MOVING FROM SURVEILLANCE TO ACTION

Using ACEs Data as a Catalyst to Build Capacity in Michigan

Putting people first, with the goal of helping all Michiganders lead healthier and more productive lives, no matter their stage in life.
What are ACEs?
01/12/14

**Early Adversity Increases Physical, Mental, Behavioral Problems, Scientists Report**

Dr. Robert Anda & Dr. Vincent Felitti
Investigators

**Centers for Disease Control & Prevention, Kaiser Permanente Study**

**Over 17,000 study participants**

The ACE Study confirms, with scientific evidence, that adversity early in life increases physical, mental and behavioral problems later in life.
The three types of ACEs include

**ABUSE**
- Physical
- Emotional
- Sexual

**NEGLECT**
- Physical
- Emotional

**HOUSEHOLD DYSFUNCTION**
- Mental Illness
- Incarcerated Relative
- Mother treated violently
- Substance Abuse
- Divorce
ACE Score = Number of ACE Categories

- 0 ACEs: 33%
- 1 ACEs: 26%
- 2 ACEs: 16%
- 3 ACEs: 10%
- 4+, + ACEs: 16%
What do we know about ACEs in Michigan?
Many States are Collecting ACEs Data
The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort between the Centers for Disease Control (CDC), Michigan State University (MSU) and the Michigan Department of Health and Human Services (MDHHS).
Michigan’s ACEs Exploration (2013)

In 2013 the BRFSS Adverse Childhood Experiences (ACEs) Module was included in our state-added questions and asked of one split of the total sample (~3,000 respondents).

11 questions assess 8 categories
- Household Dysfunction: 5
- Childhood Abuse: 3
- Neglect: None
In 2016, the Michigan BRFSS once again included the BRFSS Adverse Childhood Experiences (ACE) Module as state added questions, asked of one split of the total sample.

There were also ten additional questions added that asked about:
- death of a parent
- neighborhood violence
- poverty
- discrimination
- and social support (adapted from the [National Survey of Children’s Health](#) and [2015 Wisconsin BRFSS](#))
In 2016, the total sample size of completed interviews for the core survey was 12,024 respondents.

Land line = 4,797
Cell phone = 7,227

All of the results from the 2016 MiBRFS have been weighted to represent prevalence estimates among the Michigan adult population.
What has been happening since 2016?
This Data Served as a Catalyst and Connector

Early Adversity has Lasting Impacts

Image Source: Centers for Disease Control and Prevention
Partners Became Interested and Invested

Michigan Department of Health and Human Services Partners:

- Children’s Trust Fund
- Child and Adolescent Health
- Chronic Disease and Injury Control
- Mental Health Services

Shared Commitment to:

- Analyze and Share Data across Systems
- Leverage Existing Resources
- Develop Communication Tools
- Expand to County/Regional Data
What did we learn from all this data?
Adverse Childhood Experiences (ACEs) in Michigan: 2016

Justin Fast
How prevalent were ACEs statewide?
1.1 million Michiganders were sexually abused one or more times as a child.
2.7 million Michiganders were verbally abused one or more times as a child.

Prevalence of Individual ACEs Among Michigan Residents (2016)

- Verbally abused (2.7 M): 39%
- Substance abuse in household (2.1 M): 29%
- Separated or divorced parents (1.9 M): 27%
- Mental illness in household (1.4 M): 20%
- Adults in household physically violent to one another (1.4 M): 19%
- Physically abused (1.3 M): 18%
- Sexually abused (1.1 M): 16%
- Incarcerated household member (0.6 M): 9%

Prevalence of Individual ACEs (2016)

- **2.1M**
  Michiganders (29%) lived with someone with substance abuse

- **1.9M**
  Michiganders (27%) reported having parents who were separated or divorced

- **1.4M**
  Michiganders (20%) lived with someone with mental illness

*Data Source: Michigan Behavioral Risk Factor Surveillance System, 2016*
Prevalence of Individual ACEs (2016)

1.4M
Michiganders (19%) reported that adults in their household were physically violent to one another one or more times

1.3M
Michiganders (18%) were physically abused one or more times as a child

0.6M
Michiganders (9%) lived with someone who was incarcerated

### Prevalence of Community-Level ACEs (2016)

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.0M</strong></td>
<td>Michiganders (28%) said their family found it difficult to cover the basics one or more times</td>
</tr>
<tr>
<td><strong>1.8M</strong></td>
<td>Michiganders (26%) were witness to or victim of neighborhood violence one or more times</td>
</tr>
<tr>
<td><strong>1.4M</strong></td>
<td>Michiganders (20%) were treated unfairly one or more times because of race</td>
</tr>
</tbody>
</table>

**Data Source:** Michigan Behavioral Risk Factor Surveillance System, 2016
ACEs load *(the number of ACEs a person has)*
Percent of Michigan Population by ACEs Load (2016)

ACEs load is strongly associated with health outcomes.
# Health outcomes most closely associated with ACEs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pearson Chi-Square*</th>
<th>Relative Risk for condition = “Yes”</th>
<th>95% CI’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosed Depression</td>
<td>Significant (&lt;0.01)</td>
<td>2.41</td>
<td>2.40 to 2.42</td>
</tr>
<tr>
<td>COPD</td>
<td>Significant (&lt;0.01)</td>
<td>1.83</td>
<td>1.82 to 1.84</td>
</tr>
<tr>
<td>Poor Mental Health more than half of last month</td>
<td>Significant (&lt;0.01)</td>
<td>1.82</td>
<td>1.81 to 1.82</td>
</tr>
<tr>
<td>Ever told Asthma</td>
<td>Significant (&lt;0.01)</td>
<td>1.69</td>
<td>1.68 to 1.69</td>
</tr>
<tr>
<td>General Health Status (poor)</td>
<td>Significant (&lt;0.01)</td>
<td>1.64</td>
<td>1.64 to 1.65</td>
</tr>
<tr>
<td>Current Asthma</td>
<td>Significant (&lt;0.01)</td>
<td>1.57</td>
<td>1.56 to 1.58</td>
</tr>
<tr>
<td>Poor Physical Health more than half of last month</td>
<td>Significant (&lt;0.01)</td>
<td>1.31</td>
<td>1.30 to 1.31</td>
</tr>
<tr>
<td>Cancer</td>
<td>Significant (&lt;0.01)</td>
<td>1.06</td>
<td>1.06 to 1.07</td>
</tr>
<tr>
<td>Cardiovascular Disease</td>
<td>Significant (&lt;0.01)</td>
<td>1.03</td>
<td>1.03 to 1.03</td>
</tr>
<tr>
<td>Arthritis</td>
<td>Significant (&lt;0.01)</td>
<td>1.00</td>
<td>1.00 to 1.01</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Significant (&lt;0.01)</td>
<td>0.98</td>
<td>0.98 to 0.99</td>
</tr>
<tr>
<td>Stroke</td>
<td>Significant (&lt;0.01)</td>
<td>0.91</td>
<td>0.90 to 0.92</td>
</tr>
<tr>
<td>Coronary Heart Disease</td>
<td>Significant (&lt;0.01)</td>
<td>0.85</td>
<td>0.84 to 0.85</td>
</tr>
<tr>
<td>Heart Attack</td>
<td>Significant (&lt;0.01)</td>
<td>0.72</td>
<td>0.71 to 0.72</td>
</tr>
</tbody>
</table>

**Data Source:** Michigan Behavioral Risk Factor Surveillance System, 2016

**Analysis:** Public Sector Consultants
“Has a doctor, nurse, or other health professional EVER told you that you had a **depressive disorder**, including depression, major depression, dysthymia, or minor depression?”

Depression by ACEs Load

In 2016, 44% of MI adults with 4 or more ACEs had been diagnosed with depression – compared to only 12% of MI adults with no ACEs.

The relative risk of depression for adults with one or more ACEs is nearly two and a half times greater than for adults with no ACEs.
Chronic Obstructive Pulmonary Disease (COPD) by ACEs Load

Poor Mental Health by ACEs Load

2019 Michigan ACE Conference

**Fair or Poor Health Status by ACEs Load**

- **None**: 13%
- **1 ACE**: 11%
- **2 ACEs**: 21%
- **3 ACEs**: 23%
- **4 or more ACEs**: 30%

*Data Source: Michigan Behavioral Risk Factor Surveillance System, 2016*
Lifetime Asthma by ACEs Load

Current Asthma by ACEs Load

Poor Physical Health by ACEs Load

What about social support?
Social Support
Diagnosed Depression and Social Support

COPD and Social Support

- Low social support (14 points or less): 17%
- High social support (15 points or more): 9%

Poor Mental Health (14+ days/month) and Social Support


Low social support (14 points or less) 37%
High social support (15 points or more) 22%
Fair or Poor Health Status and Social Support

Lifetime Asthma and Social Support

Low social support (14 points or less) 30%
High social support (15 points or more) 16%

Current Asthma and Social Support

Poor Physical Health (14+ days per month) and Social Support

- Low social support (14 points or less): 39%
- High social support (15 points or more): 19%

Respondents with high social support exhibited 7-29% lower incidence of negative health outcomes than respondents with low social support, depending on health outcome and ACEs load.

felt that you belonged at your high school
felt supported by your friends
two adults took genuine interest in you
able to talk with your family about your feelings

Source: Adapted from the Michigan Behavioral Risk Factor Surveillance System, 2016
enjoyed participating in community traditions
family stood up for you in difficult times
What does this mean for adults in my community?
In 2019, funding was secured to support the BRFSS Adverse Childhood Experiences (ACEs) Module for the entire sample, allowing for meaningful data at the county level. This will help communities make data-driven decisions.
Investment in Communities Matters

State level data is powerful. Community level data is empowering.
"The impact of ACES can now only be ignored by the most myopic conscious choice. With this information comes the responsibility to act and to use it." – Dr. Rob Anda, CDC

Thank you!

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