What Are ACEs and Why Do They Matter?

For more than 20 years, public health experts have been aware of a critical factor that can put a child at a disadvantage in life regardless of race, health, or socioeconomic background: Adverse Childhood Experiences (ACEs). There are ten key ACEs related to episodes of abuse, neglect, and family dysfunction, such as divorce, incarceration, and substance abuse. Unmitigated toxic stress from this type of adversity results in harmful effects on children, compromising their brain and immune system development as well as cognitive functioning, which affects critical thinking.

The impact of high ACEs loads are seen in our schools, the juvenile justice system, correctional statistics, and job performance data.

ACEs Are Individual Experiences with Cumulative Effects

Studies have found a correlation between the number of ACEs a person has (an ACEs load) and adult health conditions, such as alcoholism, depression, asthma, chronic obstructive pulmonary disease (COPD), cancer, cardiovascular disease, and diabetes. Additionally, adults with high ACEs loads are more likely than others to cope in unhealthy ways, such as using tobacco, abusing alcohol, or self-harming. The higher a person’s ACEs load, the greater the likelihood of these outcomes. The impact of high ACEs loads are seen in our schools, the juvenile justice system, correctional statistics, and job performance data.

Prevalence of ACEs in Michigan, as Reported in Adulthood

Michigan annually collects information about ACEs through the Behavioral Risk Factor Surveillance Survey (BRFSS). The most recent survey revealed the following statistics:

**BRFSS 2016 Data**

<table>
<thead>
<tr>
<th>ACE</th>
<th>Total Reported</th>
<th>Percentage of Michigan Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were verbally abused as children</td>
<td>2.7M</td>
<td>39%</td>
</tr>
<tr>
<td>Lived with someone with substance abuse</td>
<td>2.1M</td>
<td>29%</td>
</tr>
<tr>
<td>Reported having parents who were separated or divorced</td>
<td>1.9M</td>
<td>27%</td>
</tr>
<tr>
<td>Lived with someone with mental illness</td>
<td>1.4M</td>
<td>20%</td>
</tr>
<tr>
<td>Reported adults in household were physically violent to one another</td>
<td>1.4M</td>
<td>20%</td>
</tr>
<tr>
<td>Were physically abused one or more times as a child</td>
<td>1.3M</td>
<td>18%</td>
</tr>
<tr>
<td>Lived with someone who was incarcerated</td>
<td>0.6M</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: Murad and Barth 2018


<table>
<thead>
<tr>
<th>Key Child Outcomes (Age in Years)</th>
<th>Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zero ACEs</td>
</tr>
<tr>
<td>Child has a chronic condition requiring above routine amount or type of health care services (0–17)</td>
<td>14.4%</td>
</tr>
<tr>
<td>Child has an ongoing emotional, development, or behavioral problem (0–17)</td>
<td>5.8%</td>
</tr>
<tr>
<td>Child is overweight or obese (10–17)</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

Source: Child and Adolescent Health Measurement Initiative (CAHMI) 2019

Odds of Key Adult Health Problems with One or More ACEs Compared to Adults with No ACEs

<table>
<thead>
<tr>
<th>Key Adult Outcomes</th>
<th>Zero ACEs</th>
<th>One ACE</th>
<th>Two ACEs</th>
<th>Three ACEs</th>
<th>Four or More ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide attempts</td>
<td>100%</td>
<td>180%</td>
<td>300%</td>
<td>660%</td>
<td>1,220%</td>
</tr>
<tr>
<td>Injected drugs</td>
<td>100%</td>
<td>130%</td>
<td>380%</td>
<td>710%</td>
<td>1,003%</td>
</tr>
<tr>
<td>Consider self an alcoholic</td>
<td>100%</td>
<td>200%</td>
<td>400%</td>
<td>490%</td>
<td>740%</td>
</tr>
<tr>
<td>Recent depression</td>
<td>100%</td>
<td>150%</td>
<td>240%</td>
<td>160%</td>
<td>460%</td>
</tr>
<tr>
<td>Lung disease</td>
<td>100%</td>
<td>160%</td>
<td>160%</td>
<td>220%</td>
<td>390%</td>
</tr>
</tbody>
</table>

Note: Data adapted from the Michigan Department of Health and Human Services 2016 BRFSS data.
Source: Murad and Barth 2018

Michigan ACE Initiative
Yet There Is Hope

ACEs do not guarantee a difficult future—social support from friends, family, and community can help buffer their negative effects. Additionally, holistic, community-based efforts can prevent ACEs in the first place. Together, these support systems foster resilience and help break the cycle created by the toxic stress of ACEs. Addressing these types of experiences will contribute to a better healthcare system, improve overall K–12 education attainment, reduce juvenile incarceration rates, and create a more productive workforce.

Social Supports Mitigate the Negative Consequences of ACEs

The presence of a strong social network that builds resilience can offset the impact of ACEs by up to 50 percent or more. According to Michigan BRFSS data, a strong social network includes feelings of belonging and support from peers, the presence of caring adults, and a supportive family and community.

Diagnosed Depression by ACEs Load

<table>
<thead>
<tr>
<th>Zero ACEs</th>
<th>One ACE</th>
<th>Two ACEs</th>
<th>Three ACEs</th>
<th>Four or more ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>15%</td>
<td>24%</td>
<td>29%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Note: Data adapted from the Michigan Department of Health and Human Services 2016 BRFSS data. Source: Public Sector Consultants 2019

Diagnosed Depression and Social Support

<table>
<thead>
<tr>
<th>Low social support</th>
<th>High social support</th>
</tr>
</thead>
<tbody>
<tr>
<td>52%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Four or more ACEs

Note: Data adapted from the Michigan Department of Health and Human Services 2016 BRFSS data. Source: Public Sector Consultants 2019

COPD by ACEs Load

<table>
<thead>
<tr>
<th>Zero ACEs</th>
<th>One ACE</th>
<th>Two ACEs</th>
<th>Three ACEs</th>
<th>Four or more ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>6%</td>
<td>11%</td>
<td>11%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Note: Data adapted from the Michigan Department of Health and Human Services 2016 BRFSS data. Source: Public Sector Consultants 2019

COPD and Social Support

<table>
<thead>
<tr>
<th>Low social support</th>
<th>High social support</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Four or more ACEs

Note: Data adapted from the Michigan Department of Health and Human Services 2016 BRFSS data. Source: Public Sector Consultants 2019
A Statewide Response to ACEs: The Michigan ACE Initiative

The Michigan ACE Initiative was initially funded in 2016 by the Michigan Health Endowment Fund and formally launched in 2017. Since 2019, corporate funding has supported its work. The initiative aims to develop trauma-informed, healing communities across the state, improve the lives of individuals dealing with the consequences of ACEs, and make strides toward systems change. It accomplishes this by:

- **Expanding ACE awareness** to accelerate research, educate the public and lawmakers, and ultimately reduce and prevent ACEs in Michigan
- **Providing training and technical assistance** across sectors and populations to raise awareness; identify, understand, and respond to ACEs; and build resilience in individuals, organizations, and communities
- **Pursuing ACE-aware, trauma-informed policies** in the public and private sectors

Creating Healing Communities

The Michigan ACE Initiative’s objective is to use compelling data to drive greater awareness of the link between trauma and the origin of behaviors that underlie the leading causes of disability and death, workplace injury, low educational attainment, and correctional system usage.

While the Michigan ACE Initiative is statewide in focus, its data and interventions support local efforts to mobilize community partners and create trauma-informed communities that build resilience. These partners set priorities and share resources about how best to improve capabilities, belonging, and healthy community functioning (the three protective systems for promoting healing and recovery among people affected by trauma).
National Expertise, State Partnership: ACE Interface and the Michigan ACE Initiative

Since its inception, the Michigan ACE Initiative has partnered with ACE Interface for its Master Trainer curriculum. These trainers support rapid dissemination of ACE and resilience science and promote understanding and application of the science to improve health and well-being across the lifespan. ACE Interface was founded by Dr. Robert Anda, one of the principal investigators of the original ACE Study in the late 1990s, and Laura Porter, an expert on the study’s application in communities.

Working with ACE Interface ensures Michigan’s Master Trainers develop an understanding of the original study and its implications and learn how to present ACE information to diverse communities with scientific and conceptual fidelity.

With the Michigan ACE Initiative serving as the primary sponsoring organization for Master Trainers and Michigan ACE Community Champions (MACCs) in Michigan, we take our responsibility very seriously and want to train as many individuals as possible.

Meet Two Master Trainers

Susan Kauppi is a Michigan ACE Master Trainer and family support specialist for Healthy Families Upper Peninsula at the Western Upper Peninsula Health Department. She participated in the first of five cohorts of Michigan Master Trainers.

“I was excited and grateful when I was offered the opportunity to learn from Dr. Robert Anda and Laura Porter to become a Master Trainer. This training provided the science and the language to support our efforts to make change in the way we understand individuals, families, and communities.”

After becoming a Master Trainer, Kauppi joined forces with others to create Building a Resilient Copper Country, a group of concerned professionals and community members actively working to reduce and heal the effects of ACEs and break the cycle of intergenerational trauma through awareness and education.

Dr. Lynn Todman is a Michigan ACE Master Trainer, vice president of health equity, and executive director of population health at Spectrum Health Lakeland in St. Joseph. While those titles demonstrate a depth of expertise, her decades of professional experience indicate the breadth of her career spanning many of the subjects that are referred to as social determinants of health today. Dr. Todman’s work has been supported by the Robert Wood Johnson Foundation, one of the earliest and most influential thought leaders in the field of social determinants of health.

In 2016, Spectrum Health Lakeland completed a community health needs assessment that identified mental health as the most significant health need in the region. The challenges highlighted by the community evoked themes of trauma without ever using the word. She chose to be part of the Master Trainer program to provide more support and insight to the community and to be a part of the healing process.

“Learning that trauma is ubiquitous, that it underlies many health conditions, and that the health effects of trauma can be passed down through generations was so valuable to me.”

Since becoming a certified Master Trainer, Dr. Todman has trained many community organizations and agencies. She has since launched a program based on the idea that racism is a trauma and that healing—for some people—requires the elimination of racism and other forms of marginalization.

Meet Two Master Trainers
Selected Michigan ACE Initiative Accomplishments Since 2017

EXPANDED ACE AWARENESS

• Educated more than 20,000 people across Michigan about the impact of ACEs
• Held the statewide 2019 Michigan ACE Initiative Conference, bringing together more than 500 people committed to reducing and addressing ACEs and building resilience
• Produced two videos highlighting the needs and accomplishments of Michigan communities to raise awareness about ACEs and implement trauma-informed practices

PROVIDED TRAINING AND TECHNICAL ASSISTANCE

• Developed, trained, and supported five cohorts of Master Trainers—134 individuals over three years—using the national ACE Interface model
• Provided Master Trainers with resources to incorporate ACEs into existing curricula or implement new continuing education related to ACEs
• Reached nearly 70 percent of Michigan’s counties through the Master Trainer and Community Champion programs
• Empowered more than 400 Community Champions to help create trauma-informed communities

PURSUED ACE-AWARE, TRAUMA-INFORMED POLICIES

• Assembled a statewide steering committee that comprises representatives from the healthcare industry, public health, state government, law enforcement, and others committed to adopting trauma-informed policies
• Passed Senate Concurrent Resolution 8 and House Concurrent Resolution 2—with overwhelming bipartisan support—acknowledging ACEs as a public health crisis in Michigan

“We declare that ACEs constitute a critical health issue in Michigan and commit to an ongoing strategy to significantly reduce ACEs in Michigan through legislative leadership, legislative acts, appropriations, reporting, and oversight.”

—House Concurrent Resolution 2 and Senate Concurrent Resolution 8
Building a More Resilient Michigan

Through a collaborative process, the Michigan ACE Initiative identified priorities for 2020 through 2024 to use a comprehensive strategy that improves community conditions and reduces the impact and prevalence of ACEs.

**Expand ACE awareness** to accelerate research, educate the public, and ultimately reduce and prevent ACEs in Michigan

- Foster cross-sector partnerships with social service organizations, state government, grantmakers, and corporations to create healing communities
- Train additional cohorts of MACCs
- Identify and address the intersections between ACEs and the social determinants of health and health equity
- Convene statewide conferences to highlight events, information, and data from the prior year, targeting issues of focus in the year ahead
- Share new research on ACEs with key audiences in a variety of mediums, including print, presentations, Web, social media, and video

**Provide training and technical assistance** to understand and respond to ACEs by offering tools and supports to build resilience

- Train additional cohorts of Master Trainers in high-need regions
- Provide training and technical assistance to organizations and communities committed to becoming trauma informed
- Facilitate connection and collaboration among Master Trainers, organizations, and community coalitions

**Pursue ACE-aware, trauma-informed policies and funding mechanisms** in the public and private sectors

- Provide valuable ACE research to the Michigan Legislature and the governor, including recommended annual policy actions
- Ensure continued support for annual ACEs data updates through the BRFSS while identifying other national, state, and local data sources that support ACE action
- Seek, collaborate, and facilitate demonstration projects with the Michigan Department of Health and Human Services, local public health groups, various grantmaking organizations, and corporations

ACEs and COVID-19

The novel coronavirus (COVID-19) will have far-reaching impacts on Michigan. COVID-19 will introduce its own kind of trauma, as individuals and communities struggle with the effects of long-term isolation, lack of social connection, economic downturns, and high numbers of fatalities. These environmental stresses may exacerbate the impacts of adversity for both children and adults. To that end, the Michigan ACE Initiative will work closely with communities and leaders to identify what additional supports or modifications are necessary to address these issues, including virtual platforms to deliver training and provide technical assistance.
Join a Growing Movement to End ACEs and Their Effects in Michigan

The Michigan ACE Initiative (DBA) is a statewide initiative of the Michigan Association of Health Plans (MAHP) Foundation, an independent 501(c)(3) organization. Please spread the word about our work and contact Lisa Farnum, managing director of the MAHP Foundation, at lfarnum@mahp.org if you have questions or ideas.

To become more involved in the movement, follow us on social media, visit our website or blog, sign up on our website to express interest in becoming a Community Champion, or visit miace.org/get-involved.

The Michigan ACE Initiative is grateful for the valuable insight and counsel of our steering committee members who volunteer their time generously.

“The relationship between ACEs and the current prevalence of chronic disease, addictive behaviors and related conditions is now recognized by many as a major public health crisis.”

—House Concurrent Resolution 2 and Senate Concurrent Resolution 8

REFERENCES


