State Notes

TOPICS OF LEGISLATIVE INTEREST

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When Everything Isn't Coming Up Aces: Mitigating Adverse Childhood Experiences
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Introduction

The ace card in a standard 52-card deck is considered to be lucky by modern standards; however, this has not always been the case, as an ace was thought to be unlucky because it was associated with the lowest side on a dice. Despite this, aces appear numerous times in modern English colloquialism, such as "everything is coming up aces", which means everything is turning out well or better than hoped. However, as the landmark 1998 Centers for Disease Control and Prevention (CDC)-Kaiser Permanente Adverse Childhood Experiences Study shows, aces can still be unlucky with far-reaching consequences. The CDC-Kaiser study found that negative life experiences (e.g., neglect, physical/emotional/sexual abuse, parental absence, mental illness, economic hardship) in the first 18 years of life can have a lasting negative impact on an individual's physical and mental health and social outcomes. These negative experiences now are known as adverse childhood experiences, or ACEs. Since the release of this study, ACEs have become known to be a prominent public health concern. This paper will explore how ACEs affect Michigan children and adults, the social and economic impact of ACEs, potential preventative and mitigation strategies, and finally, the affect COVID-19 has had on at-risk children and ACE mitigation strategies.

What are ACEs?

The CDC defines ACEs as potentially traumatic events that occur in childhood, such as experiencing violence, abuse, neglect; witnessing violence in the home; and having a family member attempt or commit suicide.[1] Adverse childhood experiences also can include environmental conditions that undermine a child's sense of safety, stability, and bonding, such as growing up in a household with substance misuse, mental health problems, or instability due to parental separation or the incarceration of a household member.[2] Adverse childhood experiences can be influenced by other factors, such as the nature, frequency, and seriousness of the traumatic event (the more frequent ACEs a child experiences, or larger the "ACE load", the more dramatic the impact will be in later life), previous history of trauma, and the availability of support networks. Exposure to ACEs can result in extreme or repetitive stress, known as "toxic stress", which can cause both immediate and long-term physical and psychological harm.[3] Toxic stress is the result of intense adverse experiences and may be sustained for periods ranging from one week to years.[4] Prolonged exposure to stress hormones, such as cortisol, can affect brain development in children and can lead to impairments in learning, memory, low emotional control, and low stress thresholds and regulation.[5]

ACEs Nationally

The CDC-Kaiser Permanente Adverse Childhood Experiences Study was conducted from 1995 and 1997 with 17,000 participants, making it one of the largest investigations into what effects childhood adversity have on later-life health and wellbeing. The goal of the original ACEs study was to examine associations between childhood abuse and adult health risk behavior and disease. According to the study, "the leading causes of morbidity and mortality

in the United States are related to health behaviors and lifestyle factors; these factors have been called the 'actual' cause of death".[6] However, as abuse and other potentially damaging childhood experiences may contribute to the development of these health risks, ACEs should be recognized as the basic cause of morbidity and mortality in adult life.[7] The study concluded that there was a strong relationship between the breadth of exposure to abuse or household dysfunction during childhood and multiple health risk factors (e.g., smoking, severe obesity, physical inactivity, depressed mood, and suicide attempts) that contributed to the leading causes of death in adults.[8] The study also found that with an increase in ACEs load, there was an increase in prevalence and risk of alcoholism, illicit drug use, risky sexual behavior, and history of sexually transmitted diseases.[9]

The annual Behavioral Risk Factor Surveillance System (BRFSS) is a state-based telephone survey that collects data from US adults regarding health conditions and risk factors. Since 2009, 48 states administering the BRFSS have included ACE questions at least for one year on their survey.[10] From 2011 to 2014, 62% of adults from 23 states administering the BRFSS reported having at least one ACE and 25% reported three or more ACEs.[11] These results are similar to the that of the original ACE study and indicate that ACEs are commonplace across all populations. However, some populations might be more vulnerable. From a study of the BRFSS data, participants who identified as Black, Hispanic, or multiracial, those with less than a high school education, those with an annual income of less than $15,000, those who are unemployed or unable to work, and those who were identified as gay, lesbian, or bisexual reported having greater exposure to ACEs than other demographics.[12]

ACEs in Michigan

In 2015, the Chronic Disease Epidemiology Section of the Michigan Department of Health and Human Services (MDHHS) released a newsletter describing the effect of ACEs on Michigan adults and children. The Department analyzed data collected from the 2013 Michigan Behavior Risk Factor Surveillance System (MiBRFSS). According to the report, Michigan adults who reported four or more ACEs were four times more likely to report experiencing poor mental health and depression than adults who reported having experienced no ACEs.[13] Additionally, adults with four or more ACEs also reported a significantly higher prevalence of current smoking and asthma than adults with no reported ACEs.[14] Similarly, the risk of binge drinking for adults with one or more ACEs was nearly 1.5 times greater than for adults with no ACEs.[15] Even when the Department controlled for qualitative factors like age, gender, race, education, and household income, adults with four or more ACEs remained between 1.9 to 4.9 times more likely to report adverse behaviors and outcomes than adults who did not experience ACEs.[16]

In 2019, the MDHHS released a final report on ACE data collected from the 2016 MiBRFSS, which collected data from 12,024 individuals on the eight specific ACEs (verbal, physical, and sexual abuse, substance abuse in the home, separated or divorced parents, mental illness in the home, domestic violence in the home, or an incarcerated household member) that MiBRFSS tracks. The responses gathered through the survey were weighted to reflect the prevalence of each ACE across Michigan. The report stated that 66% of Michigan adults have experienced at least one or more ACEs.[17] Generally, the prevalence of negative behaviors and poor health outcomes among adults with ACEs increases as the number of ACEs an individual has experienced increases; however, data indicates that social supports may contribute to lower risk of negative health outcomes associated with ACEs.[18] According to the report, the

risk of poorer health outcomes varied by condition, but generally, the risk of mental health conditions were higher among people with ACEs than the risk of physical conditions, but both were an issue.[19] Additionally, the six health outcomes most closely associated with ACEs were diagnosed depression, chronic obstructive pulmonary disease (COPD), poor mental health, fair and poor overall health, asthma, and poor physical health.

Societal and Economic Impact

In addition to the physical and emotional toll that ACEs may exact on an individual, ACEs have the potential to occur intergenerationally, inhibiting health and life outcomes for the next generation. Adverse childhood experiences also present a cumulative cost for the country, when considering the potential cost of medical care, mental health care, and lost productivity.

Childhood adversity may determine life opportunities such as education, employment, and earning outcomes. While further research continues to explore the relationship between ACEs and other later life opportunities, some research suggests that individuals who reported four or more ACEs were more likely to report high school noncompletion and household poverty, and individuals who reported three or more ACEs were more likely to report periods of unemployment.[20] Outcomes such as these are not limited to one generation, as ACEs can have intergenerational consequences.[21] It is generally accepted that a child is more at risk of lower education, unemployment, and poverty if these categories apply to his or her parents.[22] Many of these factors can contribute to or correlate with conditions or circumstances that comprise ACEs. If cumulative ACEs increase the likelihood of poverty as an adult, this presents a greater risk for a subsequent child to born into poverty, where that child's education and future income and employment opportunities, without support, could be inhibited.[23]

In 2012, the CDC estimated that the national total lifetime costs associated with just one year of confirmed cases of child maltreatment is approximately $124.0 billion.[24] The CDC analyzed confirmed cases of child abuse and neglect, both fatal and nonfatal, over a 12-month period, and concluded that the lifetime costs of each surviving victim of abuse was $210,012. For context, this amount is comparable to the lifetime costs associated with costly health conditions, such as stroke, which has an estimated lifetime cost of $159,846 per person.[25] The CDC reported that negative effects of ACEs over an individual's lifetime impact's the nation's health care, education, criminal justice, and welfare systems. The key findings of the CDC's 2012 study on the estimated economic toll of ACEs are described in Figure 1.

Figure 1

Estimated average lifetime cost per victim of nonfatal child maltreatment	Estimated average lifetime cost per death of a victim of child maltreatment
$32,648 in child health care costs	$14,100 in medical costs
$10,530 in adult medical costs	$1,258,800 in productivity losses
$144,360 in productivity losses	
$7,728 in child welfare costs	
$6,747 in criminal justice costs	
$7,999 in special education costs	

Source: Centers for Disease Control and Prevention.[26]

The CDC estimates that preventing ACEs might reduce certain health outcomes with potential reductions ranging from a 1.7% reduction in obesity to a 44.1% reduction in depression.[27]

Mitigation Strategies

Some ACEs and their associated outcomes can be prevented. Federal, state, and community-level intervention and supports can mitigate the effects of an ACE on a child's life.

Federally, the CDC provides "technical packages", which "are a select group of strategies to achieve and sustain substantial reduction in a specific risk factor or outcome", to help states prioritize present activities with the greatest potential for impact.[28] According to the CDC, strategies that can prevent or mitigate the harm of ACEs rely on the following: strengthening economic supports for families, promoting social norms that protect against violence and adversity, ensuring a strong start for children and paving the way for them to reach their full potential, teaching skills to help parents and youth handle stress, manage emotions, and tackle everyday challenges, connecting youth to caring adults and activities, and intervening to lessen immediate and long-term harms.[29]

Figure 2

CDC ACEs Prevention Strategies	Approach
Strengthening economic support for families	-- Strengthening household financial security (e.g. earned income tax credit, child tax credit, family-friendly work policies)
Promote social norms that protect against violence and adversity	-- Public education campaigns -- Men and boys as allies in prevention -- Legislative approaches to reduce corporal punishment -- Bystander approaches
Ensure a strong start for children	-- Early childhood home visitation -- High quality child care -- Parenting skills and family relationship approaches
Teach skills	-- Social-emotional learning -- Safe dating and health relationship skill programs -- Parenting skills and family relationship approaches
Connect youth to caring adults and activates	-- Mentoring programs -- After-school programs
Intervene to lessen immediate and long-term harms	-- Enhanced primary care -- Victim-centered services -- Treatment to lessen the harms of ACEs -- Treatment to prevent problem behavior and future involvement in violence -- Family-centered treatment for substance use disorders

Source: CDC's Report, "Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence"

There are several Federal programs intended to assist states and at-risk populations, which may have a mitigating factor for ACEs. This paper will highlight a few of those programs and their implementation within Michigan in the next section.

State-Level Mitigation Strategies

The Michigan ACEs report identified social supports as one important factor in mitigating the effects of ACEs. Demonstratively, Michigan adults with four or more ACEs and high social support had a lower risk of poor physical health outcomes when compared to those with low social support.[30]

Screenings. Screening and treatment is one of the mitigation strategies recommended by the CDC. Individuals who have experienced ACEs are more likely to experience a diagnosable mental, emotional, or behavior disorder, such as anxiety or depression.[31] Early intervention may mitigate the most serious consequences of ACEs on long-term health.[32] Some approaches may include screenings in schools or by a primary care provider, specifically if care providers, whether in a medical or school setting, consider a child's history of trauma in an approach known as "trauma-informed care".[33] The MDHHS provides guidance on the trauma-informed approach for several sectors, such as in education, courts, health care, and child welfare.[34]

In addition to providing information on a trauma-informed approach, effective in February 2017, the Medical Services Administration (MSA), which administers the Michigan Medicaid program, adopted a policy to provide for the coverage of trauma services for children under the age of 21 under the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) benefit. The MSA specifically identifies ACEs and the importance of trauma-specific interventions to reduce their prevalence and consequences.[35] Notably, the directive, which was incorporated into the *Medicaid Provider Manual*, dictates that primary care providers should do the following:

- Strengthen their provision of anticipatory guidance to support children's social-emotional-linguistic skills and to encourage the adoption of positive parenting techniques.
- Actively screen for precipitants of toxic stress that are common in their practice areas.
- Assess the child's exposure to trauma and risk of exposure to trauma using a questionnaire or screening tool.
- Identify, or advocate for the development of, local resources that address risk for toxic stress that are prevalent in their communities.[36]

The policy also includes suggestions on how a primary care provider may broach the subject of trauma or risks for toxic stress with children or parents. If the screening yields a positive result for trauma risk for toxic stress or trauma, the primary care provider should refer the child to a mental health professional trained to provide trauma assessment, treatment, and/or support.

Public Education Campaigns. Screenings by primary care providers under Medicaid is not the only avenue by which the State of Michigan seeks to mitigate ACEs. The MDHHS's Division of Chronic Disease and Injury Control has utilized $167,783 of CDC Preventive Health and Health Services (PHHS) Block Grant Funding to support a 1.0 full time equivalent (FTE) ACEs Public Health Consultant.[37] This FTE provides training, consultation, technical assistance, and resources to State-level partners to increase awareness and understanding of the impact of ACEs on adult health outcomes, in addition to assisting with programs and policies that promote resilience. This FTE also provides leadership and support to the Neuroscience,

Epigenetics, ACES, and Resilience (NEAR) Collaborative,[38] which is a cross-systems collaborative dedicated to designing, developing, and promoting effective solutions to prevent and address ACEs, toxic stress and trauma within state-led programs, policies, and activities.[39]

Home Visitations. The Maternal, Infant and Early Childhood Home Visiting Program is a Federal program that provides funding to states, territories, and tribal entities to develop and implement evidence-based, voluntary programs to assist pregnant women and families, included those considered at-risk.[40] The MDHHS was awarded approximately $7.7 million in fiscal year (FY) 2018-2019 and approximately $8.0 million in FY 2019-2020.[41] Presently, Michigan has not been awarded funds of this type for FY 2020-2021; however, the State has historically received approximately $7.5 million to $8.0 million of this grant funding each year since 2016.[42]

The Michigan Home Visiting Initiative is a voluntary program offered by the MDHHS to new mothers and families that provides at least eight home visiting models to assist applicable demographics for each model. The CDC, among other sources, identify home visits as a useful ACE preventative or mitigation measure, as these types of programs have been associated with a 48% relative reduction in rates of child abuse and neglect.[43] Additionally, home visitation programs are associated with improved parenting practices, reduction in the use of welfare, greater employment, lower rates of substance abuse, and reduced exposure to domestic violence.[44]

Research. In August 2020, the Michigan Public Health Institute (MPHI), a nonprofit corporation established under Public Act 264 of 1989 for planning, promoting, and coordinating health services research with a public university or a consortium of State public universities, was among four entities awarded $500,000 annually for three years from the CDC's Preventing Adverse Childhood Experiences: Data to Action (CDC-RFA-CE20-2006) program.[45] The first award to MPHI was made in FY 2020.[46] The purpose of this funding is to build State-level surveillance infrastructure that ensures Michigan's capacity to collect and analyze data to inform ACEs prevention and mitigation strategies, activities, and support.[47] Additionally, recipients of the award must focus on the implementation of at least two designated strategies described in the CDC's "Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence", also described in Figure 2 above.[48]

In the State budget for FY 2020-21, boilerplate requires the MDHHS to allocate $1.5 million in one-time funding from the State General Fund to develop and operate a resiliency center for families and children, and to provide services for those experiencing trauma, toxic stress, chronic disability, neurodevelopmental disorders, or addictions.[49] The Resiliency Center for Families and Children will be developed in partnership between Western Michigan University's College of Health and Human Services and the Unified Clinics.[50] Because the funding is on a one-time basis, ongoing support would need to be approved by the Legislature in subsequent budget cycles.

Strategies in Other States

Many other states have recognized the impact and prevalence of ACEs among their populations too. Some states have adopted legislation that included language officially recognizing the issue of ACEs, such as Arkansas, which adopted Act 1064 of 2019.[51] The Act's

language states that "56% of Arkansas children have undergone at least one [ACE], the highest percentage of any other state". The Act also created a pilot program for a school safety and crisis line, known as "ARSafeSchools", for students to anonymously report incidents that cause or could cause physical, mental, or emotional damage to the student.

California. In December 2020, the California Office of the Surgeon General released a report on ACEs among Californians. According to the report, 62% of California adults have experienced at least one ACE, and 16% of Californians reported four or more ACES.[52] Before the release of this report, the State of California had adopted several measures related to ACEs prevention. Assembly Bill 340 (2018) established the Trauma Screening Advisory Group to address trauma screening under the Medi-Cal (Medicaid) EPSDT program for individuals 21 and younger, similar to the measure adopted under Michigan's Medicaid program.[53] The California Legislature allocated approximately $143.1 million over FYs 2019-20 and 2020-21 to support ACEs screenings through Medi-Cal.[54] Additionally, some of the funding was used to create the ACEs Aware Initiative to offer health care providers free online training on how to integrate ACEs awareness into their care and receive free certifications for this training.[55] The California state budgets for 2019-2020 and 2020-2021 also include significant investments in programs to expand the reach and coverage of existing economic support mechanisms to promote the economic well-being of families,[56] including expanding the Earned Income Tax Credit, and increasing the amount of child support payments retained by families on CalWORKs (a public assistance program that provides cash aid and services to eligible families with at least one child in the home), effective in 2022.[57] The California Budget Acts for 2019 and 2020 also expanded the eligibility of the state home visit program beyond first-time parents and into different types of home visit models.[58]

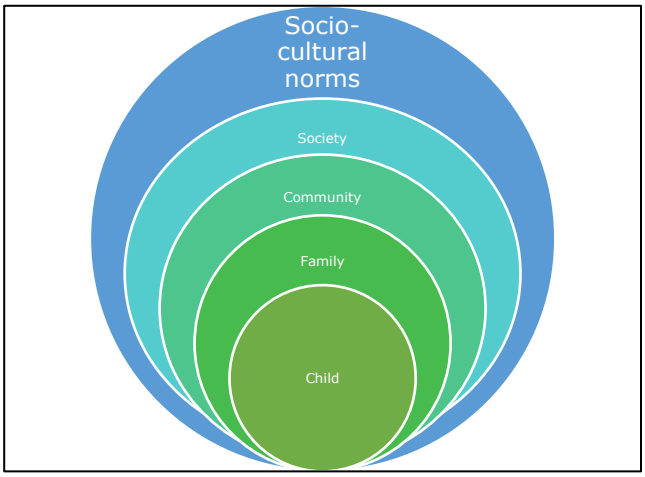
Hawaii. In 2019, Hawaii enacted Act 82 of 2019 to address intergenerational poverty and formally codify the intergenerational strategy, termed "'Ohana Nui", adopted by the state's Department of Human Services in 2016.[59] According to the bill language, the purpose of the legislation is "to require Hawaii's Department of Human Services to use an integrated and multigenerational service delivery approach to reduce the incidence of intergenerational poverty and dependence on public benefits, consistent with the nationally recognized best practices". (As discussed above, economic instability and poverty can contribute to ACEs, and children who live in poverty may have an increased risk of remaining in poverty.) Intergenerational strategies concurrently address the needs of both the parent and child to improve family outcomes.[60] Hawaii's 'Ohana Nui initiative also required the Department of Human Services to remove silos of service to integrate service delivery across several divisions and programs to provide intergenerational service.[61] Testimony provided by the Department indicates that the codification of intergenerational service approaches and eliminating barriers to access is tied to the impact that poverty can have on ACEs and welfare program dependence.[62]

Impact of COVID-19 Pandemic on ACEs

The COVID-19 pandemic has had a specific and unique impact on ACEs because of the stress of societal reaction, the potential economic impact on a family, and the shift from in-person to online methods of learning. COVID-19 may cause or exacerbate negative life experiences for vulnerable children.

The Association of State and Territorial Health Officials (ASTHO)[63] and the Alliance for Child Protection in Humanitarian Action[64] describes the socio-ecological impact of COVID-19 could have on the different facets of a child's life, which may put them at risk for adversity:

Figure 3



Socio-cultural norms; stigma and racism against certain ethnic groups.
-- Society; disruption or decreased access to basic services, e.g. access to mandatory reporters.
-- Community; break down of trust and stress from scarcity of resource, support services, education, and play spaces, e.g. impacts of social isolation.
-- Family; heightened risk of domestic violence from caregiver distress from employment concerns, health/illness, isolation, family separation, reduced access to social supports, etc.
-- Child; heightened risks to child of abuse, neglect, psychological distress/toxic stress, and negative impact on development.

Source: This chart is adopted from the Alliance for Child Protection in Humanitarian Action and ASTHO. This model demonstrates the areas that could contribute to ACEs for children during COVID-19.

Some have identified a separation between at-risk children and mandatory reporters to be particularly determinantal. Reportedly, there was a sharp decline in reported instances of child abuse in Michigan at the beginning of the pandemic, when schools were switched from in-person to virtual learning.[65] In April 2019, according to the MDHHS, there were approximately 15,000 reported cases of abuse, while in April 2020, there were approximately 8,000 cases. This sharp decline could be attributed to the inability for an abused or at-risk child to safely confide in or be identified by a mandatory reporter, such as a teacher.

Federal and State Responses to COVID-19

In April 2020, Governor Whitmer signed Executive Order (EO) 2020-35, which ordered all K-12 schools buildings to close for the remainder of the 2019-2020 school year.[66] The Order also directed schools to continue providing mental health care services for students, to the extent possible, in addition to assisting efforts in establishing disaster relief childcare centers and providing meals to families who need them during the pandemic. The support offered through school-based mental health care for students and meals may serve to mitigate certain stressors, such as isolation, anxiety, and risk of food-insecurity. The provision of child care may also alleviate some parental stress if a parent or parents cannot work remotely. Executive Order 2020-35 was rescinded and replaced by EO 2020-65, which retained the provisions of EO 2020-35 discussed in this section.

In March 2020, Congress passed four stimulus packages. Of the four, the Families First Coronavirus Response (FFCR) Act and the Coronavirus Aid, Relief, and Economic Security (CARES) Act provide funding to states and programs that could help mitigate the effects of COVID-19 on at-risk children because of conditions caused by or exacerbated by the pandemic, or to ensure that programs and supports that are serving at-risk children and families can continue in light of the pandemic. For example, the FFCR Act awarded Michigan $12.5 million of $500 million for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the State had an estimated allocation of $12.7 million for the Emergency Food Assistance Program (TEFAP), which serves to supplement the diets of low-income Americans by providing free food assistance.[67] The CARES Act also maintained several provisions that could be seen to address factors that contribute to ACEs, such as loss of household income or poverty-related crises.

The CARES Act provided for "economic impact payments" to individuals, which provided $1,200 in direct payments to individuals and an additional $500 per child under the age of 17.[68] Additionally, the Federal Pandemic Unemployment Compensation (FPUC) provided $600 per week in addition to regular State and Federal unemployment insurance benefits through July 31, 2020. Michigan's estimated share of the FPUC was $15.2 billion out of an estimated $260. billion nationally, while Pandemic Unemployment Assistance (PUA) extended unemployment benefits to workers who generally are not eligible for these benefits in Michigan (estimated share of $3.7 million), such as contract workers, part-time employees, and the self-employed.[69] Notably, the CARES Act also provided funding for training and support services for dislocated workers, seniors, migrant farm workers, and homeless veterans. The CDC recommends such job training programs as an ACES prevention strategy.[70] Michigan received $3.3 million for these programs.[71]

The CARES Act provided funding for human services, most notably, $45 million of the total $6.3 billion for the Federal Administration for Children and Families, under the CARES Act, was dedicated to child welfare services to prevent child neglect, abuse, or exploitation, for family preservation programs, and services that promote the safety of children in foster care and adoption programs. Michigan is estimated to have received a share of $1.4 million.[72] An additional $45 million of total funding, of which Michigan's estimated share was approximately $1.0 million, was dedicated to state grants for family violence prevention services and family violence shelters from the Family Violence Prevention and Services (FVPSA) Act.[73]

Conclusion

This article describes the impact that adverse childhood experiences can have on every stratum of our communities and society. The toll adversity exacts on the mental and physical health of an individual can have far reaching consequences, from a cycle of intergenerational adversity to a cumulative economic cost approximately $124.0 billion each year in the United States. As shown, ACEs can be prevented. Continuing research and prevention strategies based in the best available evidence can equip states with the tools to mitigate the impact of ACEs on American children and prevent ACEs from occurring. Information campaigns by the CDC, states, and other interest groups have drawn significant awareness to ACEs and states, like Michigan, California, and Hawaii, are responding with programs and policies that may serve to prevent ACEs among their at-risk citizens, even amidst complications posed by the COVID-19 pandemic.

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