



Helping Our Children Grow and Thrive

Leveraging the Health Care System to Prevent and Mitigate Adverse Childhood Experiences and Advance Equity in Childhood

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The Center on Health Equity Action for System Transformation is the only national entity exclusively dedicated to the development and advancement of patient-centered health system transformation policies designed to reduce racial, ethnic, and geographic inequities.

We focus on advancing equity while improving outcomes, increasing value, and lowering costs. We catalyze and coordinate action to develop and implement health care delivery and payment policies focused on health equity. We make an impact by partnering with and supporting community leaders, health equity experts, and other stakeholders at national, state, and local levels.

The Center on Health Equity Action for System Transformation works to achieve an equitable, high-value, high-quality, and affordable health care system by:

- » **Building a movement for equity-focused health care system transformation by galvanizing and coordinating action among diverse organizations and community leaders** to ensure that a transformed health care system centers on the needs of those most affected by inequities.

- » **Channeling and translating the power of the best ideas and the most innovative thinking from top thought leaders and policy experts into concrete, actionable strategies and recommendations** that community leaders, stakeholders, and decision-makers can use.

- » **Working with leaders who represent communities of color and other underserved groups** to enhance their capacity to engage effectively in system transformation. We provide critical strategic guidance, training, and technical support, while highlighting the urgency of tackling inequities through health system reform.

In addition to being the leading national resource for community leaders, decision-makers, and other stakeholders on equity-focused health care system transformation, the Center on Health Equity Action houses the Health Equity Task Force for Delivery and Payment Transformation and the Community Health Worker Sustainability Collaborative.

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Executive Summary

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As a nation, it is critical to our collective future that we ensure that all children have the opportunity to achieve their full potential. Yet early adversity, toxic stress, and trauma are erecting lifelong barriers for many children, jeopardizing their healthy development, their ability to self-actualize, and their long-term well-being. The evidence is clear that adverse childhood experiences (ACEs) are widespread and that they have dramatic, detrimental, and lasting effects on the health and wellbeing of children that can persist into adulthood.

While ACEs can affect children of all backgrounds, they are most prevalent among children who live in poverty, children of color, and those from other marginalized populations. As a result, our nation's lack of attention to ACEs is falling hardest on these children. This has a direct impact on the ability of national and state policymakers, health system leaders, individual providers, and others to transform our health care system and to drive greater value and better health. It also impacts efforts to end health disparities and to achieve an equitable health care system, where health outcomes do not differ based on factors such as race, ethnicity, or socioeconomic status. The urgency around these issues will only grow as demographic shifts related to race and ethnicity continue in our nation.

New efforts to expand our understanding of health, to pay for and measure health care, and to develop linkages between physical, behavioral, and social

services present new opportunities to prevent and mitigate ACEs. The health care system is well positioned to address ACEs given that it is a nearly universal system that touches almost all young children and families. The system also is becoming more attuned to addressing social determinants of health (SDOH). As health care systems transform to promote health, provide high-value care, improve outcomes, and reduce costs, equity-focused strategies to prevent and mitigate ACEs are critical to meeting these goals.

This paper lays out a suite of the most important policies and strategies to leverage the health care system to address ACEs resulting from the combined effects of racial and other inequities and experiences of early adversity on health. It is intended to guide the work of national and state policymakers, state Medicaid agencies, health system leaders, and individual providers. Key recommendations include:

As health care systems transform to promote health, provide high-value care, improve outcomes, and reduce costs, equity-focused strategies to prevent and mitigate ACEs are critical to meeting these goals.

Federal and State Policymakers

1. Federal and state policymakers should invest in and scale home visiting programs.

Home visiting has been shown to promote nurturing relationships, reduce parental stress, and foster resilience. Scaling home visiting and related programs that are flexible enough to meet the needs of families, and offered in environments that make services more accessible, comfortable, and convenient, is an important opportunity to help children thrive at home with their families. While some states are funding the expansion of home visitation programs with their own dollars, widespread scaling likely will require an expansion of federal funding for home visiting programs.

State Medicaid Agencies

2. State Medicaid agencies should expand financial support for utilizing community health workers (CHWs) to coordinate care in pediatric health and other settings. Growing evidence demonstrates the value of community-based care coordination services as an effective and efficient model to achieve better health care outcomes, lower health care costs, and improve patient health care experiences. Medicaid agencies should expand financial support for CHWs. There are several pathways to funding CHWs through Medicaid, including: (1) using Medicaid state plan amendments (SPAs) to add CHW services as a covered Medicaid benefit; (2) using preventive services SPAs to fund specific CHW services tied to prevention; (3) including CHW reimbursement in Section 1115 Medicaid waivers; and (4) leveraging managed care contracts to require CHW services or incentivize them through quality and value metrics. These pathways each offer tradeoffs regarding the breadth of the CHW benefit and the ability of the state's Medicaid program to target CHW services.

3. State Medicaid agencies should allow pediatric health providers to bill for maternal depression screening and cover treatment for maternal depression under the child's Medicaid benefit. [CMS guidance](#)¹ allows pediatric health care providers to bill for maternal depression screening and cover treatment related to maternal depression as a part of the child's Medicaid benefit if the child is present and if the treatment directly benefits the child. This is a significant opportunity to screen and provide treatment for maternal depression in the pediatric health care setting. States that currently do not cover maternal depression screening and treatment under a child's Medicaid benefit should do so.

Health System Leaders

4. Health systems should partner with families at all levels, including policy development and program design and implementation. Strong evidence suggests that patient- and family-centered care and shared decision-making promote better health outcomes, improvements in quality and in patient safety, and can help rein in health care costs. It is critical that health systems be intentional in engaging families as authentic partners in policy development, program design and implementation, and ensure that families have

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Strong evidence supports the conclusion that implicit bias affects health care in a number of detrimental ways, with significant consequences for underrepresented patients.

the supports needed to engage at all levels. Health systems should prioritize programs and payment approaches that share power with families and align with their expressed needs.

5. Health systems and organizations setting policy for pediatric practice and quality improvement should institute staff training on implicit bias to prevent biased decision-making and treatment.

Strong evidence supports the conclusion that implicit bias affects health care in a number of detrimental ways, with significant consequences for underrepresented patients. Health systems and organizations setting policy for pediatric practice and quality improvement should institute staff training to surface and mitigate implicit bias.

6. Health systems should use Institutional Analysis (IA) to identify and mitigate the health harms of institutional racism.

Research indicates that institutional racism affects coverage, access, care delivery, and other dimensions of health care, contributing to higher disease rates and worse outcomes for minority populations. IA, typically used in child welfare, juvenile justice, and other public intervention agencies to confront the structural contributors to poor outcomes for children and families, can surface and mitigate structural barriers in health care, pinpointing inherent organizational policies and practices contributing to inequities. Health systems should use IA to identify and mitigate the health harms of institutional racism in health care and advance health equity.

Health Care Providers

7. Primary care providers should promote population health by better connecting and integrating health care and social supports.

Today, there is growing recognition that (1) social, economic, and environmental factors influence child health, and (2) opportunities exist to promote population health by better connecting and integrating health care and social supports to collectively address broader drivers of health outcomes. Several exemplary evidence-based models described in this paper use such strategies in pediatric health care settings. These efforts should be scaled and further integrated into clinical practice.

8. Primary care providers should target interventions to young children ages birth to 3 years and their caregivers.

Early childhood is a time of rapid brain development, physical growth, and learning. Given (1) that social disadvantage, particularly low socioeconomic status and the health burden it brings, are passed on from one generation to the next, and (2) the significant impact of adversity on the healthy development and long-term health outcomes of both caregivers and children, it is essential to target interventions to young children and their caregivers. These strategies should promote equity-driven, multi-generational policies and programs that aim to interrupt cycles of disadvantage and poorer health and have positive impacts on both caregiver and child. Recognizing this opportunity, primary care practices should implement approaches that combine caregiver and child health care.

Given the shifting demographics of our country and sharply rising income inequality, we must invest in strategies to support and empower all children and families — and ensure that communities of color and other marginalized populations are not left behind.

9. Primary care providers should use the well-child visit to promote both child and maternal health in the context of [family-centered care](#).² Pediatricians and other primary care providers are well positioned, given their ongoing contact and relationship with families, to identify concerns, link families to needed interventions, and provide additional resources (or linkage to resources) that support both child development and the parent-child relationship. Utilizing a family-centered approach, primary care providers should screen for social-emotional risk factors including maternal depression, interpersonal violence, and substance abuse, as well as parental strengths, during well-child visits and link families with resources, supports, and interventions.

10. Primary care providers and researchers should expand the definition of and screening for neighborhood-, community-, and societal-level ACEs. ACEs are too often defined as exposure to 10 adverse experiences that only capture the family environment. Strong evidence suggests neighborhood-, community-, and societal-level exposures also can create traumatic experiences in early childhood. Thus, a narrow definition of ACEs disregards important adverse experiences occurring for children, and specifically children of color and other marginalized populations. ACEs screening tools should be universally expanded to capture broader SDOH like racism and discrimination, food insecurity, housing instability, community or neighborhood violence, and poverty.

Given the shifting demographics of our country and sharply rising income inequality, we must invest in strategies to support and empower all children and families — and ensure that communities of color and other marginalized populations are not left behind. Health care systems can play a pivotal role in this work to reduce disparities and improve equity — especially now — as health care is on the brink of a profound transformation in how it delivers and pays for care by balancing the goals of promoting more high-value care, improving quality, and reducing costs. A focus on reducing inequities, improving the social factors that influence health, and preventing and mitigating ACEs will provide long-term benefits for children, families, and society at large.

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I. Introduction

All children deserve the opportunity to achieve their full potential. Our collective future prosperity hinges on whether our nation is willing to provide the strong foundation children need for a healthy childhood and a promising future. High-quality, affordable health care is critically important for children’s healthy development. However, a broader range of factors impact children’s health and well-being, especially during the early years of development. Many of these factors fall outside the realm of traditional health care.

In particular, early adversity, toxic stress, and trauma are erecting lifelong barriers for many children, jeopardizing their healthy development and long-term well-being. The evidence is clear that ACEs — defined as abuse, neglect, and other potentially traumatic experiences, such as living with someone who has a substance use disorder, suffers from depression, or has been incarcerated — are widespread and have dramatic, detrimental, and lasting effects on the health and well-being of children that can persist into adulthood.³

However, research shows that when children who are at risk of or have been exposed to ACEs can access a broad array of supports and services — from safe, stable, and nurturing families, to access to healthy nutrition, stable housing, safe communities, early care and education opportunities, and high-quality schools — they can develop powerful resiliency and the ability to achieve a healthy, independent, and productive life.^{4, 5, 6}

Unfortunately, despite a strong evidence base that provides a roadmap for what children need to secure a healthy childhood, our nation is falling short in supporting children and families who are at risk of or exposed to ACEs. We are failing to heed the research and make critical investments in building a strong foundation for their future. While ACEs affect children of all backgrounds, they are most prevalent among children who live in poverty, children of color, and those from other marginalized populations. As a result,

High-quality, affordable health care is critically important for children’s healthy development. However, a broader range of factors impact children’s health and well-being.

our nation’s lack of attention to ACEs is falling hardest on these children, and is impacting our ability to address health disparities and to achieve an equitable health care system, where health outcomes do not differ based on factors such as race, ethnicity, or socioeconomic status.

New efforts to broaden the definition of health, to pay for and measure health care, and to develop linkages between physical, behavioral, and social services

Our nation is falling short in supporting children and families who are at risk of or exposed to ACEs.

present new opportunities for health system leaders and policymakers to leverage the health care system to prevent and mitigate ACEs. These efforts include providing prenatal and postpartum supports for mothers, offering evidence-based prevention services and interventions for mothers and families with infants and toddlers, screening children and parents to identify and mitigate ACEs, and linking health care to a broad array of social supports and services that can prevent or address ACEs.

This paper provides a brief history of ACEs research, explores successful models being deployed to prevent and mitigate ACEs, and provides concrete recommendations for national and state policymakers, state Medicaid agencies, health system leaders, and individual providers to leverage the health care system to address ACEs and improve health equity for children, and, in the longer term, for everyone.

Adverse Childhood Experiences

The original ACE study was conducted in two waves of data collection by Vincent Felitti et al. from 1995 to 1997. The study surveyed over 17,000 Kaiser Permanente HMO members about childhood exposure to 10 adverse experiences: emotional, physical, or sexual abuse; mother treated violently, or living with household members who had substance use disorders, were mentally ill, or were ever imprisoned; loss of a parent to separation or divorce; and emotional or physical neglect.¹ Research has shown that the greater a child's exposure to ACEs, the more likely they are to experience poor health and poor social outcomes in adulthood, ranging from increased rates of heart disease, diabetes, and cancer to an increased likelihood of incarceration or failure to graduate from high school. Among other findings, data suggests that experiencing six or more ACEs reduces one's life expectancy by 20 years.⁷

Since the publication of the original ACE study, the field of ACE research, policy, and practice has advanced considerably. Our understanding of adversity and conceptualization of ACEs has broadened beyond a core set of familial indicators to include other adverse experiences — indicators driven by historic, systemic, and institutional inequities, including poverty, racism, diminished opportunities for employment, limited access to health care, housing instability, and food insecurity that contribute to adversity, toxic stress, and trauma for children and families.

¹ Data on neglect (emotional and physical) was only collected during Wave 2 of the study.

ACEs can be both the result of, and fuel for, deep racial, ethnic, and other health inequities that can persist for an entire lifetime and undermine the future of our children and our nation.

While ACEs, toxic stress, and trauma are experienced by children from a wide variety of backgrounds, data shows that exposure to early adversity is not equally distributed in the U.S.⁸ ACEs are far more concentrated and prevalent in under-resourced communities struggling with poverty, economic hardship, or community or neighborhood violence, among other challenges. These experiences are often driven by deeply entrenched structural and systemic economic, racial, and ethnic inequities that increase the risk of poor health while limiting the resources available to families, neighborhoods, and communities that can promote or improve health.

Children of color and low-income children in particular are disproportionately impacted by ACEs.^{9, 10} Poverty, racism, diminished opportunities for employment, food insecurity, community and interpersonal violence, and limited access to health care can result in particularly high levels of exposure to early adversity, toxic stress, and trauma. These factors are more prevalent among children and families of color, children with disabilities, immigrants, and LGBTQ populations, among others. ACEs can be both the result of, and fuel for, deep racial, ethnic, and other health inequities that can persist for an entire lifetime and undermine the future of our children and our nation.

ACEs research has identified an evidence base both to prevent and to mitigate adverse experiences. Research points to a broad range of ACEs prevention strategies that include home visiting, quality early care and education, economic supports, family-

friendly workplace policies, and affordable housing initiatives — as well as early childhood interventions such as Early Head Start, those that promote maternal and child health in the context of pediatric well-child visits, and school-based mental health services — for ACEs prevention and mitigation. Yet, many children who are exposed to early adversity lack access to the services and supports they need to flourish.

Currently, health care is in the midst of a profound transformation in how it delivers and pays for care, balancing the goals of promoting more high-value care, improving quality, and reducing costs. Increasingly these efforts focus on the role social factors play in influencing health outcomes.

Building a safe, stable, and nurturing foundation for all of our children is a down payment on a future where we all can prosper and contribute to society. Healthy children are much more likely to grow into healthy adults, become part of a productive workforce, and use fewer costly health care interventions and other social services. In this paper, we identify specific health care policies to support the prevention and mitigation of ACEs and the reduction of health inequities, drawing on real-world examples of promising approaches at the health system and state levels that have been either piloted or fully implemented.

Progress in this work requires an intentional focus on addressing the broader social inequities that generate and intensify stressors and risk of exposure to early adversity. Improved outcomes for children will require both a willingness to take on hard, long-standing

problems of structural inequality and a pragmatic set of tools that leverage the power of our health care system to address these problems. A commitment to understanding the root causes of early adversity, toxic stress, and trauma, and to developing strategies that can support children and families who experience compounding stressors, can improve systems and change community conditions so that all children and families can thrive.

This need is more urgent now than ever. Census numbers project that 2020 will be the first time the U.S. will have more children of color than those who are white.¹¹ Given the shifting demographics of our country and sharply rising income inequality, it is critical to ensure that communities of color and marginalized populations are not left behind. Our future rests on the promise that the children of today become the healthy and productive adults of the future.

The Relationships between ACEs, Toxic Stress, and Trauma

While the concepts of ACEs and toxic stress are related, they are distinct constructs. ACEs refer to a specific set of indicators or experiences of early adversity (i.e., experiencing abuse or neglect or living with a family member with mental illness). Experiencing ACEs — especially without supportive adults to help — can trigger a range of stress response systems and cause toxic stress, a specific physiological response defined as “the strong, frequent and/or prolonged activation of the body’s stress response system without adequate protective relationships and other mediating factors.”^{12, 13}

Sources of toxic stress can include individual experiences of adversity as well as family and community conditions. The effects of toxic stress can be seen in a range of poorer outcomes, including deficits in learning, behavior, and health.¹⁴ Toxic stress, left unmitigated, can compound over time and even have lasting transgenerational effects on mental and physical health. It is especially damaging during sensitive periods, including pregnancy, infancy, and early childhood — periods of significant growth and development when disruptions in brain architecture and other organ systems can have lasting consequences.¹⁵ For example, research links maternal depression and anxiety during pregnancy to a higher risk of obesity and diabetes in children born of those pregnancies.¹⁶

Trauma is a possible outcome of exposure to adversity, occurring when an event, experience, or series of circumstances are emotionally and/or physically frightening, harmful, or threatening.^{17, 18} It leads to strong negative emotions and often physiological symptoms that manifest soon after and may linger well beyond the initial event.¹⁹ Complex trauma refers to a child’s exposure to multiple traumatic experiences and their far-reaching and long-term impact.²⁰ This trauma, frequently interpersonal in nature, is severe and pervasive, and typically occurs early in life. In this way, it has the potential to disrupt many aspects of development.

II. Increasing Health Equity by Leveraging the Health Care System to Address ACEs

Inequities in the Prevalence of ACEs, Toxic Stress, and Trauma

ACEs are common and seen across income levels and all races and ethnicities. Nearly half of U.S. children have at least one ACE, and 10% have experienced three or more, putting them at high risk for negative health outcomes both in the short term and into adulthood.²¹ That said, data also shows racial and ethnic inequities in the occurrence and experience of ACEs, and that LGBTQ and other marginalized populations experience disproportionately higher incidence of ACEs.²²

People with incomes below the poverty level experience greater exposure to ACEs than their higher-income counterparts,²³ girls experience higher rates of ACEs than boys,²⁴ and children of color have more ACEs than white children. In fact, 61% of black children and 51% of Latino children experience one or more ACEs compared with 40% of white children.²⁵ One in three black children have experienced two to eight ACEs, compared to one in five white children.²⁶ Importantly, even at higher income levels, children of color continue to experience disproportionately high levels of adversity compared to white children of the same income level.²⁷

These inequities are exacerbated by the fact that populations experiencing higher rates of ACEs — including low-income children and children of color — are also less likely to receive the services and supports they need to mitigate the effects of exposure to early adversity, toxic stress, and trauma. For example, low-income children²⁸ and children of color are far less likely to receive mental health services than white children, and when they do receive services, they are often of poor quality.^{29, 30}

Various social and economic factors underpin the conditions that drive the disproportionate impact of ACEs on communities of color and other marginalized populations. Systemic and structural racial, ethnic, and economic inequities are at the heart of factors that increase risk for ACEs, and are the result of generations of government policies that, by design or by default, have favored some communities over others — from residential segregation of communities of color from economic opportunity³¹ to mass incarceration.³² These policies are the legacy of historical and ongoing traumaⁱⁱ in many U.S. communities. Today, continued marginalization and racial and ethnic discrimination drive our widening racial wealth gap and health inequities. Systemic racism pervades policies and institutional practices, and cultural representations perpetuate these inequities. On top of that, the day-to-

ⁱⁱ Historical trauma refers to a complex and collective trauma experienced over time and across generations by a group of people who share an identity, affiliation, or circumstance. Many minority groups have experienced historical trauma, including blacks and American Indians and Alaska Natives, who have endured a history of multiple traumas. An exhaustive list of these traumas can be found in many available resources, but for illustrative purposes we highlight a few examples here. For American Indians, this includes colonization, epidemic diseases brought from Europe, and Indian boarding schools. For blacks, it includes being stolen from their native lands, slavery from 1619 to 1865, Jim Crow laws, and mass lynching, among others.

day experiences of interpersonal racism and implicit bias compound the systemic challenges people of color in this country must contend with, and are also themselves stressors that can trigger physiological responses that can undermine health.³³

This work has helped us to recognize the role of inequities, including racism, as a both a direct form of childhood adversity and an underlying

cause of chronic stress and trauma for people of color, immigrants, LGBTQ populations, and other marginalized groups, and the need for solutions that target historic, systemic, and institutional inequities and reduce health disparities for children who face adversity. It is essential to employ an equity lens to understand how systems and institutions reduce opportunities for health and create and compound adversity, toxic stress, and trauma for families.

The Link Between Experiencing Racism, Health Inequities, and ACEs

Researchers have suggested that experiencing racism and discrimination impacts health by functioning as a stressor that may have negative biopsychosocial sequelae that contribute to health disparities.³⁴ Racism can have both direct and indirect influences on toxic stress. It can itself be a neighborhood-, community-, or societal-level ACE and lead to toxic stress, and it can also impact family- and household-level ACEs by serving as a stressor and compromising parenting, quality of the parent-child relationship, and family functioning, which then lead to toxic stress.³⁵

The role of racism as a contributor to racial and ethnic inequities has been studied in adults and its effects demonstrated on a range of health outcomes.³⁶ We know less about the role of racism in children's health. A review of the available research highlights the impact of perceived racial discrimination on child health outcomes, including the following: among black adolescents, effects of perceived racism on depression and conduct problems; among mainland Puerto Rican children, associations between perceived discrimination and higher levels of depressive symptoms, school stress, and behavioral adjustment; in adolescents and preadolescents, associations between perceptions of racism and internalizing and externalizing behaviors, anger, conduct problems, and delinquent behaviors; and in girls, associations between internalized racism, body mass index, waist circumference, and fasting glucose and insulin levels.³⁷

Research has also demonstrated the downstream effects of racism experienced by other family members on children. Specifically, in one study of black families with young children, mothers' perceptions of racial discrimination were related to poor parental psychological function, which then negatively affected parenting satisfaction and parenting style.³⁸ In another study, associations were observed between racial discrimination experienced by a parent and child distress, independent of the child's own experiences with racial discrimination.³⁹

Health Care Systems Have a Critical Role to Play in Preventing and Mitigating ACEs, Improving Health, and Advancing Health Equity

Health care is well positioned to address ACEs given that it is a nearly universal system that touches almost all young children and families. The majority of young children are seen regularly from birth into the early years in pediatric primary care settings. In fact, 88% of children enrolled in Medicaid receive pediatric well care in the first six months of life,⁴⁰ and the [Bright Futures/American Academy of Pediatrics \(AAP\) “Recommendations for Preventive Pediatric Health Care”](#)⁴¹ call for 12 well-child visits by age 3, making early childhood a critical window of opportunity to implement prevention and early intervention strategies in the pediatric setting. The pediatrician's office offers an unparalleled opportunity for implementing universal approaches to screening, prevention, and early intervention for infants and toddlers. In addition, in many communities, federally qualified health centers (FQHCs) are community anchors that can play a major role in building community capacity and promoting resilience. These health care systems serve 25 million

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people annually, with the majority (seven in 10) having incomes at or below the federal poverty level.⁴² FQHCs are often present in the poorest and most disinvested neighborhoods, offering resources, referrals, and linkages to other systems to address a range of health and social needs for families.

Health care is also becoming more attuned to health-related social needs. Millions of people struggle with socially determined barriers to being and staying healthy. Delivery system transformation in health care is increasingly focused on SDOH that drive close to 80%⁴³ of variation in health outcomes. These include, but are not limited to, income; housing; food security; access to educational, work, and economic opportunities; racism; and discrimination. As health care systems transform to provide high-value care, improve outcomes, and reduce costs, equity-focused strategies to prevent and mitigate ACEs will help meet these goals.

This paper lays out a suite of policies and strategies to address the combined effects of racial and other inequities and experiences of early adversity on health. Our recommendations operate at multiple levels in our health care system. It is not possible to move the dial on achieving lifelong better health outcomes for the children of today without working to prevent and mitigate ACEs; accounting for underlying systemic and institutional racism and other inequities generally; and addressing inequities in health care and human services delivery particularly. In addition, we recommend policy interventions that change how health care for children and families is organized and delivered, and highlight interventions that are effective in preventing and mitigating ACEs and promoting resilience.

Payment Models to Support ACEs Prevention and Mitigation

Widespread adoption of payment models that offer more flexibility to pay for services and interventions that can prevent and mitigate ACEs is critical to the spread and scale of the types of changes proposed in this paper. These can take the form of either supplementation to fee-for-service payment or more comprehensive advanced payment models. For more information on pediatric payment models with the potential to benefit children’s health and health care, see [Payment for Progress: Investing to Catalyze Child and Family Well-Being Using Personalized and Integrated Strategies to Address Social and Emotional Determinants of Health](#)⁴⁴ by The Child and Adolescent Health Measurement Initiative (CAHMI) and AcademyHealth.

III. Recommendations for Leveraging the Health Care System to Prevent and Mitigate ACEs and Improve Health Equity

The vast majority of young children receive health services in their early years in clinical settings. However, in many cases, the services they receive are limited to medical and screening services. We must broaden the definitions of health and health care to ensure that our health care system prioritizes the use of evidence-based, evidence-informed, and promising interventions, services, supports, and opportunities that can address both the health and non-health factors that affect the health and well-being of children and families. Investments in prevention and upstream approaches that reduce a child's exposure to ACEs or mitigate their impact result in improved health outcomes for children and families in the long term.

We must broaden the definitions of health to ensure that our health care system prioritizes the health and non-health factors that affect the well-being of children and families.

Given that the health care system is already engaged in transforming itself to provide high-value care, this presents a powerful opportunity to ensure that the strategies and interventions that are valuable in addressing the needs of diverse children and families are a central objective of these efforts. This can have a lasting impact not only on the children and families who will directly benefit, but also on the nation as a whole. The recommendations below aim to leverage the health care system to prevent and mitigate ACEs and improve health equity, and are organized by key decision-makers.

Federal and State Policymakers

1. Federal and state policymakers should invest in and scale home visiting programs

Families are more likely to access essential services if those services and supports are provided in places where families already spend time, such as child care centers, libraries, schools, and pediatricians' offices. Home visiting is an example of a valuable strategy to prevent and mitigate ACEs that has been shown to promote nurturing relationships, reduce parental stress, and foster resilience.⁴⁵ Home visiting can provide critical supports at a time when families need it most and is an opportunity to support families who are struggling for various reasons. In 2014, 48% of families receiving home visiting through the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program were living in extreme poverty.⁴⁶ The majority of women receiving services were young mothers. Of those receiving services, 39% were single mothers, and 43% were women of color.⁴⁷

Home visiting yields positive impacts for children and families across a range of outcome areas, including improvements in maternal and child health and reductions in child abuse and neglect.⁴⁸ An often cited example is the [Nurse-Family Partnership](#),⁴⁹ which provides home visiting services for mothers, infants, and families from a mother's pregnancy through her child's infancy. The program has demonstrated a range of positive outcomes, including a decrease in abuse and injury, improvements in children's cognitive and socioemotional outcomes, and a reduction in mothers' closely spaced subsequent births.^{50, 51}

While some states are funding the expansion of home visiting programs with their own dollars, widespread scaling likely will require an expansion of federal funding for home visiting programs as many states continue to struggle to fund their basic Medicaid and Children's Health Insurance Program (CHIP) programs.

In addition to MIECHV, federal dollars support home visiting through Medicaid, Title IV-B of the Social Security Act, Title I of the Elementary and Secondary Education Act (ESEA), Part C of the Individuals with Disabilities Education Act (IDEA), Temporary Assistance for Needy Families (TANF), and Community-Based Child Abuse Prevention (CBCAP). Many states also allocate funds for home visiting from their state general fund or dedicated funds, such as lottery proceeds, tobacco settlement dollars, tobacco taxes, and birth certificate fees. But millions of families with children under age 6 who could benefit from home visiting services do not receive them because the need far exceeds current program capacity. Nationwide, 18.3 million families have a child under 6 or a child on the way, but evidence-based models only reach

a tiny fraction — about 3% — of these families.⁵² Scaling programs like home visiting, that are flexible enough to meet the needs of families and offered in environments that make services more accessible and are comfortable and convenient, provide an important opportunity to help children thrive at home with their families. While some states are funding the expansion of home visiting programs with their own dollars, widespread scaling likely will require an expansion of federal funding for home visiting programs as many states continue to struggle to fund their basic Medicaid and CHIP programs.ⁱⁱⁱ For additional recommendations on early home visiting for community pediatricians, large health systems, and researchers, see this AAP [policy statement](#).⁵³

ⁱⁱⁱ Federal budget cuts and lapses threaten funding for these programs, including the 114-day lapse in CHIP funding in 2018, and, most recently, the administration's proposed \$800 billion cut in federal funding for Medicaid over the next decade. States struggling to control growing health care costs typically target Medicaid for cuts or changes.

To Improve Health Outcomes and Reduce Maternal Mortality, Medicaid Must Be Extended from 60 Days to a Full Year Postpartum

In addition to changing how health care is delivered, access to postpartum services remains a critical barrier to positive health outcomes for women during pregnancy and into the postpartum period. In particular, the so-called fourth trimester, or 12 weeks following childbirth, is a critical time for the health of new mothers. During this time, a woman must not only physically recover from childbirth, but also form a new relationship with, and nurture and care for, her infant.

In the weeks following childbirth, women frequently struggle with health problems, complications from childbirth, pain, and anxiety, and are more likely to die from pregnancy-related conditions than during either pregnancy or delivery. Many pregnant and postpartum women experience depression. The data show that women of color are much more likely to die from pregnancy-related causes. In fact, black women are three to four times more likely to die from pregnancy-related causes than their white counterparts.⁵⁴ Despite these statistics, four out of 10 mothers who are insured through Medicaid do not access a postpartum visit and don't receive critical care following birth.⁵⁵

Medicaid pays for nearly half of all births and must cover pregnant women through 60 days postpartum.⁵⁶ States can opt to continue eligibility for Medicaid coverage beyond the first 60 days postpartum. In states that have expanded Medicaid, most women are typically eligible to remain covered, as eligibility is extended to all qualifying individuals with incomes up to 138% of the federal poverty level. In states that have not expanded Medicaid, many women are left uninsured during a critical time because they do not meet the state's Medicaid income eligibility requirements for parents. Currently, 36 states and the District of Columbia have adopted expanded eligibility for Medicaid under the Affordable Care Act (ACA) and offer Medicaid coverage after the first 60 days postpartum to low-income women.⁵⁷ In the 14 states that have not adopted Medicaid expansion, to continue coverage, postpartum women would need to requalify for Medicaid as parents.⁵⁸ Nine of the 14 non-expansion states offer women limited-scope Medicaid family planning coverage, and some run state-funded family planning programs.⁵⁹

At the federal level, Congress should enact legislation to expand Medicaid coverage from 60 days postpartum to a full year after delivery. At the state level, states that have not already adopted the ACA Medicaid expansion should do so. States that have expanded Medicaid have been shown to significantly improve maternal health and birth outcomes, in particular for women of color. Given that the postpartum period can be a medically vulnerable time for many women, states should extend Medicaid coverage beyond the required 60-day post-partum period up to one year to ensure women have continuous coverage during and after pregnancy.

2. Policymakers should incentivize the diversification of the health care workforce to effectively address ACEs, toxic stress, and trauma, and to improve child health

The development of a diverse health care workforce trained to provide culturally centered care leverages our health care system to combat structural inequities.

A recent study revealed that nearly one in three black Americans⁶⁰ and one in five Latinos⁶¹ have reported experiencing discrimination when going to a doctor or health clinic. This same study also showed that a significant proportion of underrepresented groups — specifically, 22% of blacks, 17% of Latinos, 18% of LGBTQ individuals, and 15% of American Indians — have avoided seeking medical help altogether out of fear of discrimination.⁶² The lasting effects of historical trauma in medicine,^{iv, 63} combined with the persistence of bias and discrimination that underrepresented groups face when interacting with our health care workforce, contribute to higher levels of toxic stress and are at the root of ongoing mistrust of the health care system.

Racial and ethnic minority providers have proven to be critical in providing access to care for communities of color. They are more likely to practice in underserved areas that comprise a large percentage of racial and ethnic minority families, are more likely to enter into primary care, and are more likely to accept patients

who are covered by Medicaid.⁶⁴ They have also been linked to improving the quality of care marginalized and underrepresented groups receive. Studies show that patients are more likely to report care satisfaction when treated by a physician from their own racial or ethnic background.⁶⁵

In order to adequately promote high-quality, equitable care, reduce persistent biases in care treatment, and effectively address ACEs, health care teams must reflect the communities they serve — in terms of race, ethnicity, gender, and sexual orientation.

Racial and ethnic minorities are largely underrepresented in our health care workforce. Together, blacks and Latinos comprise over 30% of the U.S. population⁶⁶ but make up less than 10% of all practicing physicians.⁶⁷ In order to adequately promote high-quality, equitable care, reduce persistent biases in care treatment, and effectively address ACEs, health care teams must reflect

^{iv} Communities of color have been subjected to grossly unethical medical research practices resulting in mistrust of research institutions and the overall health care system. One of the most well-known and egregious examples of immoral scientific practice is the Tuskegee syphilis study. Black men believed they were receiving free health care but instead were observed for the untreated progression of the disease, even after penicillin became an effective treatment, without their consent. The eugenic targeting and recruitment of poor Puerto Rican women in oral contraceptive research is another example. Participants were intentionally kept in the dark about the experimental nature of the medication, resulting in the deaths of three women. This historical trauma, compounded by the institutional and implicit biases that persist in medical and health systems research, has resulted in the underrepresentation of people of color in research, which in some cases has yielded less effective treatments for these populations that already bear disproportionate rates of disease.

the communities they serve — in terms of race, ethnicity, gender, and sexual orientation. This means that even as we work toward more diversity among clinical practitioners, it is imperative that we think more broadly about the different roles that should be included as part of health care teams, and increase racial and ethnic diversity in roles such as CHWs, peer navigators, outreach workers, interpreters, developmental screeners, and systems navigators. All are essential to strengthening relationships with patients, helping provide better care, and restoring trust in our health care system.

Unfortunately, lack of exposure to a variety of roles within our health care workforce, limited career pathways, and poor financial support often serve as barriers to entry into and retention of populations of color at all levels of the health care workforce. These barriers hit frontline workers the hardest. Some states, including Ohio,⁶⁸ Michigan,⁶⁹ and New York,⁷⁰ are tackling this challenge by investing in their communities and partnering with high schools, community colleges, and pipeline programs to provide more avenues for underrepresented populations to enter into various professions in the health care workforce, such as community-based care occupations.

3. The Centers for Disease Control and Prevention (CDC) should encourage states to routinely collect and report data on ACEs through the Behavior Risk Factor Surveillance System (BRFSS) and the Youth Risk Behavior Surveillance System (YRBSS), and request funding for this from Congress

Many states now collect ACEs data through the BRFSS,^v an annual, state-based survey that collects data on health conditions and risk factors.⁷¹ Since 2009, 42 states plus the District of Columbia have included ACE questions for at least one year on their survey. Seventeen states included ACE questions in 2018.⁷²

The CDC can encourage states to collect this data and recommend that Congress appropriate additional funding for states to routinely collect and report on the data. Additionally, the BRFSS, YRBSS, and other surveys with ACEs indicators, including the National Survey of Children’s Health (NSCH),^{vi} should: (1) employ an expanded ACE scale that considers neighborhood-, community-, and societal-level factors; (2) be consistently collected; and (3) employ oversampling and other approaches to ensure the inclusion of diverse populations. This data can inform strategies to target specific populations or geographic locations with a high incidence of measured ACEs, including when awarding grants and contracts to entities serving target populations or locations.

^v BRFSS data is limited, as respondents who complete the ACE module are mostly white and well educated.

^{vi} The NSCH is sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration and evaluates the emotional and physical health of children 17 and under.

State Medicaid Agencies

4. State Medicaid agencies should expand financial support for utilizing CHWs to coordinate care in pediatric health and other settings

Growing evidence demonstrates the value of care coordination services as an effective and efficient model to achieve better health care outcomes, lower health care costs, and improve patient health care experiences. Importantly, available data suggests that care coordination in the context of the patient-centered medical home improves health care delivery for children.⁷³ CHWs who are authentically based in the communities they serve hold a unique role on the health care team. As trusted members of the community with expertise in supporting families and helping them navigate health and supportive services, they can be very effective in providing culturally centered care coordination. Moreover, many are also community leaders who work to alleviate structural inequities and improve community conditions that often drive SDOH, including ACEs, and poor health outcomes for communities of color.⁷⁴ CHWs strengthen health care systems and coordinated care teams because they are able to address gaps in cultural competency, allowing them to deliver high-quality, accessible care that effectively improves outcomes.⁷⁵ CHWs have also proven to increase quality of care while reducing health care costs by focusing on preventive care, improving patients' health literacy, and assisting with the early detection and management of chronic diseases, which disproportionately affect communities of color. In fact, many CHW programs report for every \$1 spent, the financial return on investment ranges from \$1.50 to \$5.⁷⁶

The CHW field includes *promotoras de salud* (lay health advisers and educators), who have, for generations, served as key members of health care teams across Latin America, providing community-based outreach to marginalized populations. More recently, health programs in the U.S. have incorporated *promotoras* in health initiatives, serving as frontline outreach and providing referral services as well as concrete and emotional support to program participants. As an example, an evaluation of [Healthy Start Programa Madrina](#),⁷⁷ a home visiting *promotora* outreach and education program for pregnant Latinas, has shown that the program was successful at linking women to perinatal care, health education, and support services, as well as decreasing barriers to prenatal care.⁷⁸

Pediatric interventions including [HealthySteps](#)⁷⁹ draw on this model, employing a trained HealthySteps specialist (or related role) in the health care setting as a part of the health care team to support families and facilitate measurable improvements in health care quality. Importantly, employing a HealthySteps specialist presents an opportunity to actively engage and effectively utilize the time families spend in the clinic. Almost 80% of routine visits involve less than 20 minutes of face-to-face time with a medical provider,⁸⁰ yet families often spend over one hour at the health care site.⁸¹ HealthySteps and similar models maximize that time by using the waiting room and wait time in the exam room to screen, assess, and interact with families. In this way, programs can make visits more valuable for families and may offer another avenue for improvement in delivery of preventive health care.

There are several pathways that states can use to fund CHW services through Medicaid. Which avenue to approach depends on a variety of factors specific to each state, and each option involves tradeoffs between the breadth of availability of CHW services and the ability of the Medicaid program to target

Community health workers who are authentically based in the communities they serve hold a unique role on the health care team.

CHW services. These options include: (1) using Medicaid SPAs to add CHW services as a covered Medicaid benefit; (2) using preventive services SPAs to fund specific CHW services tied to prevention and recommended by a clinician; (3) including CHW reimbursement in Section 1115 Medicaid waivers; and (4) leveraging managed care contracts to require CHW services and/or incentivize them through quality and value metrics. This last option, exercising state Medicaid programs' contracting power to shape care delivery, has been particularly fruitful. For more information on the various pathways for sustainable Medicaid funding for CHWs, please see our issue brief, [How States Can Fund Community Health Workers through Medicaid to Improve People's Health, Decrease Costs, and Reduce Disparities](#).⁸²

Below are examples of three states that are prioritizing the recruitment of CHWs by partnering with community colleges or CHW working groups. All of them have passed legislation to provide sustainable funding for CHWs through Medicaid.

- » **Idaho incentivizes primary care providers to include CHWs on their interdisciplinary care teams.** Idaho Medicaid's Primary Care Case Management program rewards primary care providers for better patient outcomes that result from the integration of CHWs into their care coordination model, offering a higher per-member per-month case management payment in these instances.⁸⁵
- » **Texas utilizes CHWs in a variety of settings outside of the hospital to promote community-based care and provides professional growth opportunities and incentives for CHWs.** Texas was the first state to implement a voluntary CHW training and certification program in 2001.⁸⁶ One mechanism for reimbursement for CHWs is through managed care organizations (MCOs). A recent survey found that 18 of 19 MCOs employ CHWs or contract for their services in Texas.⁸⁷ Other funding mechanisms for CHWs include the state's Section 1115 waiver, and the Title V Maternal and Child Health block grant to support the training and certification program.⁸⁸ In the state, CHWs work in a variety of settings, including homes, schools, churches, neighborhoods, local health departments, service nonprofits, and area health education centers.
- » **Michigan promotes care that integrates behavioral health and officially recognizes CHWs as part of the interdisciplinary care team.** Michigan's care team models integrate CHWs as part of interdisciplinary care teams.⁸³ Michigan's Medicaid managed care contract requires that there be, at a minimum, one full-time CHW per 20,000 patients covered.⁸⁴ Michigan establishes a specific reimbursement methodology for CHWs that promotes behavioral health integration.

Research suggests that maternal depression also can negatively impact a child’s development, impede their ability to learn, and have a lasting impact on a child’s health and well-being if left untreated.

5. State Medicaid agencies should allow pediatric health providers to bill for maternal depression screening and cover treatment for maternal depression under the child’s Medicaid benefit

While an estimated 5 to 25% of all pregnant, postpartum, and parenting women experience some type of depression, for low-income women, the rates of depressive symptoms are much higher — between 40 and 60%.⁸⁹ Research also suggests that, while prevalence rates for maternal depression are similar for women of color and white women, a disproportionate number of black women and Latinas who suffer from postpartum depression do not receive needed services. Reasons for this may include poor outreach, detection, and service provision; limited trust between providers and patients; and societal stigma.^{90, 91, 92} Research suggests that maternal depression also can negatively impact a child’s development, impede their ability to learn, and have a lasting impact on a child’s health and well-being if left untreated.

In addition, a recent Mathematica cost model found that untreated mood and anxiety disorders among pregnant women and new mothers carry a high cost — about \$14.2 billion for births in 2017 — when following the mother-child pair from pregnancy through five years postpartum.⁹³

CMS guidance allows pediatric health care providers to bill for maternal depression screening under the

child’s Medicaid benefit during well-child visits.⁹⁴ States may also allow Medicaid to cover treatment related to maternal depression under the child’s Medicaid if the child is present and if the treatment directly benefits the child. This is a significant opportunity to provide treatment for maternal depression in the pediatric health care setting, and specifically for women of color.

Thirty-seven states allow, mandate, or recommend^{vii} that Medicaid cover maternal depression screenings at well-child visits.^{95, 96} At least 25 states cover maternal depression screenings in Medicaid well-child visits.⁹⁷ Several states have gone further. Colorado, Illinois, North Dakota, and Virginia cover maternal depression screenings under the child’s insurance in CHIP, and Illinois, Massachusetts, New Jersey, and West Virginia all mandate that providers screen all women for prenatal and postpartum depression.⁹⁸ States that currently do not cover maternal depression screening and treatment under a child’s Medicaid benefit should do so.

States are looking at other ways to cover treatment for maternal depression. In [Missouri](#),⁹⁹ legislation enacted in 2018 supports the governor’s plan to apply for a [Medicaid Section 1115 demonstration waiver](#)¹⁰⁰ that, if submitted and approved by CMS, will extend postpartum coverage for substance use and related mental health treatment in MO HealthNet, Missouri’s Medicaid program, from 60 days to 12 months.¹⁰¹ Without this waiver, women not otherwise covered by insurance will lose access to behavioral health services 60 days postpartum.

^{vii} Five states require, 25 recommend, and seven allow maternal depression screening as part of the well-child visit.

The effective inclusion of the voices and priorities of communities of color and other disadvantaged groups is a matter of equity, but it will also mean that the ultimate output will be of higher quality and more effective.

Health System Leaders

6. Health systems should partner with families at all levels, including policy development, program design, and implementation

Health systems must be intentional in engaging families as authentic partners in policy development, program design, and implementation, and ensure that families have the supports needed to engage at all levels. Health systems should prioritize programs and payment approaches that share power with families and align with their expressed needs.

The effective inclusion of the voices and priorities of communities of color and other marginalized groups is a matter of equity, but it will also mean that the ultimate output will be of higher quality and more effective. Family-centered care and shared decision-making contribute to better health outcomes¹⁰² and improvements in both quality and patient safety.^{103, 104} They can also help rein in health care costs.¹⁰⁵ Yet barriers — rooted in structural racism and biases that influence attitudes, behaviors, policies, and practices of child- and family-serving systems — prevent many families of color from being true partners and leaders in their children’s healthy development.

There are strategies available that can address these barriers. Efforts to address intergenerational transfers of opportunity and disadvantage and to dismantle baseline inequities require a shift in the power imbalance often seen in how systems engage with families. Strategies for shifting this power imbalance include creating space for and lifting up families’ voices by (1) pursuing community-based participatory research, (2) creating opportunities for shared decision-making with parents at every level of program development and policy, and (3) partnering with and investing in parent and community-based organizations to support their ideas and priorities.

The [*Manifesto for Race Equity & Parent Leadership in Early Childhood Systems*](#),¹⁰⁶ developed by the [Early Childhood Learning and Innovation Network for Communities \(EC-LINC\)](#),¹⁰⁷ and the [Center for the Study of Social Policy \(CSSP\)](#),¹⁰⁸ provides a set of recommendations to support equitable outcomes for children and families in early childhood agencies and systems, including: (1) challenging racism, (2) embracing parent leadership, (3) prioritizing resources, (4) creating career pathways, and (5) maximizing equitable outcomes. To learn more about specific actions that support these strategies, read [here](#).¹⁰⁹ For more on how to assess family engagement in systems change, see this [brief](#)¹¹⁰ by the Lucile Packard Foundation for Children’s Health.

In health care, institutional racism affects coverage, access, care delivery, and other dimensions of care, contributing to higher disease rates and worse outcomes for minority populations.

7. Health systems and organizations setting policy for pediatric practice and quality improvement should institute staff training on implicit bias to prevent biased decision-making and treatment

Implicit bias impacts our decisions and actions in an unconscious manner and can cause people to unintentionally apply bias in how they interact with others.¹¹¹ In health care, implicit bias affects care in a number of ways with potentially harmful consequences for underrepresented patients.¹¹² As an example, research has shown that marginalized populations, including people of color, are less likely to be prescribed pain medications,¹¹³ more likely to be viewed as noncompliant with their medication,¹¹⁴ and more likely to be viewed as medication-seeking or having some other motive to seek medication other than receiving needed care.^{115, 116}

Studies have also demonstrated the impact of implicit bias in the treatment of children. Among these, studies have found that implicit bias is associated with racial disparities in pain management in pediatric care.¹¹⁷ Yet there are ways to address implicit bias in health care. Organizational support, skills training, and resources can help.

» **The Mayo Clinic in Minnesota** has led an institution-wide effort to train all 63,000 Mayo Clinic employees in implicit bias.¹¹⁸ It has also implemented several evidence-based strategies for addressing implicit bias, including having providers follow checklists for each patient to avoid skipping questions and biased decision-making.

» **Mount Sinai Health System** in New York City has implemented implicit bias training. To offer training on unconscious bias, Mount Sinai employed a train-the-trainer model, partnering with a trainer to train a designated team during an off-site, multiday program.¹¹⁹ The trainers returned, offering training to multidisciplinary teams.

8. Health systems should use Institutional Analysis to identify and mitigate the health harms of institutional racism

Institutional racism refers to structures, policies, and practices within and across institutions that influence the distribution of and access to resources, as well as exposure to risk that adversely affects communities of color while concurrently benefitting white people.^{120, 121} In health care, institutional racism affects coverage, access, care delivery, and other dimensions of care, contributing to higher disease rates and worse outcomes for minority populations.

Studies have demonstrated that care for people of color is concentrated in a small number of hospitals and that these hospitals tend to provide lower-quality care.^{122, 123} Further, where people of color live and receive care has been associated with disparities in care for a number of diseases and procedures, including heart disease, pneumonia, and knee replacements.^{124, 125, 126} This trend is a direct result of our country's history of racial redlining and the resulting racial and economic segregation

Advancing health equity means that health care systems must recognize the role of racism in health outcomes and in shaping policies and practices that perpetuate inequities.

of communities.^{viii} Residential racial segregation, combined with historical inequities in the availability of resources for hospitals that serve communities of color, has resulted in inequities in care quality.

Institutional practices are responsible for less effective medical treatments for people of color, and also affect their quality of care. To illustrate, a study in 2016¹²⁷ examining the perceptions of 400 medical students found that white physicians in training are likely to hold false beliefs about the pain tolerance of black patients. More than half of white study participants indicated that black patients have less sensitive nerve endings and have faster coagulating blood than white patients. Belief in these untrue statements was correlated with inappropriate treatment plans for black patients in pain. Racialized decision-making is not necessarily intentional, but can be attributed to implicit perceptions influenced by exposure to negative portrayals of black lives.¹²⁸ Implicit biases impact diagnosis, communication, care quality, and patient-provider relationships, disproportionately affecting blacks and other communities of color.¹²⁹ Remediating institutional beliefs and practices is imperative to eliminate health inequities.

Advancing health equity means that health care systems must recognize the role of racism in health outcomes and in shaping policies and practices that perpetuate inequities. One potential approach that can surface and mitigate structural barriers in health care is institutional analysis (IA). IA is typically used in child welfare, juvenile justice, and other public intervention agencies to confront the structural contributors to poor outcomes for children and families, and it identifies standardized institutional methods like administration requirements, job descriptions, and employee training that may compound or produce poor results.¹³⁰ The analysis focuses on pinpointing inherent organizational policies and practices — the underlying structural barriers — contributing to inequities rather than solving the causes of disparities. It does this by emphasizing community context and the experiences of children and families who interact with public systems to understand how institutional structures and service delivery produce problematic outcomes.¹³¹

^{viii} Government surveyors in the 1930s designed a color code system to grade desirability of neighborhoods in 239 cities. Green indicated “best,” blue was “still desirable,” yellow was “definitely declining,” and red was “hazardous.” “Redlined” areas were considered credit risks by local lenders largely due to the racial and ethnic makeup of residents, which included blacks, immigrants from Asia and southern Europe, and Catholics and Jews. As a result, loans in redlined neighborhoods were very expensive or nonexistent, creating a barrier to homeownership for low-income minorities and catalyzing present-day racial wealth disparities and inequities.

Institutional Analysis in Practice: Advancing Racial Equity in Fairfax County, Virginia

Fairfax County, Virginia, has the second-highest median income in the country and a highly ranked school system. Its superlative standing in wealth and education, however, is marred by racial disproportionality, or disproportionate minority contact (DMC), in the juvenile justice system. The county has been working on this issue since 2009, and has implemented a few ambitious but unrealized attempts at lowering and eliminating DMC. County leaders, committed to finding solutions to reducing and eliminating DMC, turned to CSSP for an IA.

The IA used a number of data collection tools and approaches to begin to understand the experiences of communities interacting with the juvenile justice system to help explain DMC. In addition to a review of case files, in-depth interviews and focus groups were conducted with youth, their families, and a variety of service providers, including social workers, judges, probation officers, community and faith leaders, and others. This information was supplemented by structured observations of juvenile justice intakes, court and diversion hearings, and other system processes. The comprehensive collection of qualitative data revealed the true experiences of those participating in the system and of those carrying out system procedures, data and evaluation that were missing from previous attempts.

The IA concluded that DMC was not an issue confined to one system; rather it was widespread, and its solution necessitated a systematic, multiagency, and community-centered approach. The IA was instrumental in the passage of “One Fairfax” in 2017, an extensive policy that requires the consideration of equity in decision-making and in the development and delivery of future policies, programs, and services made by the board of supervisors and school board.

For a more in-depth look at Fairfax County’s IA and other examples, please visit [CSSP](#).¹³²

Recognizing that health and well-being are shaped more by what happens outside the clinic walls than within, it is important that IA is informed by the community context and the lived experiences of children and families most affected by inequities. Once institutional barriers are identified, health care

organizations can partner with community leaders to develop a remediation plan, potentially focusing on changes that benefit high-priority populations, such as young children and parents, immigrants, or specific ethnic, racial, or tribal groups. In this way, IA in health care can advance health equity.

Hospital Community Benefit: An Opportunity for Institutional Analysis in Health Care

Nearly half of U.S. hospitals operate as nonprofit organizations and are exempt from most federal, state, and local taxes.¹³³ This favored tax status reflects the acknowledgement of the community benefit provided by these hospitals. They are, in turn, required to invest in the communities they serve through community benefit, to report on that benefit, and to conduct a community needs assessment. Federal community benefit is currently loosely regulated with little oversight, but is a promising approach to addressing structural inequities that impact community health and an opportunity to use IA to do so.

In practice, hospitals can readily satisfy the federal community benefit requirement through a number of categories, including charity care, or free or reduced patient services; participation in Medicaid; community health improvement activities; and in-kind contributions to community groups.¹³⁴ Another category hospitals can use to satisfy the federal requirement is community building activities. These include community investments in housing, economic development, or environmental remediation, activities that can address SDOH. However, to claim these community building activities, hospitals must submit additional documentation to demonstrate the link between these types of investments and health improvement, a requirement that may be onerous and serve as a disincentive for hospitals.¹³⁵

Community benefit can serve as a powerful lever for nonprofit hospitals seeking to address SDOH and the structural barriers, including racism, that impact health in the communities they serve. The additional required documentation to claim community building investments is a missed opportunity, especially because community benefit, as currently implemented by hospitals, continues to be primarily medically focused. About 92% of the \$62 billion

spent on community benefit in 2011 was for "clinical services," and only 7% was used for community-focused activities.¹³⁶ Barriers to implementing these activities should be removed by modifying federal regulations to allow hospitals to claim community building activities as a community benefit without the need for additional documentation.

Community benefit is also regulated by state laws. These laws differ substantially in reach and detail from state to state, including the required evidence hospitals must report, which may go beyond what is federally mandated.¹³⁷ ¹³⁸ Some states mandate a minimum amount hospitals need to spend on community benefit. Other states require hospitals to report how their community benefit investment addresses SDOH or the needs of underserved populations.¹³⁹ For these states, integrating IA can serve as a tool to maximize the impact of hospital investments. The Hilltop Institute provides a state-by-state profile of community benefit requirements, which can be found at its [Community Benefit State Law Profiles](#) webpage.¹⁴⁰

The community health needs assessment (CHNA), a federal statutory requirement for

nonprofit hospitals, may be another way to facilitate IA. Nonprofit hospitals are required to conduct a CHNA at least every three years and must include community voices in the process. By regulation, the CHNA must evaluate barriers to care, disease prevention, and social, behavioral, and environmental factors influencing community health.¹⁴¹ An IA allows for a broad analysis of a variety of systems affecting community health and disparities, including inherent barriers in health care organizations that should be prioritized. It can help provide a wider assessment of inequities and needs, and can be integrated into or designed to align with CHNA. Integrating IA into the CHNA requirement can help provide a comprehensive assessment of inequities and needs to address structural and institutional barriers disproportionately affecting communities of color and other marginalized populations.

Annually, health inequities result in an estimated \$93 billion in unnecessary medical care and \$42 billion in lost productivity.¹⁴² The value of a tax-exempt status for nonprofit hospitals was estimated to be \$24.6 billion in 2011.¹⁴³ Nonprofit hospitals, and the broader health care system, can potentially increase profits and improve health outcomes for all if they invest in approaches, including IA, that target institutional racism and promote the broader goal of preventing and eliminating health inequities.

9. Health systems should institute trauma-informed training

Trauma is all too common and should be a focus for health care systems. Data suggests that 90% of patients treated in public behavioral health care settings have experienced trauma.¹⁴⁴ In the U.S., 51% of women and 61% of men have experienced at least one traumatic event,¹⁴⁵ many of which occur during childhood. Among children, more than two-thirds have reported at least one traumatic event by age 16.¹⁴⁶ Given the high prevalence of trauma, it is critical that health care systems prioritize a trauma-informed approach. Failing to do so could compromise care, risk causing further distress for patients, and even deter patients from seeking care in the future.¹⁴⁷

A trauma-informed approach is one that “realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization.”^{148, 149}

The integration of a trauma-informed approach is critical for the prevention and mitigation of ACEs, toxic stress, and trauma, and, when possible, should be done by trusted, interdisciplinary care teams that can provide culturally sensitive, patient-centered screening and proper referral for services.¹⁵⁰ Interdisciplinary care teams are more effective than other care models at providing culturally competent care and effectively treating complex care needs or health needs that may require multiple services across disciplines¹⁵¹ — both essential to the delivery of trauma-informed care.

Given the high prevalence of trauma, it is critical that health care systems prioritize trauma-informed approaches.

It is critical that interdisciplinary care teams are trained to adequately handle trauma, are able to recognize trauma in patients and staff, and understand how to prevent re-traumatization when administering screenings and implementing treatments and interventions.

» **Connecticut has made an effort to institute trauma-informed training.** In collaboration with the Child Health and Development Institute, Connecticut’s Department of Children and Families (DCF) created [CONCEPT](#)¹⁵² — The Connecticut Collaborative on Effective Practices for Trauma. Since 2012, Connecticut’s DCF has required staff at all levels to undergo extensive trauma-informed training using the [National Child Traumatic Stress Network’s Child Welfare Trauma Training Toolkit](#).¹⁵³ Through CONCEPT, DCF has been able to train over 9,000 providers and clinicians practicing in a wide range of fields on trauma-informed care and the best practices for implementing evidence-based treatments in response to trauma.¹⁵⁴ Also, the child trauma training tool has been applied across various sectors, such as behavioral health, pediatrics, education, and juvenile justice. DCF has also improved its trainings to better support health care workers who may be affected by the long-term effects of ACEs, toxic stress, and trauma.¹⁵⁵

» **Montefiore Medical Group in New York has implemented system-wide, equity-focused, trauma-informed care in all of its 21 primary practices.** Montefiore, which operates the largest integrated pediatric behavioral health service in the country, has instituted a number of approaches to prevent and reduce trauma for patients and staff alike. Such approaches include: (1) engaging patients, especially those who have experienced trauma, in the organization’s trauma-informed initiatives; (2) instituting trainings for non-clinical staff in trauma-informed care principles to de-escalate situations for a more welcoming waiting room experience; and (3) screening infants and their parents for ACEs to assess their exposure to trauma.^{156, 157}

10. Health systems and early childhood “system builders”^{ix} should integrate pediatric interventions within the community-based early childhood system

Together, pediatric health and early childhood systems have the potential to reach the vast majority of children. Greater coordination and enhanced linkages between the two systems (as well as other public systems and supports) can improve population health and well-being and advance equity for young children. By coordinating and connecting interventions, supports, and opportunities across health and early

^{ix} Early childhood system builders include leaders in state and local early childhood agencies, early childhood funders, advocates, and others involved in developing, building, and supporting early childhood systems.

childhood systems, we can greatly increase the chances that (1) children are screened, identified, assessed, and linked with necessary resources; and (2) parents have the information, support, access, and opportunities they need to help their young children thrive in the first years of life.

As an example, one of the primary drivers of [Project DULCE](#)¹⁵⁸ (Developmental Understanding & Legal Collaboration for Everyone) — a universal, evidence-based approach to embedding strengths-based, family-centered child health care during the critical first six months of life — is that the intervention site (a pediatric primary care clinic) is embedded in a community-wide system of early childhood care. As such, the pediatric primary care clinics implementing Project DULCE are integrated within EC-LINC communities (CSSP’s network of early childhood system builders),¹⁵⁹ allowing them to utilize a broad network of services and supports that already exist in the community. DULCE sites are already observing linkages to preexisting and newly identified early childhood services and tracking how well families are able to move through this new enhanced “system” of services and supports, and working to capture the value-add of a better aligned system.

11. Health systems and organizations setting policy for pediatric practice and quality improvement should promote routine developmental screening and surveillance in the pediatric primary care visit

Not all children in a given age range will meet key developmental milestones (e.g., walking, speaking, or identifying letters) at the same time, yet failure to do so within a standard time frame raises concerns about a child’s potential for healthy growth and development.¹⁶⁰ Approximately 10% to 14% of children birth to age 5 exhibit developmental delays

or behavioral concerns that impede school readiness and overall success.¹⁶¹

Racial and ethnic disparities exist in the diagnosis and treatment of developmental and behavioral conditions in early childhood, as documented across other areas of child health.¹⁶² Studies show that early in life — by 24 months of age — black children are almost five times less likely than white children to receive early intervention (EI) services.¹⁶³ Also, black children who qualify based on developmental delay alone are less likely to receive services as compared to children with a diagnosed condition.¹⁶⁴ While disparities exist in the screening, evaluation, and referral process, improving training and cultural competency of providers can help reduce these disparities.

Comprehensive screenings in pediatric primary health settings, coupled with strong linkages to early intervention and other needed services and consistent follow-up, can promote well-being and healthy development — effectively serving as a means to ensure that all young children enter school ready and able to learn. Importantly, Medicaid’s Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit requires states to provide comprehensive services and all Medicaid-coverable, appropriate, and medically necessary services needed to correct and ameliorate health conditions, including screening and resources for services that address physical and mental health, substance use disorders, medically necessary personal care, dental, vision, and hearing. As noted in [Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 4th Edition](#),¹⁶⁵ developmental surveillance and screening of children and adolescents are “integral components of health care supervision,” and monitoring development during infancy and early childhood and ongoing surveillance should be supplemented and strengthened by standardized developmental

Project DULCE uses a range of screening tools to assess the need for concrete supports (e.g., nutrition assistance, housing needs, utility assistance) as well as child development and parent functioning (e.g., maternal depression, interpersonal violence).

screening tests that are used at certain visits (9 months, 18 months, and 2 years) and at other times when concerns are identified.¹⁶⁶

Pediatric interventions use a variety of screening tools to identify developmental concerns or other risks. As an example, the [Assuring Better Child Health and Development \(ABCD\) program](#)¹⁶⁷ is focused on increasing the rate of developmental screening for young children eligible for CHIP — primarily using the Ages & Stages Questionnaires — and increasing referral rates for appropriate services. Originally piloted in a community care network in North Carolina, the program was later expanded to all 14 community care networks in the state. The program provides flexibility for each network to develop a screening and referral program suitable to the region's population and to employ early intervention specialists who train physicians in using the screening tool and making referrals. Data suggests that the program has effectively increased screenings and referrals. The percentage of children who were screened for developmental disabilities increased from 7% in 2000 (when the program was initiated) to 90% in 2009.¹⁶⁸

Health Care Providers

12. Primary care providers should promote population health by better connecting and integrating health care and social supports

Today, there is growing recognition that (1) social, economic, and environmental factors influence child health, and (2) opportunities exist to promote population health by better connecting and integrating health care and social supports to collectively address broader drivers of health outcomes. Several exemplary evidence-based models, such as Safe Environment for Every Kid ([SEEK](#)),¹⁶⁹ Project DULCE,¹⁷⁰ and [Help Me Grow](#),¹⁷¹ use such strategies in pediatric health care settings and show promise. In the SEEK model, providers use the SEEK Parent Questionnaire (PQ, formerly the Parent Screening Questionnaire or PSQ) to screen for targeted problems known as risk factors for child maltreatment, including maternal depression, alcohol and substance abuse, intimate partner (or domestic) violence, harsh parenting, major parental stress, and food insecurity. Others, including Project DULCE, use a range of screening tools to assess the need for concrete supports (e.g., nutrition assistance, housing needs, utility assistance), as well as child development and parent functioning (e.g., maternal depression, interpersonal violence). An evaluation of Project DULCE found that intervention families experienced not only fewer emergency department visits and improved adherence to preventive care (such as immunizations), but also accelerated access

to concrete supports like Supplemental Nutrition Assistance Program (SNAP) benefits and utility service supports.¹⁷²

Notably, a core component of the DULCE model — [medical-legal partnership \(MLP\)](#)¹⁷³ — has been endorsed by the American Medical Association and the American Bar Association (among other organizations) in recent years and has been deemed an “enabling service” for FQHCs by the Health Resources and Services Administration (HRSA). The MLP approach reduces barriers to accessing health-promoting benefits and services such as food, housing, and energy; education and employment; health care; and personal and family stability and safety.^{174, 175}

13. Primary care providers should target interventions to young children ages birth to 3 years and their caregivers

Early childhood is a time of rapid brain development, physical growth, and learning. This time sets the foundation for healthy physical, social-emotional, and behavioral development, and also for academic success well into adulthood. Findings from early intervention studies suggest that these early years of life are a sensitive period for facilitating social-emotional development, promoting child cognitive and academic competence, and preventing long-term sensory problems, making it an important time for pediatric interventions.^{176, 177, 178}

Results from a number of studies, including meta-analyses, reviews, and randomized controlled trials, show that interventions involving parents during the first few years of a child’s life can dramatically improve parental sensitivity and discipline strategies, and encourage supportive, warm parenting.¹⁷⁹ Recent neural and behavioral evidence from studies of

new parents also makes a compelling case for the transition to parenting as a distinct and important period for adults. Because the transition to parenting typically co-occurs with the first and most sensitive period of a child’s life, it is an optimal time for multigenerational approaches that meet the needs of both children and their caregivers, maximizing investments to create a cycle of opportunity.¹⁸⁰

Multigenerational policies and programs focus on addressing the needs of both caregivers and children, especially in the early years of life, together and with equal intensity.¹⁸¹ These programs have demonstrated effectiveness in improving child and caregivers outcomes. Social disadvantage, particularly low socioeconomic status and the health burden it brings, is passed on from one generation to the next, and this adversity has a significant impact on the healthy development and long-term health outcomes of both children and caregivers. Therefore, it’s essential to promote equity-driven, two-generation (and beyond) policies and programs that aim to interrupt cycles of disadvantage and poorer health and have positive impacts on both children and caregivers. Research has shown that interventions that promote a supportive, responsive relationship between children and caregivers can mitigate ACEs.¹⁸²

Recognizing the opportunity in multigenerational approaches, pediatric practices are experimenting with programs that combine caregiver and child health care, including: models like [CenteringParenting](#)¹⁸³ that offer group models of well-child care, bringing small cohorts of parents and infants together for care during the first year of life; interventions such as Project DULCE and HealthySteps that are focusing on dyadic care, integrating a family support specialist into the pediatric care team, to provide a range of supports for families with infants and toddlers in the

clinic setting; and others, including [Child First](#),¹⁸⁴ that are connecting families to needed services through intensive care coordination and providing parent-child psychotherapy to address trauma and strengthen the caregiving relationship.

14. Primary care providers should use the well-child visit to promote both child and maternal health in the context of family-centered care

According to AAP, “family-centered care is based on the understanding that the family is a child’s primary source of support and that the perspectives and information provided by families and children are important in clinical decision-making.”¹⁸⁵ Pediatricians are well positioned, given their ongoing contact and relationship with families, to identify concerns, link families to needed interventions, and provide additional resources (or linkage to resources) that support both child development and the parent-child relationship. Utilizing a family-centered approach, pediatricians can observe contributions of the parent-child relationship to early social-emotional development, identify family stressors and strengths (including parent and child risk and resiliency factors) and provide support for the family, paying attention to the needs of both parents and children.

Recognizing the opportunity to attend to both child and maternal health, pediatricians can screen for social-emotional risk factors, including maternal depression, interpersonal violence, and substance abuse, as well as parental strengths, during a well-child visit. [Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 4th Edition](#)¹⁸⁶ recommends a postpartum checkup as part of well-child visits, including maternal depression screenings, as well as a discussion of SDOH, including

food security and family substance use, as a best practice for pediatricians. Interventions, including Project DULCE, screen for maternal depression and interpersonal violence during the well-child visit.

15. Primary care providers and researchers should expand the definition of and screening for neighborhood-, community-, and societal-level ACEs

The original ACE study, conducted at Kaiser Permanente, surveyed their members from Southern California to establish a link between early adversity and health and well-being later in life.¹⁸⁷ The study sample was mostly white, insured, and well educated. While the field of ACEs research has grown considerably since then, the exclusion of ethnically and racially diverse communities from the research continues to limit our understanding of ACEs.

Additionally, ACEs are too often defined as exposure to 10 adverse experiences that capture the family environment and disregard neighborhood-, community-, and societal-level exposures to adversity. Many experts now believe that work to prevent and mitigate ACEs requires a definition of early adversity that reflects a broader set of neighborhood-, community-, and societal-level experiences.^{188, 189, 190}

Specifically, as discussed earlier, racial discrimination and other stressors outside the home — at the neighborhood, community, or societal level — have direct and indirect influences on child health and well-being. Early experiences of racism and discrimination have measurable and broad negative impacts on health, including increased risk for mental and behavioral health issues.¹⁹¹ In adolescents, discrimination heightens the likelihood of depression, substance abuse, and risky sexual behavior.¹⁹² Exposure

Many experts now believe that work to prevent and mitigate ACEs requires a definition of early adversity that reflects a broader set of neighborhood-, community-, and societal-level experiences.

to community violence can lead to emotional,¹⁹³ social,¹⁹⁴ and cognitive¹⁹⁵ problems, including difficulty regulating emotions¹⁹⁶ or concentrating¹⁹⁷ at school. Peer rejection and social isolation are also linked to a number of disorders.¹⁹⁸ The negative impact of poverty on child physical health and emotional well-being has also been well documented.^{199, 200} Persistent poverty and associated hardships expose children to preventable stressors that affect healthy development and lifelong health. Given the impact of such neighborhood-, community-, and societal-level exposures on children's health — and in particular the health and well-being of children of color and other marginalized populations — ACEs screening tools should be universally expanded to capture indicators, such as social isolation, and broader SDOH, like racism and discrimination, food insecurity, housing instability, neighborhood or community violence, and poverty.

State Highlights

In **Pennsylvania**, the Institute for Safe Families created the ACE Task Force in 2012 to evaluate the prevalence and impact of ACEs in the socially and racially diverse urban city of Philadelphia.²⁰¹ The Philadelphia Expanded ACE Survey was one of the first to include community-level indicators of ACEs. The task force added witnessing violence, experiencing discrimination, bullying, living in foster care, and neighborhood safety to the survey. In addition to revealing that 70% of adult residents had experienced one ACE and 40% had experienced four or more of the conventional ACEs, the survey showed

that 40% of adults had also experienced four or more of the additional indicators.

In 2016, **South Carolina** supplemented its BRFSS ACE module with eight additional questions that asked about two new ACE indicators, food security, and homelessness, as well as socioeconomic factors to better contextualize environments that can contribute to or prevent ACEs, and protective factors to assess what supports and resources families had available.²⁰²

California is incentivizing the use of ACEs screenings in the context of pediatric visits that include broader indicators. In 2018, a group of pediatricians, other health care providers, legal services, and social service agency representatives recommended three trauma screening options to the California Department of Health Care Services. From these options, the state has moved forward with reimbursing for only one of the three recommended screening tools. Beginning July 2019, providers will be reimbursed for ACEs screening if they use the Pediatric ACEs and Related Life-event Screener (PEARLS).^{203, 204, 205} The PEARLS screening tool adds bullying, racism, homelessness, community violence, foster care, and food insecurity to the conventional ACE indicators. Considering the minority-majority status of California's population, the inclusion of community- and systems-level indicators is critical, acknowledges the diverse experiences of children, and can also provide better data to inform the development of more tailored and effective interventions.

Addressing the Toxic Effect of Anti-immigrant Policies and Sentiment

A torrent of recent immigration enforcement actions aimed at excluding nonwhite immigrants from the U.S. has created intense challenges, uncertainty, and stress for immigrant children and families, providers, and communities. For many families, deeply discriminatory and punitive immigration policies, including the proposed public charge rule,^x have fostered fear and confusion. Immigrant families are uncertain about their ability to access concrete supports, including Medicaid and CHIP, and are hesitant to do so because of the potential consequences. The Kaiser Family Foundation^{206, 207} and AAP²⁰⁸ have both pointed to increases in toxic stress and drops in coverage for children in immigrant families as a result of a heightened anti-immigrant environment in the U.S. As fear and confusion abound, there are strategies that can be deployed in health care settings to support immigrant children and families, including:

- » MLPs to assist the health care team in resolving legal challenges immigrant families may face when accessing care. MLPs are also a good resource on the most current national and state-specific policies that can impact patients' health and health care access.
- » Training health care providers on immigration policy, enforcement activities, and immigrants' rights to improve awareness of the current policies affecting immigrant families, which will also better inform care delivery.
- » Implementing "Know Your Rights" campaigns in health care settings to build the capacity of immigrant families to understand how to properly exercise their rights when interacting with law enforcement as well as gain overall knowledge of the policies that affect them.

^x Under the Trump administration's proposal, an immigrant could be considered a public charge, and therefore denied entry to the country or denied the right to adjust status and become a lawful permanent resident, if that person receives Medicaid or certain other public benefits for a period of time. The proposed rule can be found here: <https://www.federalregister.gov/documents/2018/10/10/2018-21106/inadmissibility-on-public-charge-grounds>.

Considerations for ACEs Screening

1. Strengths-Based Approaches to Screening for ACEs

An effective approach to screening for SDOH, including ACEs, recognizes the inherent strengths of families. It includes inquiries about deficits as well as the resources or supports that make the patient or family resilient and incorporates strategies for building trust with families.²⁰⁹

A Strengths-Based Approach to Screening Families for Health Related Social Needs, a [brief](#)²¹⁰ by MLPB and CSSP, offers several concrete recommendations for strengths-based screening for SDOH, including: (1) involving families and communities in the development of screening tools and protocols; (2) screening for both risk and protective factors; (3) setting person-centered screening priorities; (4) ensuring that screening is conducted by care team members trained and supervised in strengths-based approaches; (5) recognizing that screening for SDOH is not risk-free for families, and proceeding accordingly; and (6) acknowledging family-level risk and strengths in a broader historical context.

Screening for ACEs can help us understand an individual's experience of adversity, but only after it has happened. To prevent ACEs, we have to move much further upstream.

2. Opportunities to Strengthen Linkage to Services

A common concern raised by providers when screening for ACEs and other SDOH is “the fear of the empty toolbox.” Providers agree that SDOH have a significant impact on patient outcomes and should be addressed, but many feel that they lack the staff and resources to do anything about these risk factors, even when they can identify them.²¹¹ This can often lead providers to do no screening at all or to refer families outside the practice for screenings. Strengths-based screening can provide an opportunity to engage parents in mapping their strengths and social supports, and help to pinpoint resources available to them. In addition, a number of strategies have been identified for improving linkages to promote developmental health in pediatrics, including: (1) co-location, co-management, and information sharing to reduce barriers to care, promote early referral, linkage, and follow-up, promote cross-discipline problem-solving and family-centered care, and reduce duplication and fragmentation of services, and; (2) system-wide training programs for pediatric primary care practices to improve developmental care and linkages by providing information to enhance developmental expertise, create a practice-wide systems change approach, and emphasize the importance of linking to a broader array of community services and systems.²¹²

Years of research and learning have helped create a roadmap for prevention. Now we need to invest in it.

3. Beyond Screening for ACEs

Screening for ACEs can help us understand an individual's experience of adversity, but only after it has happened. To prevent ACEs, we have to move much further upstream. We know a great deal about what children and families need to thrive, and while experiencing some adversity is a part of life, we can do much more to shore up our systems and scale investments in services, supports, and opportunities for children and families. ACEs screenings can be a useful tool in the context of other strategies to identify and intervene in ACEs, and to support children and families who have experienced adversity

(albeit a narrow set of adverse experiences), but these screenings are limited. [Strengthening Families](#),²¹³ a research-informed approach, highlights five protective factors to increase family strengths, enhance child development, and promote resilience, helping reduce the likelihood of child abuse and neglect and other negative outcomes. Other organizations, including [ZERO TO THREE](#),²¹⁴ have also identified policies that can meet the universal needs of infants, toddlers, and families. Years of research and learning have helped create a roadmap for prevention. Now we need to invest in it.

Does Our Approach to ACEs Add Up?

Some have raised concerns that research, beginning with the original ACE study, has consistently reported ACEs as cumulative, treating all ACEs equally in an additive index. The ACEs additive index is based on the assumption that each ACE is equal and equally traumatic. However, the additive approach to the study of ACEs has been called into question as research suggests that children often experience ACEs differently — with experiences influenced by factors such as timing, severity, duration, and the presence of individual genetic, epigenetic, and protective factors.²¹⁵ Thus, researchers and providers should: (1) be aware that ACEs may have differential impacts on children, (2) stay attuned to the potential variation in how children experience ACEs, and (3) consider factors such as timing, severity, and duration of adversity, as well as the presence of protective factors, in screening for ACEs and identifying appropriate interventions.

Conclusion

All children deserve the opportunity to achieve their full potential, yet early adversity, toxic stress, and trauma pose a serious threat to the health and well-being of many young children and can have a lasting and profound impact on their lives, including their long-term health. While ACEs are common and seen across income levels, races, and ethnicities, data shows disparities in the occurrence and experience of early adversity. Conditions that drive the disproportionate impact of ACEs on communities

Looking ahead, health care delivery systems must focus resources on advancing policies and implementing strategies to prevent and mitigate ACEs.

of color and other marginalized populations are underpinned by various social and economic factors, including historic, systemic, and institutional racial, ethnic, and economic inequities. These disparities are exacerbated by the fact that populations experiencing higher rates of ACEs — including low-income children and children of color — are also less likely to receive the services and supports they need to mitigate the effects of exposure to early adversity, toxic stress, and trauma.

Given the shifting demographics of our country and sharply rising income inequality, we must invest in strategies to support and empower all children and

families — and ensure that communities of color and other marginalized populations are not left behind. Health care systems can play a pivotal role in this work — especially now — as health care is in the midst of a profound transformation in how it delivers and pays for care, balancing the goals of promoting more high-value care, improving quality, and reducing costs. Increasingly, these efforts focus on addressing the health-related social needs that drive close to 80% of variation in health outcomes, and, for many, sharply curtail their opportunities to be healthy. Health care is also well positioned to do this work given that it is a nearly universal system that touches almost all young children and families.

Looking ahead, health care delivery systems must focus resources on advancing policies and implementing strategies to prevent and mitigate ACEs, toxic stress, and trauma; support families in raising healthy children; and promote child, family, and community resilience. Investing in reducing inequities, improving the social factors that influence health, and preventing and mitigating ACEs will provide long-term benefits for children, families, and society at large.

The specific recommendations outlined in this paper highlight strategies for leveraging health systems for the prevention and mitigation of ACEs, and the reduction of health inequities, drawing on examples of promising approaches at the national, state, health system, and practice levels that can be scaled to support children and families who experience compounding stressors, to improve systems, and to change community conditions so that all children and families can thrive.

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