“The impact of ACEs can now only be ignored as a matter of conscious choice. With this information comes the responsibility to use it.” – Dr. Rob Anda, CDC
ACES are adverse childhood experiences, or traumatic events such as abuse, neglect, or family dysfunction. The ACE study was conducted by the Center for Disease Control and Kaiser Permanente with 17,000 adults between 1995-1997, finding:

1) ACES are common across all populations
2) A dose-response relationship exists between a person's ACE score and negative health and social outcomes

This tool helps us understand how health and social problems in our community are impacted by things that happen to people in childhood. We can build a more “trauma informed community” where we support and help each other to overcome challenges to become more resilient, together.

ACES are not destiny. You can build resilience and live a happy, healthy life.

Experiences that cause toxic stress chemicals to be produced have an impact on brain development, immune system function, and one's physical health. Many habits such as smoking, substance use, and unhealthy eating are often “coping mechanisms,” or ways of numbing pain and stress. Behaviors are adaptive as well; people (especially children) who experience repeated trauma often exhibit “fight or flight” behavior which can include hyperarousal, aggression, dysregulation, etc. The brain can become wired for “survival mode,” impairing executive and cognitive functions. The good news is, there are ways to build resilience and specific interventions that can help stressed brains heal.

WHAT IS TRAUMA?

Trauma is an overwhelming event or events that renders an individual helpless, powerless, and creates a threat of harm and/or loss AND an internalization of the experience that continues to impact the person's development as well as their perception of self, others, and the world.

WHAT IS RESILIENCE?

Resilience is the ability to “bounce back” after bad things happen. The good news is, resilience can be learned and developed. Resilience factors include:

- Developing personal capabilities/skills.
- Having positive relationships with others.
- Connecting with one's community, faith and culture.

WHAT DOES A TRAUMA INFORMED COMMUNITY LOOK LIKE?

We can...

- Shift our thinking from “What’s wrong with you?” to “What happened to you?”
- Engage in education, training, and conversations around trauma, resilience, and other social determinants of health.
- Support trauma specific services and interventions in healthcare, education, and social services.
- Use “universal precautions,” assuming everyone has experienced some kind of hardship and treating people with kindness, understanding, and respect.
- Encourage others and promote a sense of community and connectedness.
- Take care of ourselves and consider how our own experiences impact our relationships and interactions.
- Participate in self-reflection, exploring how implicit bias, systemic oppression, historical factors, and privilege play a role in perpetuating traumatized individuals and communities.
- Equip agencies, businesses, and schools to adopt trauma informed cultures and practices.

ACES MUSKEGON SURVEY

From November 2015-September 2016, the ACES Muskegon team made up of cross-agency partners and community members conducted an ACE survey, collecting retrospective information from 2,252 adults living and working in Muskegon County.

SURVEY METHODS

Using a community-based empowerment model, the team began in November 2015 by training 125 “ACE Champions” from various community agencies, committees, and sectors of the community. This included training about trauma and resilience.

Survey implementation began January 2016 using Proof Pilot online research platform to collect demographic and ACE information. There were 647 responses that could be used for data analysis. It became clear the online survey method was a barrier to participation for many, at which time the team implemented a paper/pencil version at community events, health fairs, food trucks, agencies, community trainings, committees (such as Rotary), the jail and local businesses. Surveys were administered face to face, and a total of 1605 paper/pencil surveys were collected. These were stored in a secure location and entered into an excel database with no identifying information and then shredded.

HOW REPRESENTATIVE AND VALID IS THIS DATA?

• ACES Muskegon had 2,252 respondents, or 1.3% of the population of the county (171,008.)
• The state of Michigan had 3,610 respondents, or .036% of the population (9.91 million.)
• The U.S. had 53,784 respondents, or .17% of the population (318.9 million.)

We used a convenience sample versus a weighted population sample for this study due to the heavy burden and expense associated with a weighted population sample. Given the size and scope of our sample, it reaches many population subgroups in our community (see Demographic Profile on pages 3-4.) To identify the statistical validity of our sample, we used the traditional statistical techniques of reviewing p values. P-values less than 0.05 suggest statistical significance, meaning that we can be confident that the finding means something. These benchmarks are set by J. Cohen and are standards across psychology, social, and behavioral research. Our sample size gives us sufficient data for many statistically significant findings with p values far less than 0.05.

If you experienced trauma in your childhood, you are not alone and it is not your fault.
This demographic profile explores the extent to which survey respondents are demographically representative of the make-up of Muskegon County.

**GENDER**

<table>
<thead>
<tr>
<th>% MUSKEGON COUNTY</th>
<th>% SURVEY RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>50%</td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>69.3%</td>
</tr>
<tr>
<td>Male</td>
<td>30.7%</td>
</tr>
</tbody>
</table>

**RACE/ETHNICITY**

<table>
<thead>
<tr>
<th>% MUSKEGON COUNTY</th>
<th>% SURVEY RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Descent</td>
<td>14%</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>77%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>9%</td>
</tr>
<tr>
<td>Native American/Aboriginal</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

**ZIP CODE**

Population of the County: 49442: 24.1%, 49437: 4.09%, 49425: 2.2%, 49416: 1.6%, 49440: 0.6%, 49445: 12.15%, 49457: 6.3%

**AGE**

<table>
<thead>
<tr>
<th>18-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80+</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>25%</td>
<td>13%</td>
<td>15%</td>
<td>12%</td>
<td>6%</td>
<td>4%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

**EDUCATION**

| No degree         | 10%   | 10.3% |
| High school/GED  | 35%   | 31.8% |
| Some college      | 35%   | 17.5% |
| College           | 13%   | 19.9% |
| Post graduate school | 5% | 15.1% |
| N/A               | 5%    | 5.4%  |

**INCOME**

<table>
<thead>
<tr>
<th>Average Per Capita</th>
<th>$22,081</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Per Capita Survey Respondents</td>
<td>$37,260</td>
</tr>
<tr>
<td>No degree</td>
<td>10%</td>
</tr>
<tr>
<td>High school/GED</td>
<td>35%</td>
</tr>
<tr>
<td>Some college</td>
<td>35%</td>
</tr>
<tr>
<td>College</td>
<td>13%</td>
</tr>
<tr>
<td>Post graduate school</td>
<td>5%</td>
</tr>
<tr>
<td>N/A</td>
<td>5%</td>
</tr>
</tbody>
</table>

Note: 6.3% of surveyors were from non-Muskegon zip codes who only work in Muskegon County.

Important to note is a strong overrepresentation of female respondents at 69%. However, this is common for surveys of this nature and 663 respondents were male. When comparing average ACE score for males and females the numbers are very comparable, suggesting this imbalance did not have a significant impact on reported information. In terms of race/ethnicity, persons of African descent are slightly overrepresented (22% of respondents versus 14% of the county), and persons identifying as Hispanic/Latino and Native American/Aboriginal are slightly underrepresented. There was a wide mix in terms of education, income, and location (zip code) with the majority of respondents coming from our most populated zip codes. Online survey respondents tended to be more highly educated, with higher incomes, with an average ACE score of 2.5. Respondents utilizing the paper/pencil survey tended to have lower education levels and lower income, with an average ACE score of 2.7 (total average ACE for all respondents is 2.6.) Around 6% of respondents identified as Lesbian, Gay, Bisexual, or transgender (the National Gay and Lesbian Task Force estimates three to eight percent of the population identifies as LGBT.)
### Score Comparisons

<table>
<thead>
<tr>
<th>Q#</th>
<th>Survey Question</th>
<th>Muskegon Co. ACE Survey</th>
<th>Michigan Data</th>
<th>National Data</th>
<th>% of People With Each ACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Did a parent or other adult in the household often or very often … Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?</td>
<td>30.9%</td>
<td>35.3%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>Did a parent or other adult in the household often or very often … Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?</td>
<td>21.6%</td>
<td>17.2%</td>
<td>15.9%</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Did an adult or person at least 5 years older than you ever … Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?</td>
<td>22.8%</td>
<td>10.7%</td>
<td>10.9%</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>Did you often or very often feel that … No one in your family loved you or thought you were important or special? or Your family didn’t look out for each other, feel close to each other, or support each other?</td>
<td>28.6%</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>Did you often or very often feel that … You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you? Or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?</td>
<td>12.6%</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>Were your parents ever separated or divorced?</td>
<td>45.6%</td>
<td>26.6%</td>
<td>22.8%</td>
<td></td>
</tr>
<tr>
<td>Q7</td>
<td>Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? or Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?</td>
<td>17.3%</td>
<td>16.3%</td>
<td>14.9%</td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?</td>
<td>35.1%</td>
<td>27.2%</td>
<td>25.1%</td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>Was a household member depressed or mentally ill, or did a household member attempt suicide?</td>
<td>32.1%</td>
<td>15.9%</td>
<td>16.3%</td>
<td></td>
</tr>
<tr>
<td>Q10</td>
<td>Did a household member go to prison?</td>
<td>15.5%</td>
<td>7.8%</td>
<td>5.7%</td>
<td></td>
</tr>
</tbody>
</table>

**What Does This Mean?**

We’ll start by stating the obvious – this data is less than positive and demonstrates a deeply rooted problem in our community. However, communities who have embraced a “trauma informed approach” have seen improvement in health and social outcomes; part of becoming “trauma informed” is recognizing the impact of ACEs on health and understanding where our community is in terms of historical and generational trauma. To address one of the root causes, or social determinants, of health, we need to understand where we are. By starting with the ACE survey we can build a foundation of understanding and from there, use a resilience/strengths-based framework to improve protective factors and prevention and intervention efforts.
The data revealed in this report is consistent with other community level data pointing to significant health and behavioral health concerns in Muskegon County, as there is a dose-response relationship between ACE scores and health behaviors and outcomes. For example, County Health Rankings rate Muskegon as number 81 out of 83 counties in terms of health behaviors.

There have been significant improvements in health outcomes in the community, due to continued efforts of community partners to address health behaviors and outcomes. Smoking rates have gone down for young people and teen pregnancy has continued to decrease. Muskegon is one of the top rated counties for quality clinical care. The community is looking more closely at social determinants of health and working to pair trauma informed practices with other health improvement initiatives. It is time to “Watch Us Go!”

The Michigan Profile for Healthy Youth (MiPHY) 2015-16 reports on several risk and protective factors, including the percentage of high school youth who:

- Felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months to be 37.0% (n=912).
- Ever seriously considered attempting suicide to be 19.8% (n=488).
- Been bullied on school property in past year: 24.0% (n=727).
- Electronically bullied in the past year: 17.6% (n=531).
- Were physically hurt on purpose by someone they were dating or going out with in the past year: 9.5% (n=185).
- Reported feeling unsafe or very unsafe in their neighborhood: 4.4% (n=135).
- Who know adults in the neighborhood they could talk to about something important: 48.5% (n=1359).
- Who could ask their mom or dad for help with personal problems: 77.2% (n=2132).
- Who feel safe at school: 79.7% (n=2255).
- With people in their family who have serious arguments: 50.3% (N=1404).

Data from the Michigan Behavioral Risk Factor Surveillance System (2013-2015) reports:

- Poor physical health on at least 14 days in the past month: 16.8% (Muskegon); 12.8% (MI).
- Poor mental health on at least 14 days in the past month: 14.5% (Muskegon); 12.2% (MI).
- Proportion of adults who reported ever being told by a doctor that they had a depressive disorder including, depression, major depression, dysthymia, or minor depression: 24.8% (Muskegon); 20.5% (MI).
- Adults that consume five or more drinks per occasion (men) or 4 or more (women) at least once in the past month: 18.5% (Muskegon); 18.8% (MI).

Additionally, the rate of suicide in Muskegon County has consistently been higher than state and national averages according to the Muskegon County Suicide Death Review and Prevention Team Community 2016 Report.

By addressing underlying causes of health problems in our community and working to prevent ACES and mitigate their effects, health outcomes can be impacted as well. See page 9 for more info on current efforts to address ACES and social and emotional health in our community.
**ACES REPORT SUMMARY**

**WHAT ARE WE DOING ABOUT IT?**

- The 1 in 21 strategic plan for community health now includes “building a more trauma informed community” and “utilizing the ACE in community practice” as key actions to a healthier community. ACES Muskegon is now “Resilience Muskegon,” the Social Emotional Health Action Team overseeing implementation of these goals. For the full 1 in 21 plan visit: 1in21.org/about-1-in-21

- Good For YOUth is a cross agency collaborative offering training and networking opportunities for youth-serving professionals in the area of trauma informed care.

- HealthWest, the MAISD, and other partners are working to equip professionals with trauma specific interventions such as mindfulness, behavioral, and brain-based techniques.

- Access Health is piloting a tool to measure resilience factors with health coach clients.

- Our child serving systems are working to become more treatment oriented and person centered; the Juvenile Justice system is being re-designed to be more rehabilitative and the child welfare system has implemented a MI-Team approach based on needs of children and families.

- ACE work was used to write $4 million System of Care grant to enhance services for youth with mental health needs and to help our systems become more youth guided, family driven, culturally responsive, and coordinated.

- The community’s Federally Qualified Health Centers (Hackley Community Care Center and Muskegon Family Care) have incorporated the ACE into their practice.

**SOURCES**

- Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Survey ACE Module Data, 2010. Atlanta, Georgia: U.S. The prevalence estimates reported below are from Washington, DC and ten states (HI, ME, NE, NV, OH, PA, UT, VT, WA, and WI) who included the ACE module on the 2010 BRFSS (n=53,784).


- County Health Rankings, University of Wisconsin Department of Population Health, 2016.


- Michigan Profile For Healthy Youth, 2015-2016.

- Muskegon County Suicide Death Review and Prevention Team Community 2016 Report.

- The Southwest Michigan Children’s Trauma Assessment Center, Western Michigan University, Kalamazoo, MI.

- United States Census Bureau.

- Health Disparities Report Card.

Looking to replicate this community education effort? Reach out to acesmuskegon@healthwest.net for tips and lessons learned.
ACE TEAM MEMBERS FROM NOVEMBER 2015-PRESENT:

- Cheryl Schneider, Access Health
- Dr. Abiade, Private Practice
- Dr. Joel Jarvis, retired Family Physician
- Dr. Ramona Wallace, Family Practice Physician, Muskegon Family Care
- Emily Masri, community member
- Jamie Hekker, Public Health and 1in21
- Jennifer Nelson, Muskegon Area Intermediate School District
- Joellen Rhyndress, HealthWest
- John Severson, Muskegon Area Intermediate School District
- Kelly France, HealthWest
- Kristina Baas, Health Project
- Lauren Meldrum, HealthWest (Chair)
- Letizia Charleston, Private Practice
- Liz Taylor, student
- Marianne Boykin, Catholic Charities of West Michigan
- Marjory Erdman, parent and youth worker
- Mitchell Severson, Muskegon Family Care
- Randy Lindquist, Muskegon Area Intermediate School District
- Rose Justian, Private Practice Clinician

NEW RESILIENCE TEAM MEMBERS:

- Jane Clingman-Scott, Great Start Collaborative
- Kyleen Gee, Child Abuse Council
- Stephanie Vanderkooi, Lakeshore Regional Entity
- Lindsay Lassanke, DHHS

YOU? If you are interested in joining Contact acesmuskegon@healthwest.net

PARTICIPATING PARTNERS:

- 103.7 The Beat
- 1in21
- Access Health
- Affinia
- Angell Neighborhood Association
- ARC Muskegon
- Baker College
- Bariatric clinic
- Bethany Christian Services
- Big Brothers Big Sisters
- Birth Quest
- Boys and Girls Club
- Case Managers Forum
- Catholic Charities of West Michigan
- Chamber of Commerce
- Child Abuse Council
- Community Coordinating Council
- Community enCompass
- Community Foundation for Muskegon County
- Community Members
- County Lead Program
- County Prosecutor’s Office
- Department of Health and Human Services
- Disability Network
- Downtown Clergy
- Drug Free Coalition
- Early Head Start
- Exit Program
- Family Court
- Fruitport Elementary
- Good For YOUth
- Grace Memorial Baptist Church
- Greater Muskegon Jaycees
- Great Lakes Dental Excellence
- Great Start Collaborative
- Great Start to Quality Western Resource Center
- Hackley Community Care Center
- Health Disparities Coalition
- Health Project
- HealthWest
- Juvenile Transition Center
- Kids Food Basket
- Lakeshore Museum Center
- Lemonade Stand
- Lions Club
- Local Leadership Group
- Mercy Health Partners
- Michigan Academy of Family Practice
- Michigan Works!
- MOCAP
- Muskegon Area Intermediate School District
- Muskegon Community College
- Muskegon County Jail
- Muskegon Family Care
- Muskegon Heights Public School Academy
- Muskegon In Focus
- Muskegon Oral Health Coalition
- Muskegon Public Schools
- Muskegon Rotary Club
- Osteopathic Conference
- Pathways MI
- Parmenter O'Toole
- Pharmacies
- Planned Parenthood
- Positively Muskegon
- Proof Pilot
- Public Health
- Recovery Cooperative
- Reeths Puffer Schools
- Revel
- Social Justice Commission
- Suicide Prevention Coalition
- The Hope Project
- TrueNorth
- United Way of the Lakeshore
- Volunteer for Dental Care
- Way to Wellville
- Webster House Youth Services/Every Woman's Place
- West Shore Family Medicine
- And all other businesses, schools, and individuals involved. Thank you!