

Children's mental health: The right care today for a healthier tomorrow

Magellan Healthcare white paper

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Our nation's youth are facing a mental health crisis. Mental health issues in children and adolescents were becoming more prevalent even before COVID-19 [1], and the widespread adversity they experienced during the pandemic exacerbated these challenges to critical levels. Because of the spiraling rates of emotional and mental health issues experienced by youth in the United States, a national state of emergency in children's mental health was recently declared by the American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry and Children's Hospital Association [2], and the White House issued a Fact Sheet to raise awareness about these concerns [3]. Additionally, the U.S. Surgeon General issued an official Advisory recommending swift and coordinated societal changes that will support and ultimately improve the mental health of our nation's children and adolescents [4]. As a leader in children's mental and behavioral health for over 30 years, Magellan Healthcare joins our nation's healthcare leaders in drawing attention to and developing solutions to address this crisis [5]. We are taking action to identify and mitigate child and adolescent mental health challenges via our multifaceted, evidence-based model of care.

Context: The mental health of children and adolescents in the U.S.

Mental health issues have long been a leading cause of disability for children and youth on a global basis [6, 7, 8, 9], and they are the most costly pediatric health condition in the U.S. [10]. Even prior to COVID-19, the prevalence of a variety of mental health conditions was increasing in American children and adolescents, including attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), depression and anxiety [1, 11, 12, 13, 14, 15]. Up to one in five children and adolescents were experiencing a mental health condition annually [16, 17], and two in five experienced a mental health condition at some point before reaching adulthood [18, 12].

COVID-19 has accelerated these trends. As families experienced job losses, financial hardship, COVID-related illness and deaths, school closures and social isolation, mental health issues in children and adolescents became more prevalent and severe [19]. By October 2020, almost one-third of parents reported that their child's emotional health was worse than before the onset of the pandemic and two-thirds indicated that their child had recently experienced a mental or emotional challenge [20]. Additionally, only one-third of high school students felt they were able to cope with the stress they were experiencing; 83% reported having at least one stress-related physical health symptom [21]. Young people who already had mental health conditions were most vulnerable to pandemic-related mental health challenges; for example, adolescents with prior major depressive episodes were more likely than those without to report the pandemic negatively affected their mental health "quite a bit or a lot" [22]. Suicidal ideation in young people also increased, and many states experienced increases in adolescent suicide deaths [23, 24].

Together, these alarming trends prompted numerous organizations to shine a spotlight on the mental health challenges experienced by our nation's youth. The White House released a Fact Sheet [3], the US Surgeon General issued an official Advisory [4], and a National State of Emergency in Children's Mental Health was declared by leading pediatric healthcare organizations [2]. All agree: the mental health of our nation's youth is in crisis.

Magellan's role in improving children's mental health

The 2021 declarations of a children's mental health crisis by leading children's health organizations were prompted by the recent acceleration of longstanding trends [2, 3, 4]. However, since our inception, the mental and emotional wellbeing of children has been a primary focus area of Magellan in managing behavioral healthcare. With our more than 50 years of experience collaborating with state and local agencies, we have developed innovative and successful behavioral health programs for children and their families. In partnering with state Medicaid agencies, county leaders and other stakeholders, we have built, expanded, and strengthened services for children and adolescents. We currently serve over 1.1 million lives across eight state Medicaid agencies and 14 different customers. Magellan's model of children's mental healthcare is multifaceted. It encompasses a broad spectrum of pediatric and adolescent mental health needs and services, from prevention and collaborative primary care to specialized and intensive care of children with complex behavioral health challenges.

Prevention and early identification

Addressing child and adolescent mental and emotional health issues early alleviates and curtails suffering and enables young people to learn, grow and lead long, healthy, and vibrant lives. Magellan's prevention and early identification solutions are built around the strong body of evidence that mental health challenges in childhood often lead to adverse mental health outcomes in adulthood [25, 26, 27, 28, 29]. Accordingly, early identification and appropriate mental healthcare during childhood and adolescence not only improve wellbeing during youth [30], but may also prevent or mitigate future mental health issues that are prevalent in adulthood [29, 31].

Supporting and partnering with primary care

More than 90% of children in the U.S. visit a primary care physician (PCP) at least once a year [32], so PCPs are well-positioned to play a vital role in the early identification of mental health issues. However, to effectively play this role PCPs need the appropriate tools. Magellan arms PCPs with the award-winning Primary Care Physician Toolkit [33, 34], which includes numerous evidence-based screening tools that enable PCPs to identify pediatric mental health symptomology and assign accurate diagnoses, including valid and reliable measures of:

- General psychosocial functioning and emotional/behavioral problems: The Pediatric Symptom Checklist (PSC-17) [35]
- ADHD symptoms: The Vanderbilt ADHD Diagnostic Parent Rating Scale (VADARS) [36]
- Anxiety symptoms and anxiety-related disorders: The Screen for Child Anxiety Related Disorders (SCARED) [37]
- ASD symptoms: Modified Checklist for Autism in Toddlers, Revised with Follow-up (M-CHAT-R/F) [38]
- Depression symptoms: Center for Epidemiological Studies Depression Scale for Children (CES-DC) [39]
- Suicidal ideation: The Columbia Suicide Severity Rating Scale Screen, version for children (C-SSRS) [40, 41]

The toolkit also facilitates the provision of high-quality collaborative care by supplying PCPs with evidence-based clinical practice guidelines. The actionable information contained within the toolkit guides the PCP through workflows, referrals, care management and psychiatric consultations. Further, the toolkit includes industry best Healthwise educational resources for PCPs to share with adolescents and parents [42].

In addition to their important role in screening children for and educating families about mental health issues, PCPs have long been the leading prescribers of psychotropic medications for children [43], and some PCPs reported increasing pediatric psychotropic prescribing during COVID-19 [44]. However, the majority of physicians surveyed by the American Academy of Pediatrics reported that a barrier to providing care to children/adolescents with mental health problems was a lack of confidence in treating these patients with medications, and even more reported a lack of training in this area [45]. Consequently, Magellan's impressive team of psychiatrists, mental health clinicians and pharmacists has provided PCPs and other clinicians with critical information through the recently updated clinical monograph, *Appropriate Use of Psychotropic Drugs in Children and Adolescents: Important Issues and Evidence-Based Treatments* [46]. This compendium of vast evidence-based research on current pediatric pharmacological mental health treatment and potential alternatives is packaged into a single, accessible resource for providers.

School-based collaboratives

Children and adolescents spend a considerable amount of time in school, so schools play a significant role in meeting the mental health needs of young people [47]. The student population is heterogeneous, with widely varying behavioral health needs. Given this variation, a best-practice in developing school-based mental health-related programs is to organize the supports and services into a three-tiered structure called a "Multi-Tiered System of Supports" (MTSS) [48, 47]. The first tier involves a foundation of universal mental health supports and prevention activities that benefit all students (e.g., widespread screening, prevention-based school activities, social-emotional-based curricula, and development of and teaching positive classroom norms). The second tier involves more targeted activities for students exhibiting risk factors, with the goal of reducing the likelihood of issues developing or resolving early and non-severe emotional, behavioral, and/or social issues. Third-tier services are individualized and focused on students actively experiencing mental health issues and may also incorporate family-based mental health treatment [47, 48]. Providing tier-three services within schools facilitates access to care, particularly in underserved groups [49], and in recent years the use of such services has been increasing [50].

While school districts, teachers and other school staff members are typically well-positioned to carry out prevention activities, identify changes in students' behavior, and conduct screening and tier-two level interventions for at-risk students, they are often not equipped to provide indicated treatment for students with more intensive mental health needs. Consequently, a collaborative care approach is warranted. Collaborative care involves structured service provision processes that incorporate a variety of specialists, including persons in non-clinical roles [51]. Magellan has extensive experience partnering with school districts and other agencies and stakeholder organizations to implement multi-tiered school-based mental health collaborative care programs, which are designed in accordance with the University of Washington Collaborative Care in School model. This innovative approach to integrated mental health service delivery focuses on reducing access barriers by enhancing community partnerships; increasing service accessibility; integrating mental health, primary care, and educational providers and services; and improving service quality through increased use of evidence-based practices by school-based practitioners [51, 52].

For example, enormous strides have been made in school districts within two contiguous counties in northeast Pennsylvania. In 2019, Magellan Behavioral Health of Pennsylvania, the Medicaid Behavioral Health Managed Care Organization (BH-MCO) for the counties, collaborated with the school districts to study students' access to mental health services. The collaboration identified that over 80% of children referred for assessment through the school districts' student assistance program, to which students could be referred when concerns arose [53], met the clinical criteria for outpatient counseling. Given these findings, a school-based collaborative was formed. Magellan partnered with the schools to co-locate mental health providers within school buildings to make them more accessible to the students and families covered by Medicaid.

Additionally, Magellan facilitates a learning community in which school district administration, mental health providers, county human services agencies, and Magellan meet bi-monthly to collaborate, coordinate and improve services to Medicaid-eligible families. Together, the collaborative ensures that children and adolescents receive mental health support across all tiers: prevention, early identification, and treatment.

The northeast Pennsylvania collaborative has achieved notable success:

- The number of provider clinics co-located within schools grew from 80 in calendar year 2020 to 115 in calendar year 2021, a 44% increase.
- A wide range of students, aging from 2 to 20 years, have participated.
- Students with a myriad of mental health conditions were identified and treated in the school-based clinics. The most common conditions treated were trauma and stressor-related disorders, ADHD, depressive disorder, ASD, and anxiety disorders. Other mental health conditions were also treated, including bipolar disorder, substance use disorders and schizophrenia spectrum disorders.
- Providers who are co-located within the schools reported impressive clinical and operational outcomes, as illustrated by the video [here](#).
- Community and school district partners expressed satisfaction with the program and gratitude for Magellan's involvement. One of Magellan's partners [54] said the program gave children and their families "the ability to have their mental health needs met at various points of the treatment continuum with very little to no disruption to their families and/or their school setting." They explained that Magellan has "... become a critical partner in the mental health service delivery landscape. We believe they understand the needs of our community, have immersed themselves in our community, and are constantly looking for ways to partner and improve our community."

Magellan Youth Leaders Inspiring Future Empowerment (MY LIFE)

For youth who have experienced or are experiencing mental health-related challenges, discussing their challenges with a supportive peer group can improve social inclusion and self-awareness while facilitating empowerment and personal growth. These activities align with recovery-oriented principles and are associated with recovery. In addition, open and affirming discussions between young people about the lived experience of mental health issues can also counteract the social stigma associated with mental illness [55, 56]. This de-stigmatization enables other youth to get help when warranted. To these ends, Magellan developed MY LIFE, the award-winning program which provides young people with a venue in which they can share, offer, and receive emotional and informational support. Founded in 2008, MY LIFE is for youth between the ages of 13 and 23 who have experience with mental health, substance abuse, juvenile justice, or foster care-related issues. Through regular meetings, special events, performances, social media, and local and national presentations, youth share their stories and support each other in their recovery goals. MY LIFE activities are presented in partnership with our state and local partners, and numerous other youth-serving systems, groups, and local organizations. To date, more than 500 MY LIFE meetings and events have taken place across the nation, inspiring thousands of youths and adults alike [57]. Most recently, in response to COVID-19 Magellan launched the *Stay Home for MY LIFE* virtual youth fest series featuring inspirational speakers, uplifting entertainment, fun activities and more [58]. Recordings of the events are available [here](#).

MY LIFE provides youth-led platforms for suicide prevention, leadership development, and peer support workforce development. Activities have included participating in screenings of *My Ascension*, a documentary about youth suicide and suicide prevention [59]; speaking and sharing at schools, detention centers, community events, and Boys and Girls Clubs; and presenting at the National Federation of Families, among other conferences [57].

The MY LIFE program and *Stay Home for MY LIFE* events have had a marked impact on the lives of young people:

- According to one former MY LIFE attendee who went on to become a professional peer support specialist, “MY LIFE was a very pivotal, important thing for me in my recovery, at a time in my life when I was probably at my most isolated and lonely” [58].
- 83% of the youth participating in *Stay Home for MY LIFE* events reported feeling more hopeful about the future, and 77% reported feeling less alone [58].

Children with complex behavioral health needs

The vulnerable population of children and adolescents enrolled in the Medicaid program is of particular concern to Magellan, and we have a myriad of programs designed to support this group. Children and youth in Medicaid experience the highest levels of complex behavioral health needs, which may be in conjunction with physical comorbidity and intellectual and developmental disabilities (I/DDs). According to the 2019 National Survey of Children’s Health, 49% of children in Medicaid/CHIP have a behavioral disability, including [60]:

- 30% who have a chronic physical and behavioral health condition
- 26% who have a behavioral health condition and I/DD
- 18% who have all three types of conditions

Further, 54% percent of children who qualify for Medicaid in addition to private insurance (i.e., based on disability or medically needy eligibility) have a behavioral disability, including [60]:

- 34% who have a chronic physical and behavioral condition
- 37% who have a behavioral health condition and I/DD
- 25% who have all three types of conditions

Medicaid eligibility covers youth with specific multi-system involvement, such as foster care and juvenile justice. By virtue of removal from birth family, a youth in foster care or juvenile detention has experienced the trauma of family separation in addition to experiences leading up to the removal.

The National Traumatic Stress Network found that over 70% of foster children have complex trauma and more than 1 in 10 have five or more trauma types [61]. It is estimated that 80% of children in foster care have significant mental health issues, compared to 18–22% of the general population [62]. Children in foster care have higher rates of psychiatric disorders, including ADHD, post-traumatic stress disorder and reactive attachment disorder. Children in foster care receive psychotropic medications at a rate three times higher than children who are not in foster care [63].

Studies of youth who have been in detention have found up to two thirds of males and three-quarters of females with at least one mental health disorder and one in ten meeting substance use disorder criteria. These disorders impacting self-regulation and impulsivity increase risk of engaging in aggressive behaviors. Up to a third have been studied to have a diagnosis of posttraumatic stress disorder [64].

Finally, the largest portion of children and youth are eligible due to financial need, or children experiencing the physical and emotional stressors of social determinants of health. National data unequivocally documents significant associations of early childhood mental, behavioral, and developmental disorders (MBDDs) with sociodemographic, health care, family, and community factors; poor parental mental health;

difficulty getting by on the family's income, childcare problems (among parents of children aged 2–3 years); and lacking a medical home [65]. The impacts of discrimination, pollution, poverty, and lack of access to healthy food, quality early childhood education, and neighborhood activities are just beginning to be understood in causality and complication of poor behavioral health. The impact of chronic stress on brain development is both extensive and still being understood [66].

Through federal waivers, states turn to alternative financing options to design innovative community-based Medicaid services that meet the complex needs of children and youth, including those with serious emotional disturbance (SED), serious mental illness (SMI), I/DDs, co-occurring substance use, multiple functional impairments, and multi-system involvement. Waivers under social security authorities 1915(c) home and community-based services (HCBS) and 1115(a) research and demonstration projects enable states to target eligibility of complex populations and include non-traditional therapeutic services, such as respite, peer, family and child skill building, and adjunctive therapies such as music, art, and occupational therapies for sensory interventions.

Magellan partners with states to meet the needs of their children and youth with complex behavioral health needs with programs such as:

- Specialty qualified evaluator networks for youth whose needs cannot be met in their own home or a foster home, potentially qualifying them for qualified residential treatment programs (QRTPs) under the Family First Prevention Services Act [67, 68, 69]
- Transition to Independence Process (TIP) for youth and young adults with SMI and multi-system involvement [70]
- Coordinated specialty care (CSC) programs for youth with first episode psychosis [71]
- The Matrix Model and juvenile justice specialty programs for youth who have substance use disorders [72]
- Specialized networks for child welfare-involved youth and families, including Functional Family Therapy and Parent-Child Interaction Therapy (PCIT) [73, 74]
- Specialized services for juvenile justice-involved youth, including mental health court, sexual offender residential programs and Multisystemic Therapy (MST) [75, 76]
- Home- and community-based rehabilitation services for children with social-emotional disturbance and intellectual disabilities, including behavioral consulting, family therapy, case management and multi-disciplinary care teaming
- Home- and community-based autism services, including functional behavioral analysis, applied behavioral analysis and sensory therapies
- Wraparound as an intensive care coordination model for multi-systemic involved youth at risk of out of home placement or residential services (discussed in greater detail below)

Residential treatment and alternatives

A spectrum of behavioral health treatment services, ranging in level of intensity, exists to meet the varying needs of America's diverse child and adolescent population experiencing mental health or emotional disturbance issues [50]. For over three decades, Magellan has been dedicated to facilitating access across this broad spectrum of pediatric care, while ensuring that youth receive evidence-based services in the least restrictive and most therapeutic settings available. Residential treatment programs, wherein children temporarily live outside of their home to receive care [77], are a necessary part of the care continuum for a small proportion of youth with serious mental and emotional problems. However, evidence-based intensive

home- and community-based care is an important alternative to residential treatment. This care—that does not remove young people from their families, schools, and communities —has been recognized as both less costly and more appropriate for most young people with significant mental health or emotional issues [78, 50]. Unfortunately, in many states it has been challenging for youth and their families to access high-intensity community-based services when this care is warranted [50, 79, 80, 81].

Magellan has served as a thought leader in responding to the challenges related to children’s residential treatment programs and community-based alternatives to residential care. Our clinical monograph, *Perspectives on Residential and Community-Based Treatment for Youth and Families*, provides an overview of the evidence-based research in this area [82].¹ In addition, we have partnered with numerous states and local agencies to develop and implement programs designed to meet these goals:

1. Provide children and families with coordinated access to comprehensive systems-oriented community-based services when an alternative to residential treatment is appropriate
2. When residential treatment is requested for a child or adolescent, ensure that such care is necessary and evidence-based

Residential treatment assessment and management

In recent years, residential care for children and adolescents has been viewed as problematic [79]. Such treatment is restrictive for the youth and costly to Medicaid. While federal policy and family preferences necessitate that youth receive care in the least restrictive environment possible [79, 81], there is a minority of young people for whom high-quality, evidence-based residential treatment remains the best and most appropriate choice [83]. Magellan has developed solutions to address the challenges of residential care for these children and adolescents.

Magellan’s residential treatment solutions for children and adolescents are based on findings in two research areas. First, long lengths of stay for residential care may not always be warranted. On average the most dramatic treatment gains occur during the first month of these programs [84, 85, 86]. While improvement may continue beyond that point, the improvement in later weeks is less marked and decreases over time [84]. This improvement trajectory suggests that a transition to treatment in a less restrictive environment after a relatively short initial period in residential care may be warranted for some young people. Second, the mental and emotional health gains made by children while in residential treatment may be lost post-discharge if families are not involved in the residential care or if follow-up treatment is lacking [87, 88], so a coordinated, ecological approach to residential treatment is critical.

Magellan’s evidence-based residential care solutions preserve the availability of such care for children and adolescents whose complex needs necessitate intensive, restrictive treatment, while at the same time ensuring that the residential care received is of high quality.

Independent Assessment, Certification and Coordination Teams (IACCTs)

Magellan of Virginia’s evidence-based program takes a coordinated, family-focused approach to residential treatment. We serve as the single point of entry for children and adolescents at risk of admission to residential treatment. All requests for Medicaid-funded residential admissions must be reviewed by a Magellan-led Independent Assessment, Certification and Coordination Teams (IACCTs). This team collaborates to gather medical and behavioral health records and other information that will guide care decisions. The team consists of, at minimum, a Magellan care manager, the family/guardian(s), the child’s physician(s) and

1. Updates to this monograph are underway. Once complete, the newest version will be available at <https://www.magellanhealthcare.com/for-states/childrens-services/childrens-models/>

a licensed mental healthcare professional. When appropriate, the team includes other providers who have treated the child, representatives from the child's school and persons from other organizations involved in the child's life. The youth and parents/guardians play an important role on the team, identifying strengths and needs, setting goals, expressing preferences, and identifying natural supports. Magellan offers families the additional resource of a family support partner who may also participate as part of the team. The family support partner is a trained employee of Magellan who has lived experience as a parent of a child with behavioral health challenges. In addition to having a care coordination role on the team, the family support partner advises the family/guardian on processes and services and advocates for the child's needs.

Together, the team develops an appropriate plan of care to meet the individualized needs of the child and family; the care plan may involve residential treatment or community-based alternatives. In the case of the latter, the team will provide referrals and/or connections to the youth's Medicaid managed care organization for care coordination. When residential care is appropriate, members of the team assist with securing appropriate placement and will remain involved throughout the residential treatment process. The team provides oversight, assessment, and comprehensive multi-system care coordination at the care planning stage, periodically over the course of the child's treatment and with the post-discharge transition of care. In 2020, 1,920 youth were served in this team-based program.

Magellan's team-based approach has achieved notable success, as measured through the Child and Adolescent Needs and Strengths (CANS) instrument to support care-planning and monitor outcomes [89]. Based on changes in CANS data for caregivers of 62 young people discharged between 2017 and 2019 with a transition CANS, the program was associated with improvement in multiple caregiver domains:

- Of caregivers experiencing a serious mental health or substance use issue that might limit their capacity for parenting/caregiving at baseline, 50% had a resolution of the issue as of the discharge assessment (6% of caregivers experiencing issue at initial, 3% at discharge).
- Of caregivers with challenges related to their ability to participate in or direct the organization of the household, services, and related activities at baseline, 67% had a resolution of the issue as of the discharge assessment (10% of caregivers experiencing issue at initial, 6% at discharge).
- Of caregivers with challenges related to their ability to maintain the child/youth's safety within the household at baseline, 50% had a resolution of the issue as of the discharge assessment (6% of caregivers experiencing issue at initial, 3% at discharge).
- Of caregivers with challenges related to housing stability at baseline, 33% had a resolution of the issue as of the discharge assessment (5% of caregivers experiencing issue at initial, 2% at discharge).

Additionally, families choosing to include a Magellan family support partner on their care team experienced enhanced outcomes. Youth with a family support partner experienced 85 fewer days in residential treatment, as the average number of days spent in residential for all youth in the program was 295 days and the average number of days for the subset of those with a family support partner was 210.

Intensive residential treatment facilities (IRTFs)

Magellan Behavioral Health of Pennsylvania's evidence-based approach to residential treatment is focused on reducing the duration of traditional long-term residential stays for children and adolescents, while better supporting families in caring for their children's needs in the home and community. We carry out our Intensive Residential Treatment Facilities (IRTFs) program in partnership with the Building Bridges Initiative (BBI), an organization that works to identify and promote best practices and policy in youth residential care [90]. With cooperation from numerous counties in Pennsylvania, Magellan entered into value-based contracts with select residential providers to implement our intensive residential treatment model.

The program involves four key components, which align with BBI practice principles:

1. *Small team-based caseloads.* Care is managed by a master's level clinician and bachelor's level case manager who work together as a team with a small caseload of children or adolescents. While team caseloads vary by facility and acuity, the maximum is typically between four to seven children or adolescents.
2. *Meaningful family involvement.* Therapists provide family therapy at the facility and/or within the home environment. Frequent home passes and overnight visits for the child or adolescent are available and encouraged as these offer opportunities for youth and families to practice in their home environment what they've learned in the program and identify specific gaps on which to work upon returning from a pass.
3. *Community involvement and services.* Through discharge planning for aftercare, the care management team provides new and strengthened connections to local resources and supports, including but not limited to outpatient mental healthcare services, support groups and social programs (e.g., food pantries). The child's/adolescent's involvement in community programs (e.g., local sports teams, Boys Scouts and Girl Scouts, Boys & Girls Clubs) is facilitated and supported by facility staff in these settings, enabling their post-discharge involvement in typical community activities.
4. *Discharge planning.* Once the youth is discharged, the care management team continues contact with the family for 30 to 60 days, ensuring care continuity and providing additional supports when needed.

Program fidelity to best practices is systematically monitored, as is treatment progress made by the children and adolescents participating in the program. The IRTF program is associated with impressive outcomes, as revealed by claims data for 97 young people discharged between 2017 and June 2021:

- *A 74% reduction in acute inpatient admissions.* Discharged young persons experienced 148 acute inpatient admissions in the 180 days prior to their enrollment in the program, while they experienced 39 acute inpatient admissions in the 180 days post-discharge.
- *A 40% reduction in per member per month (PMPM) behavioral health spending.* In the 180 days prior to enrollment in the program the behavioral health claims paid were \$9,801 PMPM, versus \$5,892 PMPM in the 180 days post-discharge.

Systems of care with wraparound: An evidence-based alternative to residential treatment

While residential treatment is appropriate for a minority of youth, this setting is associated with negative iatrogenic effects for others [91]. Further, families and policymakers generally prefer less restrictive community-based alternatives that enable young people to remain with their families and in their schools and communities [79, 81]. However, accessing and coordinating intensive community-based care can be a challenge [50, 79, 80, 81]. Children and adolescents with serious emotional impairment and/or mental health issues often have needs that involve multiple domains and settings. Consequently, care and support must be coordinated across multiple distinct systems, including local and state agencies focused on education, juvenile justice, mental and physical healthcare, public health and child welfare, social determinants of health, among others [81]. Community-based programs that address the need for multi-system coordination are called "systems of care" [92, 93]. In addition to incorporating multi-system coordination and a spectrum of community-based services, systems of care involve meaningful partnerships with families and youth while addressing their cultural and linguistic needs [93]. Evidence-based systems of care are effective in stabilizing children and adolescents within their homes and communities, as well as improving clinical functioning [81, 94]. Numerous Medicaid funding mechanisms can be leveraged to develop such systems [81]. Magellan has extensive experience developing and implementing Medicaid-funded systems of care that align with clinically oriented best practices.

For each youth and their family entering a system of care, Magellan employs an evidence-based process called “wraparound” [95], which is recognized by the Prevention Services Clearinghouse as having an evidence-basis that meets Family First Prevention Services Act requirements for federal Title IV-E funds [96, 97, 98]. The wraparound process yields an individualized plan of community services and supports that are selected with positive outcomes in mind [99, 95]. Magellan ensures that community services and formal and informal supports are “wrapped around” the youth and family while they remain in their home environment. In accordance with the wraparound philosophy, Magellan’s process is strengths-based and youth- and family-centered. At the same time, it is coordinated across agencies and outcome-driven [99, 100, 95]. Magellan’s wraparound programs provide vulnerable children/youth and their families with the right support and services, at the right level of intensity, at the right time, for the right amount of time, from the right provider. In doing so, we enable children and youth with serious mental health and behavioral challenges to remain in their homes and communities.

While Magellan customizes Medicaid-funded system of care/wraparound programs to meet the specific needs and requirements of each state, we ensure that our programs consistently incorporate the following key elements as outlined by the National Wraparound Initiative [95]:

- *Community partnerships.* Magellan ensures that representatives of key stakeholder groups, including families, young people, agencies, providers, and community representatives all collaborate to plan, implement, and oversee wraparound as a community process. We employ health plan liaisons who facilitate smooth transitions and coordination of care so that that children’s medical and behavioral health needs are met. We also employ system liaisons who work with state, county and local departments of health, children and family services organizations, juvenile justice and law enforcement agencies, disability services organizations and agencies, and other system participants to forward the wraparound model.
- *Collaborative action.* Magellan brings together stakeholders involved in the wraparound effort. In partnership with Magellan, stakeholders work together to translate the wraparound philosophy into concrete policies, practices and achievements that work across systems. Magellan listens to state and local agencies and providers and takes action to address barriers and create policies that support best practices.
- *Fiscal policies and sustainability.* Magellan partners with communities to develop fiscal strategies that support and sustain wraparound and better meet the needs of participating children/youth and their families. Magellan develops innovative reimbursement models that reward excellence in practice and positive outcomes.
- *Access to needed supports and services.* Magellan’s community partnerships and broad provider networks facilitate access to the wraparound process as well as to the services and supports that are necessary to fully implement wraparound plans. Magellan maintains and grows its robust network of waiver-funded service providers and works collaboratively with state agencies to increase access and improve quality of care.
- *Resource development and support.* Magellan’s approach recognizes that wraparound and partner agency staff must be supported to fully implement the wraparound model. Magellan ensures that staff have the training, skills and competencies needed to fulfil their roles with annual recertification trainings by wraparound-certified trainers and coaches.
- *Accountability.* Magellan partners with states to ensure that the right children/youth are enrolled in wraparound, and we monitor wraparound fidelity, quality, and outcomes. Eligibility for wraparound programs requires meeting thresholds based on standardized assessment tools used by independent, non-Magellan assessors. Additionally, Magellan staff compare clinical assessments and documentation to these independent assessments to ensure reliability. Further, a standardized Wraparound Fidelity Index tool is used to conduct comprehensive program evaluations; as part of this process, Magellan’s fidelity assessment results are compared against national benchmarks [101].

Magellan's experience in these areas is invaluable to states. Systems of care with wraparound are complex to develop and implement because they are, by definition, flexible. At the individual level, each child/adolescent has a customized wraparound plan. At both the individual and systems level, multiple youth- and family-serving systems and agencies are involved [102]. Relationships within a system of care must be built and consistently maintained across sectors and providers, and fidelity to the wraparound model is strongly associated with positive outcomes [103, 102]. Magellan has over a decade of experience partnering with states, local agencies and organizations, providers, and other stakeholders to develop and implement high-quality, evidence-based, and comprehensive systems of care and wraparound programs that efficiently and effectively leverage Medicaid waiver funds. Further, Magellan's Care Management Entity approach to wraparound helps ensure that state programs maintain fidelity to best practices of the wraparound model of care [102]. Consequently, we have consistently observed positive outcomes with our state wraparound programs.

Louisiana Children's Coordinated System of Care (CSoC)

Magellan of Louisiana is the administrator of the Coordinated System of Care (CSoC), a system of care with wraparound for children and youth with serious mental health and substance use challenges. Magellan partnered with the Louisiana Department of Health to develop this program [104], which is funded by Centers for Medicare and Medicaid Services (CMS) 1915c and 1915b(3) waivers. Since 2012, more than 19,000 children and youth ages 5 to 20 have participated. Within the program, Magellan collaborates with nine Louisiana regions with varying cultural makeups and provider bases.

Magellan is responsible for the coordination and management of specialized Medicaid behavioral health benefits and services to Louisiana children and youth who meet the program eligibility criteria, which is specified within the CMS-approved waiver [104]. Specialized services are provided by family care coordinators, family support partners, and/or youth support partners, including parent and youth support and training, and independent living/skills training. Respite services and flex funds are also available to enrollees' families. Young persons enrolled in the program are eligible for all standard state Medicaid plan services, excluding multi-systemic therapy.

The Magellan-administered Louisiana system of care has produced significant results. The Child and Adolescent Needs and Strengths (CANS) assessment tool is used to guide program interventions and assess outcomes [89]. Based on data from 6,982 discharged episodes of wraparound care between January 2017 and December 2021:

- 78% of participants experience improvement in at least one area of clinical functioning
- 69% experience improvement of five or more points, wherein a one-point change is a meaningful change.
- Overall scores from first to last assessment improved an average of 23%, a statistically significant change (Mean 65.13 vs. 49.99; $t = 69.35$, $p < 0.001$).
- On average, improvement was observed in all CANS domains: Caregiver Strengths and Needs; Life Functioning; Youth Behavioral/Emotional Needs; Youth Risk Behaviors; and Youth Strengths.

Wyoming Care Management Entity (CME) program

Magellan collaborated with the State of Wyoming and Wyoming Department of Health to design and implement a system of care with wraparound called the Care Management Entity (CME) program. This program is funded by concurrent CMS 1915c and 1915b(3) waivers and was implemented in 2015 [105]. Each year since, Magellan has served between 328 and 494 Wyoming children/youth ages 4 to 20. As administrator of this program, Magellan provides wraparound, respite, flex funds, youth peer support, parent

support, and youth and family training across the state. We also train, coach and certify providers in the wraparound model of care. Because of the geographic span of the state and its predominantly rural makeup, Magellan has taken an innovative home-based approach in the program, coupled with our strong provider network, to enable access for families in many remote regions.

We have observed notable cost-saving and satisfaction outcomes in our CME program:

- Costs for the child/youth participants are markedly lower than for those in residential care, despite their meeting the clinical criteria for residential treatment. While the average annual cost to Medicaid for a young person in a psychiatric residential treatment facility in Wyoming was \$47,045, the average annual cost for wraparound was \$21,482, based on Wyoming fiscal year 2020 data [106].
- Youth and families report high satisfaction with their wraparound experiences:
 - One mother of a program graduate said "I finally have a team who will not give up on us and see that my son is not this 'bad' kid that needs to be sent away. They see us as a family who overcomes challenges we are facing."
 - While the national average for caregiver satisfaction was 79.9%, caregiver satisfaction for our program based on data collected from January to June 2021 was 86.1% (N=24). Youth satisfaction was 82.7% (N=19), above the national average of 76.7% [101].

Fidelity is the extent to which an intervention follows a program model. The positive outcomes observed in the Wyoming program likely stem from its above-average fidelity with the best practices of the wraparound program model. Based on data collected from January to June 2021 [101]:

- The caregiver fidelity score in Wyoming was 79.5%, compared to the national average of 72.0%.
- The youth fidelity score in Wyoming was 76.8%, compared to the national average of 69.3%.

Innovative solutions

Further to Magellan's long-standing programs with proven outcomes, we are continually innovating and launching new evidence-based programs with the expectation of future reporting on positive outcomes for the youth and families served.

Infant and early childhood mental health consultancy (IECMHC)

Through this model, we provide a prevention-based approach to mental healthcare in the settings where children learn and grow, such as childcare, preschools and home visiting programs, by pairing a mental health consultant with a background in child development, trauma and strengths-based care with early childhood educators [107]. The goal is to facilitate healthy social and emotional development in the children by addressing impacts of stress, trauma, and mental health conditions, and increase parent's/caregiver's understanding of their young child's emotional development and other needs. IECMHC has been shown to improve caregiver stress and children's social skills and reduce children's challenging behaviors. In 2022, Magellan was funded by the Preschool Development Grant to develop an IECMHC practice model and sustainable prevention program in the state of Wyoming.

Technology-based solutions: Teaching emotional regulation via gaming

Supported by National Institute of Mental Health funding [108], Magellan partnered with Neuromotion Labs and Mightier to examine the impact of Mightier video games on improving the lives of children with a broad range of mental health conditions, such as ADHD, anxiety and oppositional defiant disorder (ODD). Developed at Boston Children's Hospital and Harvard Medical School, Mightier is a clinically proven

biofeedback video game for teaching emotional regulation. It is intended for use by children ages 6 to 14 who are struggling with irritability, aggression, and anger, or diagnosed with ODD, ADHD, ASD or general anxiety disorder. Mightier pairs video games with clinically validated emotion-calming skill building to help children learn through play. Caregivers receive access to a personalized dashboard to track progress, the Mightier caregiver community, and 1-1 coaching with a licensed, master's-level clinician to tailor the program to their individual family needs. In an initial pilot, 80% of children with ASD who used Mightier reported improvement of primary symptoms, compared to only 50% in the control group, after only 12 weeks of use [109].

As an extension of our On To Better Health platform for adults, Magellan developed educational digital cognitive behavioral therapy programs to teach children how to deal with anxiety. Incorporated in ThinkHeroSM for ages 6 to 11 and ThinkWarriorSM for ages 12 to 17 is:

- A pediatric Smart Screener to be completed by the child and their identified healthcare provider
- A series of nine interactive, self-paced lessons to help the child become self-empowered, learn life-long skills for managing anxiety, recognize and alter unhelpful thought patterns, and participate in situations they tend to avoid

The child identifies a natural helper such as a parent, who has access to the platform, to support, encourage and reward the child as they learn new skills.

Family and youth peer support

In our family- and youth-driven wraparound and other programs, we incorporate the lived experience of parent and youth peer support specialists, self-directed care and flex funds, and family and youth focused treatments. We have family and youth peer support specialists embedded in our staffing, such as the team of nationally certified family support coordinators in Virginia, described above, as well as our networks. We have piloted self-directed care for children with autism and have flex funds built into our wraparound models to support plans of care. We support family involvement at all levels of care, from outpatient family therapy to residential treatment. We endorse and train our staff on the Building Bridges Initiative standards of family involvement for youth in residential treatment [110, 90].

Conclusion

When describing the alarming increases in U.S. children's mental health issues in recent years, the Surgeon General's Advisory stated that "... everyone has a role to play in combating this mental health pandemic" [4]. Magellan is deeply committed to our nation's children and preventing and addressing the broad spectrum of pediatric and adolescent mental health conditions. In partnership with state and local agencies across the nation, we will continue to develop innovative solutions backed by our extensive clinical and lived experience to support children, families, and communities.

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