also incumbent on clinicians and clinical societies to rely on not only clinical evidence of efficacy but also evidence of social factors such as diagnostic bias that can undermine appropriate prescribing practices.
- Sustaining patients in treatment through measurable improvement should be a key quality metric. Clinicians need to view overcoming financial and practical access barriers as part of their treatment responsibilities to help reduce high rates of patient attrition.

- Family engagement should be considered part of quality mental healthcare for youth except in instances in which it is specifically contraindicated, because it improves care outcomes and helps address stigma and access barriers.
- Those involved in research should increase their attention to the racial, ethnic, and linguistic diversity of the nation to ensure that evidence-based treatments are available to all.

- Public and private payers should support the expanded use of alternative payment models that provide capitated payments to providers as one method of promoting early and effective intervention. Well-designed capitation models in particular can facilitate redirection of resources to where population needs are greatest. Expansion of these models should proceed in concert with more robust quality measures to assure that they are yielding better mental health outcomes.

4. Support Community Institutions, with an Emphasis on Schools

Strong mental health has its roots in the community. Evidence shows that various local institutions play a central role in promoting good adolescent health. Families, schools, and religious and voluntary organizations can work together to provide the range of preventive and treatment services youth need to protect their mental health.

Many of these institutions are under strain, and some require federal or state assistance to build the infrastructure needed to support their communities. This is particularly the case in communities with a history of disinvestment. Federal support should be provided to achieve the following:

- Federal support would help ensure that elementary and secondary schools, which are a natural focal point for services for children and young adolescents, have the capacity to provide a core set of preventive, treatment, and referral services for students (many of which are described above).
- Trusted community organizations should be included in efforts to expand access, with a particular focus on the ability of community health workers to improve care navigation and link people to social supports that reduce family stressors.

- Colleges reach a significant subset of older adolescents, with community colleges in particular serving a large number of young adults with significant risk factors for poor mental health. Federal support would enable these institutions to perform age-appropriate preventive, screening, referral, and treatment functions.
- With appropriate leadership, communities can assess the mental health needs of community members, map available resources, and address systemic barriers to positive mental health, including dimensions beyond the clinical setting

such as affordable housing and accessible open space. Leadership can come from elected officials, voluntary associations, healthcare systems, and more. Federal and state governments should financially support efforts such as these and fund research to determine their effectiveness and how to spread effective approaches.

- Ultimately, all types of community support will be most effective if they enable parents and families to identify mental health needs of youth and adolescents and support families in accessing resources needed to address them.

5. Embrace the Potential of Technology

Policymakers should support steps designed to build on the positive existing and potential applications of technology. Examples of these steps include the following:

- Federal and state policymakers should solidify and enhance telehealth access through appropriate payment and licensure policy.
- Federal regulators should align and streamline the regime for licensing technology-enabled mental health interventions, providing clarity to clinicians, patients, and their families regarding the scrutiny these methods have undergone.
- Building in part on the evaluation framework developed by the American Psychiatric Association's App Evaluation Model, an independent, nonprofit organization should be given the task of developing a clearinghouse for evidence-based digital therapeutics and other technology-enabled clinical interventions.

- The National Institutes of Health and other research funders should increase support for randomized controlled trials of digital therapeutics.
- Regulatory agencies should take appropriate steps to increase the likelihood that users of social media will be guided to evidence-based treatment modalities if they are identified as potentially needing treatment.
- Voluntary and regulatory steps should be taken to respond to identified sources of mental health harm that arise from social media applications.

Moving Forward

There is currently a crisis in child and adolescent mental health in the United States. Health sector leadership is needed to respond to this crisis. The Aspen Health Strategy Group, with its multisector membership, has developed these ideas to motivate improvements in policy and practice. We call on the health sector and the new Trump administration to embrace these big ideas and lead the nation to reverse the negative trends that so heavily burden our youth.

BACKGROUND PAPERS

Understanding and Improving Mental Health in Adolescence and Youth

Margarita Alegria, Ph.D. and Michelle Cheng, B.S.

Paying for Child and Adolescent Mental Health Care in the United States

Jonathan Cantor, Ph.D. and Ryan McBain, Ph.D.

Adolescent Mental Health Equity

Janine Jones, Ph.D., N.C.S.P., L.P.

Promising Approaches to Address the Youth Mental Health Crisis: Rethinking When, What, Where, How, and by Whom Services Are Delivered

Ann Garland, Ph.D.

Part 2

"While attention focused on adolescent mental health in the wake of COVID-19, the pattern of increasing mental health problems among adolescents and youths predates the pandemic."

– MARGARITA ALEGRIA, PH.D. and MICHELLE CHENG, B.S.

Understanding and Improving Mental Health in Adolescence and Youth

Margarita Alegría, Ph.D. and Michelle Cheng, B.S.

Introduction

The United States faces two trends related to adolescent and youth mental health: One leads to apprehension and concern, while the other leads to optimism and hope. The first trend is the deterioration in mental health of adolescents and youth.

A report by the Centers for Disease Control and Prevention National Center for HIV, Viral Hepatitis, STD, and TB Prevention's Division of Adolescent and School Health (2023) identified substantial increases over a 10-year period in the percentage of high school students experiencing persistent feelings of sadness or hopelessness (28 to 42 percent), considering suicide (16 to 22 percent), making a suicide plan (13 to 18 percent), and attempting suicide (8 to 10 percent). Across the board, epidemiologic data have raised a red flag, leading the surgeon general to declare a youth mental health crisis (Office of the Surgeon General, 2021).

The second trend is one of optimism and hope. Advances in research and practice in the last 10 years have yielded a better understanding of the risks and protective factors related to adolescent mental health, produced evidence of mental health treatments that work, and provided confidence that considerable gains can be achieved with policy change (McGinty, 2023). Fazel and Soneson (2023) documented substantial promise in interventions to improve adolescent and youth mental health. Evidence shows the role of school-based services, mindfulness, and digital tools in youth mental health prevention approaches (Arango et al., 2018; Lattie et al., 2019). There have also been increases in the percentage of adolescents receiving specialty mental health services between 2002 and 2019 (from 11.8 to 16.7 percent) (Agency for Healthcare Research and Quality, 2022) and upsurges in youth accessing

school-based services between 2009 and 2019 (from 12.1 to 15.4 percent) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Adolescence, before mental health disorders may crystalize, is an opportune time to intervene, allowing for adaptation and recovery (Bonnie & Backes, 2019).

This paper provides an overview of adolescent and youth mental health, mental healthcare, and recommendations for action. It aims to describe where we are now, how we got here, and where we should go, reflecting on promising future steps.

Where We Are: The Current State of Adolescent and Youth Mental Health

Adolescent mental health (which, for this paper, includes children and youth ages 10–25) covers many aspects of well-being. It includes anxiety disorders (characterized by persistent anxiety that impedes daily functioning), depressive disorders (characterized by depressed mood or loss of interest that interrupts daily activities), suicidality (characterized by self-harm with intent to end one's life), substance use disorders (involving misuse of substances), and attention deficit hyperactivity disorder (characterized by inattention and hyperactivity impeding functioning and development), among others (National Institute of Mental Health, 2024). It also includes symptoms of disorders and trauma; social, emotional, and developmental well-being; and positive quality of life (Centers for Disease Control and Prevention, n.d.). This paper does not focus on severe mental illness, given difficulties with diagnosis in childhood and adolescence. For instance, early symptoms of schizophrenia, cognitive and language delays, and histories of trauma are commonly seen in other developmental disorders (McClellan, 2018). Additionally, some symptoms of psychotic disorders, like vivid fantasies, can be part of normal child development.

The Substance Abuse and Mental Health Services Administration's annual report on the National Survey on Drug Use and Health stated that in 2022, nearly one-fifth of adolescents had a major depressive episode in the past year, with 14.6 percent

having a major depressive episode with severe impairment (SAMHSA, 2023). The Teen National Health Survey found that 17 percent of adolescents experienced depressive symptoms in 2021–2022, and 21 percent experienced anxiety symptoms in the past two weeks (Panchal, 2024). In 2022, 13.4 percent of adolescents reported serious thoughts of suicide, 6.5 percent made suicide plans, 3.7 percent attempted suicide, and 2.9 percent reported all three (SAMHSA, 2023). A meta-analysis found attention deficit hyperactivity disorder prevalence of 7.6 percent for children younger than 12 and 5.6 percent for adolescents ages 12–18 (Salari et al., 2023), although other studies suggest that the prevalence is lower, between 2.2 and 7.2 percent, depending on the methods used to estimate prevalence (Sayal et al., 2018).

While attention focused on adolescent mental health after COVID-19, the pattern of increasing mental health problems among adolescents and youth predates the pandemic. In the decade before the pandemic, youth suicidality had risen by more than 40 percent (Agency for Healthcare Research and Quality, 2022). Lebrun-Harris and colleagues (2022) found escalating levels of anxiety and depression between 2016 and 2020, and Keyes & Platt (2024) noted rising rates of psychological distress, suicidal thoughts, self-harm, and fatal suicide. Adolescent and youth mental health prevalence rates worsened during the COVID-19 pandemic (Meade, 2021). Data from a COVID 19 pandemic meta-analysis (Deng et al., 2023) found both depressive symptom and anxiety symptom prevalence to be 31 percent.

Mental Health of Adolescents and Youth of Racial and Ethnic Minoritized Groups

There are no significant differences in the prevalence of major depressive episodes among adolescents from different racial or ethnic groups (SAMHSA, 2023). However, considerable differences exist in the comorbidity of depression and substance use disorder, as reported by 2.1 percent of American Indian or Alaska Native adolescents, 1.0 percent of Asian adolescents, 2.6 percent of Black adolescents, and 4.3 percent of White adolescents (SAMHSA, 2023). According to data from the National Center for Health Statistics at the Centers for Disease Control and Prevention, there was a higher suicide death rate among American Indian and Alaska Native adolescents (22.2 per 100,000) in 2022 compared to White adolescents (7.2 per 100,000) (Panchal, 2024).

Mental Health of Lesbian, Gay, Bisexual, Transgender, Queer, and Questioning Youth

Lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) youth bear a disproportionately high mental health burden. The prevalence of anxiety and depressive symptoms was 43 percent and 37 percent, respectively, among LGBTQ+ adolescents, in contrast to 14 percent and 11 percent among non-LGBTQ+ adolescents in 2021–2022 (Panchal, 2024). In 2021, rates were higher for LGBTQ+ high school students compared to heterosexual students for past-year persistent feelings of sadness or hopelessness (69 percent vs. 35 percent), poor mental health (52 percent vs. 22 percent), seriously considered attempting suicide (45 percent vs. 15 percent), made a suicide plan (37 percent vs. 12 percent), attempted suicide (22 percent vs. 6 percent), and was injured in a suicide attempt (7 percent vs. 1 percent) (National Center for HIV, Viral Hepatitis, STD, and TB Prevention, 2023). Anxiety significantly increased for LGBTQ+ high school students from 2012 to 2018, with a prevalence of more than 50 percent for LGBTQ+ youth in 2018 (Parodi et al., 2022). LGBTQ+ related mental health disparities emerge early in life and persist over the life course (Fish, 2020).

Adolescent and Youth Mental Health Services Utilization and Spending

By examining mental health services utilization, we can begin to understand the current state of the pediatric and adolescent mental healthcare system. In 2022, 29.8 percent of adolescents ages 12–17 received mental health treatment (SAMHSA, 2023). Twenty-three percent of adolescents received treatment in an outpatient setting; 20.0 percent in a setting outside of a general medical clinic or doctor's office; 13.8 percent via telehealth; 3.0 percent in an inpatient setting; and 1.2 percent in a prison, jail, or juvenile detention center (SAMHSA, 2023). Many adolescents received support elsewhere: 7.2 percent received services from a support group and 3.1 percent from a peer support specialist or recovery coach (SAMHSA, 2023). Additionally, 12.8 percent of adolescents took prescription medicine for their mental health (SAMHSA, 2023). A different study found that 20 percent of adolescents received mental health therapy or counseling, and 14 percent took medication for mental health in the past year (Panchal, 2024).

Research shows increases in utilization in recent years for youth and adolescents. Mental health–related emergency department visits have increased (Abrams et al., 2022; Ferro et al., 2023; Hoffmann et al., 2019; Lo et al., 2020). Among adolescents receiving mental healthcare, there were increases in utilization in outpatient settings (58.1 percent in 2005–2006; 67.3 percent in 2017–2018) and in mental health clinics (12.3 percent in 2011–2012; 19.3 percent in 2017–2018); increases in hospital stays and residential treatment stays (10.2 percent and 4.4 percent, respectively, in 2005–2006; 12.2 percent and 5.9 percent, respectively, in 2017–2018); and decreases in care provided by school counselors (49.1 percent in 2005–2006; 45.4 percent in 2017–2018) (Mojtabai & Olfson, 2020).

Spending and costs for mental healthcare have been increasing over the past decade. From 2017 to 2021, total medical expenditures for pediatric mental health conditions increased by 45.2 percent, and in 2021, medical spending for household members was about $2,337 higher for households with a child with a mental health condition than for households without (Loo et al., 2024). Outpatient services in a publicly funded

youth mental health system cost $2,673 per episode, with paid services including psychotherapy, assessment, collateral, medication support, and case management (Dickson et al., 2020). While children with mental health conditions make up only 19 percent of the youth population enrolled in Medicaid, they account for more than half (55 percent) of Medicaid spending in that population (Doupnik et al., 2020). For Medicaid-enrolled children with mental health conditions, mental health–related inpatient hospitalizations contributed to high spending (Doupnik et al., 2020).

How We Got Here

Researchers have speculated about the causes behind these worsening trends. Greater willingness to report mental health symptoms by youth may explain higher counts of mental health disorders (Foulkes & Andrews, 2023). However, this may not fully explain trends. For example, 77 percent of adolescents who died by suicide had interacted with health professionals, but less than half (38 percent) had reported mental health problems during their visits (Ahmedani et al., 2014).

Striking increases in stress and worry among children since 2006 have also been noted (Keyes & Platt, 2024) as well as higher rates of adolescent sexual violence and cyberbullying, particularly for girls. Others have identified changing community norms for adolescent educational and economic attainment (Luthar et al., 2020), with youth self-reports of increased schoolwork pressure (Cosma et al., 2020) and more intense academic stressors (Högberg, 2021). The World Health Organization suggests that worsening living conditions for youth (e.g., greater housing instability and family moves to afford housing) and increased experiences of exclusion might account for some of the rising mental health problems in adolescents (World Health Organization, 2024).

Unmet Mental Health Needs

The Substance Abuse and Mental Health Services Administration (2023) reported that more than 40 percent of adolescents with a past-year major depressive episode received no mental health treatment. Adolescents without health insurance (compared to those with private or public insurance) and Hispanic and multiracial adolescents (compared to White adolescents) had a higher likelihood of unmet mental health need (Fox & Hanes, 2023). Similarly, Whitney and Peterson (2019), using data from a 2016 national survey, found that 49.4 percent of children with a mental health disorder received no mental health treatment or counseling. Rates of unmet needs varied by state, ranging from 29.5 percent in Washington, DC, to 72.2 percent in North Carolina (Whitney & Peterson, 2019). Additionally, many youth who receive mental health services do not receive sufficient care for it to be effective (Harpaz-Rotem et al., 2004), and many who receive care terminate their treatment prematurely (Kazdin, 1996).

Barriers to Accessing and Receiving Quality Mental Healthcare

Stigma is an oft-cited barrier to receiving mental healthcare (Price & Hollinsaid, 2022; Quinlan-Davidson et al., 2021; SAMHSA, 2023; Waid & Kelly, 2020). Heflinger and Hinshaw (2010) describe how institutional and professional stigma convey guilt and shame to parents, making them feel judged and reluctant to take their children to care. During care visits, providers may address the child by their diagnosis, approach the family with a deficit model of family dynamics, hold treatment meetings that exclude the caregiver or youth, and ignore the life circumstances and social determinants that may impact the family.

Institutional barriers to receiving quality care also exist. Examples include restrictive policies that provide few options for mental health treatment (Heflinger & Hinshaw, 2010), lack of appointment accommodations for working parents (Anderson et al., 2017; SAMHSA, 2023), and use of coercive approaches or limited services for those with public insurance (Waid & Kelly, 2020). Other service-level barriers include long

distances to travel, limited telehealth options, and administrative burdens (e.g., having to make multiple phone calls in the referral process) (Anderson et al., 2017).

System-level factors limiting service access and engagement include the cost of treatment, lengthy insurance procedures, workforce shortages, long waiting times or delays between referral and appointment, and lack of culturally and linguistically appropriate care (Anderson et al., 2017; Lu et al., 2021; Waid & Kelly, 2020). Primary care providers also report feeling unprepared to address mental health problems, experiencing confusion about what aspects of mental healthcare fall within their jurisdiction, receiving a lack of financial compensation for these services, having insufficient mental health specialists for consultations or referral, and experiencing fragmentation of mental health services (Anderson et al., 2017).

Low health literacy about mental health symptoms and conditions is a barrier to seeking care since it can lead to parents underestimating the seriousness of their child's mental health conditions (Roberts et al., 2005). White parents were twice as likely as Latino or Black parents to recognize their child's mental health as poor or fair and to identify the need for professional care (Roberts et al., 2005). Parents and youth may also have concerns about confidentiality (Anderson et al., 2017; SAMHSA, 2023) and not trust the mental health system (Castro-Ramirez et al., 2021).

Disparities in Mental Healthcare Utilization

Racial and ethnic disparities in utilization may be worsening (Olfson et al., 2024). Marrast and colleagues (2016) found that compared to White children, Black children had 37 percent fewer visits to psychiatrists and 47 percent fewer visits to any mental health professional but similar rates of inpatient and emergency department utilization. In comparison to White children, Latino children had 49 percent fewer visits to psychiatrists, 58 percent fewer visits to any mental health professional, and lower rates of inpatient utilization (Marrast et al., 2016). While mental healthcare utilization from 2005–2006 to 2017–2018 significantly increased among female adolescents, non-Hispanic White adolescents from families with income above 200 percent of the federal poverty level, and adolescents with private insurance, it significantly decreased among male adolescents, non-Hispanic Black adolescents, and adolescents with Medicaid or CHIP (Mojtabai & Olfson, 2020).

Racial and ethnic biases held by mental health providers, along with inequitable funding for community health and staffing, limit the availability of evidence-based mental health services for youth of racial and ethnic minority groups (Castro-Ramirez et al., 2021). Black and multiracial youth are overrepresented in experiencing child

psychiatric emergencies, which may reflect low opportunity and inequitable neighborhood conditions in care access; racial biases by community members that result in mental health crisis reports; and inequities in access to mental health prevention, early intervention, and routine care (Chen et al., 2024). As is discussed in greater detail by Janine M. Jones in this report ("Adolescent Mental Health Equity"), there is an urgent need to address the structural and systemic factors underlying disparities to augment access to outpatient and routine mental healthcare for youth of racial and ethnic minority groups (Olfson et al., 2024).

LGBTQ+ youth also have limited options for care. In 2020, only 28 percent of youth mental health facilities offered mental health services designed for LGBTQ+ individuals (Choi et al., 2023). One study found that in states with restrictive laws around transgender individuals' rights, fewer mental health providers specifically served transgender adolescents (Hollinsaid et al., 2022). Provider and community stigma against individuals of sexual minority groups are a barrier to receiving care (Cronin et al., 2021).

Where We Should Go

This section reviews opportunities to improve mental health services at the individual, family, and system levels. Despite daunting trends in the prevalence of disorders, a growing body of work on interventions addresses challenges in adolescent and youth mental health. Much of the cause for optimism is associated with an improved understanding of the risk and protective factors related to adolescent mental health (a review of the evidence regarding risk and protective factors appears in the appendix). This understanding creates new opportunities for treatment and policy.

Treatment Engagement Interventions

Families may be reluctant to access available treatment options. Lindsey and colleagues (2014) found that periodic assessments (i.e., measuring client needs through interviews, questionnaires, and rapport-building methods) and accessibility promotion (i.e., making services more convenient and accessible) were part of more than half of successful treatment engagement interventions. Enhancing parental involvement and family empowerment, leveraging technology, using social marketing campaigns, and encouraging youth participation in program development may also help to improve youth engagement in mental health interventions (Dunne et al., 2017).

Martinez and colleagues (2015) describe the significance of psychoeducation to achieve parental engagement for families with youth with disruptive behaviors. This includes explaining the child's behavior problems and potential causes, defining the goals and rationale of treatment, and providing strategies to manage misbehaviors. As expected, parental psychoeducation demonstrated increased subsequent engagement in treatment.

Integrating mental health services within medical care has also demonstrated benefits regarding family engagement in care (Rapp et al., 2017). A systematic review of engagement interventions found that the most promising intervention involved integration into primary care (Petts & Shahidullah, 2020).

Individual-Level and Family-Level Mental Health Interventions and Therapies

Rigorous intervention studies spanning five decades have identified evidence-based psychotherapies for adolescents and youth that can improve mental health (Weisz, Ugueto, et al., 2017). For example, Weisz, Kuppens, and colleagues (2017) found that behavioral treatments for youth, such as cognitive behavioral therapy (CBT), had the highest effectiveness compared to other types of therapies (e.g., youth-focused nonbehavioral, caregiver and family-focused behavioral interventions). Caregiver involvement in youth CBT may also help bolster its large treatment effect (Sun et al., 2019).

Interventions and therapies targeting families have also shown effectiveness. For example, parent-child interaction therapy, focused on enhancing secure patient-child relationships, was associated with significantly reduced child behavior problems among children with and without histories of trauma, even among children who did not complete all therapy sessions (Messer et al., 2024). Other components of youth mental health interventions contributing to their success include behavioral activation (a behavior change component of mental health treatments involving identification, planning, and self-monitoring of engagement in activities with personal value; Lejuez et al., 2011), due to its focus on increasing engagement in personally meaningful activities and behaviors (Malik et al., 2021), and problem-solving, due to its focus on using adaptive solutions as coping strategies, which can help increase hopefulness and a sense of control over stressors (Michelson et al., 2022).

Population-Wide or Universal-Level Mental Health Interventions

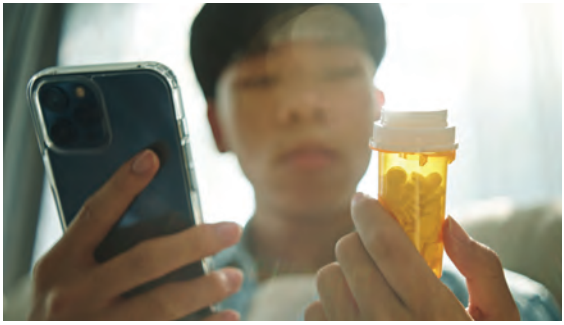
Some mental health interventions aim to benefit whole populations (e.g., mental health prevention approaches) rather than target specific at-risk groups. Population-wide mental health programs for youth have been delivered in schools and community settings (such as homes, after-school programs, and counseling centers) and include components of psychoeducation, problem-solving, social skills training, insight building, and communication skills, all of which are important for prosocial, socioemotional, and positive mental health development (Boustani et al., 2020).

Some population-wide interventions aim to increase mental health literacy, such as Youth Aware of Mental Health (Lindow et al., 2020). As part of the program, adolescents receive five 50-minute sessions (three role-play sessions and two mental health interactive lectures), a booklet, and six posters. At the three-month follow-up, significantly more students reported speaking to friends or a school staff member about depression or suicidal thoughts. Help-seeking behaviors increased, and mental health–related stigma decreased considerably. Over time, students also improved their general mental health knowledge.

Pharmacological Interventions

Over the past few decades, significant increases have occurred in psychotropic medication use by young people (Olfson et al., 2015). Practice and treatment guidelines by professional organizations, such as the American Academy of Child and Adolescent Psychiatry and the American Academy of Pediatrics, recommend the provision of psychotropic medications alongside behavioral interventions to treat mental health conditions (Shahidullah et al., 2023).

To treat depressive disorders in youth, psychosocial therapies (such as CBT) are the first-line intervention. Still, in some cases, selective serotonin reuptake inhibitors, in combination with psychotherapies, can be provided when coordinated within the same care system (Shahidullah et al., 2023). Physicians have reported prescribing medications to treat depression when psychotherapy is unavailable or inaccessible (Tulisiak et al., 2017). For anxiety disorders, CBT in combination with selective serotonin reuptake inhibitors has shown effectiveness and is sometimes the preferred treatment course for patients ages 6 to 18 (Shahidullah et al., 2023). A mixed-methods study found that pediatricians are more likely to recommend psychotherapy before pharmacological treatments for youth with anxiety disorders due to their perception of the manageability of anxiety disorders (Tulisiak et al., 2017). Decisions regarding the prescribing of psychotropic medications remain nuanced, especially when considering adverse side effects, coordination between practitioners, and patient and family attitudes (Murphy et al., 2016; Shahidullah et al., 2023).



Systems and Policy Opportunities to Improve the Adolescent and Youth Mental Healthcare System

Despite signs of progress, the current youth and mental healthcare system is ill-equipped to provide equitable and quality mental healthcare. Evidence-based interventions often use a biomedical model and focus on treating rather than preventing mental health problems (Dopp & Lantz, 2020). System- and policy-level approaches are needed to address upstream factors and improve adolescent and

youth mental health at the population level (Dopp & Lantz, 2020). Current studies reveal gaps in quality (Quinlan-Davidson et al., 2021), confusion about providers' roles in treating mental health and substance use disorders (Hadland et al., 2024), and provider bias in diagnosing mental health disorders in youth (Becker-Haimes et al., 2023). These findings imply an urgent need for system-wide improvements in adolescent and youth mental healthcare services.

Protecting Youth Mental Health: The US Surgeon General's Advisory (Office of the Surgeon General, 2021) highlights the actions that schools, healthcare institutions, community-based organizations, funders, and policymakers can take to improve the children's mental healthcare system. These include expanding comprehensive and affordable coverage for pediatric mental health services, investing in programs that have shown clinical effectiveness, expanding the mental health workforce, and improving coordination between youth-serving systems. Medicaid must also improve mental healthcare for adolescents and youth, given issues such as varied billing practices for peer support services and opportunities to establish innovative models for complex needs (Perera & Alper, 2024). State and federal policy efforts that improve factors outside the mental healthcare system, such as social and economic policies (Office of the Surgeon General, 2021) and the recent ruling to expand health insurance access for Deferred Action for Childhood Arrivals (DACA) recipients (Baron, 2024), also have the potential to improve youth mental health through upstream policies.

Below, we review system and policy efforts that have gained momentum and shown promise to improve adolescent and youth mental health.

School-Based Mental Healthcare

Schools are well positioned to deliver mental health services to young people. School-based services are associated with improved utilization, higher acceptability, and lower stigma (So et al., 2019). Ideally, school mental health models involve cross-sector collaborations of professionals (e.g., healthcare providers, social care providers, and school staff members) working together to provide care to students in a natural environment (Hoover & Bostic, 2021; Richter et al., 2022).

Since school-based settings are a primary source of care for underserved populations, adapting interventions relevant to the specific school and cultural context contributes to their effectiveness (Richter et al., 2022). However, researchers note many challenges with implementing and sustaining school-based mental health services. Mental health providers and coordinators in school-based health center networks report operational challenges (e.g., separate electronic medical record systems, sharing patient information), challenges in maintaining and fostering community partnerships (e.g., budget cuts, staff turnover, inconsistent coordination meetings, confidentiality laws), and challenges engaging students and families due to mistrust, confidentiality concerns, and stigma (Lai et al., 2016). Schools with less funding and fewer resources may require additional infrastructure and personnel to implement school-based services (Sanchez et al., 2018) to prevent widening disparities between populations attending high- and low-resourced schools.

The use of trauma-informed care in schools and youth agencies is growing (Hanson & Lang, 2016; Maynard et al., 2019). It involves system-level changes in agency processes that may take on different forms, such as child welfare systems implementing training to recognize trauma symptoms, courts minimizing triggers that retraumatize youth in juvenile justice systems, or health systems incorporating trauma screening in healthcare visits (Bargeman et al., 2021). In education systems, trauma-informed approaches include education for teachers and school staff and trauma-informed and trauma-sensitive curricula (Bargeman et al., 2021; Kataoka et al., 2018). Other critical components for trauma-informed approaches in schools include a commitment from leadership, multitiered trauma-informed supports

(including targeted group prevention programs), and policies and practices that ensure a positive and safe school climate (Kataoka et al., 2018). Since trauma-informed care requires systemic change to respond to school climates, innovative methods are needed to evaluate the organizational processes of trauma-informed care approaches.

Integrated and Coordinated Care Approaches

Integrated care models have been linked with advances in accepting and using child mental and behavioral health services (So et al., 2019). In such models, an interdisciplinary team of primary care providers, mental health professionals, case managers, and social workers work with patients and families to provide holistic and comprehensive care, including direct treatment, monitoring, and care coordination (Archer et al., 2012; So et al., 2019). Encouraged by the Affordable Care Act provisions of 2010, care coordination models have gained traction due to their cost-effectiveness and approach to improving care quality (Carter et al., 2022). Collaborative care models have been associated with positive healthcare outcomes (Kolko et al., 2012; Richards et al., 2024) and can increase access, expand workforce capacity, and decrease stigma (Richards et al., 2024).

De Voursney & Huang (2016) present a model for an integrated youth behavioral health system. The model, which places youth and family at the center since care approaches must be tailored to the specific youth and family, highlights the importance of behavioral health provider coordination in offering clinical services (e.g., health promotion and prevention, screening and early identification, treatment, ongoing support, and monitoring). The de Voursney & Huang (2016) model's outermost domain (surrounding the health sector and youth and family) is community systems, due to their critical role in children's well-being and social development (e.g., sports, after-school programs with peers).

Care coordination models include wraparound services, which connect youth to behavioral health services, with collaboration between care coordinators, youth, family members, and providers to create a care plan with formal and informal support systems (Cosgrove et al., 2020). A longitudinal evaluation of statewide implementation of wraparound services found decreased residential treatment and increased outpatient therapy use after implementation (Cosgrove et al., 2020).

Current models have been financed by local, state, and federal funding and insurance coverage (Richards et al., 2024); however, improving and formalizing payment coordination between different sectors (e.g., mental healthcare, special education, foster care, juvenile justice) is critical to advancing integrated and coordinated care approaches that allow for more cross-sector coordination (Hoagwood & Kelleher, 2020). Policy and financing frameworks are needed to support the implementation and sustainability of these types of services (de Voursney & Huang, 2016). Improving children's mental healthcare systems requires a robust workforce, systems integration, strong leadership and accountability, support and prioritization from federal organizations, and stable funding (Richards et al., 2024).

Virtual Care Models

During the COVID-19 pandemic, telehealth and virtual care models reduced logistical and geographical availability barriers to accessing mental healthcare. Evidence-based virtual care shows promise for young people. For example, a computerized CBT intervention, delivered in a United Kingdom school setting with United Kingdom adolescents, was more effective than self-help websites at reducing depression after four months (Wright et al., 2017). However, concerns about attrition from the virtual

intervention raise questions about the need for a clinician to encourage treatment completion and the need to have mechanisms in place to redirect adolescents to in-person care when needed (Wright et al., 2017).

Also increasing in popularity is delivering psychological and mental health interventions through digital devices. One meta-analysis found that psychological interventions delivered by smartphones were effective at reducing anxiety as compared to control or wait-list conditions (Firth et al., 2017). Some digital applications target mindfulness, such as Breathe2Relax and Headspace, while other apps aim to reduce symptoms of specific mental health disorders (Garland et al., 2021). Despite limited research and provider concerns about the lack of regulation around digital mental health applications, patients are using them, so evaluations are needed (Garland et al., 2021).

While virtual care has the potential to improve children's mental health, efforts must be made to ensure equitable technology access and digital literacy to prevent exacerbating disparities (Richards et al., 2024). Policies allocating investment in affordable Internet access (Dopp & Lantz, 2020) and provision of technology support by healthcare organizations (Chakawa et al., 2021) can work to reduce disparities.

Recommendations

There is increasing recognition of the importance of ensuring positive adolescent and youth mental health and well-being at the national level (Allen & Hutton, 2023; Bonnie & Backes, 2019; Office of the Surgeon General, 2021). This section presents five high-level recommendations for where we should go to ensure we achieve this goal.

1. **Interventions in youth and family-provider interactions.** Invest in reducing mental health provider stigma, increasing family and youth engagement in care, and enhancing provider training and supervision to ensure acceptance and receipt of effective adolescent and youth mental health treatments so families enter into and benefit from care.

2. **Interventions in community.** Outreach to schools and youth service agencies (e.g., welfare agencies) with a high prevalence of youth-reported mental health problems to connect youth to services, address social determinants of mental health, identify how to improve their social conditions, and tackle any toxic organizational or neighborhood climate for adolescents, youth, and families to halt upstream risk factors for mental health conditions.

3. **Interventions in the health system.** Redesign the healthcare system as a learning system, in which there is a high value on evidence-based care, ongoing supervision of clinicians and paraprofessionals to ensure use of evidence-based care and integration of research evidence into their practice, regular performance assessment, and codesign of programs and services with youth and families to ensure inclusion of components of their care needs.

4. **Interventions in the policy domain.** Evaluate policy changes to shift incentives to focus on improvements in mental health outcomes, decreases in adverse childhood experiences, and mitigation of early exposures to harmful social and environmental factors that lead to adverse social, emotional, and mental health outcomes, with attention to fortifying financing and expansion of insurance coverage for adolescents and youth.

5. **Interventions in research.** Conduct research to monitor and map increasing and decreasing trends in mental health outcomes, identifying areas of positive deviance (groups of youth doing well even in conditions of risk and hardship) to better understand potential sources of resiliency and protection.

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Appendix

A Review of the Evidence of Risk and Protective Factors Impacting Youth and Adolescent Mental Health

Improving adolescent and youth mental health requires understanding the multiple risk and protective factors, processes, and environmental influences that can affect mental health. This appendix highlights individual, family, peer, community, and system factors impacting risk and recovery for adolescent and youth mental health studied in the research literature. Limited causal evidence exists regarding these factors; most research reveals correlations between the factors and mental health. There has also been limited research examining what has caused the increase in adolescent and youth mental health conditions.

Individual-Level Factors

Sociodemographic Factors

Age and gender have an inconsistent relationship with mental health—some studies show older age sometimes linked to worse mental health outcomes (Deng et al., 2023), while other studies show older age associated with better mental health (Lee et al., 2021). Most research finds that female adolescents and youth have worse mental health than their male counterparts (Carlos Chavez et al., 2024; Lee et al., 2021; Panchal, 2024) and that the gender gap is widest at younger ages while narrowing for adults (Keyes & Platt, 2024). Death rates by suicide are an exception; they are higher for male adolescents (8.1 per 100,000) than for female adolescents (3.8 per 100,000; Panchal, 2024). From 2011 to 2021, the percentage of serious thoughts of suicide and suicide attempts increased more quickly in female adolescents (11 percent increase and 3 percent increase, respectively) than in their male counterparts (1 percent increase for both; Panchal, 2024).

Biological Factors

Some research has pointed to the potential neurobiological susceptibility to environmental conditions underlying differential developmental trajectories in response to environmental exposures (Ellis et al., 2011). Experiencing adverse childhood events and other stressors invokes the physiological stress response system, which can lead to high reactivity for some youth and negative health effects (Boyce & Ellis, 2005). More research is needed to identify neurobiological factors underlying adolescent and youth mental health patterns and trajectories as well as how they interact with social and psychological factors to impact mental health outcomes.

Psychological Factors

Individual-level self-esteem, prosocial behaviors, self-efficacy, having a sense of purpose, and optimism have all been related to positive adolescent mental health (Burrow et al., 2023; Preston et al., 2023; Preston & Rew, 2022). A systematic review found that low self-esteem consistently cooccurred with anxiety and depression in a sample of adolescents with clinical levels of internalizing disorders (Keane & Loades, 2017). Findings from a study with adolescents in Norway suggest a bidirectional association between self-esteem and mental health, such that high self-esteem predicts reduced depression and anxiety and improved mental health, and vice versa (Moksnes & Reidunsdatter, 2019). Optimism predicts positive mental health in adolescents and serves as a coping strategy to protect against the adverse mental health effects of stress (Rincón Uribe et al., 2022). Cultivating a sense of purpose helps in positive youth development, particularly for youth confronting adversity such as discrimination and a hostile environment (Burrow et al., 2023). Prosocial behaviors are also consistently associated with positive mental health outcomes (Hirani et al., 2022; Memmott-Elison et al., 2020).

However, nuances in these associations may depend on context. For example, during the COVID-19 pandemic, being on the receiving end of prosocial behaviors was associated with lower depression, while engaging in prosocial behaviors was associated with greater anxiety among adolescents (Alvis et al., 2023). While prosocial behaviors may have helped adolescents feel connected with other community members, which may have protective effects on mood, these behaviors may have reminded adolescents of the burdensome global situation (Alvis et al., 2023). Alternatively, those more distressed may have sought opportunities to help others undergoing similar distress (Alvis et al., 2023). More data on how these individual traits and behaviors interact with a changing environment could help explain the rising problems in the mental health of adolescents and youth.

Social Determinants

The link between social determinants of health and mental health outcomes is well established (Alegría et al., 2018, 2023) and impacts children's mental health development (American Psychiatric Association, 2022; Cotton & Shim, 2022; Xiao et al., 2023). Life course perspectives describe how social and environmental factors and exposures in childhood impact later outcomes among youth, adolescents, and adults and create health disparities (Jones et al., 2019; Smith et al., 2024). A meta-analysis of US population-representative samples found that lower socioeconomic status was associated with increased psychopathology in children and adolescents,

with receipt of public assistance having a particularly strong association (Peverill et al., 2021). The surges in family poverty and the need for public aid could be associated with the deterioration of adolescent and youth mental health. Oh & Thomas (2024) found that experiencing childhood material hardship at age 3 was associated with a greater risk for depression at age 15, and lower neighborhood social cohesion and trust (itself associated with childhood material hardship) accounted for 11 percent of this relationship.

In a sample of Latinx and Asian American adolescents, lower perceived subjective social status was linked with more perceived stress (Huynh & Chiang, 2018). Studies have also found associations between higher perceived social rank and decreased depression in school populations (Rahal et al., 2020; Wetherall et al., 2019). Rivenbark et al. (2019) found that associations between subjective social status and mental health problems were robust among older adolescents (ages 14–16). Adolescents making social comparisons and comparing themselves to their peers could be sources that drive them to despair (Ruan et al., 2023; Vidal & Wissow, 2023).

Religion

Individual coping strategies, such as religious practices, have also been explored regarding their role in mental health outcomes. Some longitudinal studies have found that the importance of religion to the individual and engagement in religious and spiritual practices are associated with better adolescent mental health outcomes (Aggarwal et al., 2023). In a sample of US adolescents, religiosity was associated with decreased depression, with this association being robust for those more severely depressed (Fruehwirth et al., 2019). In contrast, other studies have found exacerbating effects of religion on poor mental health (Aggarwal et al., 2023). Focus groups with Black youth revealed that while religion and spirituality served as protective factors for some (e.g., helping youth cope with stressors and creating strong communities and networks), others reported having their mental illness stigmatized by people in their religious communities and religious activities as a proxy of care, discouraging care-seeking behaviors (Fante-Coleman et al., 2024). Black youth noted that religion is not sufficient to cope with mental health problems and that mental healthcare is needed (Fante-Coleman et al., 2024).

Complex relationships with religion and spirituality have also been examined in lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) populations, finding that belonging to a religious community that was LGBTQ+ affirming was protective for mental health (McCann et al., 2020). In contrast, LGBTQ+ related discrimination, stigma, and persecution in a religious community can increase

tension for the LGBTQ+ individual and lead to negative well-being (McCann et al., 2020). As conflicts and tensions rise between some religious communities' teachings and identifying as LGBTQ+ (which can lead to poor mental health), LGBTQ+ youth cope by disassociating from religious communities that are nonaffirming, with some youth finding a new spiritual community that is more accepting (McCann et al., 2020). For LGBTQ+ youth, personal approaches to care that emphasize respect, sensitivity, curiosity, and awareness as well as establish safe school spaces, are needed (McCann et al., 2020).

Civic Engagement and Leadership

Civic engagement and leadership can be considered coping strategies to help adolescents and youth maintain or improve their mental health. Researchers have found an association between civic engagement and positive mental health outcomes (Hrivnák et al., 2023). Wray-Lake and colleagues (2019) examined civic engagement across adolescence, early adulthood, and young adulthood, finding that community engagement (e.g., extracurricular activities, service, and relationships to organizations) were associated with lower symptoms of depression later in life. A different study found that civic engagement may help protect against the harmful effects of adverse childhood experiences on mental health (Lu & Xiao, 2019). A study exploring why marginalized youth engaged in activism found that in addition to a commitment to social justice work, interest in the cause, and desire to effect change, activism programs and organizing sites provided a sanctuary for youth who were affirming their social identities (Akiva et al., 2017).

However, there are heterogeneous findings on how civic engagement affects mental health depending on the forms and contexts of civic engagement (Fenn et al., 2024). For example, while volunteering and voting were associated with later positive mental health in late adolescence and early adulthood, activism was not always related to positive mental health (Ballard et al., 2019). Some studies have shown that youth engagement in activities designed to address structural foundations of inequities (e.g., structural racism and discrimination) can take a toll on youth mental health (Ballard et al., 2019) if they are not accompanied by mindfulness or cognitive behavioral skills. In a study with Norwegian adolescents, civic engagement was not associated with positive mental health (Wiium et al., 2023).

Social Media and Technology Use

While social media use has been demonized as the cause of much of the increase in mental health problems among young people, research shows that the connection

is more nuanced, both positive and negative, and differs by population group. In the National Academies of Sciences, Engineering, and Medicine report Social Media and Adolescent Health, Galea and colleagues (2024) discuss that research on social media and technology use as risk or protective factors shows mixed results. During the COVID-19 pandemic, Deng et al. (2023) found that children and adolescents with low electronics usage had a 15 percent lower prevalence of depressive and anxiety symptoms than those with high electronics usage, similar to other findings of negative associations. During COVID-19, technology use may have led to increased exposure to COVID-19–related news, causing pandemic-related stress and anxiety (Marciano et al., 2022). In general, researchers posit that technology and social media use can increase unfavorable social comparison, cyberbullying experiences, loss of sense of self, exposure to self-harm behaviors, and sleep loss, all of which may impact youth mental health (Abi-Jaoude et al., 2020; Galea et al., 2024). A recent report from the American Psychological Association (2024) concludes that social media use harms youth's positive development through multiple mechanisms, such as hypersensitivity to social feedback and rejection, interruptions in relationship skill building, ease of exposure to harmful content and actors, interruptions in impulse control development, and sleep disruptions. Some research suggests that policies and guidelines in social media industries are needed to prevent adverse mental health outcomes for adolescents and youth engaging with social media (American Psychological Association, 2024; Anderer, 2024).

A systematic summary of research studies found that social media can positively and negatively affect adolescent and youth well-being (Hancock et al., 2022). For example, among adolescents, both higher depression and higher social well-being were associated with social media use (Hancock et al., 2022). Social media use can increase social connection, improving mental health (Marciano et al., 2022). Talking to friends online and having large online friend networks were associated with higher mental well-being among male adolescents (Best et al., 2016). Hancock and colleagues (2022) proposed mechanisms underlying links between social media use and well-being, which can explain positive associations (e.g., feeling socially connected with others, social support, and social capital). Additionally, social media can be a platform for mental health education and awareness for adolescents and youth (Latha et al., 2020).

The effects of social media on mental health may differ for different subpopulations. Oberle and colleagues (2020) found gender-moderated associations between longer screen time and poor mental health, such that this association was stronger among female adolescents than among male adolescents. Social media use may

also differentially impact the mental health of adolescents of sexual and gender minority groups and of racial and ethnic minority groups due to increased risk of exposure to online discrimination and bias (Galea et al., 2024). One study found that while discrimination and victimization were of concern, social media use was associated with improved mental health for LGBTQ+ youth, with youth identifying decreased feelings of isolation, increased social support, and support for sexual and gender identity development and expression as underlying this positive association (Berger et al., 2022).

Family-Level Factors

Family Functioning and Resilience

The central influence of family on adolescent and youth mental health is well established. Positive family relationships and connectedness, positive and caring family environments, and parental support have consistently been linked to better mental health outcomes for adolescents and youth (Ma et al., 2022; Preston & Rew, 2022). Positive interactions between parents and caregivers can also have ripple effects on children, such that positive interactions between parents can elicit positive emotions in children, conveying family security, modeling social learning of positive interactions, and leading to improved mental health (Don et al., 2024). Positive family and parent factors can also increase resilience in adolescents and youth. Both parental emotion coaching and routine maintenance mitigated associations between COVID-19–related family stress and internalizing symptoms in their children (Cohodes et al., 2021). Better family functioning during the COVID-19 stay-at-home orders was also associated with lower mental health problems for children (Penner et al., 2021).

Family Stressors

Family-related stressors can negatively impact children's mental health. Family financial stress and family violence have been associated with psychological distress (Capielo Rosario et al., 2024). Family-related stressors may affect youth roles within the family, impacting their mental health. Social conditions impacting parents, such as employment, play essential roles in child mental health through multiple mechanisms, such as their impact on access to resources, parental stress, and parenting practices (Heinrich, 2014). Childhood exposures to food insecurity and housing instability have also been associated with worse mental health outcomes in childhood and adolescence (Anderson et al., 2023; Hatem et al., 2020). Both before and during the COVID-19 pandemic, household hospitalization, job and income loss, and increased childcare responsibilities were associated with higher levels of internalizing

symptoms (e.g., depressive and anxiety symptoms), and adolescents' increased childcare responsibilities were directly related to increases in adolescent internalizing and externalizing symptoms (Roche et al., 2022). Parenting stress and parental anxiety symptoms have also been found to exacerbate youth internalizing and externalizing symptoms associated with COVID-19–related family stress (Cohodes et al., 2021), suggesting vicarious effects of parental mental health problems.

Childhood Maltreatment

Prospective and retrospective reports of childhood maltreatment have also been repeatedly associated with adolescent and youth psychopathology (Baldwin et al., 2024). Physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect, institutional neglect or deprivation, harsh physical discipline or corporal punishment, and broader measures of adversity have all been linked with youth internalizing disorders (Baldwin et al., 2023; Bonnie & Backes, 2019; Calhoun et al., 2019; Committee on Child Maltreatment Research, Policy, and Practice for the Next Decade, 2014).

Peers and Other Relationships

Positive relationships with peers and people who are not family members are also critical to youth mental health and well-being (Ma et al., 2022). Peer support is consistently found to protect against suicide, depression, anxiety, and stress and confer positive mental health and well-being for adolescents, although exceptions were found in contexts in which adolescents had a risk or history of maltreatment and social anxiety (Roach, 2018). Among LGBTQ+ adolescents, social support has been related to reduced depression symptoms, suicidal ideation and drug use and improved mental health outcomes (McDonald, 2018).

Negative impacts of peer relations can be seen in the associations between experiences of online racial discrimination, posttraumatic stress disorder symptoms (PTSD), and suicidal ideation (Tynes et al., 2024). Data from the first wave of the National Survey of Critical Digital Literacy showed that experiences of online racial discrimination significantly predicted PTSD symptoms, and PTSD symptoms significantly predicted suicidal ideation. There was a significant indirect association between online racial discrimination and suicidal ideation. PTSD symptoms fully mediated this association.

Relational factors, such as participation in organized sports and non-sports activities, can positively impact youth mental health (Boelens et al., 2022). For example, support from coaches and a connection with the team for youth in sports can help

improve their well-being (Swann et al., 2018). A different study also found that peer belonging fully mediated associations between transitioning to participation in team sports and improved mental health (Oberle et al., 2019). The positive role that sports participation plays in improved mental health may be limited to team sports rather than individual sports (Hoffmann et al., 2022).

Community-Level Factors

Cultural Factors and Processes

Cultural factors and processes at the community level affect youth mental health, especially for adolescents and youth of minority and immigrant groups (Yearwood & Meadows-Oliver, 2021). Acculturation, a process by which the dominant culture of the society in which youth live encourages or pressures them to assimilate, can lead to acculturative stress and impact mental health (Jones et al., 2022). However, the impact of acculturation on mental health is mixed and may depend on the acculturation style (Kodippili et al., 2024) and the climates of the surrounding communities (Cobb et al., 2020). In a study of Latinx youth, acculturative stress predicted greater psychological distress (Sirin et al., 2022). One study found that Latinx youth engaging in active coping had stronger associations with acculturative stress and depression symptoms. The authors suggest that the chronic nature of acculturative stress and youth hypervigilance to negative social interactions due to community stressors exacerbate the negative mental health impacts of acculturative stress (Gomez & Gudiño, 2023).

The concept of biculturalism involves developing an identity for a host culture in the community in which one currently resides. While deemed generally positive, biculturalism has also been associated with tensions and challenges, such as fear of losing connection to one's heritage, cultural identity, and family conflict (McKenzie et al., 2023). A study that explored bicultural stress as consisting of both acculturative stress and enculturative stress (i.e., stresses related to staying connected to one's heritage culture) found that bicultural stress was associated with increased anxiety and depression (Wasserman et al., 2021). While peer support protected against acculturative stress, parent support did not protect against enculturative stress, which the authors suggest may be attributed to parents potentially contributing to enculturative stressors (Wasserman et al., 2021). Future research must explore specific bicultural stressors and how they impact relational processes (e.g., interpersonal discrimination, family conflict, peer conflict) and inform interventions seeking to navigate bicultural stress and incorporate cultural values (Romero et al., 2020).

Community Violence

Community violence is similarly considered a risk factor for poor mental health in youth (Ma et al., 2022). In a study of African American mothers and their children, a youth's exposure to community violence was associated with externalizing behaviors, with youth anger as a potential mediating mechanism (La Barrie et al., 2024). On the other hand, community connection and neighborhood social cohesion can positively influence mental health (Ma et al., 2022; Oh & Thomas, 2024). However, there is limited investment in community-led interventions that promote community resilience and policies that improve neighborhood conditions to benefit the mental health of adolescents and youth.

Marginalization, Discrimination, and Race-Related Stressors in the Community

The detrimental impacts of discrimination and other race-related stressors on the mental health of youth in minority groups are well established (Weeks & Sullivan, 2019; Williams, 2018). Different types of racial discrimination (e.g., direct and overt, indirect, ambiguous, anticipated, vicarious) have been implicated in the development of depression in racial and ethnic minority populations (Woody et al., 2022). Evidence consistently shows a statistically significant longitudinal association between racial discrimination and adverse mental health outcomes for Latino or Hispanic, African American or Black, and Asian children and adolescents (Cave et al., 2020). This association exists on a physiological level, with studies finding that discrimination is associated with higher cortisol levels, a hormone in the body's stress-response system that has been linked to worse mental health outcomes in adolescents and young adults (Huynh et al., 2016; Zeiders et al., 2018).

Heightened vigilance has also garnered attention as a race-related stressor with detrimental impacts on youth mental health. Heightened vigilance is "living in a state of psychological arousal to monitor, respond to, and attempt to protect oneself from threats linked to potential experiences of discrimination and other dangers in one's immediate environment." The threat of exposure to discrimination in the community or school environment adversely affects mental health, similar to actual exposure (Williams, 2018). While currently limited, emerging research on potential race-related threats suggests that threats of discrimination, anticipating discrimination, and heightened vigilance increase an adolescent's risk of depression through biobehavioral mechanisms (Woody et al., 2022).

Another race-related stressor is minoritization, by which diverse racial and ethnic groups experience "the exclusionary practices of more dominant groups resulting

from historical and contemporary race." (Chase et al., 2014). In a study of Puerto Rican youth living in the South Bronx (in a minoritized context) and in Puerto Rico, the youth living in the South Bronx had higher rates of major depressive disorder, generalized anxiety disorder, depression and anxiety symptoms, and psychological distress (Alegría et al., 2019). Mediators in the association between minoritized status and more significant psychological distress include greater residential mobility and greater exposure to violence, while acculturation had a protective effect against depression (Alegría et al., 2019). To prevent these negative influences from crystalizing a negative identity, intervening at the school level could facilitate developing coping skills and acquiring a different narrative focused on leadership and a positive role, as discussed in the Civic Engagement and Leadership section. Disparities researchers have called for schools and after-school–based interventions to address youth mental health and decrease barriers to participation.

Minority stress is also associated with adverse mental health outcomes for LGBTQ+ youth, with the strongest effect being on depressive symptoms (Dürrbaum & Sattler, 2020). In a sample of LGBTQ+ adolescents seeking mental health crisis services, experiencing minority stress was associated with suicidal ideation and suicide attempts (Fulginiti et al., 2021).

Policies

State-Level Policy

Some data suggest that social and public policies and benefit programs can play a role in youth well-being outcomes (Hamad & Rehkopf, 2016; Milligan & Stabile, 2011). Data from the Adolescent Brain Cognitive Development Study found that the state-level cost of living and generosity of antipoverty programs moderated associations between family income and youth's internalizing symptoms, such that negative associations between family income and internalizing symptoms among children living in states with a higher cost of living were smaller for those in states with more generous antipoverty policies (Weissman et al., 2023). Specifically, Weissman and colleagues (2023) found that living in states with more generous antipoverty cash assistance narrowed income-related disparities in internalizing symptoms by about 48 percent in states with a high cost of living, suggesting that state-level policy and economic factors, such as the social safety net environment, can play a role in the mental health of adolescents living in those states.

Policies Creating Welcoming or Hostile Environments

For both immigrant youth and US-born youth with immigrant family members, living in hostile immigration policy environments that are punitive and restrict opportunities for families can have adverse effects, including decreased access to services, fear, and direct and vicarious exposure to traumatic events. In a sample of US-born Latinx adolescents, youth with more significant concerns about immigration policy had higher anxiety levels than those with low or moderate concerns (Eskenazi et al., 2019). Family member detention or deportation in the past six months was significantly associated with a higher likelihood of youth reporting suicidal ideation, clinical level of past externalizing symptoms, and alcohol use in Latinx adolescents (Roche et al., 2020). Latinx adolescents of first- and second-generation immigration status had worse mental health in response to immigration actions and news than adolescents of third- or later-generation immigration status (Roche et al., 2021). Additionally, Latinx adolescents with undocumented parents, parents with Temporary Protected Status, or permanent resident parents had more depressive symptoms in response to immigrant actions than those whose parents were US citizens (Roche et al., 2021). Hainmueller and colleagues (2017) found a significant reduction (4.5 percent) in adjustment or anxiety disorder diagnoses among children (from 7.8 percent to 3.3 percent) when mothers were eligible for Deferred

Action for Childhood Arrivals (DACA). Roche and colleagues (2024) found that family factors may mediate longitudinal associations between anti-immigration policy factors and externalizing and internalizing symptoms. For example, mothers' worry and behavior modification (e.g., avoiding medical care) due to anti-immigration policies were associated with later parent-child conflict, which, in turn, was associated with later increased externalizing symptoms for adolescents (Roche et al., 2024). Among female adolescents, specifically, family member detention or deportation was associated with lower parental support in later years, and this lower parental support was associated with later increased externalizing and internalizing symptoms (Roche et al., 2024). In addition to family interventions to mitigate the downstream mental health effects of anti-immigration policies on youth, inclusive immigration policies are needed to protect the mental health of immigrant youth and youth with immigrant family members (Roche et al., 2024).

Previous research has also shown that the policy climate where children and youth live impacts the mental health of LGBTQ+ youth. After the implementation of state policies legalizing same-sex marriage, researchers found significant decreases in suicide attempts among all students (relative reduction of 7 percent) as well as among students identifying as a sexual minority (relative decrease of 14 percent) (Raifman et al., 2017). LGBTQ+ youth living in states with more affirming policy

environments have reported a lower likelihood of binge drinking than those living in states with harmful policy environments (Chien et al., 2022). Chien and colleagues (2022) also found that LGBTQ+ affirming policies targeted at protecting LGBTQ+ youth specifically were even more strongly associated with reduced binge drinking.

Cell Phone Policies

Conflicting evidence exists regarding whether school cell phone policies play a role in adolescent and youth mental health. A quasi-experimental study of strict and lenient smartphone use policies in Norwegian middle schools found smartphone use policies associated with youth well-being, psychiatric service use, bullying, and academic achievement outcomes (Abrahamsson, 2024). When stratifying by gender, findings show that a policy of smartphone bans resulted in significant decreases in the number of psychological symptom-related visits among female middle school students. Bullying also decreased for both girls and boys. Female middle school students had improved academic outcomes; associations with girls from low socioeconomic status backgrounds were strongest. A different study, however, found no associations between school cell phone bans and student behaviors (Smahel & Kvardová, 2020). More research is needed to examine if school technology policies impact youth mental health (Wood et al., 2023).

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"At a time when the nation is focused on unmet mental health needs, it is easy to forget the long history of cost containment efforts related to mental health care and how those efforts have shaped and continue to shape the organization and delivery of mental health services."

– JONATHAN CANTOR, PH.D. and RYAN MCBAIN, PH.D.

Paying for Child and Adolescent Mental Healthcare in the United States

Jonathan Cantor, Ph.D. and Ryan K. McBain, Ph.D.

Introduction

This paper provides an overview of what is spent on mental health services for children and adolescents in the United States and how those costs are financed. Spending reflects a combination of the need for care, how much of (and how) those needs are met, and the amounts different payers outlay for those services. Insurance coverage provisions and the payment mechanisms they use have major implications for how care is organized and delivered.

The paper begins with a summary of national trends in spending on child and adolescent mental health and then turns to the current architecture of the mental healthcare system for children and adolescents, examining the roles of key payers. It then discusses factors driving mental healthcare costs for children and adolescents, explores possible interventions to reduce costs, and provides recommendations to policymakers and health system administrators. Where possible, data are presented from both before and after the COVID-19 pandemic, given notable changes that have occurred.

Trends in Spending

There are various ways to describe spending on child and adolescent mental health. In the aggregate, Loo and colleagues (2024) estimate $31 billion was spent on mental health services for children and adolescents in 2021, which represents almost half of all medical spending on this population but is less than 1 percent of total healthcare spending in the United States.

An alternative view of spending is to consider the cost of treating a mental health episode. An administrative claims–based analysis of 6,663 youth in one Southern California county between July 2017 and June 2018 found that the mean total cost per treatment episode for publicly funded outpatient mental health services was $2,673. While costs varied significantly by episode type, the average cost per episode was $1,079 for psychotherapy, $683 for assessment, $227 for collateral services, $161 for case management, and $186 for medication support (Dickson et al., 2020). A separate study analyzed 2016 Medicaid claims data from 11 states for children and adolescents ages 3 to 17 years with mental health conditions. Excluding the most expensive 1 percent of children, per-member per-year costs were $2,455 for ambulatory care, $803 for pharmacy services, $257 for inpatient care, and $19 for emergency department services (Doupnik et al., 2020).

Because of the relationship between mental and physical health, yet another way to consider spending is to determine the additional total health costs incurred by a person with a mental health condition relative to a person without a mental health condition. Using data from 2008 to 2013, one study found that among children and adolescents with a chronic physical health condition, the per-person incremental health cost due to a concurrent mental health condition averaged $2,631 per year (Suryavanshi, 2016). More recent work using data from a MarketScan Commercial Research Database found that on average, children with a mental illness incurred $6,055 in medical costs in 2018 compared to $1,825 for children without a mental illness (Tkacz & Brady, 2021), a difference of $4,230. In 2019, children and adolescents with a pediatric mental health diagnosis incurred an average $3,171 higher total medical spending per capita compared to those without a pediatric mental health diagnosis (Loo et al., 2024).

Spending increased considerably during the COVID-19 pandemic. Among a national sample of children with commercial insurance, researchers documented a 26 percent

increase in mental health spending from 2019 to 2022 (Kalmin et al., 2023). Likewise, data from the national Medical Expenditure Panel Survey (MEPS) indicate pediatric mental health diagnoses were associated with $4,361 higher total medical spending per child in 2021 compared to 2017, a 31 percent increase (Loo et al., 2024). The same study extrapolated that pediatric mental health conditions were responsible for $31 billion in spending in 2021, representing 46.6 percent of all pediatric medical spending that year (Loo et al., 2024).

Contributors to Mental Health Spending

Spending reflects a combination of factors, many of which are discussed in more detail in other papers in this series. At root, spending arises from the prevalence of mental health conditions. Even before the COVID-19 pandemic, mental health conditions represented the leading cause of poor life outcomes and disability among children and adolescents ages 3 to 17 (Perou et al., 2013). The pandemic led to a rapid increase in mental health conditions among children and adolescents in the United States, driving the surgeon general to issue a national advisory warning (Office of the Surgeon General, 2021). In 2021, roughly one in three high schoolers (31 percent, grades 9 to 12) reported experiencing poor mental health in the preceding 30 days (Jones et al., 2022). Almost half (44 percent) reported experiencing persistent feelings of sadness or hopelessness in the past year, and one in five (19.9 percent) reported seriously considering attempting suicide.

Since spending reflects service utilization, another factor affecting spending is the share of children and adolescents with mental health conditions who receive care. Data from the 2016 National Survey of Children's Health indicate that approximately half of children in the United States with a mental health condition did not receive treatment from a mental health professional within the past year (Whitney & Peterson, 2019). Multiple studies have examined treatment utilization during the COVID-19 pandemic. Estimates from the 2021 National Health Interview Survey documented that 15 percent of children ages 5 to 17 received mental health treatment in the past year (Zablotsky & Ng, 2023).

Receipt of care is based on seeking care, finding it, and paying for it. Stigma, the limited availability of providers, and lack of insurance coverage all reduce utilization, causing tabulations of healthcare spending to underrepresent actual need. By contrast, declines in stigma may normalize mental healthcare service seeking among children and adolescents (Walsh & Foster, 2021). Increasing the supply of mental health providers to address the existing dearth would broaden accessibility and therefore service utilization (Wosik et al., 2020). Actions such as Medicaid expansion, which was focused on adults, have led to higher rates of insurance coverage for children (Schubel, 2021).

Payers and Payment Models

The US mental healthcare system is funded by a patchwork of public and private payers using a variety of payment models. Major payers for child and adolescent mental health services may be thought of in terms of public and private insurers.

The public sector pays for healthcare services for people with disabilities and low incomes through Medicaid (85 million total beneficiaries,[1] including 38 million children as of 2023) (Centers for Medicare & Medicaid Services [CMS], 2024c). Medicaid is a vital payer for individuals with mental health conditions: It provides coverage for roughly 23 percent of individuals with any mental illness (Saunders & Rudowitz, 2022). Private insurers are the predominant payers for employed individuals younger than age 65 and their families (Miller & Keenan, 2021).

However, the financing of mental health services is considerably more expansive than this. For example, schools are one of the largest providers of mental health services for children, with funding from tax dollars and grants. This section describes the roles of major payers for child and adolescent mental health services.

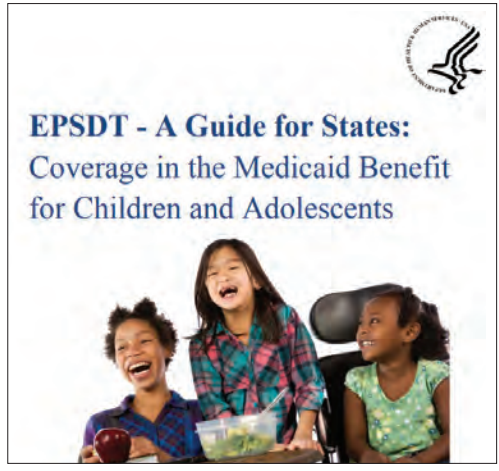
1 During the COVID-19 pandemic, Congress passed the Families First Coronavirus Response Act, which required states to keep individuals continuously enrolled in Medicaid throughout the COVID-19 public health emergency to obtain enhanced federal matching funds (which all states chose to accept). As a result, Medicaid enrollment estimates during 2020–2023 are larger than either before or after the end of the public health emergency.

Medicaid and Children's Health Insurance Program

Medicaid is the single largest source of health coverage in the United States (CMS, 2024d). It is also the largest payer for mental health services overall (CMS, 2024b). While eligibility rules are complex, federal law mandates that states provide coverage for certain poor and low-income populations, including families, pregnant women, children, and individuals with mental health disabilities (CMS, 2024g). As of September 2023, almost 33 million children were enrolled in Medicaid (US Department of Health and Human Services, 2023b). The Children's Health Insurance Program (CHIP), created by the Balanced Budget Act of 1997 (Hill et al., 2015), provides coverage for children in families with incomes that exceed Medicaid eligibility, with the specific income threshold set by each state. In 2021, more than 7.5 million children were enrolled in CHIP at some point during the year (CMS 2021).

Eligibility criteria for Medicaid and CHIP differ by state. Federal law requires states to provide Medicaid coverage to all children with incomes below 133 percent of the federal poverty level, although most state thresholds are significantly higher.

Covered mental health services are relatively consistent across states. This reflects Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit for children younger than age 21, which allows children and adolescents to receive any service available under federal Medicaid law to correct or ameliorate a health condition (Guth et al., 2023). Specifically, EPSDT covers clinic, hospital, and physician services as well as services provided by licensed medical professionals such as psychologists. Benefits considered optional under federal Medicaid law are mandatory for children under EPSDT. These benefits include rehabilitative services; case management services; prescription drugs; and inpatient services provided by psychiatric hospitals, psychiatric facilities, or psychiatric units in general hospitals (CMS, 2024e, p. 21).



Medicaid is one of the largest payers for direct treatment services for mental health conditions among children and adolescents. National estimates are dated, with the

2009–2011 MEPS showing that Medicaid spent approximately $5.1 billion on mental health disorders for children ages 5 to 17 (Davis, 2014). More recent estimates, using IBM Watson Health MarketScan Medicaid data, show that mental health spending for children ages 3 to 17 with a mental health diagnosis amounted to $3.1 billion across 11 states in 2016 (Doupnik et al., 2020). The average total per-member per-year spending for this group computes to $47,000.

Employer-Based Insurance

In 2022, more than half of all people in the United States were covered by employment-based health insurance plans (54.5 percent) (Keisler-Starkey et al., 2023). Slightly fewer than half (48.8 percent) of all children and adolescents ages 0 to 18 in the United States were covered by employer-based insurance in 2022, amounting to 36 million children and adolescents (KFF, n.d.).

Most, but not all, employment-based insurance plans provide mental healthcare coverage. Coverage typically includes inpatient hospitalization, partial hospitalization, outpatient mental health treatment, emergency care, and prescription drugs (National Alliance on Mental Illness, n.d.). Recent estimates suggest that approximately six million children and adolescents per year receive mental health services and treatment under a parent or guardian's employer-based insurance (AHIP, 2022). Within these estimates, it was reported that mental health services provided to these children and adolescents included psychotherapy, mental health–related office visits with a primary care physician, and prescription drug therapy (AHIP, 2022).

In 2020, approximately 18 percent of spending on healthcare for individuals age 18 years or younger in employer-based plans was on mental health and substance use disorder services, according to MarketScan claims data (Fronstin & Roebuck, 2022). The 2009–2011 MEPS data indicate that approximately $3.5 billion, or 32 percent, of expenditures for mental healthcare were paid by private insurance (Davis, 2014).

Health Insurance Marketplace Insurance

The Affordable Care Act (ACA), enacted in 2010, created a competitive insurance marketplace for individuals with incomes over 100 percent of the federal poverty

level who do not have an offer of affordable coverage from another source. Approximately 1.3 million children were enrolled in marketplace plans during the 2022 open enrollment period (Osorio, 2022).

Marketplace plans cover mental health services as an essential benefit. Treatments include psychotherapy and counseling as well as inpatient services for mental health conditions. The specific coverage provisions depend on the plan selected (CMS, n.d.-b).

The average premium for a child younger than age 15 on a Health Insurance Marketplace plan is roughly $250 to $350 per month (Masterson & Megna, 2024). For older adolescents, this figure is closer to $300 to $400 per month (Masterson & Megna, 2024). To our knowledge, no data are available on mental health spending for children and adolescents enrolled in ACA plans.

School-Based Care

Most public schools (more than 95 percent) offer mental health services, making them available to the 49 million children enrolled in public elementary and secondary schools in the US. The intensity and modality of services they offer vary widely (Panchal et al., 2022). In 2020, roughly 55 percent of K–12 schools reported providing diagnostic mental health tests, and 42 percent reported providing treatment for mental health conditions (National Center for Education Statistics, 2022).

Little information is available on school-based mental health expenditures. New York City, the nation's largest school district, has a $37.6 billion budget for 915,000 students (City of New York, 2023; New York City Department of Education, 2024). This budget includes 5,000 social workers and school counselors, 2,700 therapists, and larger numbers of paraprofessionals. Assuming social workers, school counselors, and therapists have a mean salary of $70,000 (Indeed, 2024a, 2024b), this would yield an estimated expenditure of $589 per pupil, or 1.4 percent of the school system's total budget.

The US Bureau of Labor Statistics estimates the total number of school-based mental health professionals to be 342,400 school and career counselors (median pay: $60,140 per year), 60,250 school psychologists (median pay: $81,500 per year), and 143,000 school social workers (median pay: $50,820 per year) (US Bureau of Labor Statistics, 2023, 2024; Zippia, 2021). This aggregates to $32.8 billion per annum. Notably, not all of these professionals are delivering mental health services, and these figures exclude occupational therapists and paraprofessionals. These estimates also only include K–12 educational settings.

Federal Grants

Some child and adolescent mental healthcare services are provided through federal grant programs. It is difficult to estimate how many people receive these services, what they receive, and how much is spent on them. A particular challenge in estimation is that many grant programs cover a broader population or broader range of services, and it is difficult to isolate the portion devoted to child and adolescent mental health.

For example, Community Mental Health Services Block Grants totaled $832 million in 2023 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2023b), but these funds can be used for adults and children, and they subsidize services including case management, peer support, prevention, and early intervention. Similarly, Maternal and Child Health Services Block Grants totaled over $2.6 billion in 2022 (HRSA Maternal & Child Health, 2024), but these funds support services including prenatal care, special needs, health education, and promotion.

There are some more narrowly targeted programs. The Substance Abuse and Mental Health Services Administration disburses roughly $80 to $100 million per year through the Children's Mental Health Initiative (TAGGS, 2024), which provides coverage for diagnosis and evaluation, outpatient, crisis, intensive home-based outreach and case management, intensive day treatment, respite care, therapeutic foster care, and transition to the adult delivery system services (SAMHSA, 2023a). The US Department of Education's School-Based Mental Health Services Grant

Program (2024) allocates roughly $20 million per year to state educational agencies, local educational agencies, and consortia of local educational agencies using a needs-based formula (US Department of Education, 2024).

Understanding Mental Healthcare Costs

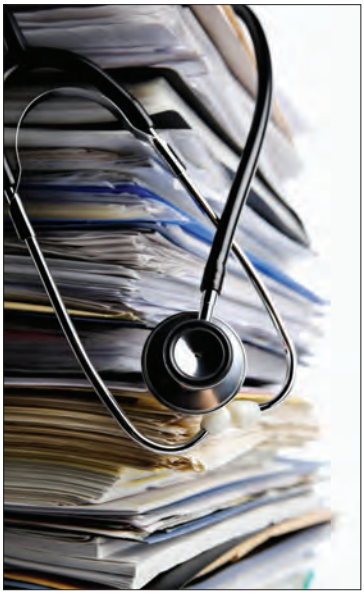
At a time when the nation is focused on unmet mental health needs, it is easy to forget the long history of cost containment efforts related to mental healthcare and how those efforts have shaped and continue to shape the organization and delivery of mental health services. Concerns regarding the accuracy of mental health diagnoses, the limited evidence to support effective treatment, and the professional separation between mental and physical health resulted in limited insurance coverage for mental health conditions and reliance on publicly funded institutional care for those with the greatest need. In the current fragmented system, most services are paid for fee for service, and access to care is limited for people with mental health disorders such as anxiety and depression. This section describes some of the sources of inefficiency that have emerged from this legacy.

Research has identified at least four major contributors to the cost of child and adolescent mental health services that present opportunities for improved efficiency.

First, emergency and inpatient services serve as the safety net for children and adolescents with unmet mental health needs (Bommersbach et al., 2023; Kalb et al., 2019). Estimates from MEPS data suggest that spending on mental health–related hospital visits alone totaled $11.6 billion from 2006 to 2011 (Torio et al., 2015). Children and adolescents generally stay in emergency departments until they can be transferred to a specialized facility with psychiatric beds (Hazen & Prager, 2017; McEnany et al., 2020), which can take hours, days, or weeks. In the interim, boarding can cost as much as $219 per hour (Jewell et al., 2022). Some evidence suggests that boarding rates increased during the pandemic (Herrera et al., 2023). Interventions that reduce the need for emergency services could reduce overall mental healthcare costs.

A second contributor to unnecessary mental healthcare spending among children and adolescents is provision of treatments that lack a sufficient evidence base. This concern has been raised not only by researchers but by past presidents and task forces within institutions such as the American Medical Association and the American Psychological Association (American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006; Resneck, 2022). In a recent survey of 44 state mental health directors, a large majority acknowledged implementing minimal incentives or mechanisms to promote adoption of evidence-based practices (Stewart et al., 2018). In many cases, evidence-based practices are discontinued after adoption due to inadequate financial support and workforce issues (Bond et al., 2014). Evidence-based treatments result in greater symptom remission and promote patient-centered outcomes (Hoagwood et al., 2001). Provision of care that fails to meet criteria for being evidence based also tends to be less cost effective (Catarino et al., 2023).

A third source of inefficiency pertains to the healthcare workforce. Provider time is one of the most expensive commodities in pediatric mental healthcare. Yet mental healthcare, as in other areas of the US healthcare system, privileges those with advanced degrees such as psychiatrists, psychologists, and licensed clinical social workers, leaving limited opportunities for task shifting services to less costly providers such as counselors and psychiatric nurses. At the same time, bottlenecks exist for those entering into advanced, highly paid professions. For example, there is an inflexible ceiling on the number of residency slots in psychiatry in the United States (Aggarwal et al., 2023). The upshot of this supply constraint is higher prices: fewer professionals available to meet demand allows professionals to charge higher prices for their services—including by declining forms of insurance with undesirable reimbursement rates such as Medicaid (Office of Inspector General, 2024) or by focusing on serving out-of-network clients (Mark & Parish, 2024).



A fourth contributor pertains to administrative costs. Perhaps even more so than physical healthcare, mental healthcare is highly fragmented, with minimal coordination across providers and settings. As a result, resources committed to billing, insurance process, and regulatory compliance are extensive and duplicative. Sahni et al. (2021) reported that administrative spending in healthcare reached $950 billion in 2019.

A systemic response to these sources of inefficiency is the adoption of payment models that pay for outcomes rather than services. Alternative payment models (APMs) such as capitation and bundled payments shift financial risk from the insurer to the provider, with the expectation that providers will focus on services that are high quality and cost efficient, thereby promoting savings. Some evidence suggests APMs are associated with positive adult mental health outcomes (Carlo et al., 2020). There are, however, risks associated with adopting APMs when the metrics that providers are held accountable for fail to accurately measure quality and predict patient outcomes (Pincus & Fleet, 2023).

APMs can apply to specific care episodes, clinical conditions, or populations (CMS, 2024a), and they have grown slowly in the behavioral healthcare space (Bhalla et al., 2022). This is particularly relevant in state Medicaid programs, which have started requiring MCOs to use APMs in lieu of fee-for-service payment. Mauri and colleagues (2017) present a list of behavioral health APMs, emphasizing their four core values: measurement-based care; using technology for monitoring, improvement, and coordination; adopting value-based payment; and offering flexibility in care delivery (Mauri et al., 2017). A systematic review by Carlo et al. (2020) found that relatively few APMs are used for mental health for children and adolescents; they thus have limited impact on spending (Carlo et al., 2020). There is a need for increased research and funding to develop, test, and establish high-quality, child-focused metrics that can hold providers accountable.

Policies, Programs, and Initiatives to Reshape Financing and Payment

Over the past 20 years, several large-scale initiatives and policies have sought to reform financing and payment for mental healthcare services for children and adolescents. These offer a sense of how the landscape is (and is not) evolving as well as insights on recommended next steps. This section describes five major policy and programmatic shifts.

Mental Health Parity and Addiction Equity Act (MHPAEA) of 2008. MHPAEA compelled insurers to provide benefits for mental health and substance use disorders commensurate with benefits for medical and surgical conditions. This requirement extends to Medicaid and CHIP as well as private insurers, and it encompasses copayments, coinsurance, and out-of-pocket maximums; restrictions on service utilization; and use of nonquantitative treatment limitations (CMS, n.d.-a). Research suggests that the MHPAEA has led to an increase in treatment utilization for behavioral health outpatient services but not inpatient services (Block et al., 2020). The evidence is mixed regarding out-of-pocket spending, with some studies suggesting a modest decline (Barry et al., 2013) and others suggesting an increase (Walter et al., 2017). Policymakers and researchers alike have raised concerns about the MHPAEA's lack of data tracking and weak enforcement. Analyses have consistently shown that parity has not been achieved in practice (Presskreischer et al., 2023; US Government Accountability Office, 2019; Volk et al., 2022), and insurers have seldom been held accountable for failure to adhere to its requirements (Lawrence, 2020). In theory, enforcement of the MHPAEA should lower out-of-pocket payments and increase reimbursement for mental health and substance use disorder services, which could in turn stimulate workforce growth (Hoge et al., 2013).

ACA. The ACA required states to expand Medicaid to include all low-income Americans with household income under 138 percent of the federal poverty level, although the US Supreme Court later determined this decision should be left to individual states. As of March 2024, all but 10 states have adopted Medicaid

expansion (KFF, 2024). Notably, all children in families with this income were already eligible for Medicaid. Yet, research suggests that state Medicaid expansion has led to improved mental health outcomes among children and adolescents as young as ages 2 to 3 (Cha et al., 2023). It has also reduced child poverty and improved overall child health (Currie & Chorniy, 2021). Researchers have theorized this improvement in child health is a function of increased Medicaid spending in expansion states (Mazurenko et al., 2018).

Integrated Care for Kids Model. A long-term trend in rising costs of child mental healthcare has encouraged the development of novel delivery and payment models. An example is the Centers for Medicare & Medicaid Services Innovation Center's Integrated Care for Kids Model (CMS, 2024f), a child-centered service delivery and payment model that aims to reduce expenditures for children and adolescents covered by Medicaid. The hope is that the model will reduce avoidable inpatient stays, reduce out-of-home placements, and encourage development of sustainable APMs—in particular, capitated models coupled with quality measures to incentivize providers. The Integrated Care for Kids Model aims to assist states and local providers to identify and treat children's health-related needs earlier, before they become more costly. Demonstrations are taking place in six states, with evaluation ongoing from 2020 through 2027 (CMS, 2024f).

Project Advancing Wellness and Resilience in Education and School-Based Learning. Schools are an essential source of mental health services, both treatment and prevention. School-based universal mental health education offers an upstream avenue to destigmatize mental illness and promote engagement. A systematic review of 15 studies found that such programs are associated with improved mental health knowledge, attitudes, and help seeking (Salerno, 2016). Ten states have mandatory K–12 mental health curricula (McBain et al., 2021).

The Substance Abuse and Mental Health Services Administration has helped promote these activities through Project Advancing Wellness and Resilience in Education and School Based Learning, which offers multiyear grants to build school-provider partnerships (currently in 23 states) that enhance coordination, screening, early intervention, and mental health treatment within a school-based setting (SAMHSA, 2021). Policy evaluations will assess if the intervention lowers total service costs and improves mental health outcomes.

Telehealth Expansion and Payment. The COVID-19 pandemic has generated transformative changes in telehealth policy. For example, the Coronavirus Aid, Relief, and Economic Security (CARES) Act, enacted in 2020, led CMS to offer service reimbursement for telehealth at parity with in-person visits, and many states legislated or mandated that private insurers follow suit (Khera et al., 2023). Research suggests that policy changes, including payment parity, have led to growth in wider telehealth availability (McBain et al., 2023). At the same time, overall service utilization (driven by telehealth) may have increased for children and adolescents during the pandemic (Kalmin et al., 2023). Many of the CMS telehealth flexibilities that were put in place during the COVID-19 pandemic are set to expire on March 31, 2025 (US Department of Health and Human Services, 2023a).

Prospective policies, programs, and initiatives are equally important to consider. We briefly note three examples of programs that are at a pivotal transition point, in which scale-up would likely improve child and adolescent mental health outcomes over the long term but raise costs in the short run.

Child Tax Credit. The American Rescue Plan Act of 2021 significantly increased the federal Child Tax Credit, which the Center on Budget and Policy Priorities estimated would lift 5 million children and adolescents out of poverty (Cox et al., 2024). Evidence suggests that the increase in the Child Tax Credit significantly reduced poverty (Collyer et al., 2023) and food insufficiency (Adams et al., 2022) and had positive impacts on parental mental health (Batra et al., 2023; Nam & Kwon, 2024), with the largest reductions in anxiety levels observed among Black and Hispanic beneficiaries. An analysis by the Urban Institute estimates that making the increase permanent would increase high school graduation rates and lifetime earnings of children and adolescents who benefit (Collyer et al., 2023), both of which are strong predictors of mental health outcomes (Breslau et al., 2008; Knapp et al., 2011). Permanent expansion of the Child Tax Credit has the potential to shape social determinants of health, including mental health, among some of the nation's most vulnerable individuals.

Reimbursement for Adverse Childhood Experiences Screening. The Centers for Disease Control and Prevention defines adverse childhood experiences (ACEs) as potentially traumatic events that occur during childhood (Centers for Disease Control and Prevention, 2021). Reduction of ACEs could lead to a decrease of an estimated 21 million cases of depression (Merrick et al., 2019). Due to the potential return on investment associated with reducing ACEs, primary care providers have begun screening children and adolescents for ACEs to intervene earlier (National Center for Injury Prevention and Control and Division of Violence Prevention, 2019). In 2019, California became the first state to call for universal ACE screening in primary care for children and adolescents enrolled in MediCal, and MediCal has provided reimbursement codes for this (California Department of Health Care Services, n.d.). Further research is required to determine the downstream impacts of universal ACE screening and referral on mental healthcare utilization and expenditures.

988 and Mobile Crisis Response. The new three-digit 988 Suicide and Crisis Lifeline, launched in July 2022, provides an easier-to-remember alternative to the National Suicide Prevention Lifeline phone number. Since its launch, it has received 9.1 million calls, texts, and chats (SAMHSA, 2024). The lifeline aims to offer emotional support, reduce stress, and guide healthy decision-making (Suran, 2023). A national survey in 2023 found that 1 in 20 adults experiencing psychological distress used the 988 lifeline (Purtle et al., 2023). Understanding the lifeline's effectiveness in connecting children and adolescents to care will depend on equivalent estimates for this demographic. A robust emergency response hotline is considered one of the three best practices for a crisis service system, along with mobile crisis response teams and crisis stabilization centers (Fix et al., 2023). A recent case study found crisis stabilization units to be highly cost effective (Mukherjee & Saxon, 2019). However, more studies are needed that examine cost effectiveness among children and adolescent populations.

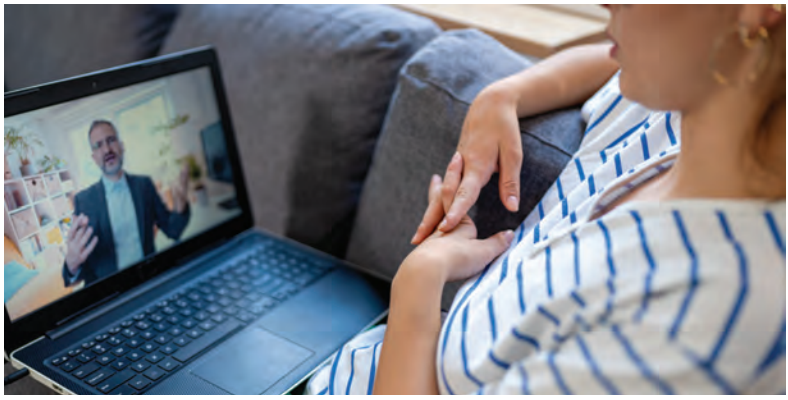
Future Directions and Recommendations

In 2021 the American Academy of Pediatrics declared a National State of Emergency in Children's Mental Health (American Academy of Pediatrics, 2021). This declaration emphasizes the need for policymakers and public health officials to take immediate action. Transformative investments in the US healthcare system are essential to enhance mental health outcomes for children and adolescents. While these investments may seem costly in the short run, they must be examined in the context of the cost of inaction, including the long-term toll of poor mental health as young people graduate to adulthood and enter the workforce. Cost-effective solutions are needed, and ongoing research is essential to pinpoint these interventions and integrate them into the US healthcare system.

The following recommendations are based on our review of the literature. We believe these represent key steps toward achieving high-quality, cost-effective mental healthcare for children and adolescents.

- **Expand public (and private) funding for school-based mental health curricula and services.** As noted earlier, many pediatric mental healthcare services are provided in school settings. Given this, public and private funding for universal school-based mental health curricula and screenings could play a major role in the early detection of mental health conditions while also reducing mental health–related stigma. The National Academies of Sciences, Engineering, and Medicine recently published a report that outlined school-based strategies to improve mental healthcare that included these two features (Alegria et al., 2021). Cultivating mental health knowledge and offering services in a manner that is consistent, early in the life cycle, and where children and adolescents congregate could be a linchpin in any cost-effective strategy to strengthening pediatric mental healthcare.
- **Strengthen accountability mechanisms for parity regulations.** Policymakers intended the MHPAEA to drive transformative change in mental healthcare coverage. Yet, even 15 years after its passage, its goals have yet to be realized. The lack of enforcement of existing parity regulations for pediatric mental health services is a serious problem. Stronger enforcement could lead to a reduction in out-of-pocket spending for services.

- **Advance metrics on quality of care to strengthen the connection between APMs and value-based care.** The extent to which APMs drive better value for money hinges on the accuracy and appropriateness of quality metrics. APMs are unlikely to result in desired improvements in patient outcomes if metrics fail to capture the true quality of care. Metrics that focus on easily measurable aspects of care (e.g., readmission rates), at the expense of more nuanced metrics (e.g., timely receipt of appropriate care), may create distorted incentives for providers. Given this, greater research and funding could be targeted toward proposing, testing, and establishing high-quality metrics for which providers can be held accountable.
- **Evaluate evolving telehealth expansion and payment changes on access and quality.** Telehealth constitutes a rapidly evolving space in pediatric mental healthcare services. Given the magnitude of the shifts in service utilization and spending since the start of the COVID-19 pandemic, it will be important to assess the impact of telehealth expansion and payment changes on access and quality of mental healthcare for children and adolescents. This line of inquiry may be particularly pertinent as states and the federal government revert to pre-COVID policies or test new telehealth policies in the post-COVID pandemic era.



- **Invest in upstream services.** Intervening earlier and upstream would reduce the likelihood that children and adolescents arrive at an emergency department or require inpatient care. Early intervention is particularly important for first-episode psychosis: Programs such as Recovery after an Initial Schizophrenia Episode have demonstrated that addressing first-episode psychosis early and aggressively can result in long-term health improvements and cost savings (Murphy et al., 2018; National Institute of Mental Health, 2022). Reducing severity of a mental health condition should contribute to cost savings, although it may not be in the financial interests of providers operating under a fee-for-service model.

- **Improve data quality.** Data on child and adolescent mental healthcare costs and spending are limited, when they exist at all. Improving data collection systems and establishing integrated real-time data infrastructure, as recommended by the US surgeon general (Office of the Surgeon General, 2021), would go a long way toward understanding child and adolescent mental healthcare trends. Such a system could include measures of costs by condition and by payer to aid policy and programmatic decisions. More generally, addressing the fragmented nature of current healthcare data systems would permit researchers to conduct holistic evaluations of mental healthcare spending in the United States.

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"Community-based approaches to adolescent mental health care are essential for reaching young people in the environments where they live and socialize. These models prioritize accessibility, prevention, early intervention, and integration of services across different community sectors."

– JANINE JONES, PH.D., N.C.S.P., L.P.

Adolescent Mental Health Equity

Janine Jones, Ph.D., N.C.S.P., L.P.

Introduction

The burden of poor adolescent mental health is significant and alarmingly disproportionate, affecting people of color at a much higher rate than their peers. This disproportionality underscores the urgent need for targeted interventions and support systems that address these inequities. According to the Centers for Disease Control and Prevention, approximately 1 in 11 children and adolescents in the United States has been diagnosed with a mental health disorder (Centers for Disease Control and Prevention [CDC], 2025). We are experiencing a severe mental health crisis among our youth—one that demands deliberate and sustained efforts to alter its course. The need for a strategic response to this escalating issue cannot be overstated, as it is essential for reversing the negative trajectory and ensuring a healthier future for our children. This crisis calls for a response that places equity as a central goal—mental health equity.

What is mental health equity? Health equity is the right for all people, regardless of race, age, ethnicity, gender, disability, socioeconomic status, sexual orientation, or geographic location, to achieve the "highest level of health" (CDC, 2024a). Mental health equity, specifically, includes the opportunity to achieve optimal mental health regardless of identity or socioeconomic status (CDC, 2024b).

Mental health equity is crucial for building healthier communities and societies in which all people can thrive. It recognizes the needs of diverse populations and strives to address these needs in a comprehensive and inclusive way. Mental health equity can only occur when every person has access to quality services. But, given

the relationship between social determinants of health and mental health, mental health equity also depends on addressing the social factors that lead directly and indirectly to poorer mental health.

Adolescent Mental Health Disparities and Their Origins

Various inequities impact the mental health status and outcomes of adolescents. For marginalized communities, mental health issues often go unaddressed. Black, Indigenous, and people of color (BIPOC) and lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) adolescents experience the highest rates of detrimental physical and mental health outcomes (Hoffmann et al., 2022). Research has shown that these disproportionate outcomes are due to social, economic, and environmental inequities that are rooted in systemic oppression and discrimination (Alegría et al., 2022). Adolescent mental health equity requires an intentional effort to address the primary factors within systems that perpetuate cycles of oppression. This section describes the key dimensions along which adolescent mental health inequities occur.

Racial and Ethnic Disparities in Adolescent Mental Health

Racial and ethnic disparities in adolescent mental health are significant and pervasive, reflecting broader systemic inequities in society. These disparities manifest in various ways, including differences in prevalence rates, access to care, quality of care, and mental health outcomes (Alegría et al., 2022; Hoffmann et al., 2022). Racial disparities significantly impact the prevalence and treatment of depression and anxiety among adolescents from Black and Hispanic backgrounds. These young individuals experience mental health disorders at higher rates compared to their White counterparts, yet they face considerable challenges in accessing appropriate and timely mental healthcare. Barriers such as lack of culturally responsive care and systemic racism within healthcare exacerbate these disparities. Moreover, adolescents from racial minority groups are frequently subjected to unique stressors, including experiences of racial discrimination and socioeconomic hardships, which can intensify their mental health struggles (Alegría et al., 2010).

The quality of mental healthcare available to adolescents varies dramatically depending on their racial background. The seminal report of former US Surgeon General Dr. David Satcher (2001) highlighted the critical connections between culture, race, and ethnicity in mental health and revealed the dramatic shortage of mental health providers who reflect the community's racial and cultural diversity. This shortage can make it difficult for adolescents from minority groups to find providers with whom they feel comfortable and understood. Studies indicate that adolescents of racial minority groups are less likely to receive care that adheres to best practice guidelines and are more likely to encounter mental health providers lacking cultural competence and cultural humility (Huey et al., 2014). This can exacerbate disparities, as cultural misunderstandings between providers and clients lead to misdiagnoses, inappropriate treatments, and generally poorer health outcomes. Effective communication, respectful understanding of cultural nuance, and culturally informed care are crucial for improving these interactions and outcomes.

Historical and systemic racism also play a critical role in the mental health disparities faced by adolescents of minority groups. Experiences of discrimination and racial trauma can lead to chronic stress, which heightens vulnerability to mental health disorders (Deo & Prelow, 2018; Sirin et al., 2015). Furthermore, adolescents from non–English-speaking families or those who have immigrated to the US may encounter additional challenges, such as language barriers that complicate their ability to seek and receive mental healthcare. This lack of accessibility further impedes the establishment of trust and rapport between healthcare providers and their patients, which is essential for effective treatment.

Gender Disparities in Adolescent Mental Health

Gender disparities in adolescent mental health are prominent and can have lasting impacts on development and well-being. These disparities are evident in the prevalence and type of mental health disorders, access to and use of mental health services, and influence of social and cultural norms.

Girls are more likely than boys to experience depression and anxiety, beginning in early adolescence. This disparity is often attributed to hormonal changes, social pressures, and a higher incidence of sexual harassment and abuse (Norcott et al., 2019). Conversely,

boys are more frequently diagnosed with behavioral disorders, such as attention deficit hyperactivity disorder and conduct disorders, potentially due to both a higher incidence of these disorders in boys and cultural tendencies to overlook similar symptoms in girls. Additionally, eating disorders are more prevalent among girls, although they are also significant and underdiagnosed in boys, often due to cultural and diagnostic biases that fail to recognize these issues in boys.

Marked gender differences also exist in how adolescents access and use mental health services. Girls are generally more likely to seek help for mental health issues, possibly due to greater social acceptance for girls to express emotional distress (Maclean et al., 2010). Boys often underreport symptoms and are less likely to seek help, influenced by societal expectations that equate masculinity with stoicism and self-reliance (Maclean et al., 2010; Vogel et al., 2011).

Social and cultural norms deeply influence adolescent mental health. Boys may face intense pressure to adhere to traditional masculine roles, discouraging them from expressing psychological distress or seeking help. Girls often face significant pressures regarding appearance and body image, which are heavily influenced by media and societal expectations and contribute to higher rates of depression and eating disorders.

Gender differences are also stark in terms of the rates of suicidality and self-harm. Although girls are more likely to attempt suicide or engage in self-harm, boys are more likely to die by suicide, largely because they often choose more lethal means (Borowsky et al., 2001).

Substance use patterns differ significantly between genders, with boys generally more likely to engage in substance use and suffer from related disorders. For boys, substance use may be a coping mechanism for undiagnosed or untreated mental health issues, especially if they do not seek help through traditional channels.

LGBTQ+ adolescents face additional challenges and disparities in mental health. They often experience higher rates of depression, anxiety, and suicidality compared to their heterosexual and cisgender peers (Mustanski et al., 2010). Sexual harassment

rates vary across sexual orientation and gender identity, with lesbian and queer girls, bisexual girls, and transgender youth reporting the highest rates (Mitchell, 2014). These challenges are compounded by stigma, discrimination, and lack of social support, which can exacerbate feelings of isolation and psychological distress. Research that addresses the intersection of gender with other identities such as race, ethnicity, and socioeconomic status is essential for a deeper understanding of these disparities.

Geographic Disparities in Adolescent Mental Health

Geographic disparities in adolescent mental health arise from a complex array of factors that vary significantly between rural and urban settings. Access to services and cultural attitudes significantly influence the disparities between rural and urban settings, necessitating tailored mental health policies and interventions that address the specific needs of adolescents in each environment.

The availability of mental health professionals in rural areas is markedly lower than in urban areas, presenting significant barriers to accessing care. The physical remoteness of rural communities exacerbates these challenges, with long travel distances and a lack of public transportation further hindering access. Moreover, the close-knit nature of rural communities can heighten concerns about anonymity and stigma, discouraging adolescents from seeking mental health services for fear of social recognition and judgment (Garside et al., 2002; Miller et al., 2018). Urban areas, while typically better resourced with mental health services and specialists, are not without their challenges but generally offer more anonymity and accessibility to diverse mental health services.

Cultural perceptions also play an important role in shaping access to mental healthcare. Rural communities often harbor more conservative views toward mental health, which can amplify stigma and reduce service use among adolescents (Miller et al., 2018). In contrast, the cultural diversity of urban areas may foster more progressive attitudes toward mental health, which makes it easier for adolescents to seek help without fear of judgment.

Economic factors significantly affect mental health, with rural areas generally experiencing higher rates of poverty, unemployment, and underemployment—all stressors that can exacerbate mental health issues (Hoffmann et al., 2022). Environmental factors also contribute to mental health disparities. Rural adolescents may face isolation and limited social opportunities due to a declining local economy, which can lead to increased feelings of loneliness and depression. Urban adolescents, while benefiting from greater social and cultural opportunities, contend with challenges such as noise pollution, higher crime rates, and intense educational and social competition, which can also impact mental health (Ellis & Dietz, 2017).

Geographic disparities also extend into the educational arena. Rural schools may lack comprehensive mental health services and programs, while their urban counterparts are more likely to have robust support systems, including school psychologists and counselors. Substance use patterns also vary by geography; rural adolescents may have higher rates of prescription drug misuse due to limited recreational activities and greater availability, whereas urban adolescents may have access to a broader array of substances.

A particularly alarming disparity is observed in suicide rates, which are higher in rural areas. This can be attributed to factors such as greater access to firearms, fewer mental health resources, and increased feelings of isolation among rural youth (Simonetti et al., 2015).

Socioeconomic Factors and the Mental Health Burden on Adolescents

Socioeconomic variables not only shape the prevalence and severity of mental health challenges but also significantly influence the accessibility and quality of mental healthcare that adolescents receive. Socioeconomic status is a predictor of mental healthcare access. Adolescents from economically disadvantaged backgrounds are often confronted with multiple barriers, such as financial limitations, lack of health insurance, and a scarcity of available services, particularly ones that are culturally responsive (Hoffmann et al., 2022). These barriers can delay the diagnosis and treatment of mental health issues, leading to poorer outcomes.

Experiencing poverty is one of the most significant stressors impacting adolescent mental health. The ramifications of living in economic hardship extend beyond the

lack of financial resources to encompass inadequate housing, increased exposure to community violence, and restricted access to nutritious food. These adverse conditions contribute to a high-stress environment that can precipitate or exacerbate mental health issues such as anxiety, depression, and behavioral disorders (Franzoi et al., 2024). The persistent stress associated with poverty can impair cognitive and emotional development, thereby hindering academic performance and social interactions and limiting engagement with supportive networks.

Having access to high-quality educational opportunities serves as a pivotal factor in adolescent mental health, providing not just knowledge but also a stable environment, social support, and access to mental health resources. However, disparities in the availability of educational resources can exacerbate mental health inequities (Mezzina et al., 2022). Adolescents attending underresourced schools often encounter heightened stress, compounded by a lack of access to essential school-based mental health services. Additionally, the educational level of parents, which often reflects broader socioeconomic status, can influence the emphasis placed on education within the home and affect the resources available to support the student's comprehensive development.

Parents' employment status also influences the mental well-being of adolescents. Unemployment or precarious job conditions can elevate stress within the home, which adolescents absorb. Parents who work excessively long hours or multiple jobs may struggle to provide the necessary emotional support and supervision, increasing their children's vulnerability to mental health issues (Frasquilho et al., 2016). Thus, the stability and quality of parental employment is directly linked to the emotional and psychological health of adolescents.

The neighborhood environment is a significant determinant of adolescent mental health. Adolescents residing in areas characterized by high crime and violence are at increased risk of developing psychological stress and fear, which can impede healthy development (Ellis & Dietz, 2017). In contrast, supportive community environments that offer safe recreational facilities and cohesive social structures can bolster resilience and protect against mental health challenges.

Cultural Influences on Adolescent Mental Health Disparities

Cultural factors play a role in shaping the experiences and challenges associated with adolescent mental health. Across various minority communities, deeply rooted cultural beliefs and perceptions can influence how symptoms are understood and whether adolescents seek treatment. The disparities in how mental health issues are addressed among adolescents of minority groups are particularly concerning, as these can lead to significant barriers in receiving appropriate and effective care. Cultural beliefs can shape whether adolescents receive mental healthcare by influencing how mental health conditions are perceived, discussed, and treated within different communities. These beliefs can prevent adolescents from seeking or receiving appropriate mental health services, so addressing the beliefs is crucial for improving equity in mental healthcare.

Recent research has highlighted the significant impact of cultural factors on mental health disparities among adolescents. Cultural orientation, or "youth's orientations toward mainstream culture and their ethnic culture" (Neblett et al., 2012, p. 297), is measured in research by a youth's endorsement of identified cultural values. Studies show that a strong cultural identity has positive effects on the mental health of adolescents. For instance, Neblett (2023) considered the cultural context as a critical element for informing efforts promoting mental health equity for African American

youth and showed culture to be a protective factor against racial discrimination. Similarly, Doery et al. (2022) identified the positive relationship between cultural engagement and psychological well-being among Indigenous adolescents.

Disparities are also influenced by cultural differences in communication styles and cultural stigma around mental illness. Communication styles can affect the efficacy of mental health interventions for adolescents. Various cultures have distinct norms regarding the expression of personal and sensitive issues, a dynamic that requires careful navigation by healthcare providers. For example, in many cultures, direct discussions of mental health are avoided, and symptoms may instead manifest or be described through physical ailments (Ruchkin & Schwab-Stone, 2014). This indirect communication approach can result in misinterpretations and misdiagnoses if mental health professionals are not attuned to these communication differences. Moreover, cultural values emphasizing family privacy and autonomy may deter youth from discussing personal challenges with outsiders, especially mental health professionals (Zhou, 2022). To effectively bridge these communication gaps, providers must cultivate a deep understanding of the adolescent's cultural context and adapt their communication methods accordingly. This involves engaging in active listening, employing culturally resonant metaphors, and ensuring that treatment plans align with the cultural values of the adolescent, thereby fostering trust and enhancing the therapeutic relationship.

Research consistently shows that adolescents with mental health difficulties experience significant stigma and shame around mental health conditions, and this has detrimental effects on their well-being and help-seeking behavior (Ferrie et al., 2020; Telesia et al., 2020). The stigma is usually rooted in cultural perspectives of mental illness, viewing mental conditions as shameful or a sign of weakness. It can manifest as shame, denial, or suppression, making it less likely for adolescents to seek help (Kaushik et al., 2016; Moses, 2009). Some young people experience detrimental stigma-related outcomes, which have been linked to their desire to preserve their social identity and social capital (Ferrie et al., 2020). Mental health

stigma may also lead family members to discourage discussion of mental health issues, preferring to handle problems within the family. Moreover, cultural beliefs may attribute mental health problems to spiritual or supernatural causes, leading families to seek traditional healing or religious interventions instead of conventional medical treatment, such as psychotherapy and medications (Murry et al., 2011). These factors combine to create an environment in which mental health conditions are underreported and often inadequately treated.

Culturally Responsive Mental Healthcare for Adolescents

A holistic approach is needed to address socioeconomic, racial and ethnic, cultural, gender, and geographic factors that lead to adolescent mental health disparities. Essential elements of this approach are providing culturally informed interventions; enhancing the cultural competence of healthcare providers; and fostering community-based initiatives that cater to the specific mental health needs of diverse populations while also expanding access to comprehensive, culturally competent, and region-specific healthcare. These efforts must especially consider the unique needs of LGBTQ+ adolescents, who require inclusive, affirming care to navigate the additional challenges they face.

The provision of culturally responsive mental healthcare is crucial in addressing the diverse needs of adolescents, particularly those from minority backgrounds. Culturally responsive care involves recognizing and respecting the systemic factors, cultural beliefs, values, and practices of individuals of racial minority groups and integrating this understanding into all aspects of mental health service delivery. Culturally responsive practices in mental healthcare ensure that treatment is respectful of and tailored to the cultural expectations and norms of those being served while facilitating more effective and sensitive care.

Culturally and Linguistically Responsive Mental Health Providers

Mental health providers need to foster a culturally inclusive environment. A foundational element is creating a physically and socially welcoming environment in healthcare settings. This includes the incorporation of culturally relevant decor and privacy accommodations, which not only show respect for various cultures but also signal to clients that their cultural identity is acknowledged and valued (Zigarelli et al., 2016). Such an environment can significantly enhance the comfort level of adolescents seeking help, making them feel more secure and understood and more likely to return for additional services.

Diversity among mental health professionals enriches practice by bringing a range of perspectives and expertise. Hiring staff from various cultural backgrounds not only makes mental health services more accessible to a diverse clientele but also enhances the service provider's understanding of the community's needs. Diverse teams are better equipped to develop and implement treatment strategies that are culturally and linguistically appropriate, thereby improving the effectiveness of mental health interventions.

All mental health providers should undergo continual cultural competence training to effectively serve culturally diverse adolescents (Jones et al., 2015). This training should focus on understanding the various cultural backgrounds, health beliefs, and communication styles of the communities they serve. Importantly, providers must adopt a stance of cultural humility in which they acknowledge personal biases—recognizing how their biases influence therapeutic approaches and student interactions while learning strategies to manage biases effectively. This kind of training ensures that providers can offer empathetic and culturally informed care that is appropriate for their patients.

When mental health providers are not multilingual, providing comprehensive language services, including interpretation and translation, is crucial for non–English-speaking adolescents and their family members. Ensuring that all written materials are available in the primary languages of the community helps prevent misunderstandings and improves adherence to treatment plans. This is a critical aspect of accessibility that directly impacts the effectiveness of mental healthcare.

One contemporary practice for becoming a culturally responsive mental health provider is to engage with community leaders and cultural brokers to gain deeper insights into the specific needs and nuances of the communities they serve. Cultural brokers—individuals who have an intimate understanding of their community's culture—can act as mediators and advocates, enhancing communication between mental health professionals, community members, and families being served. This engagement helps build trust and fosters a collaborative approach to mental healthcare, which is essential for effective outreach and service delivery.

Culturally Responsive Mental Health Interventions

Culturally responsive care refers to the ability of mental health practitioners to understand, respect, and effectively respond to the cultural differences of their clients. Culturally responsive mental health interventions create a safe and inclusive space where the unique cultural experiences of adolescents are acknowledged and validated (Jones et al., 2017b). This approach can reduce feelings of cultural mistrust and increase the likelihood of engagement in treatment (Garland et al., 2005).

To provide culturally responsive evidence-based care, the provider often needs to adapt the therapeutic techniques and interventions and integrate the cultural context of clients. Research has shown that culturally adapted interventions are associated with improved treatment outcomes, increased treatment retention, and higher levels of client satisfaction (Cabral & Smith, 2011; Griner & Smith, 2006; Jones et al., 2017a). Cultural adaptations also increase the efficacy of interventions. Adaptations naturally improve the cultural compatibility between the clinician and client while also allowing the clinician more opportunities to address the unique needs of the client (Bernal et al., 2009). When mental health providers integrate cultural adaptations, the treatment has greater ecological validity and room for the client's subjective experiences, values, and coping skills to be addressed (Castro-Olivo & Merrell, 2012). Further, when providers recognize the importance of cultural adaptations, the intervention naturally includes a safe environment where clients can discuss their experiences with discrimination and other race-related stressors (Jones et al., 2017a; Zigarelli et al., 2016).

A primary example of a concept that is not included in traditional evidence-based interventions is racial socialization. Racial socialization is the process by which parents of youth in racial minority groups raise their children to understand culturally appropriate values and principles that will serve them well as they develop into adults (Wang & Huguley, 2012; White-Johnson et al, 2010). Such socialization

involves parents teaching their children to navigate societal structures in which their race is marginalized, emphasizing resilience and pride in their cultural identity. Parents of BIPOC youth often use the racial socialization process to counteract negative societal messages that undermine their ability to form a positive racial identity.

Cultural adaptations also include integrating the family's role and community values into treatment, which can significantly enhance the effectiveness of mental healthcare. For many cultures, the family unit plays a crucial role in decision-making and support. Including families in the therapeutic process can be especially beneficial with adolescent mental healthcare. Cultural adaptations may also include incorporating alternative therapies that the community respects and values, such as spiritual or traditional practices, alongside conventional methods.

In designing cultural adaptations, providers need to be aware of how cultural factors can influence the presentation of symptoms and be cautious not to pathologize normal behaviors. Diagnostics and treatment plans should be adjusted to account for cultural variations in symptom expression and health behaviors. One technique to determine the degree to which cultural adaptations are needed is to assess acculturation of the client (Zigarelli et al., 2016).

Acculturation is the process by which a person adapts in social interactions when they are influenced by contact with another culture (Berry, 2017). It reflects the degree to which a person retains their native heritage and how much they adopt characteristics

of the majority culture in interactions with others in their environment. One example of an acculturation style is assimilation. The assimilation style of acculturation involves a person relinquishing their native cultural values and adopting those of the majority culture (Berry, 2017). Assimilation can lead to stress and conflicts within a family because of the rejection of traditional cultural norms and values. By understanding acculturation, the mental health provider can recognize within-group cultural variability and determine appropriate intervention adaptations based on the acculturation style used by the adolescent they are supporting.

Among the most essential cultural adaptations for mental health providers is to consider the context for BIPOC youth. Mental health providers must understand the economic, social, and individual contexts of the client and their presenting problem, including environmental risk factors that may contribute to distress. This may include adverse childhood experiences (Felitti et al., 1998) such as abuse (physical, emotional, sexual), neglect (physical, emotional), or household dysfunction (mental illness, incarcerated relative, mother treated violently, substance abuse, divorce). It may also include the expanded adverse childhood experiences, such as discrimination, exposure to community violence, and living in foster care (Ellis & Dietz, 2017). Recent studies show that for racial minority communities, racism and racial trauma are critical contextual variables that must be addressed in mental health treatment (Bernard et al., 2021).

Cultural adaptations for BIPOC youth may include psychoeducation on the impact of racial trauma and normalizing the distress related to its exposure. Psychoeducation may also include defining constructs such as racial microaggressions (Sue et al., 2007) and stereotype threat (Steele, 2018) and giving clients the language to articulate their lived experiences. Providing language for describing distressing feelings can be empowering to youth, particularly when they have been socialized not to talk about such distress outside the household. Doing so can also make clients feel less alone and more connected to their racial identity and heritage group. Bernard et al. (2021) found that the minimization of client experiences of racial discrimination in

therapy can lead to a weaker therapeutic alliance, lower treatment satisfaction, and higher rates of attrition and dropout.

Culturally responsive mental healthcare is not merely an optional enhancement but a necessary component of effective treatment, especially for BIPOC youth. By embracing cultural adaptations and educating youth on the impacts of racial trauma, mental health professionals can strengthen therapeutic alliances, reduce treatment attrition, and foster better health outcomes, making a profound difference in the lives of the adolescents they serve.

Models of Care for Enhancing Adolescent Mental Health Equity

This section describes two models of care that contain features designed to achieve greater mental health equity: school-based and community-based services.

School-Based Mental Health Services

School-based mental health services can play a vital role in advancing health equity for adolescents by providing accessible and early interventions for mental health issues. Implementing effective mental health services in schools can help bridge the gaps in mental healthcare access and quality described earlier. By locating mental health services in schools, all students have equitable access regardless of their socioeconomic status, geographic location, or family background. This reduces barriers related to transportation, cost, and parent availability, which can be significant obstacles in traditional mental health settings (George et al., 2014). Integrating mental health services within school health programs can ensure a holistic approach to addressing student health. This integration can include direct therapeutic services, psychoeducation, peer support programs, and collaboration with physical health services to address the full spectrum of health needs.

Schools are in a unique position to identify mental health issues early through regular interactions with students. Early identification allows for timely interventions, which can prevent the development or exacerbation of mental health conditions. Schools that deploy multitiered systems of support are more adept at early intervention

through implementing universal screeners for mental health issues and training teachers and other personnel to recognize signs of mental distress in youth (Splett et al., 2018).

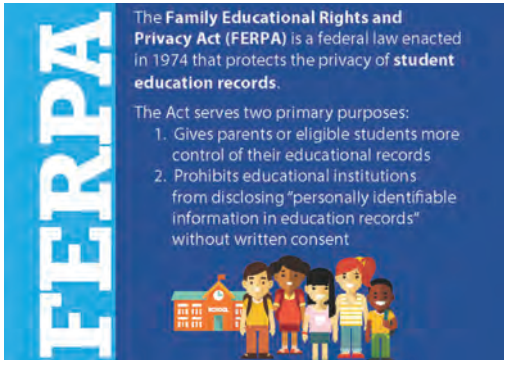
Many school districts benefit from the skills and expertise of school psychologists, school counselors, and school social workers as providers of mental health services. These employees are often trained to tailor school-based mental health services to the cultural and linguistic needs of the student population. Culturally responsive school mental health providers understand and respect their students' cultural backgrounds, and they enhance the effectiveness of their interventions by offering culturally responsive interventions to youth and families. They normalize mental health discussions in their cultural context and reduce stigma. For example, school psychologists offer mental health education campaigns, offer socioemotional coping skills training, coach teachers in mental health awareness, and implement psychological and psychoeducational interventions for youth and their families. School counselors and school social workers are skilled in implementing peer support and mentoring programs that can foster an inclusive school culture and empower students to support one another, which is particularly important for adolescents who are reluctant to seek help from adults. They also engage families and the broader community in mental health initiatives through workshops and partnerships with local agencies for community-based support.

The integration of school mental health into academic programming is a more recent development. Many schools have adopted a social emotional learning curriculum into their academic learning time based on the framework of the Collaborative for Academic, Social, and Emotional Learning (https://casel.org/). Integrating such mental health services effectively with other school programs without disrupting the academic schedule can be difficult. Coordinating these services so that they complement the educational goals and support the overall well-being of students requires careful planning and collaboration. School mental health providers often meet this challenge by incorporating elements of the social emotional learning curriculum into individual intervention services for the youth they serve.

Overall, the evidence shows that school-based mental health services can significantly advance health equity, ensuring that all adolescents have the support they need to succeed academically, socially, and emotionally.

While school-based health services offer a powerful solution for addressing the adolescent mental health crisis, there are also challenges and obstacles associated with the implementation of school mental healthcare. Key challenges include lack of funding and staffing shortages, training and expertise, privacy issues, and parent involvement.

One of the most significant challenges is the lack of adequate funding. Many schools struggle to allocate sufficient resources to support comprehensive mental health programs. This can result in shortages of staff, insufficient training, and a lack of necessary materials or facilities. The shortages of psychologists, social workers, and counselors can lead to high caseloads and reduce the ability of staff to provide effective, timely, and culturally responsive care. Without proper training, signs of mental distress can be overlooked or inadequately addressed.



Ensuring privacy and confidentiality in a school setting is another challenge. Schools must comply with federal and state laws, such as the Family Educational Rights and Privacy Act, while licensed mental health providers must comply with the Health Insurance Portability and Accountability Act. Navigating these laws can complicate information sharing and care coordination. Additionally, adolescents themselves may be concerned about privacy and worried that their peers will judge them for seeking mental health services.

Incorporating parent involvement has long been a challenge for school-based mental health providers. Engaging parents is an established best practice that is crucial for effective intervention, but there are barriers to engagement, including a lack of opportunity for regular interactions between school personnel and parents, differing expectations of the roles of school personnel, different perceptions of mental health, and logistical issues with scheduling meetings with caregivers. To overcome these challenges, some school-based mental health providers use more

creative approaches to interacting with parents and caregivers, including hosting online meetings after school or during evening hours or even meeting off site with caregivers for lunch meetings.

Community-Based Approaches to Adolescent Mental Health Equity

Community-based approaches to adolescent mental healthcare are essential to reach young people in the environments where they live and socialize. These models prioritize accessibility, prevention, early intervention, and integration of services across different community sectors. Community-based approaches can contribute to mental health equity.

The population health service model is an approach that engages the public in protecting and promoting the health of the entire population. The goal is to have the tools to address health problems by educating people about mental health, the factors that influence well-being, and how to improve well-being. Such models seek to mobilize communities to improve health cohesively while ensuring equitable access to services within the community. For example, Mental Health First Aid (https://www.mentalhealthfirstaid.org/) and Reach Out Seattle (https://www.seattle.gov/mayor/one-seattle-initiatives/youth-mental-health) are population health programs intended to promote youth mental health and wellness through community-wide learning programs that focus on prevention and early identification as well as

nonclinical interventions. These programs are designed to make parents, caregivers, supportive adults, first responders, and others in the community better equipped to recognize the signs of youth psychological distress and have the tools and training needed to support them.

The school-linked mental health services model is based in schools but extends into the community by partnering with community mental health centers, health clinics, and private providers. This approach ensures better continuity of care because it expands the range and depth of services available to adolescents outside of school hours. A similar model is the Integrated Service Networks model, in which a seamless network of schools, primary care facilities, and social service agencies are available for adolescents to access easily. This model ensures that there is a comprehensive healthcare system in which mental healthcare is healthcare and provides a one-stop shop for all healthcare needs. Another model that is increasingly being deployed as a part of population health initiatives is the Community Mental Health Teams model. With this model, teams composed of mental health professionals work directly within communities to support youth in nonclinical settings (e.g., youth community centers, clubs, sports networks). These teams offer a comprehensive approach to managing a variety of mental health conditions while embedded in the community settings.

The deployment of telehealth services in mental health has proliferated since the COVID-19 pandemic. More providers have adopted telehealth as a primary mode of intervention as it has proved to increase the accessibility of services for many people. Telehealth services and mobile health units have successfully extended the reach of community mental health services by bringing care directly to adolescents, especially those in underserved areas. Mobile health units offer on-site mental

health services, while telehealth can be offered to break down geographical or transportation barriers with online support.

The community-based models offer a multilayered approach, including improving access to high-quality mental health services, increasing the cultural competence of healthcare providers, enhancing public understanding and reducing stigma, and implementing supportive policies that acknowledge and address the root causes of mental health disparities. These efforts involve not only healthcare systems but also schools, communities, and policymakers working together to ensure equitable mental healthcare for all adolescents.

Conclusion

As we navigate the complexities of adolescent mental health, it is imperative to recognize the pivotal role that mental health equity plays in fostering resilient and thriving communities. The insights provided by the Centers for Disease Control and Prevention and other health organizations underscore a critical reality: Disparities in mental healthcare access and quality are not just issues of healthcare but are deeply intertwined with social, economic, and environmental factors.

The impact of the COVID-19 pandemic has only amplified these disparities, highlighting the urgent need for a sustained and strategic response that addresses both immediate and systemic challenges. By prioritizing mental health equity, we can begin to dismantle the barriers that prevent many adolescents, especially those from marginalized and underserved communities, from receiving the care they need.

Addressing mental health with a holistic approach that includes family, school, and community interventions will not only mitigate the impacts of current disparities but also pave the way for a healthier future for all adolescents.

The commitment to advancing mental health equity requires a collaborative effort across multiple sectors. It involves enhancing the cultural competence of healthcare providers, expanding access to quality care, and fostering environments that support mental health education and awareness. By investing in comprehensive, culturally informed strategies and embracing innovative solutions, we can ensure that all young people have the opportunity to achieve optimal mental health, regardless of their background.

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MENTAL
TOOLBOX

"To expand access to care we need to re-envision when, where, how, and by whom care is delivered."

– ANN GARLAND, PH.D.

Promising Approaches to Address the Youth Mental Health Crisis: Rethinking When, What, Where, How, and by Whom Services Are Delivered

Ann Garland, Ph.D.

"Status quo, you know, is Latin for 'the mess we're in.'"
—President Ronald Reagan (BrainyQuote, n.d.)

Introduction

The status quo for adolescent mental healthcare is grossly inadequate to meet population needs. Rates of mental health problems such as anxiety, depression, suicidal behavior, and hopelessness have risen significantly, and most youth who need mental healthcare do not receive any (Office of the Surgeon General, 2021). Even among those who enter care, most do not receive the type or amount of care likely to be effective (Garland et al., 2013; Kazdin, 2019). Compounding the problem, the unmet need for effective care is greatest for those already facing significant societal and economic stressors, including youth of color; lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) youth; and youth of other marginalized groups (Office of the Surgeon General, 2021; Pearson & Borba, 2024; Saloner et al., 2014). For youth mental healthcare, there are crises in both access to and effectiveness of care.

Current community-based mental healthcare consists primarily of individual office-based outpatient visits with licensed providers (Ahn-Horst & Bourgeois, 2024). Efforts to simply expand the current care delivery model cannot meet the challenges of

the crises; disruptive innovations in how we conceptualize care and implement interventions are needed (Chorpita, 2019; Kazdin, 2019; Rotheram-Borus et al., 2012). To expand access to care we need to reenvision when, where, how, and by whom care is delivered. To improve the effectiveness of care, we need to strengthen the alignment of research-based intervention strategies with clinical practice, thus shifting what care is delivered.

As daunting as the youth mental health crisis is, the encouraging news is that promising approaches to improving access and effectiveness have been developed and tested. Decades of research identifying causes of mental health problems and strategies to mitigate such problems have generated essential knowledge. This paper presents research-supported approaches to reconceptualizing care to reduce unmet need and improve mental health outcomes.

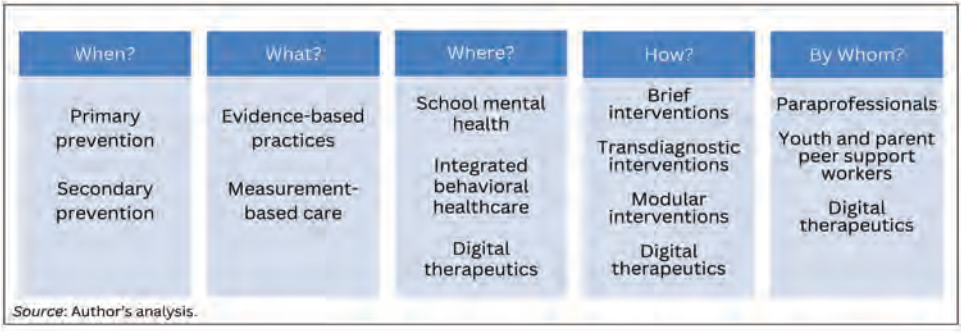
Effective mental healthcare is inaccessible for many youth and families due to objective and subjective barriers. Objective barriers include costs, insurance coverage, workforce shortages, geographic and scheduling limitations, language barriers, and fragmented connections between service sectors such as education, child welfare, and juvenile justice. Subjective barriers include stigma, perceived ineffectiveness, and limited knowledge about mental healthcare as well as confidentiality concerns (Radez et al., 2021). These barriers affect initial access as well as ongoing access (i.e., sustained engagement) to mental healthcare.

Barriers in effectiveness of care center on the lack of alignment between research-supported interventions and routine clinical practice. The difficulty of aligning research-based knowledge about effective intervention strategies and routine practice is not unique to mental healthcare, but mental healthcare presents more challenges than other medical specialties. For example, effective delivery of science-based care has traditionally relied on accurate diagnoses to link to established treatments. However, diagnoses are less precise and less reliable in mental health than in many other aspects of healthcare. Symptom reporting is more subjective in mental health, and typically no precise biomarkers or lab or imaging tests exist to confirm or refute diagnostic impressions (Fadus et al., 2020; Insel, 2014).

The translation of science-based knowledge into mental health practice also faces a more conceptual barrier: Some practitioners and members of the public question the role or relevance of science in mental healthcare. They see mental healthcare as a healing art, a humanistic or spiritual endeavor, relying on empathic interpersonal relationships (e.g., Nelson et al., 2006). For decades, tension in the mental health field has existed between researchers who promote delivery of science-informed practices and some practitioners who express skepticism about the relevance of research to their practice (Lilienfeld et al., 2013; Tavris, 2003). The existence of humanistic and scientific bases for practice can be viewed as a tension but can also be transformed into a strength. Mental healthcare is most effective when it combines humanistic principles of compassion, equity, respect, and empathy with science-based intervention strategies.

Figure 1 previews the evidence-based approaches described in this paper that expand and shift when, what, where, how, and by whom mental healthcare for youth is delivered.

Figure 1. Approaches to Rethinking Mental Healthcare for Youth



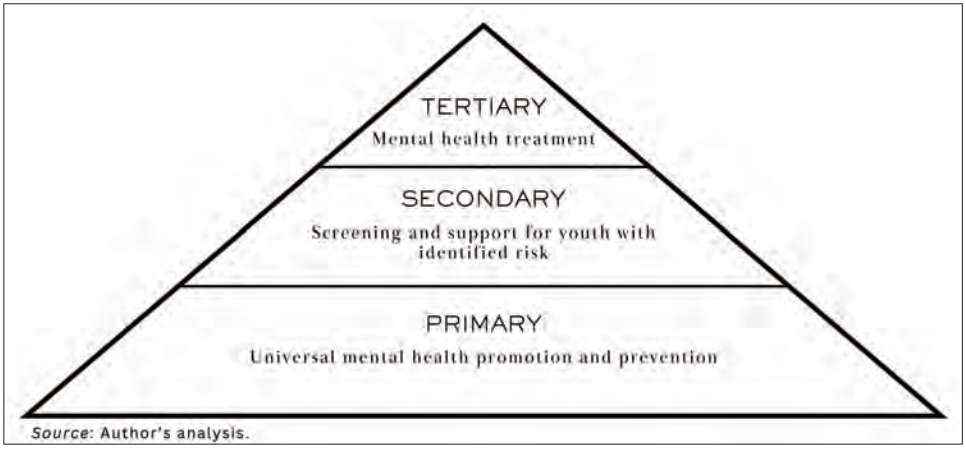
Source: Author's analysis.

Applying a Public Health Lens to Youth Mental Healthcare

Public health offers a framework for understanding the challenges in meeting adolescent mental health needs and provides guidance for the types of changes needed. For example, differentiating primary, secondary, and tertiary levels of care, as illustrated in figure 2, identifies potential intervention targets at different stages of illness trajectory. The traditional medical model of mental healthcare focuses almost exclusively on the tertiary level of care: psychotherapeutic and pharmacological treatments to individuals already diagnosed with a mental illness (Mays & Cochran, 2024). Evidence-based improvements and expansion of mental health tertiary care

are certainly needed, but tertiary care resources are limited. Rethinking when mental healthcare is delivered by redirecting some of the focus and resources to primary- and secondary-level interventions could prevent severe problems from developing, thus reducing the need for tertiary care and the human and financial costs associated with them (Le et al., 2021). This recommendation is consistent with current efforts to transform mental health away from an individual-level focus to a population-level approach used in public health (Dodge et al., 2024).

Figure 2. Public Health Framework for Youth Mental Healthcare



Source: Author's analysis.

Primary Prevention

Primary prevention approaches aim to reduce exposure to risk factors and promote protective factors to prevent onset of illness. Research has revealed a great deal about a wide array of risk factors for mental illness, including social determinants such as poverty, child maltreatment, discrimination, alienation, racial violence, gun violence, sexual violence, homelessness, and insecure caregiver attachment as well as biological factors such as genetic vulnerability or head trauma (Office of the Surgeon General, 2021). There is growing public awareness of how adverse childhood experiences are associated with poor health and mental health outcomes (Office of the Surgeon General, 2021). A World Health Organization study estimated that eradication of childhood adversities (primarily child maltreatment) would result in a 30 percent global reduction in any lifetime mental disorder (Kessler et al., 2010).

A wide variety of primary prevention programs has demonstrated effectiveness in reducing mental health problems. For example, public health parent education

programs can reduce child maltreatment rates and improve children's mental health outcomes (Prinz et al., 2009; Sanders et al., 2008). High-quality home visitation programs for new parents have also been shown to reduce child maltreatment, improve children's behavioral regulation and parents' disciplinary skills, and reduce adolescents' substance use years later (Olds et al., 2014). School-based programs to minimize bullying and gay-straight alliances in schools can reduce victimization and alienation among students (Marx & Kettrey, 2016; Waasdorp et al., 2012). Shifting to interventions delivered before symptom onset could significantly reduce the current unmet need for tertiary care.

Secondary Prevention

Secondary prevention focuses on early detection and intervention for those at risk for developing mental illness. Since adolescence is the peak period for onset of a variety of mental illnesses (Colizzi et al., 2020), secondary prevention is essential. Left untreated, mental health problems in childhood and adolescence often have significant maladaptive consequences in adulthood, including economic, family, and criminal justice implications (Singh et al., 2022). Early detection and intervention can improve individuals' quality of life, prevent more severe impairment, and save significant tertiary treatment costs (Colizzi et al., 2020).

Fortunately, many validated screening tools exist to identify youth at risk for a variety of mental health challenges. Early detection and intervention for issues such as adolescent depression is clinically and cost effective (Le et al., 2021). Even for severe mental illnesses such as schizophrenia, researchers are identifying biological and psychosocial indicators for early detection. Delivering preventive psychopharmacological and psychotherapeutic interventions to individuals with high risk has delayed onset and/or mitigated more serious functional impairments (Colizzi et al., 2020).

Secondary prevention is also needed in contexts such as the child welfare and juvenile justice systems, in which youth have significantly elevated risk for mental health challenges. Many targeted trauma-informed interventions with documented

effectiveness exist for these populations. For example, parent training programs for caregivers of children in foster care significantly reduce placement disruptions and improve children's stress resilience (Fisher et al., 2006). Increasing resources for detection and early intervention in contexts in which youth are known to be at elevated risk is necessary.

Tertiary Prevention

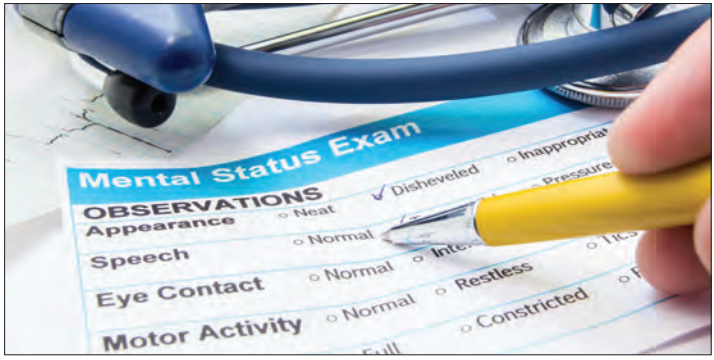
Tertiary care, namely psychotherapeutic and psychopharmacological treatment for diagnosed individuals, is the predominant form of youth mental healthcare today. Improving tertiary care requires overcoming the access and effectiveness barriers discussed earlier.

More than 650 empirically supported psychotherapeutic treatment protocols for youth with a wide range of mental health problems have been identified (Chorpita, 2019; Kazdin, 2023). Unfortunately, these treatments are often not reflected in routine clinical care (Garland et al., 2013; Kazdin, 2019). This challenge is not unique to mental healthcare; across specialties it takes an estimated 17 years for new evidence-based approaches to be adopted in clinical practice (Balas & Boren, 2000). Researchers are identifying strategies in the field of implementation science that can facilitate the integration and sustainability of research-supported interventions into clinical care (Damschroder et al., 2009). Such strategies include tailoring interventions to the realities of the service context, considering provider incentives and disincentives of implementing new practices, investing in training and ongoing consultation, and partnering with multiple stakeholders (e.g., clinicians, administrators, and clients) in each step of the implementation process (Powell et al., 2015).

A particular challenge at the tertiary level is sustaining client engagement; most youth who enter care do not participate in even the minimally adequate number of sessions (Becker & Chorpita, 2023; Saloner et al., 2014). Research-supported interventions to improve engagement include explicit attention to clients' treatment expectations and rationale, practical reminders and strategies to overcome logistical barriers, and consistent use of inclusive language (e.g., clinician and client as a

"team") (Becker & Chorpita, 2023). Dissemination and training on these evidence-based engagement strategies are needed.

Research has also consistently demonstrated that mental healthcare is most effective if progress is measured prospectively and consistently (e.g., measurement-based care [MBC], also referred to as routine outcome monitoring) (Bickman et al., 2011). MBC or *routine outcome monitoring* relies on repeated administration of standardized measures of symptoms and/or functioning beginning at baseline to track patient progress. Routine measurement can also flag critical events such as increased risk for suicide. Across age groups, many studies reinforce that MBC results in improved patient outcomes, decreased costs, and lower likelihood of patient deterioration (Lewis et al., 2019). Advanced measurement systems concurrently track treatment processes and outcomes to determine how they are related. In anticipation of advances in the use of artificial intelligence driving data-based precision medicine, data collection infrastructure development is a high priority to support measurement-based care going forward (Bickman, 2020).



Despite well-established evidence of the positive impact of MBC or routine outcome monitoring on the effectiveness of care, actual use in routine care is low. In one national survey of more than 500 clinicians, only 14 percent reported using progress measures at least monthly; 62 percent reported never using measures (Jensen-Doss et al., 2018). Clinicians have mixed attitudes about MBC, with many acknowledging potential benefits but also citing practical and philosophical barriers. Practical barriers include cost, time, and training limitations. Philosophical barriers include skepticism about clinical utility and relevance (Rye et al., 2019). These perceptions reflect the tension described earlier regarding clinicians' beliefs about the relevance of science to actual practice.

PHARMACOLOGICAL TREATMENT

Providing evidence-based psychopharmacological treatment involves unique challenges. A national study including over 6 million youth found that 7.7 percent of those ages 13 to 18 filled a prescription for at least one psychotropic medication (Sultan et al., 2018). Rates of psychotropic medication among children and adolescents have been rising, and there is concern about overmedication and polypharmacy, especially among vulnerable populations such as those in foster care (Drake, 2019). Research on psychotropic medications with youth is increasing but still uneven; of the 80 medications available, only five (escitalopram, fluoxetine, lurasidone, methylphenidate, and lithium) have strong evidence of safety and efficacy (Solmi et al., 2020).

Among youth with a psychiatric disorder, 14 percent used a psychotropic medication in the past year; 2.5 percent of youth without a diagnosis but with significant psychological distress used a psychotropic medication (Merikangas et al., 2013). Authors of that study assert that these results support appropriate medication use—that is, not overmedication. However, there is concern about significantly increased use of antipsychotic medication, specifically that it is being prescribed for a variety of behavioral issues (i.e., aggression and impulsivity) outside of the original target diagnosis and that there are significant potential negative side effects (Olfson et al., 2015).

Complicating the debate about overmedication is evidence of significant racial and ethnic disparities in medication use; White youth are twice as likely as non-White youth to use psychotropic medications, and these disparities are increasing (Rodgers et al., 2022). This is attributed in part to unconscious biases in diagnosing youth presenting with behavior problems. Fadus and colleagues (2020) reported that some youth of ethnic and racial minority groups are more likely than White youth to be diagnosed with a disruptive behavior disorder and less likely to be diagnosed with attention deficit hyperactivity disorder. The youth of minority groups are then less likely to receive medication or academic support services for attention deficit hyperactivity disorder. These findings complicate broad public perception of overmedication and suggest that undermedication may actually be a problem for some groups.

Promising Interventions to Improve Youth Mental Healthcare

Analysis using the public health framework points to the need for shifting care to primary and secondary prevention and focusing on access and effectiveness for tertiary prevention. This section describes evidence-based approaches that capture this shift by changing where, how, and by whom mental healthcare is delivered. Each of these approaches has the potential to improve access and effectiveness of care.

School mental health and integrated behavioral healthcare expand where care is provided. Modular, transdiagnostic, and brief interventions innovate in how care is provided. Nontraditional mental health workers expand who provides care. Digital therapeutics innovate in where, how, and by whom care is provided.

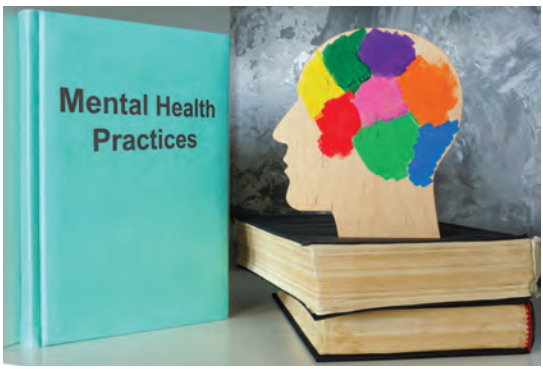
Expanding Where Care Is Provided

Expanding where mental healthcare is provided improves access, reduces the stigma associated with specialty mental healthcare, reduces disparities, and provides cost-effective care. Schools and primary healthcare are two optimal settings because virtually all youth access them. Integrating mental healthcare into schools and primary care is not a new idea, and many successful models are available.

Successful school mental health programs offer comprehensive, multitiered interventions incorporating primary-, secondary-, and tertiary-level services and coordination with local specialty mental health agencies. Such programs result in improved psychosocial outcomes for youth, improved academic functioning, and elevated teacher job satisfaction (Hoover & Bostic, 2021).

Examples of effective school-based primary prevention interventions include social-emotional learning interventions such as the Good Behavior Game (Kellam et al., 2011). Although it is implemented with children in early elementary grades, the effects of this classroom-based intervention have been documented in adolescents, with lower rates of drug and alcohol use disorders, antisocial personality disorder, delinquency and incarceration, and suicidal ideation among participants compared to students who did not participate in social-emotional learning programs (Kellam et al., 2011). Many other social-emotional learning programs show evidence to support positive academic and psychosocial outcomes that can be delivered by teachers or school counselors (CASEL, 2025).

Secondary interventions in school mental health, including screening and early intervention, can improve students' quality of life and reduce the costs of subsequent mental health treatment (Hoover & Bostic, 2021). The National Center for School Mental Health suggests best practices for screening, including selection of valid, reliable, and feasible measures; attention to parental consent and student assent procedures; and development of triaging systems to refer students to services based on results (National Center for School Mental Health, 2024). Self-report screening tools are available to identify students at risk for depression, anxiety, suicide, and anger management challenges.



School-based small group interventions delivered to students identified as at risk for mental health or behavioral challenges have demonstrated strong effectiveness. For example, the Coping Power Program for students with anger management challenges has established positive outcomes in reducing delinquent behavior and drug misuse (Lochman & Wells, 2002). Likewise, a recent rigorous meta-analysis of the effects of school-based programs for anxiety and depression concluded that such interventions are effective, particularly when delivered by a mental health clinician (Zhang et al., 2023).

Given the evidence of effectiveness, why are school mental health programs not more universal? Challenges include the following: *(a)* concern that mental health is a family issue, not a school issue, and related concerns about caring for youth without parental consent; *(b)* inadequate staffing and resources for additional programing; *(c)* privacy, labeling, and stigma concerns; and *(d)* imprecision of mental health screening tools with risk of false-positive results (Hoover & Bostic, 2021). Many states, including New York and Virginia, have addressed some of these challenges by reframing programs as "mental health literacy" in the mandated curriculum. These programs include content aimed to reduce stigma and improve mental health well-being and help-seeking skills. Such programs also implement well-being checkups to identify both strengths and problems (New York State Education Department, 2018).

Like school mental health, integrated behavioral healthcare in primary medical care is not a novel approach. More than half of all pediatric primary care visits

include discussion and care for mental and behavioral health concerns, and most psychotropic medication prescriptions for youth are written by primary care providers (AACAP Committee on Collaborative and Integrated Care and AACAP Committee on Quality Issues [AACAP], 2023). Yet, intentionally integrated behavioral healthcare models are far from universal. Such models require a collaborative multidisciplinary team seamlessly caring for a patient's physical and mental health.

Benefits of integrated care are well established. A meta-analysis of 31 randomized controlled trials comparing pediatric collaborative care to usual care found significantly better clinical outcomes for patients in collaborative care (Asarnow et al., 2015). Many studies across multiple states document an array of positive outcomes, including improved patient access and engagement in care, improved patient and provider satisfaction, and potential cost savings (AACAP, 2023).

The challenges of building fully integrated behavioral healthcare mirror, to some extent, the challenges of school-based mental healthcare. They include *(a)* discomfort among primary care providers to add mental healthcare responsibilities, *(b)* lack of time and space to provide mental healthcare, *(c)* lack of mental health professionals trained to work in primary care settings, and *(d)* complexity of funding mechanisms to support integrated care (AACAP, 2023). Given the promise of integrated care models, significant investment has been made in developing guidelines for implementation and training an integrated mental health workforce (e.g., AIMS Center, 2024).

Innovating How Care Is Provided

Traditional psychotherapeutic and psychopharmacological treatments do not necessarily align with patient or clinician needs. For example, treatments are traditionally developed and tested for a single diagnosis, but approximately half of youth needing care have multiple mental health and/or substance use diagnoses

(Merikangas et al., 2010). Patients with comorbidities have poorer treatment outcomes than those with a single diagnosis (Rosellini et al., 2015), and traditional treatments often do not address comorbidities (Ehrenreich-May et al., 2017). Also, given the weak reliability of psychiatric diagnoses, linkage to specified treatment for a single diagnosis is problematic. It is also unrealistic to expect clinicians to learn dozens of single diagnostic treatment protocols and to deliver them with fidelity. Many clinicians perceive such protocols as overly rigid and prefer treatments that can be delivered flexibly to meet the idiosyncratic needs of patients (Addis et al., 1999).

Innovative approaches to evidence-based interventions are being developed and tested to address these challenges. The innovations described here are all designed to shift how care is provided to improve access and effectiveness. In recognition that many individual treatment protocols share common practice elements, creative approaches to individualizing treatment have been developed (Garland et al., 2008). For example, Chorpita and colleagues (2013, 2017) have developed a sophisticated modularized treatment approach (Managing and Adapting Practice), which uses algorithms to recommend research-supported practice elements distilled from empirically supported treatment protocols that are linked to a patient's presenting problems and allows clinicians to deploy these modules with some flexibility. The treatment system also includes measurement-based feedback to track patient progress linked to treatment modules. This system addresses comorbidity challenges and clinician preferences while rigorously assessing progress and outcomes. Research demonstrates that clinical outcomes are significantly improved with a modularized approach compared to standard practice (Chorpita et al., 2013, 2017; https://welcome.practicewise.com/).

Transdiagnostic approaches offer another innovation in how care is delivered. Researchers have determined that pathways to mental disorders are transdiagnostic (Colizzi et al., 2020), meaning that signs of emotion dysregulation and other behavioral and emotional challenges in childhood and adolescence may progress

to a variety of different psychiatric disorders over time. The Unified Protocol for the Treatment of Emotional Disorders for Adolescents (Ehrenreich-May et al., 2017) addresses emotional and behavioral challenges such as repetitive negative thinking, behavioral avoidance, and interpersonal impairments, which transcend specific diagnoses. This approach has strong evidence of effectiveness for anxiety and depression among adults (Schaeuffele et al., 2024) and growing evidence with adolescents (Ehrenreich-May et al., 2017).

Another more dramatic innovation in how care is delivered is reflected in the growing evidence supporting the positive impact of brief interventions. Specifically, Schleider and colleagues (2024) (https://www.schleiderlab.org/ourwork.html) have developed and tested free, online, self-guided, single-session interventions for adolescents seeking help for depression, anxiety, and other emotional and behavioral challenges, including eating disorders, body image concerns, and minority stress in the LGBTQ+ community. These interventions are based on core elements of evidence-based treatments, and research supports their effectiveness in reducing adolescents' hopelessness, depressive symptoms, and restrictive eating (Schleider et al., 2024).

Expanding Who Provides Care

The traditional mental health workforce relies on highly trained professionals with expensive graduate degrees. Even doubling the number of licensed mental health professionals in the US immediately would not serve all who need mental healthcare. A more promising alternative is to extend the reach and impact of mental healthcare by expanding the workforce to include other health and education workers, community members, youth workers, family members, and peers with lived experience. Research demonstrates that interventions can be effective with paraprofessional workers (Barnett et al., 2018).

The use of employed paraprofessional peer support workers has grown in recent years. In child and adolescent mental healthcare, paraprofessional workers are often parents with lived experience parenting a child with mental health challenges

(Olin et al., 2014). These parent peer workers provide emotional support and help others navigate the complexities of the system. Most states reimburse for peer support services through Medicaid, and several training and certification programs are available (e.g., https://www.mhanational.org/center-peer-support) (Horwitz et al., 2020). Although research on clinical effectiveness of peer support is somewhat limited, studies indicate positive impacts on patient engagement, empowerment, hope, self-efficacy, and reduced rates of readmission to hospitals among adults as well as some promising evidence of reductions of negative affect and anxiety among teens (Horwitz et al., 2020; Simmons et al., 2023).

Adolescence is a developmental stage during which individuals often shift their help seeking away from family toward peers. Youth peer support programs are designed to meet this developmental preference in a less stigmatizing, more accessible way than traditional mental healthcare. Peer support programs can provide a range of services, including general support, psychoeducation, mentoring, and case management or navigation of the system (Simmons et al., 2023). Youth peer workers often have lived experience, which can foster empathy, raise optimism, and increase culturally and developmentally sensitive support (de Beer et al., 2023).

One of the most well-established youth-centric models of mental healthcare is Australia's headspace program (www.eheadspace.org.au), which includes accessible youth-friendly centers offering early intervention for mental health and substance use disorders as well as a 24/7 nationwide online support service for youth and young adults ages 12 to 25. This program includes trained mental health professionals who provide services, but the participation of young people is the key driver of programming. A study with more than 50,000 clients demonstrated that 70 percent of those who attended the centers significantly improved on at least one clinical outcome measure (Rickwood et al., 2023).

While interest in and support for peer paraprofessionals is increasing, many challenges to broader implementation exist, beginning with limited research on clinical outcomes. Additional challenges include potential role confusion and a lack of credibility for paraprofessionals as well as a lack of support and supervision for such workers (Simmons et al., 2023). However, given the current crisis in access to and engagement with care, if, as research demonstrates, peer workers can boost access and engagement, the positive public health impact would be significant.

Innovating Where, How, and by Whom Care Is Provided

Popular media is rife with warnings of the dangers of digital technologies to youth mental health with calls for banning children from using some social media platforms and/or smartphones entirely. While evidence shows that excessive screen time and social media exposure can be harmful to youth, research suggests the effects are more mixed than might be expected (Odgers & Jensen, 2020). In fact, growing evidence shows that when founded on evidence-based practices, social media, smartphone apps, and other digital therapeutics can benefit youth mental health (Hunter et al., 2023; Ramos et al., 2024; Schleider, 2024).

The reality is that youth are most likely to seek mental health information and support online, and for those who are already somewhat marginalized, digital spaces provide their de facto interpersonal connections (Pretorius et al., 2019). Rather than restricting access to these essential connections, innovators are finding ways to extend the reach of science-based mental health interventions to engage youth in effective and safe care through digital therapeutics (Morris et al., 2015).

Evidence is growing to support the effectiveness of digital therapeutics, particularly for common mental health problems such as anxiety, depression, and sleep disturbance across all age groups (Ramos et al., 2024). These tools are more accessible, less stigmatizing, and potentially more cost effective than traditional care (Mohr et al., 2021). They are not necessarily intended to replace traditional services; rather, they extend or supplement other services (Ramos et al., 2024). Emerging evidence indicates that digital therapeutics are likely to be more effective if users receive at least some support from a coach or clinician rather than being completely self-guided (Mohr et al., 2021).

Globally, more than 100 randomized clinical trials with participants across age groups demonstrate promising effectiveness of mobile apps and internet-based care (Mohr et al., 2021). One meta-analysis examined effectiveness of digital therapeutics for youth anxiety and depression and found significant reductions in participants' symptoms

compared to those in control conditions (Ebert et al., 2015). Additional studies have documented the effectiveness (primarily with adult participants) for other mental health challenges such as insomnia, posttraumatic stress disorder, and substance abuse (Mohr et al., 2021). One study of an app targeting adolescents called BeMe reported that the vast majority of the 13,000 surveyed users rated content in the app as helpful (Prochaska et al., 2023), but it should be noted that consumer satisfaction does not necessarily equate to strong clinical effectiveness (Garland et al., 2003).

The full range of digital therapeutic content is vast, but common themes of science-based tools include skill-building activities founded in cognitive behavioral therapy such as thought tracking, behavioral activation, cognitive restructuring, mood regulation, and relaxation techniques. These tools often encourage symptom monitoring to help participants gain insight into their behavior patterns and to evaluate progress. Some tools connect users to a community of participants who offer support and cognitive reappraisal (Morris et al., 2015), thus reducing social isolation.

One of the more sophisticated apps available is Woebot, a digital companion with more than 1.5 million users. Preliminary research supports the app's feasibility, acceptability, and promising effectiveness (Fitzpatrick et al., 2017).

At least 10,000 mental health–related apps are available, with hundreds more released each year (Schueller et al., 2024). Unfortunately, only about 1 to 3 percent of apps are evidence based or evidence informed (Larsen et al., 2019). The marketplace for these apps is unregulated, and the majority have not been researched. Given the rapid proliferation of apps, it is impossible for any mental health provider or consumer to evaluate the potential effectiveness, safety, or user friendliness of all the options. A clearinghouse-type resource offering reviews of digital therapeutics is needed.

Many additional types of digital therapeutics with promising effectiveness exist, including virtual reality (VR) applications, therapeutic video games, and psychoeducation through social media. Across age groups, VR technology has been shown to be particularly effective for phobias, posttraumatic stress disorder, and pain management (Rowland et al., 2022). As VR hardware becomes more affordable, it will be more feasible to deliver in community practice. The ability to simulate an immersive experience in a controlled environment is extraordinarily helpful since the most well-established evidence-based approach to treating many types of anxiety and posttraumatic stress disorder is exposure therapy.

Imagine, for example, treatment for fear of flying (aerophobia). In exposure therapy, the clinician teaches the patient stress-reducing coping skills (e.g., deep breathing)

before gradually exposing them to increasingly challenging images of the feared experience. VR allows simulation of each step: arriving at the airport, going through security, boarding, listening to safety instructions, and ultimately hearing and feeling the rumble of takeoff and turbulence. This technology offers a major advance for the effectiveness of exposure therapies.

Another promising digital therapeutic approach uses video gaming technology. While excessive video gaming has been associated with mental health problems (von der Heiden et al., 2019), games can also be harnessed for therapeutic benefit. EndeavorRx is the first Food and Drug Administration–approved video game for children with attention deficit hyperactivity disorder (https://www.endeavorrx.com/). Preliminary research demonstrates that youth who play this game show improved attentional control. Another example is SPARX, an interactive game delivering cognitive behavioral therapeutic elements to adolescents suffering from depression. Youth report enjoying this game, and rigorous research found clinical outcomes equivalent to usual community-based care (Merry et al., 2012).

While evidence of potential benefits of science-based digital therapeutics grows, there are still multiple challenges to address. These include the aforementioned lack of regulation or oversight in development or marketing, data privacy issues, cultural and age appropriateness, overreliance on technology (which could inhibit help seeking from medical providers), and lack of billing codes for insurance coverage

in most plans (new Current Procedural Terminology codes were recently opened for online digital evaluation and management by healthcare professionals, but not for digital therapeutics). Research also indicates that sustained user engagement is often a challenge, especially when not supported by a guide (Mohr et al., 2021).

As highlighted in popular media, significant challenges also exist with misinformation and even harmful content on platforms such as TikTok, YouTube, Instagram, etc. Like all of these innovations, the risks and misuses may obscure the efforts of responsible professionals and influencers attempting to make science-backed therapeutic content more accessible. For example, academics at Harvard's T. H. Chan School of Public Health engaged in an effort to "influence the influencers" by sharing research-supported mental health knowledge with popular TikTok influencers. Results showed a slight shift, whereby the influencers' content after intervention was more consistent with research evidence than their preintervention content (Barry, 2023). More efforts like these are needed.

Development of digital therapeutics is evolving and expanding quickly; this summary is just a small sampling of current tools. Emerging applications of artificial intelligence to drive advances in precision healthcare; use of wearable technologies; and neuroscience applications, including implants, are all being tested now and offer additional possibilities and risks (Bickman, 2020). Likewise, emerging treatments such as transmagnetic stimulation, ketamine, and psilocybin may shift care significantly. The hope is that technological and neuroscience innovation advances can leverage science to extend access and effectiveness of mental healthcare while also honoring ethical and equity ideals.

Conclusion

Although the current crisis in youth mental healthcare is dire, significant improvements are within reach. Effective strategies to improve access and effectiveness of care are known, but many require shifting preconceptions of when, what, where, how, and by whom care is delivered. What is needed is improved integration of science-backed knowledge in practice and policy. This integration can be facilitated by strong, mutually beneficial collaborative partnerships among all interested stakeholders (e.g., policymakers, healthcare administrators, educators, clinicians, advocates, community leaders, and patients). To tackle this crisis, we need the synergistic impact of all of these perspectives. If science-backed strategies are deployed with respect for the foundational humanistic ideals of equity, compassion, and respect, we have enormous potential to reduce suffering and improve quality of life.

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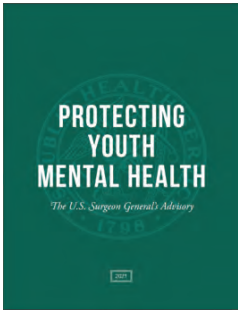
"Ultimately, for all that research has shown about the risk factors associated with poor youth mental health, it is impossible to paint a precise portrait of why youth mental health indicators have declined so precipitously. What is clear is that no single intervention will reverse current trends."

– THE ASPEN HEALTH STRATEGY GROUP

Image Citations

P. 17: From WHO's Determinants of Adolescent Health Development: An Ecological Model, 2014 and Bronfenbrenner & Ceci (1994)



P. 43: From US Surgeon General's Advisory, 2021 https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf

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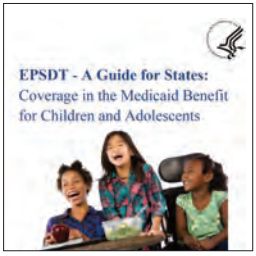

P. 85: "EPSDT - A Guide for States: Coverage in the Medicaid Benefit for Children and Adolescents," Centers for Medicare & Medicaid Services (CMS) in collaboration with NHeLP under subcontract to the NORC at the University of Chicago. https://healthlaw.org/resource/epsdt-a-guide-for-states-coverage-in-the-medicaid-benefit-for-children-and-adolescents/

P. 93: Integrated Care for Kids (InCK) Notice of Funding Opportunity. https://www.cms.gov/priorities/innovation/files/slides/inck-nofo-application-slides2.pdf

P. 95: 988 Suicide and Crisis Lifeline https://988lifeline.org/

P.125: Generated from Freepik https://freepik.com

P. 127: Family Educational Rights and Privacy Act (FERPA), Centers for Disease Control and Prevention https://www.cdc.gov/phlp/php/resources/family-educational-rights-and-privacy-act-ferpa.html#

P. 128: Governor Nikki Haley at Children's Mental Health Awareness Week Rally. (Official Governor's Office Photo by Camlin Moore) May 4 2016

ADDRESSING THE CHILD AND ADOLESCENT MENTAL HEALTH CRISIS

A Report of the Aspen Health Strategy Group

The mission of the Aspen Health Strategy Group (AHSG), an initiative of the Health, Medicine & Society Program at the Aspen Institute, is to promote improvements in policy and practice by providing leadership on complex health issues. AHSG brings together senior leaders representing a mix of influential sectors, including health, business, philanthropy, and technology, to tackle a single health issue annually through year-long, in-depth study. Co-chairs are Kathleen Sebelius, 21st US Secretary of Health and Human Services and former Governor of the State of Kansas, and William Frist, former US Senator from Tennessee and former Senate Majority Leader.

The topic of AHSG's ninth annual report is addressing the child and adolescent mental health crisis. This compilation opens with a consensus report based on the group's in-depth learning process, followed by a set of background papers. Taken together, these materials describe the risk and protective factors associated with youth mental health and offer ideas to advance evidence-based approaches for tackling the current crisis.

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