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**Abbreviations:** CMC – Children with Medical Complexity; LCSW – Licensed Clinical Social Worker; LPC – Licensed Professional Counselor; LMFT – Licensed Marriage and Family Therapist; LCAS – Licensed Clinical Addiction Specialist; SAMHSA – Substance Abuse and Mental Health Services Administration

**Table of Contents Summary:** Strategies that could mitigate the health risks of pandemic response measures for at-risk subpopulations of children are outlined for policymakers, healthcare workers/systems, and communities.

While children are not at the highest risk for COVID-19<sup>1</sup> severe illness, necessary pandemic public health measures will have unintended consequences for the health and well-being of the nation's at-risk children. School closures, social distancing, reduction in healthcare services (e.g., cancelling non-urgent healthcare visits), and ubiquitous public health messaging are just some of the measures intended to slow the COVID-19 spread. Here, we (1) highlight the health risks of the pandemic response measures to vulnerable pediatric subpopulations and (2) propose risk-mitigation strategies that can be enacted by policymakers, healthcare providers and systems, and communities (Table). The selected risks and proposed mitigation strategies are based on existing evidence and opinions of expert stakeholders, including clinicians, academicians, front-line service providers (e.g., social workers), and public health leaders.

We focus on risks and mitigation strategies for three at-risk subpopulations of children: a) children with behavioral health needs, b) children in foster care or at risk of maltreatment, and c) children with medical complexity (CMC). Mitigation strategies delineated for these at-risk populations are also likely beneficial for any child and family. Importantly, children not already in these groups are at risk of facing new medical, behavioral, or social challenges that develop during the pandemic. In particular, children in low socioeconomic status (SES) households are likely at highest risk for new or worsening issues, underscoring the critical leadership role of Medicaid programs in these risk mitigation strategies.

### **Children with Behavioral Health Needs**

The approximately 1 in 6 children with behavioral health conditions whose treatments involve regular and frequent therapist contact are at especially high risk of exacerbations during disasters.<sup>2</sup> Behavioral healthcare access during the pandemic has been reduced in medical, community, and school settings, particularly for low-income, minority students.<sup>3</sup> Strategies to maintain access include the promotion and reimbursement of telehealth behavioral health visits by the full range of licensed providers, promotion of mental health parity, and use of evidence-based systems (e.g., statewide telehealth mental health service) to support behavioral healthcare in primary care. Intense and frightening pandemic media coverage may trigger behavioral health conditions in children; developmentally appropriate materials can help parents communicate transparently about COVID-19 with their children. Additionally, physical isolation from peers and support networks may exacerbate underlying behavioral health issues. Online programs and group teletherapy visits that provide emotional support while maintaining physical distance are novel mitigating strategies that should be considered for reimbursement. Importantly, parents also need support and access for their own behavioral health needs.

### **Children in Foster Care or At Risk of Maltreatment**

As psychosocial and financial stresses build during the pandemic, children are vulnerable to new or additional abuse or neglect, similar to the increased interpersonal violence in China during the quarantines.<sup>4</sup> Strategies outlined for children with behavioral health conditions will also benefit the over 400,000 US children in foster care and all children at risk of maltreatment in this stressful time. The added stress and school closures may lead foster parents to determine that they are unable to provide foster care, resulting in placement disruptions. Broad-reaching paid leave, economic relief programs, and virtual emotional support for caregivers could reduce

household stress and in turn, maltreatment rates. University closures and other economic hardships may leave many older current and former foster youth without stable housing. In response, funding from the Chafee Foster Care Independence Program, which promotes current and former foster youth self-sufficiency, can support room and board assistance for these youth.<sup>5</sup> For new maltreatment reports and families receiving child welfare services, case workers may be unavailable to complete important safety checks due to social distancing mandates, while biological parents may be unable to comply with court-ordered plans (e.g., substance use testing). New virtual options are therefore needed for making child welfare visits, meeting court requirements, and maintaining birth family rights. For candidates for foster care, the Families First Prevention Services Act allows states to use title IV-E funds for child and family services (e.g., mental health, substance use, and parenting programs) that could potentially be delivered virtually.

### **Children with Medical Complexity (CMC)**

The risk for COVID-19 among CMC is unclear but presumed to be higher than non-CMC. CMC typically have multiple chronic conditions, functional limitations, medical technology dependence (e.g., feeding tubes), and a complex network of service providers and caregivers critical to maintain day-to-day health.<sup>6</sup> Care network disruptions could generate outsized adverse consequences for CMC. As primary and specialty healthcare access is reduced, novel guidance for home health and medical equipment agencies is needed on in-home practices, including on conserving personal protective equipment and augmenting the home health workforce.<sup>7</sup> Telehealth-reimbursable services are essential to preserve access to tertiary care center-based multispecialty medical care and school-based ancillary services (e.g.,

physical/occupational therapy). Novel ancillary service telehealth visits can educate parents on how to deliver the therapies at home. Telehealth medical visits can be strengthened with remote monitoring integration and inter-state healthcare support. Like caregivers of other at-risk child groups, CMC caregivers will need support as their usual care networks shrink due to social distancing and/or COVID-19 illness. For these families, mutual aid resource groups, family resource centers, respite childcare, and caregiver support groups with expertise in CMC care and supply needs can help mitigate increased psychosocial and financial stress.

### **Looking Ahead**

Beyond the risk of illness from COVID-19, the social and medical consequences of the unprecedented public health measures needed to slow the viral spread may pose an even greater threat to children, particularly those with behavioral health needs, in foster care or at risk of maltreatment, or with medical complexity. Common across the recommended risk mitigation strategies are the need for rapid implementation and reimbursement for virtual services, including cross-sector collaboration to maintain continuity of necessary supports and services (e.g., in schools, child welfare, and childcare settings). Many community-based and smaller agencies (e.g., child welfare, home health agencies, therapy practices) will require technical assistance to implement virtual services. Flexibility of roles across sectors can also be leveraged (e.g., teachers in China contacted students daily for education as well as for health and safety screening). Also common across strategies is support at the family level. Primary care providers, who already engage with the family unit, can enact or promote the recommended strategies, including proactive outreach to these at-risk populations and sharing local resources with families.

The pandemic response has forced the development of strategic relationships, policy reforms, and new practices, which will accelerate care integration and payment redesigns that at-risk children need now and in the future. The redesign will require determining which strategies (e.g., expanded telehealth) are working and what can be continued as part of routine care delivery. Existing pediatric care transformation learning networks can lead the way in making such recommendations, which will improve disaster preparedness for child-serving systems.

The social and health systems for children will be fundamentally transformed because of this pandemic. Clinicians, teachers, and social service providers are stepping out of their brick and mortar institutions to reach children in their homes and communities to deliver critical health and well-being services. The innovations in the systems that support at-risk children and families are long overdue and needed now more than ever - and will position us to deliver higher value and better integrated care in the future for all children.

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**Table. Selected Health Risks for Vulnerable Child Subpopulations from the COVID-19 Pandemic Response Initiatives and Recommended Mitigation Strategies**

Risks from COVID-19 Pandemic Response	Recommended Mitigation Strategies
<b>Children with Behavioral Health Needs</b>	
<p><b>Reduced healthcare access &amp; school closures:</b> Behavioral health treatments involve frequent contact with therapists and regular follow-up. Children now face reduced access in medical, community, and school settings. For example, among adolescents who utilize mental health services, 58% received these services in an educational setting - with higher rates among low-income, minority students.<sup>3</sup></p>	<p> Promote, reimburse with mental health parity, and provide technical guidance for telehealth and telephonic mental health visits, including by school counselors (school counseling <a href="#">resources and recommendations</a>) and existing mental health providers with various licenses (e.g., Doctoral, LCSW, LPC, LMFT, LCAS) to promote continuity of care and parental mental health care access</p> <p> Develop and promote the use of statewide telehealth programs (e.g., <a href="#">NC-PAL</a>) to provide consultative services to address child mental health needs during school closure</p>
<p><b>Pandemic public health messaging:</b> The high volume of intense and potentially frightening messaging consumed by children can exacerbate or trigger behavioral health conditions in <a href="#">children</a>.</p>	<p> Develop and distribute developmentally-appropriate <a href="#">guidelines</a> and materials to help parents communicate clearly and honestly about COVID-19. Examples: <a href="#">#COVIBOOK</a> – an interactive book to explain COVID-19 to children; Parent resources (<a href="#">SAHMSA</a>, <a href="#">Association for Child Psychoanalysis</a>, <a href="#">National Association of School Psychologists</a>)</p> <p> Encourage the media to provide <a href="#">child and teen-targeted</a> news reporting for transparent information that is not fear based (e.g., <a href="#">News ELA</a> for current news that can be modified by grade level)</p>
<p><b>Social distancing:</b> Physical isolation from support systems and peers can exacerbate underlying behavioral health issues, particularly children with developmental disabilities for whom community supports are critical and for children with mood disorders (e.g., depression and anxiety).</p>	<p> Develop and distribute recommended lists of <a href="#">best practices</a> and virtual programs that allow for physical distancing and emotional support among children. Examples: social media with a <a href="#">family media use plan</a>, mindfulness activities for the whole family (<a href="#">Growga</a>), or virtual volunteer opportunities for youth (<a href="#">Do Something</a>)</p> <p> Explore the feasibility (regulatory, technology) and reimbursement strategy for telehealth group therapy visits to support child mental health</p>

Children in Foster Care/At Risk of Maltreatment	
<p><b>School closure:</b> Families of all children may be taxed by added parenting demands which places children at-risk. School personnel, a key reporter of maltreatment, will be unavailable. <a href="#">Foster parents</a> may re-evaluate their ability to financially and socially support children who are not in school, resulting in placement disruption. Kinship families may be particularly stressed as they are provided fewer resources than other foster parents.</p>	<p> Heighten awareness among other reporters (e.g., primary care, police officers, faith-based organizations, public) of the enhanced risk for maltreatment and provide trauma-informed <a href="#">training</a> in how to respond</p> <p> Provide <a href="#">paid leave</a> and economic assistance to allow caregivers to provide adequate and safe child care</p> <p> Enhance and connect parents and caregivers with online support <a href="#">resources</a>, parenting education (e.g., Incredible Years, Triple P), <a href="#">best practices</a> for child and self-care (e.g., setting and maintaining routines), and <a href="#">hotlines</a> for crisis</p>
<p><b>College and university closures:</b> Closures of institutions of postsecondary education may leave current or former foster youth without stable housing options; <a href="#">one fourth to one third</a> of homeless youth have been in foster care.</p>	<p> Provide funding for room and board assistance to foster children between the ages of 18-21 (e.g., <a href="#">Chafee Foster Care Program for Successful Transition to Adulthood Funds</a>)</p>
<p><b>Social distancing:</b> For new reports of maltreatment and families receiving in-home child welfare services, case workers may be unavailable to complete important safety checks; biological parents may be unable to comply with court-ordered plans (e.g., substance use testing), especially if courts close; and foster children may be isolated from birth families.</p>	<p> Develop and promote <a href="#">virtual visits</a> and other strategies for child welfare workers to safely conduct assessments and investigations and to allow contact between foster homes, group homes, and birth parents</p> <p> Provide alternative strategies for parents who have court-ordered substance use treatment plans to meet requirements (e.g., <a href="#">Online Intergroup Alcoholics Anonymous</a>)</p> <p> States can <a href="#">fund</a> evidence-based family preservation services, such as parenting skills, mental health and substance use, and kinship navigator services</p>

Children With Medical Complexity (CMC)	
<p><b>Reduced healthcare access:</b> CMC are often dependent on medical technology (e.g., feeding tubes, respiratory equipment) and need continuous care from multiple service providers (e.g., home health, primary and specialty providers).</p>	<p> Provide additional <a href="#">guidance</a> for pediatric <a href="#">home health</a> and durable medical equipment agencies on in-home care practices, isolation procedures, preservation of personal protective equipment used for daily in-home care (e.g., gloves, masks); augmentation of home health workforce (e.g., pediatric nurses with reduced in-person clinical responsibilities during the emergency response); and increased training for home health workforce on coordinating with remote medical providers</p> <p> Proactive outreach to families of CMC through regularly scheduled touchpoints, use of <a href="#">remote monitoring</a>, or reimbursable telehealth virtual visits to provide <a href="#">early and expanded medication</a>, supplies (special consideration for facemasks and respiratory equipment), and nutritional support</p> <p> Support formation of family <a href="#">mutual aid</a> resource groups for <a href="#">critical medical supplies</a> for CMC (e.g., specialty compounding pharmacies, pediatric formulas, specialized pediatric equipment like tracheostomies and feeding tubes)</p>
<p><b>School closure:</b> CMC often receive medical (e.g. medication administration, feeding/nutrition), and other services (e.g., physical/occupational therapy) at school. School provides a regular source of respite for families.</p>	<p>  Develop and promote a strategy for telehealth reimbursable ancillary services (e.g., <a href="#">physical therapy</a>), including <a href="#">online resource libraries</a> for common pediatric therapy modules (e.g., core strengthening exercises) that caregivers can deliver at home</p> <p>  Develop policies for <a href="#">emergency respite services</a>, potentially using closed <a href="#">school</a> spaces or other <a href="#">facilities</a> as <a href="#">medical support shelters</a>, for children with complex medical technology dependence (e.g., tracheostomy, ventilator dependence) and caregivers or family members that are ill</p>
<p><b>Social distancing:</b> Parents of CMC at baseline carry tremendous responsibilities to provide complicated medical care, often while concurrently maintaining their own health employment and health for other family members – all of these challenges are exacerbated by physical distancing.</p>	<p>   Implement family resource centers or promote maintaining selected <a href="#">child care centers open</a> for vulnerable families, including onsite routine services for children with complex medical needs</p> <p>   Connect families of CMC through existing organizations (e.g., <a href="#">Family Voices</a>) for emotional and resource support</p>

CMC – Children with Medical Complexity; LCSW – Licensed Clinical Social Worker; LPC – Licensed Professional Counselor; LMFT – Licensed Marriage and Family Therapist; LCAS – Licensed Clinical Addiction Specialist; SAMHSA – Substance Abuse and Mental Health Services Administration

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