



**Michigan State University Legislative Issues Group
Adverse Childhood Experiences**

January 27, 2020

01/12/14

NEWS

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.

ADVERSE CHILDHOOD EXPERIENCES

The Most Powerful Determinate of the Public's Health

Abuse and Neglect

1. Child physical abuse
2. Child sexual abuse
3. Child emotional abuse
4. Emotional Neglect
5. Physical Neglect

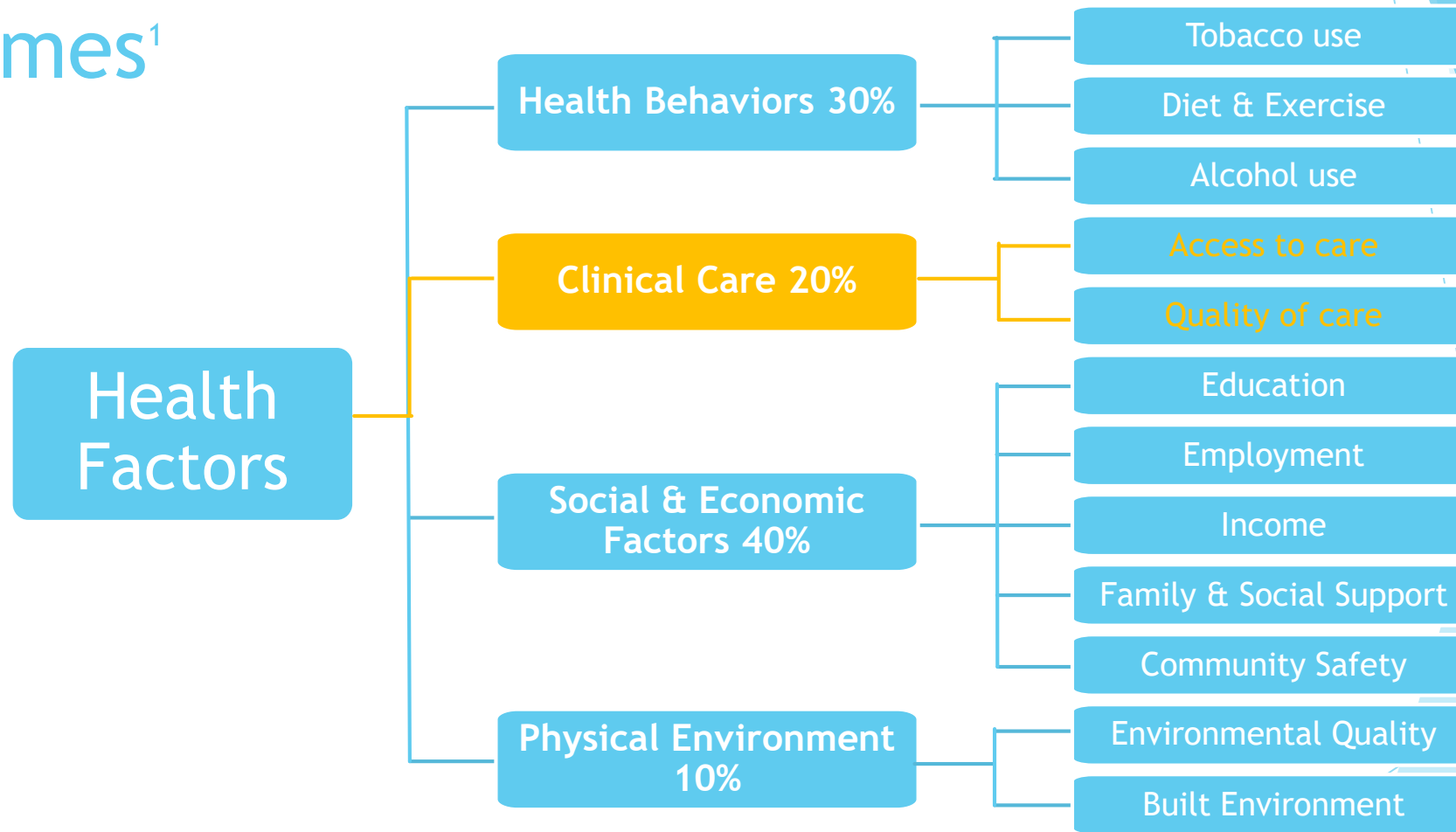
Indicators of Family Dysfunction

6. Mentally ill, depressed or suicidal person in the home
7. Drug addicted or alcoholic family member
8. Witnessing domestic violence against the mother
9. Parental discord – indicated by divorce, separation, abandonment
10. Incarceration of any family member

ACE Score: the number of categories of adverse childhood experience to which a person was exposed.

11/21/2020

Health Factors Affecting Health Outcomes¹



¹<http://www.countyhealthrankings.org/our-approach>

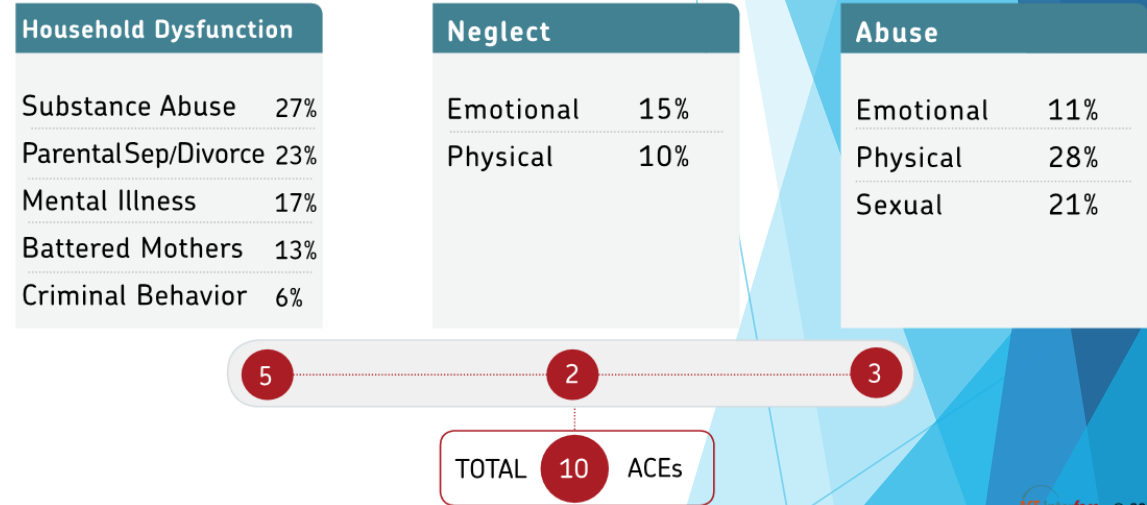
Adverse Childhood Experiences

The Adverse Childhood Experiences (ACE) Study

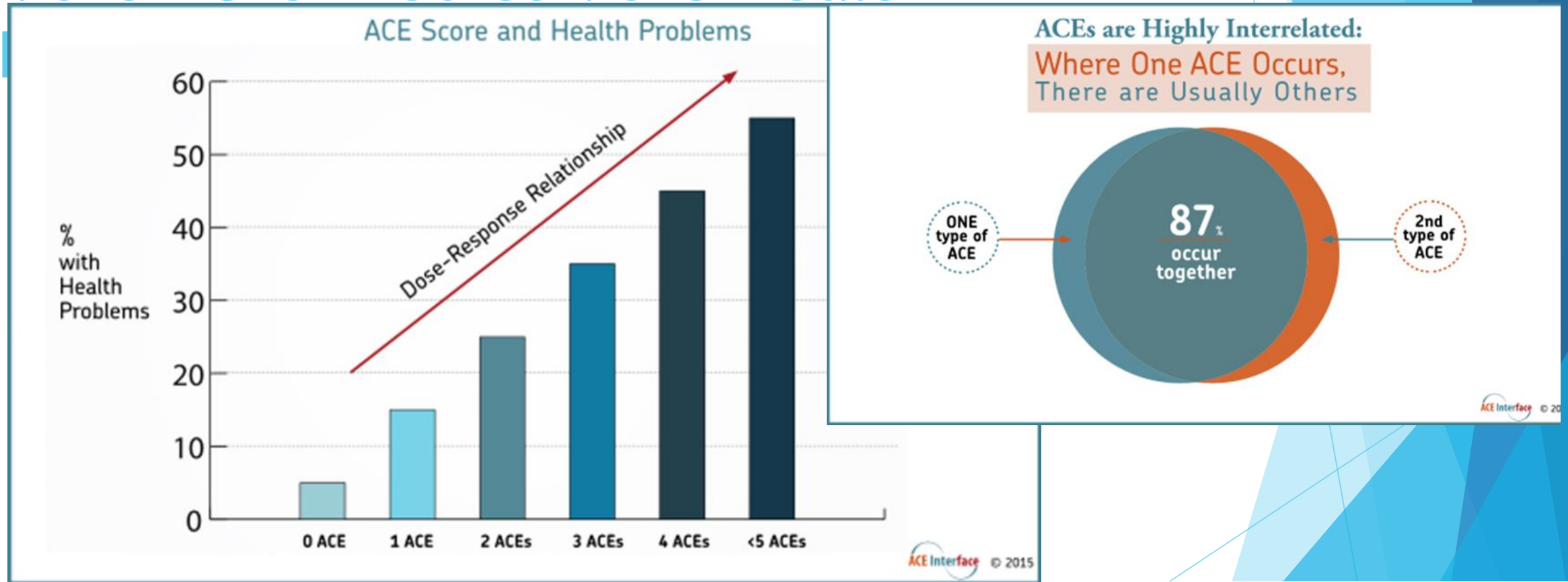


- “Probably the most important public health study you never heard of”
- ACEs sometimes referred to as toxic stress or childhood trauma
- Adverse Childhood Experiences (ACEs) are:
 - very common, and
 - strong predictors of health risks & disease from adolescence to adulthood
- This combination of findings makes ACEs one of the leading, if not the leading determinant of the health & social well-being of our nation

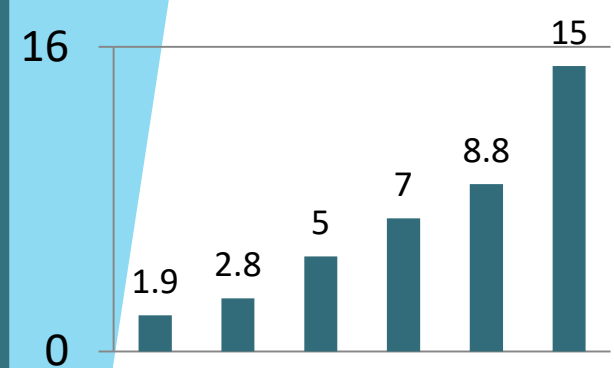
Adverse Childhood Experiences **ARE COMMON**



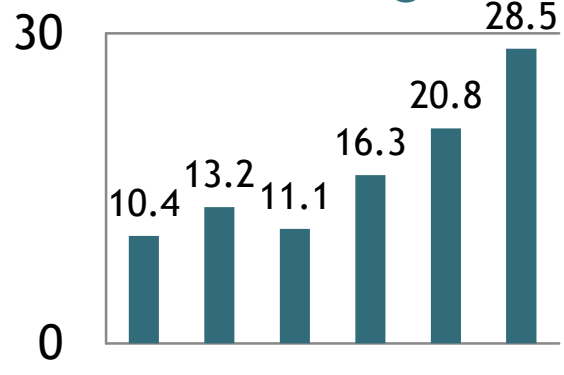
ACEs are Highly Interrelated and More ACEs Predict More Health



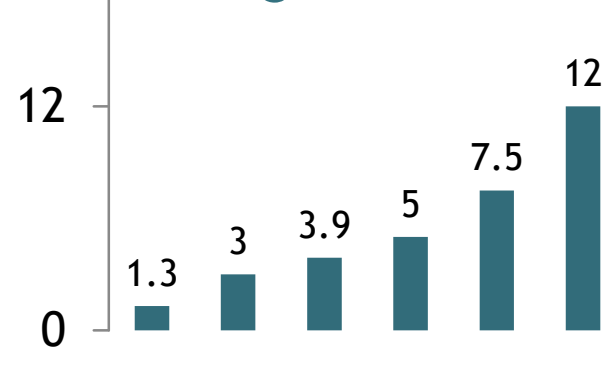
Anxiety



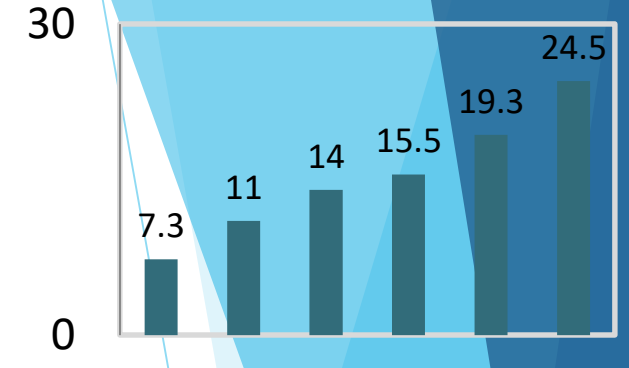
Smoking



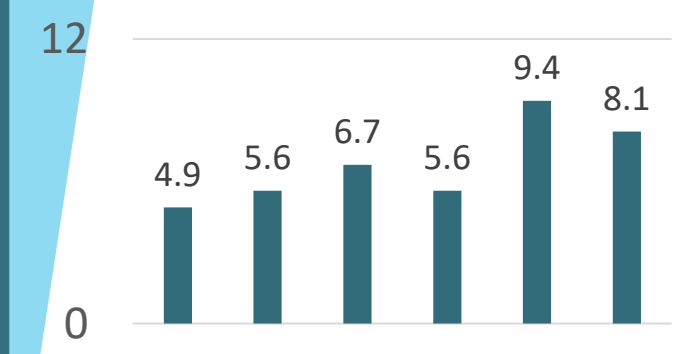
Drug Problem



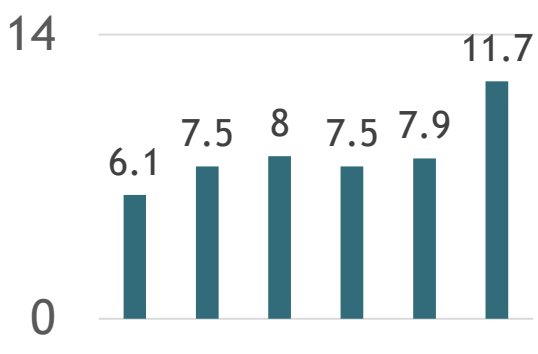
MH Treatment



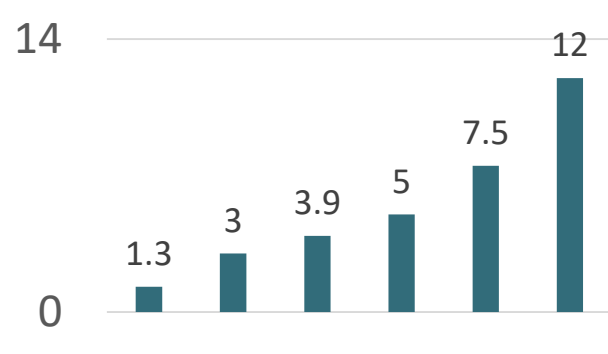
Cardio Vascular Disease



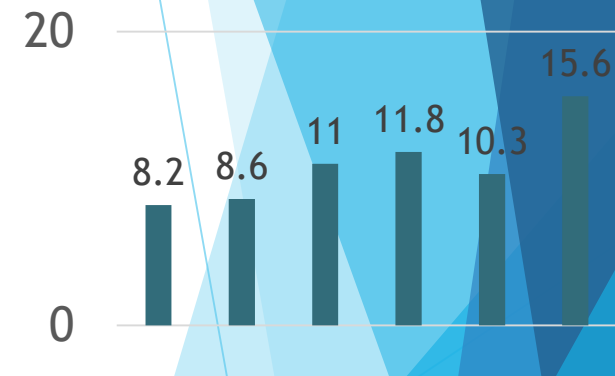
Diabetes



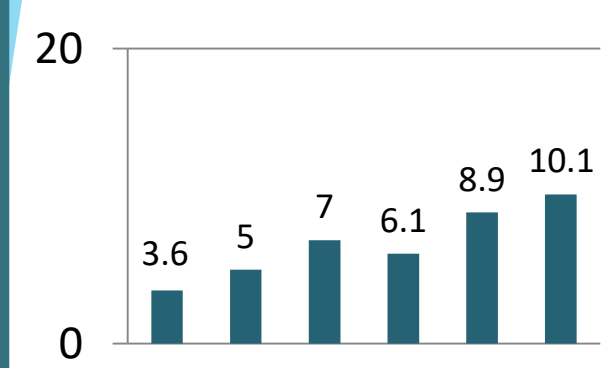
Asthma



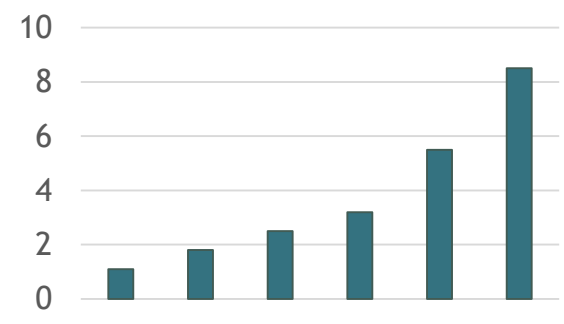
Cancer



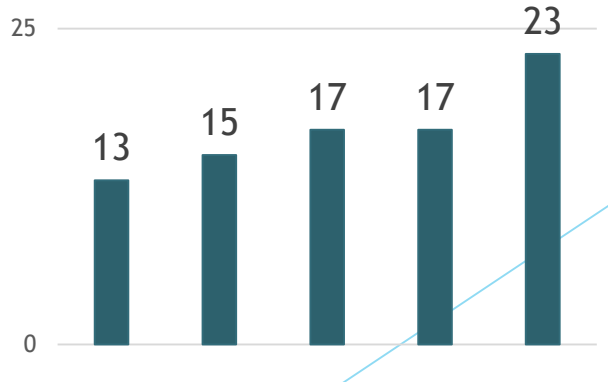
Work Injury/Illness



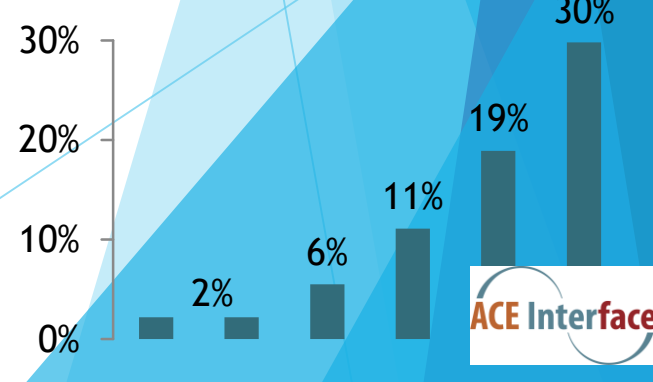
Missed 15 of 30 Work Days (MH)



Unemployed



Homeless



ACEs Related Illnesses & Social Problems

Alcoholism & Alcohol Abuse

Chronic Obstructive
Pulmonary Disease

Coronary Heart Disease

Depression

Drug Abuse & Illicit Drug Use

Fetal Death

Intimate Partner Violence

Liver Disease

Mental Health Problems

Obesity

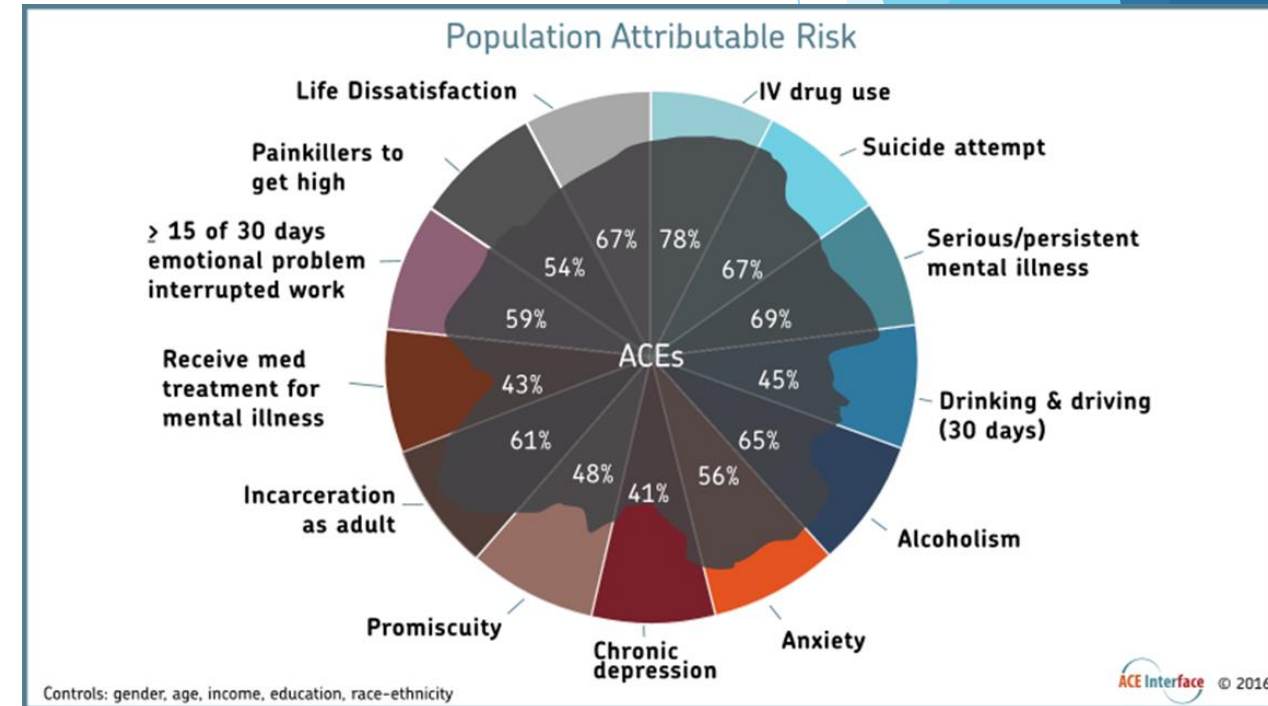
Sexual Behavior Problems

Smoking

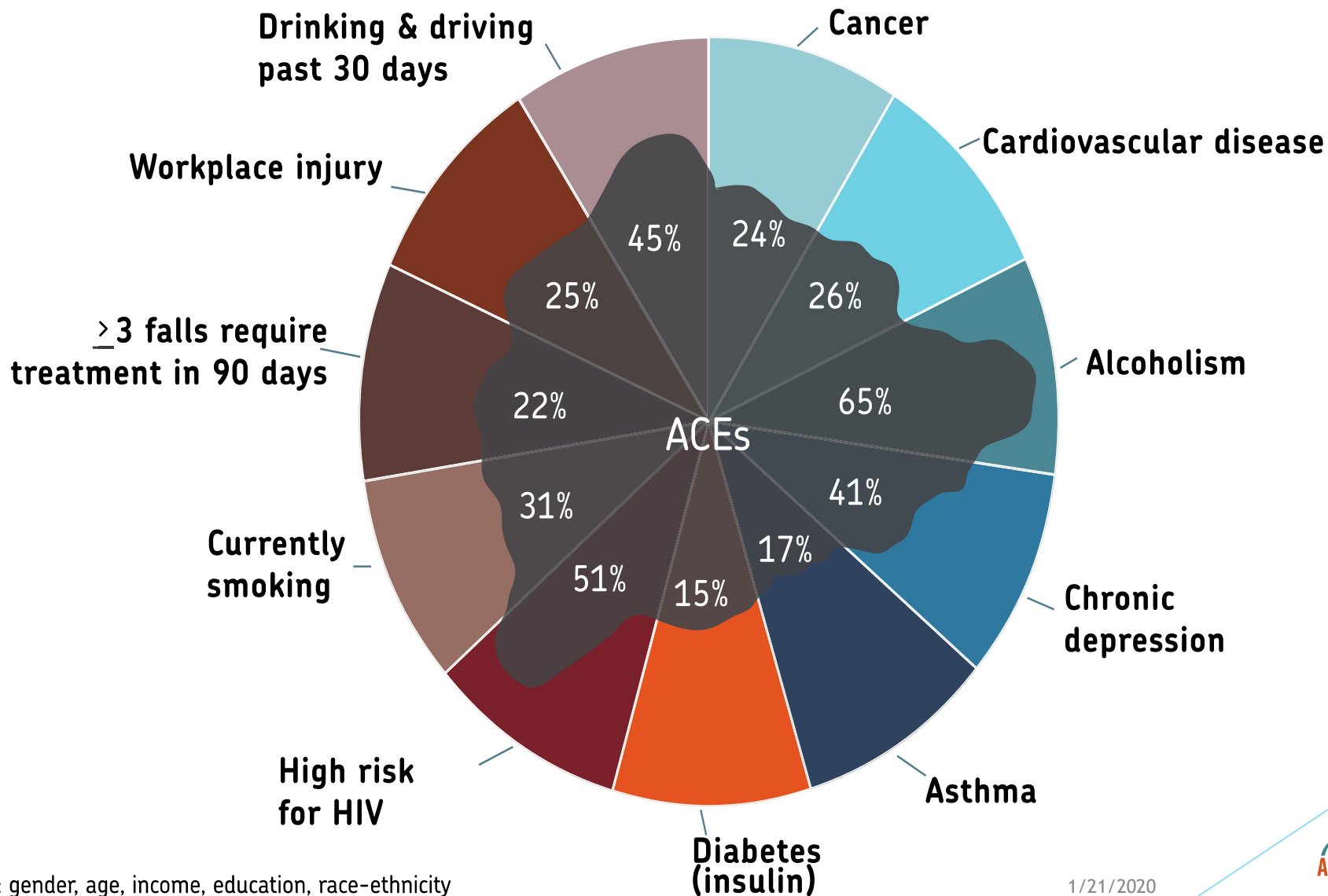
Unintended Pregnancy

Violence

Workplace Problems



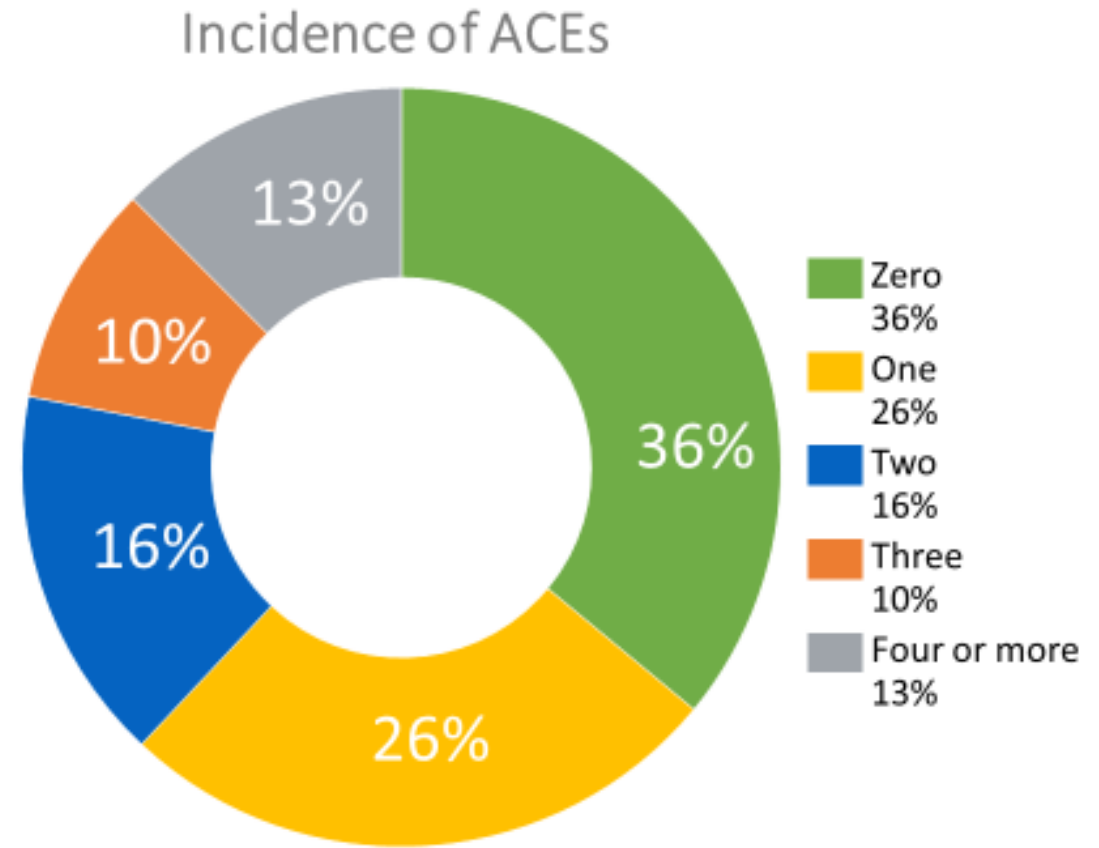
Population Attributable Risk



Controls: gender, age, income, education, race-ethnicity

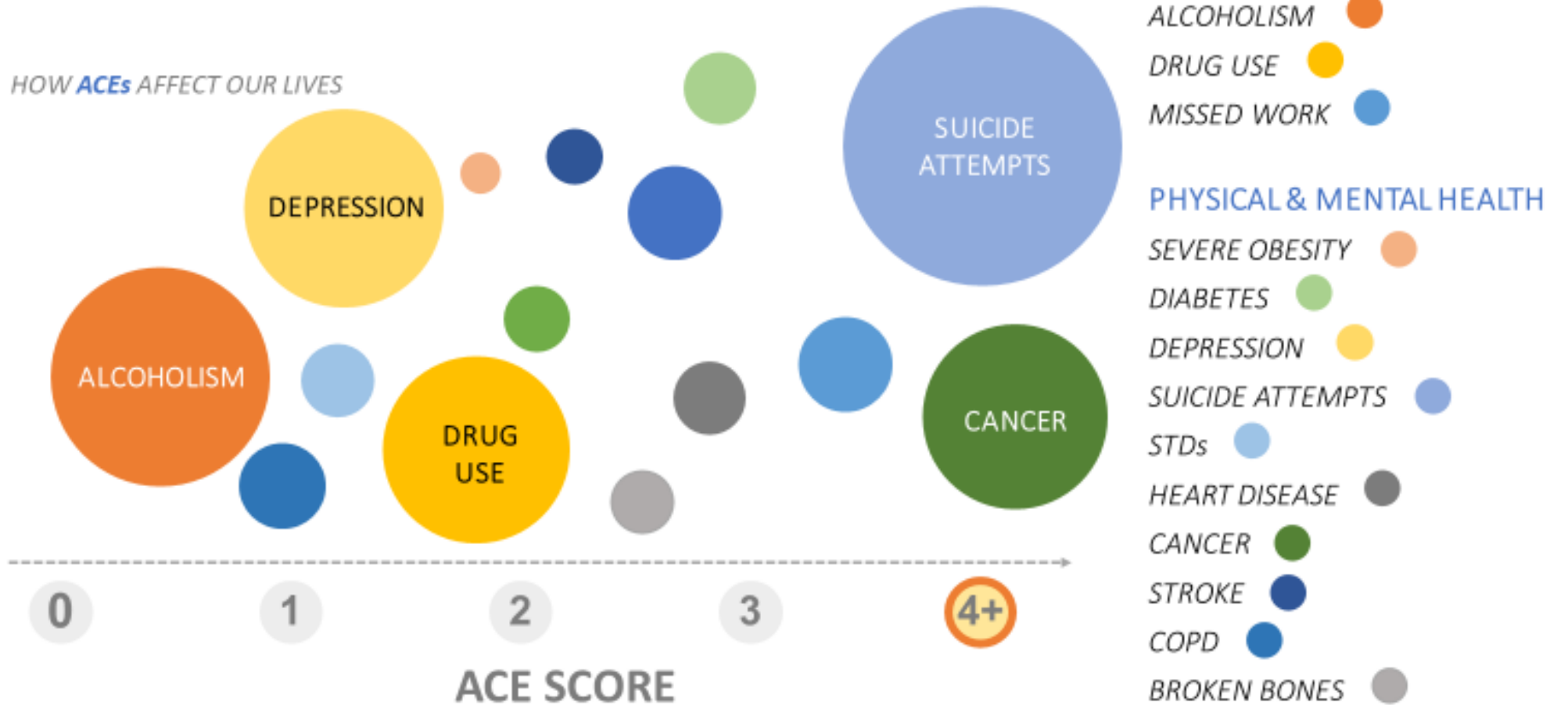
1/21/2020

Almost $2/3$ of adults surveyed reported **at least one** Adverse Childhood Experience. Where one ACE occurs, there are usually others—they are **highly interrelated**.



ACEs CAN HAVE LASTING EFFECTS ON BEHAVIOR & HEALTH

HOW ACEs AFFECT OUR LIVES



Chronic Depression

- ▶ **Adults** with an ACE score of 4 or more were **460% more likely** to be suffering from **depression** .

Current Smoking

- ▶ A child with 6 or more categories of adverse childhood experiences is **250% more likely to smoke.**
- ▶ A person with 4 categories of adverse childhood experiences is **260% more likely to have Chronic Obstructive Pulmonary Disease (COPD) .**

Suicide

- ▶ The likelihood of **adult suicide attempts increased 30-fold, or 3,000%**, with an ACE score of 7 or more.
- ▶ **Childhood and adolescent suicide attempts increased 51-fold, or 5,100%** with an ACE score of 7 or more.

Rape

- ▶ **Women with an ACE score of 4+ are 500% more likely to become victims of domestic violence.**
- ▶ **They are almost 900% more likely to become victims of rape.**

Intravenous Drug Use

- ▶ A **male child** with an ACE score of 6 has a **4,600% increase** in the likelihood that he will become an **IV drug user** later in life.
- ▶ **78% of drug injection by women** can be attributed to **ACEs**

ACE and Trauma

Findings of the ACE Study

- ACE score of 6 and higher – an almost 20-year shortening of lifespan.
- ACE score of 4 – 260% more likely to have Chronic Obstructive Pulmonary Disorder (COPD) than a person with an ACE Score of 0.
- ACE score of at least 7 increased the likelihood of childhood/adolescent suicide attempts 51-fold and adult suicide attempts 30-fold.
- ACE scores of 4 or higher increases your chance of having self-acknowledged alcoholism as an adult by 500% (with a history of parental alcoholism).
- ACE scores of 4 or more were 12 times more likely to have attempted suicide, 7 times more likely to be alcoholic, and 10 times more likely to have injected street drugs.

What other research explains the results of the ACE Study?

Researchers who are studying the short- and long-term consequences of childhood adversity say that a “unified science” of human development has emerged that includes the:

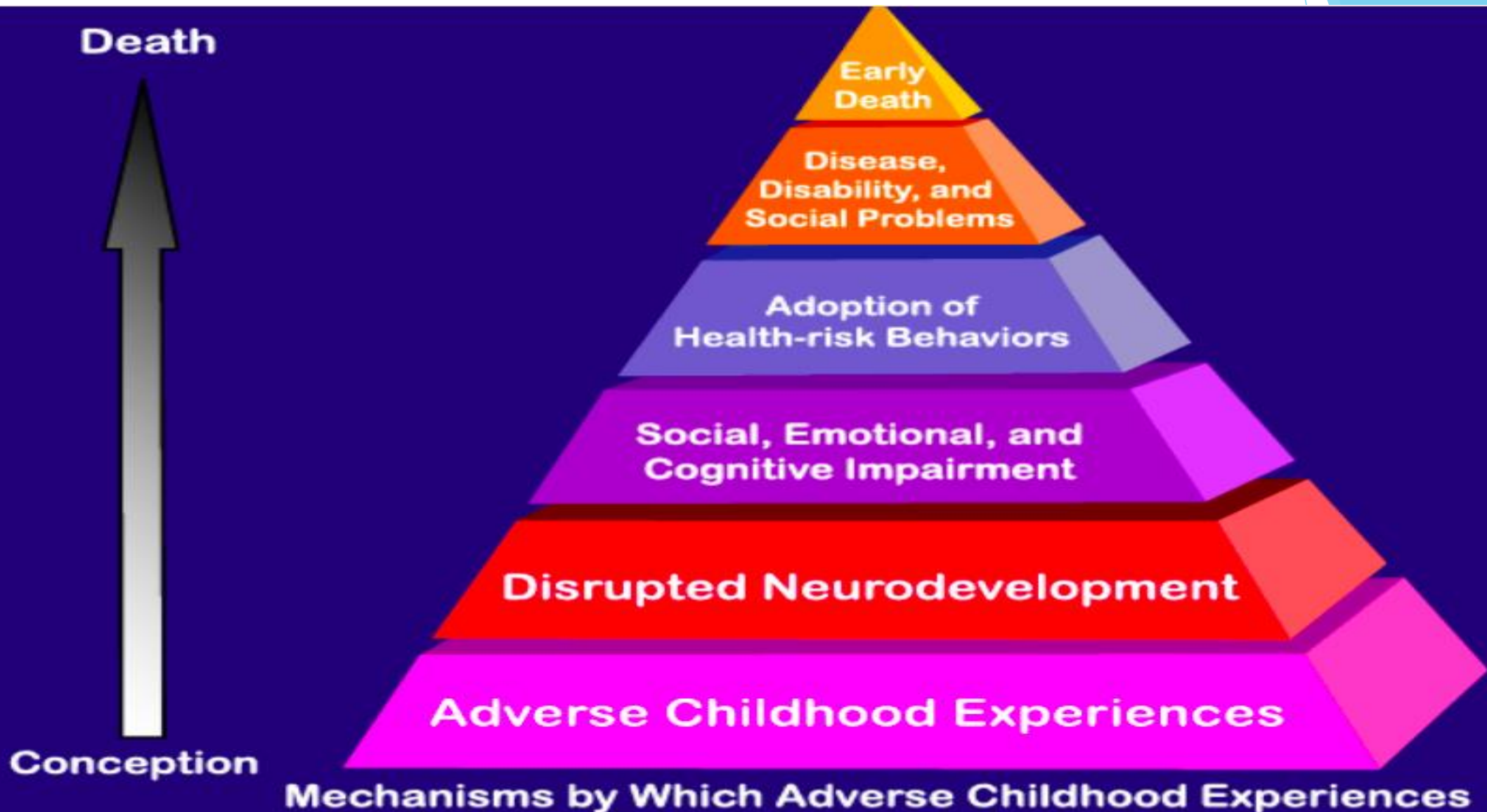
- ▶ epidemiology of childhood trauma (the CDC-Kaiser ACE Study),
- ▶ neurobiology of toxic stress,
- ▶ long-term biomedical consequences of toxic stress,
- ▶ epigenetic consequences of toxic stress,
- ▶ and resilience research.

Source: <https://acestoohigh.com/aces-101/>

Final Insights from the ACE Study

- Adverse childhood experiences are common but typically unrecognized and their link to major problems later in life is strong, proportionate, and logical.
- They are the nation's *most basic* public health problem.
- What presents as the 'Problem' may in fact be an attempted solution and treating the "solution" may threaten people and cause flight from treatment.
- Change will be resisted by us in spite of enormous benefits.

How does that work? | The Impact of Toxic Stress



Revisit ACEs & Trauma - Consider New Perspectives Engaging Each & ALL To Envision the Future of Healing

This Helps to Change our Thinking



....Thinking beyond ACEs, Trauma

Consider assets, strengths, aspirations, and engagement of individuals and healing-centered approaches.

Shifting to

“what’s right with you!”

“I am more than what happened to me, I’m not just my trauma”

- Dr. Shawn Ginwright (2018)

Impact of Stress on Children

- ▶ Flight, fight or fright (freeze) response
- ▶ Short attention span
- ▶ Struggle learning; fall
- ▶ Respond to world as constant danger
- ▶ Distrustful of adults
- ▶ Unable to develop healthy peer re
- ▶ Feel failure, despair



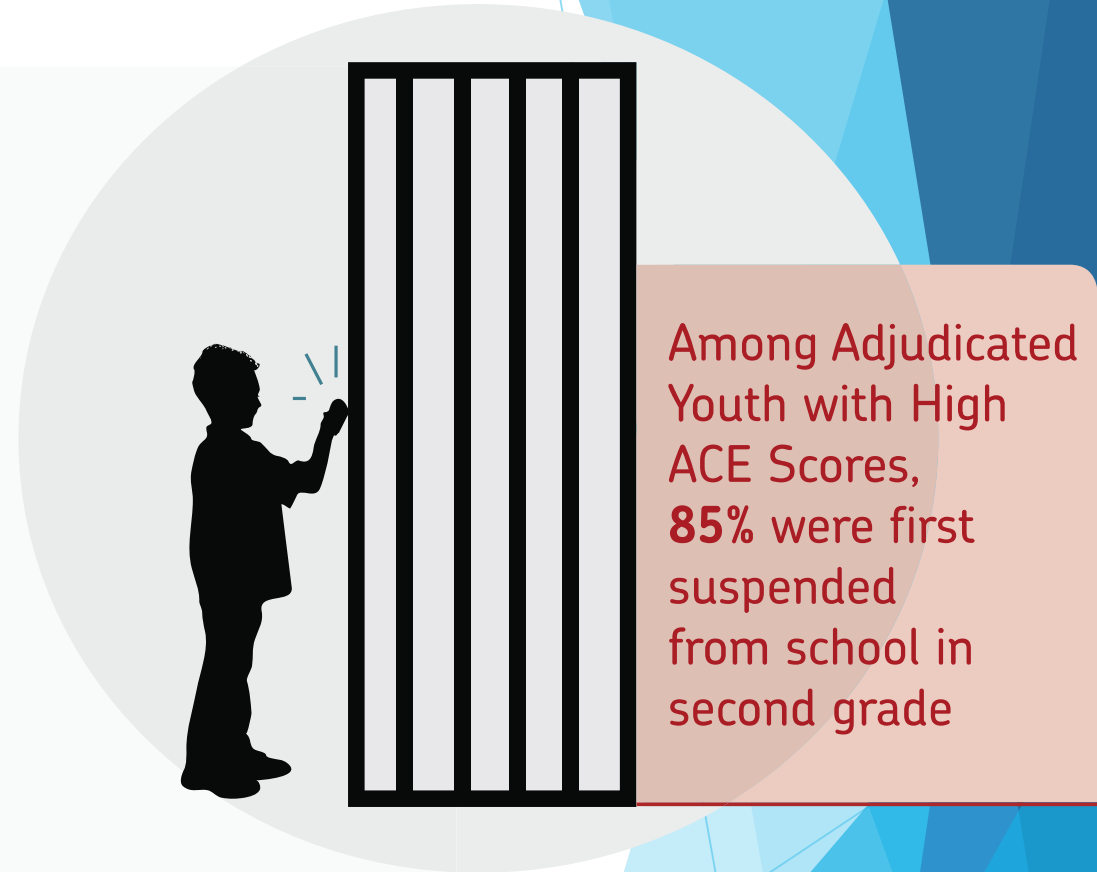
Results Oriented Decision Making: Data



Not Safe at Home



Not Welcome at School



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Building Resilience to Take down the Pair of ACEs

- Adverse *Childhood* Experiences
- Adverse *Community*

“The 4th Vital Sign”



1) Respiration 2) Heart Rate 3) Blood pressure

4) Relationships



Upstream: Beginnings of Life Health



Downstream: Health Over Life Span



Help that Helps

Four Resilience Factors that Make a Difference
They are even more powerful when we Layer Up...

1. Feeling social/emotional support and hope
2. Having 2 or More People Who Help (two or more people who give concrete help when needed)
3. Community reciprocity in watching out for children, intervening when they are in trouble, doing favors for one another
4. Social Bridging – People reach outside their social circle to get help for their family and friends

ACE and Other States (Michigan is not alone)

- ▶ 17 states have introduced or enacted legislation or Resolutions
 - ▶ Study Groups and Task Force Creation
 - ▶ Interagency Coordination and Recommended strategies
 - ▶ Research
 - ▶ EPSDT Inclusion
 - ▶ Professional Development Topic
 - ▶ Review of policies and protocols using context of ACE
- ▶ 32 States have done one or more ACE Survey (Michigan 2013 & 2017)
- ▶ <https://acestoohigh.com/2017/10/01/wisconsin-aims-to-be-first-trauma-informed-state-seven-state-agencies-lead-the-way/>

Moving from Isolated Impact...

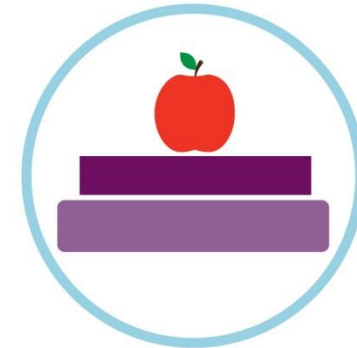
Countless nonprofit, business & government organizations each work to address social problems independently.



Government



Businesses and
the private sector



Education system



Nonprofit organizations



Medical community

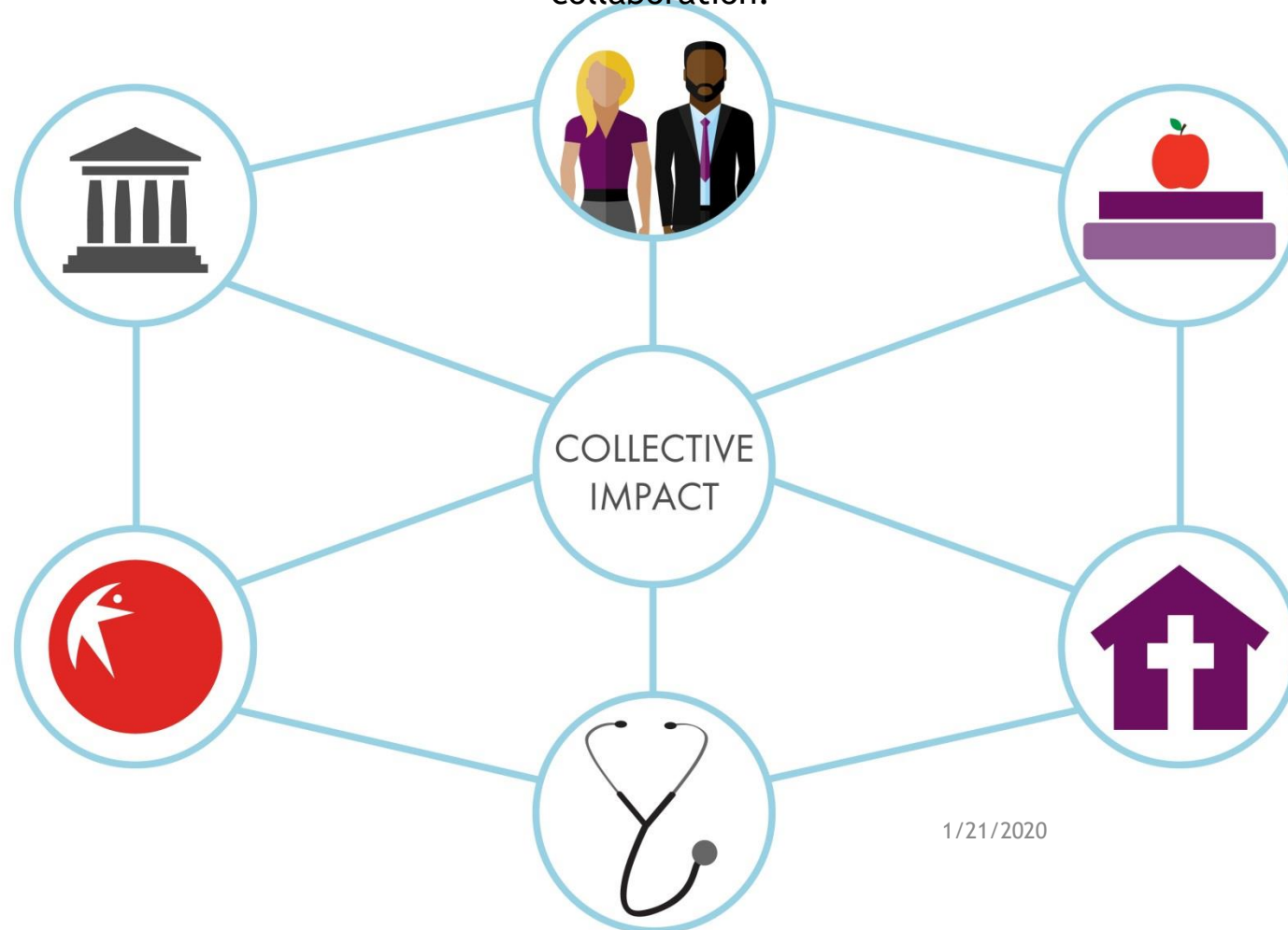
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Faith-based organizations
and churches

...to Collective Impact!

Fundamentally different, **Collective Impact** is a more disciplined, highly structured & higher performing approach to large-scale social impact than other types of collaboration.



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Adverse Childhood Experiences in Michigan: 2016

Justin Fast

Public Sector Consultants

About the Firm

Public Sector Consultants is an objective, nonpartisan research and consulting firm based in Lansing and Detroit. We offer a full suite of services in research, implementation, facilitation, and evaluation.

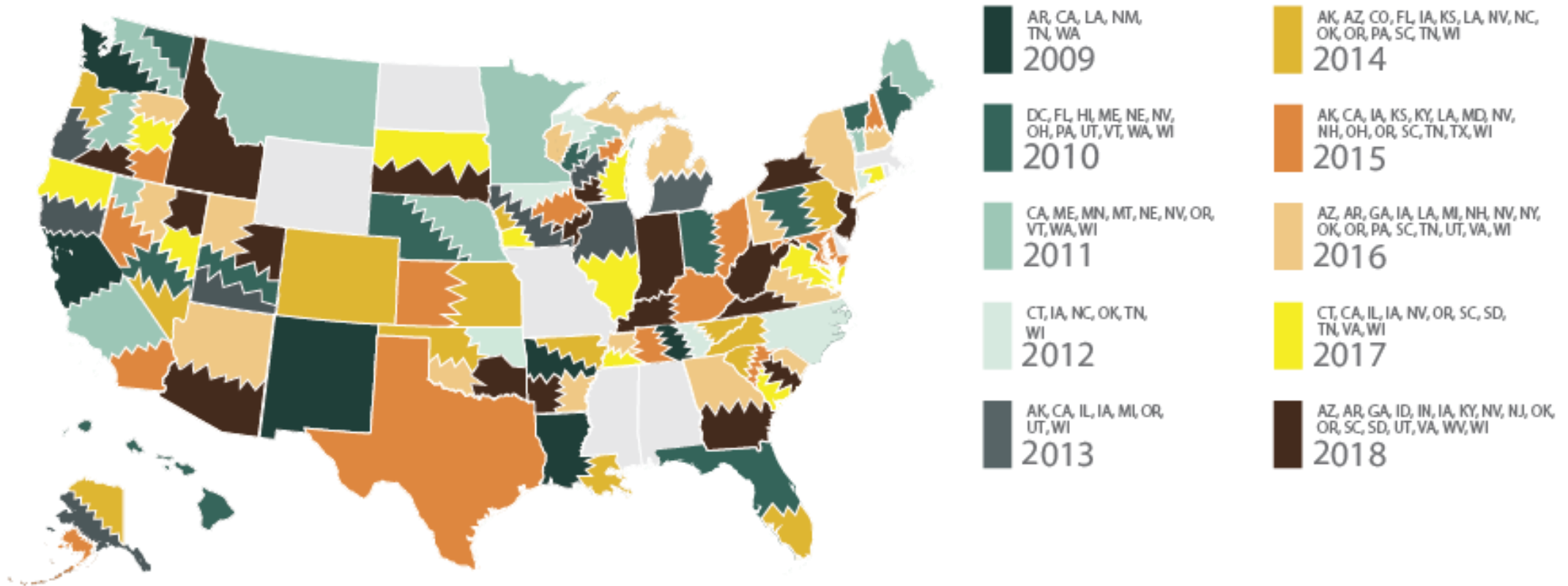


**PUBLIC SECTOR
CONSULTANTS**



Many States Are Collecting ACEs Data

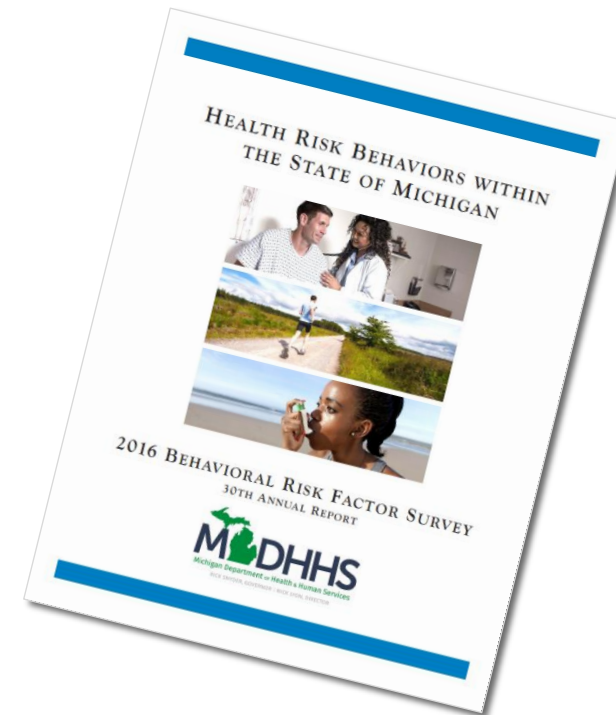
Collecting BRFSS ACE Data by Year, 2009-2018



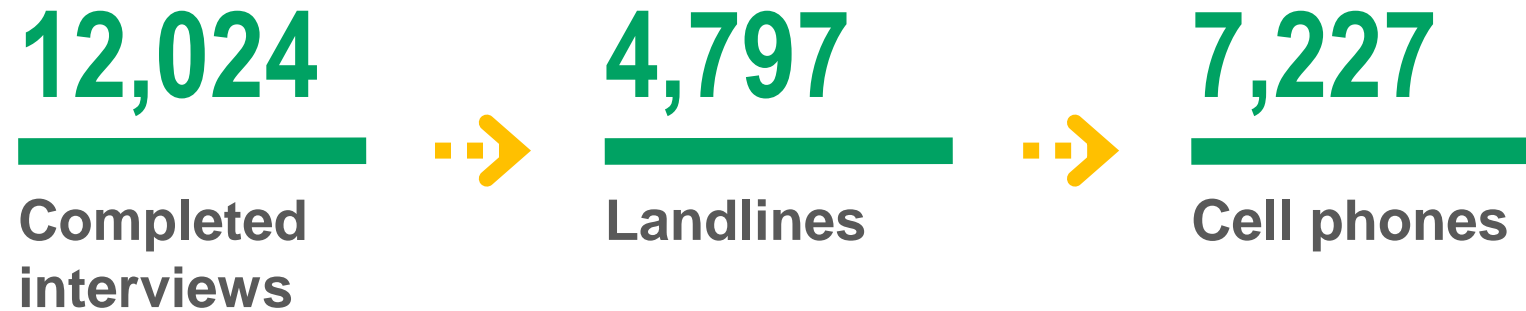
Source: Centers for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System Survey ACE Data, 2009-2018*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2019.

Michigan Behavioral Risk Factor Survey

The Michigan Behavioral Risk Factor Survey (BRFS) 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 and Prevention, Michigan State University, and the Michigan Department of Health and Human Services (MDHHS).



2016 Michigan BRFSS: Sample Size



All of the 2016 BRFSS results are weighted estimates representing prevalence among Michigan's adult population.

How prevalent were ACEs
statewide?



In 2016, **2.7 million** Michigan adults reported being verbally abused one or more times as a child.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Prevalence of Individual ACEs (2016)

2.7M



Michiganders
(39 percent) were
verbally abused as
a child.

2.1M



Michiganders
(29 percent) lived
with someone with
a substance abuse
issue.

1.9M



Michiganders
(27 percent)
reported having
parents who were
separated or
divorced.

1.4M



Michiganders
(20 percent) lived
with someone with
mental illness.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Prevalence of Individual ACEs (2016)

1.4M



Michiganders (19 percent) reported that adults in their household were physically violent to one another one or more times.

1.3M



Michiganders (18 percent) were physically abused one or more times as a child.

1.1M



Michiganders (16 percent) were sexually abused one or more times as a child.

0.6M

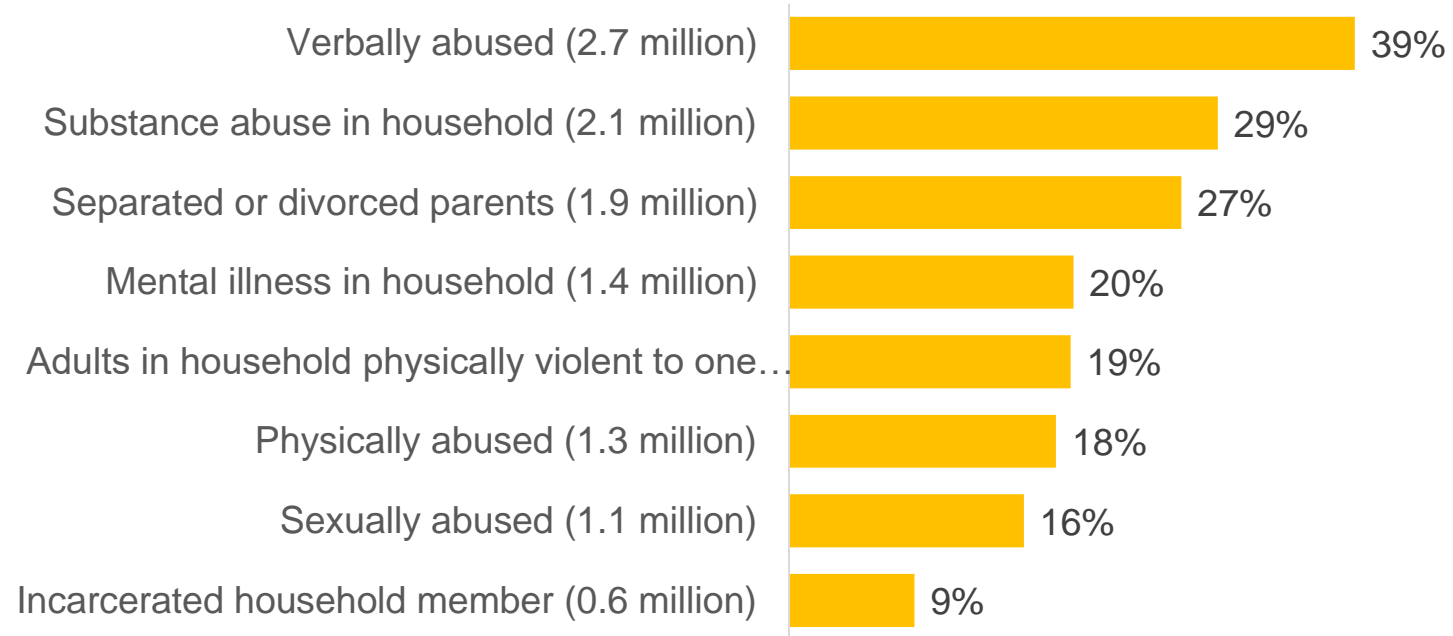


Michiganders (9 percent) lived with someone who was incarcerated.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

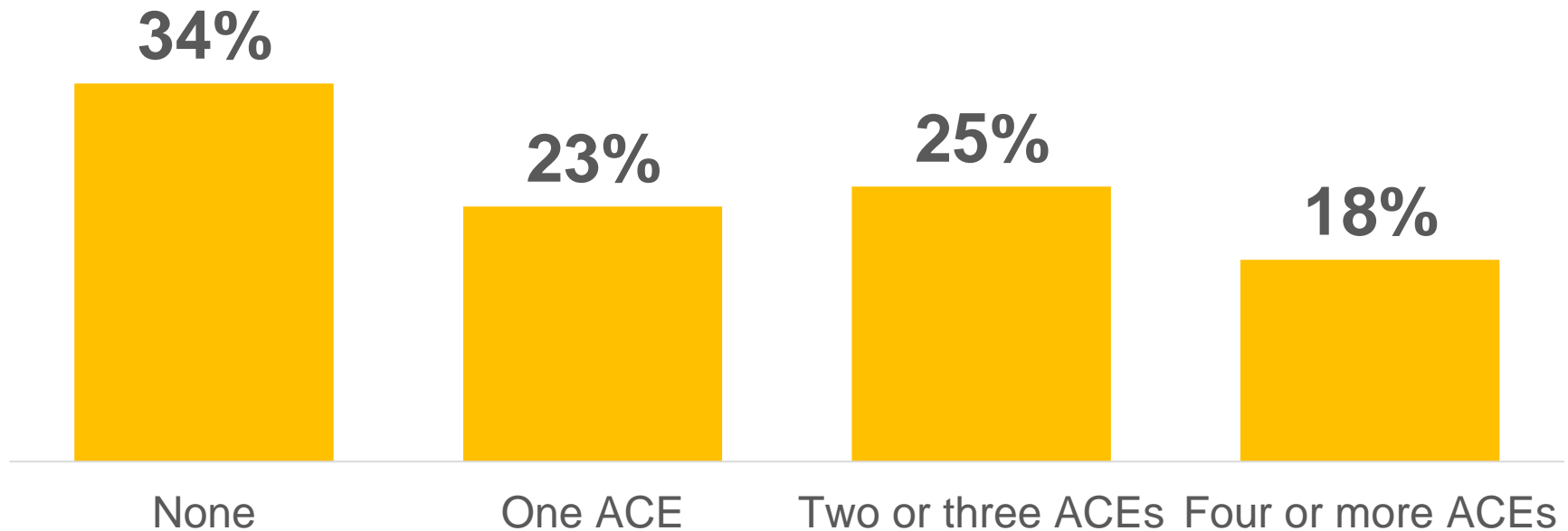
Prevalence of Individual ACEs Among Michigan Adults (2016)



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

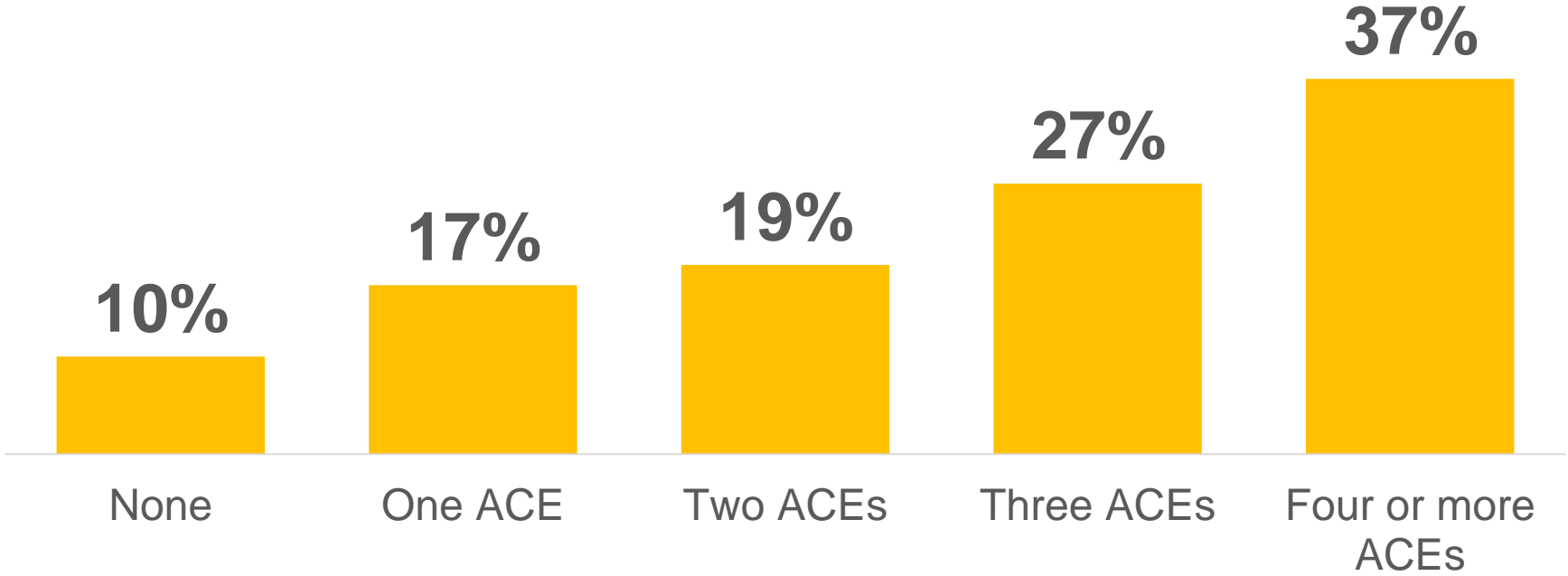
ACEs Load Among Michigan's Adult Population (2016)



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Current Smoking by ACEs Load



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

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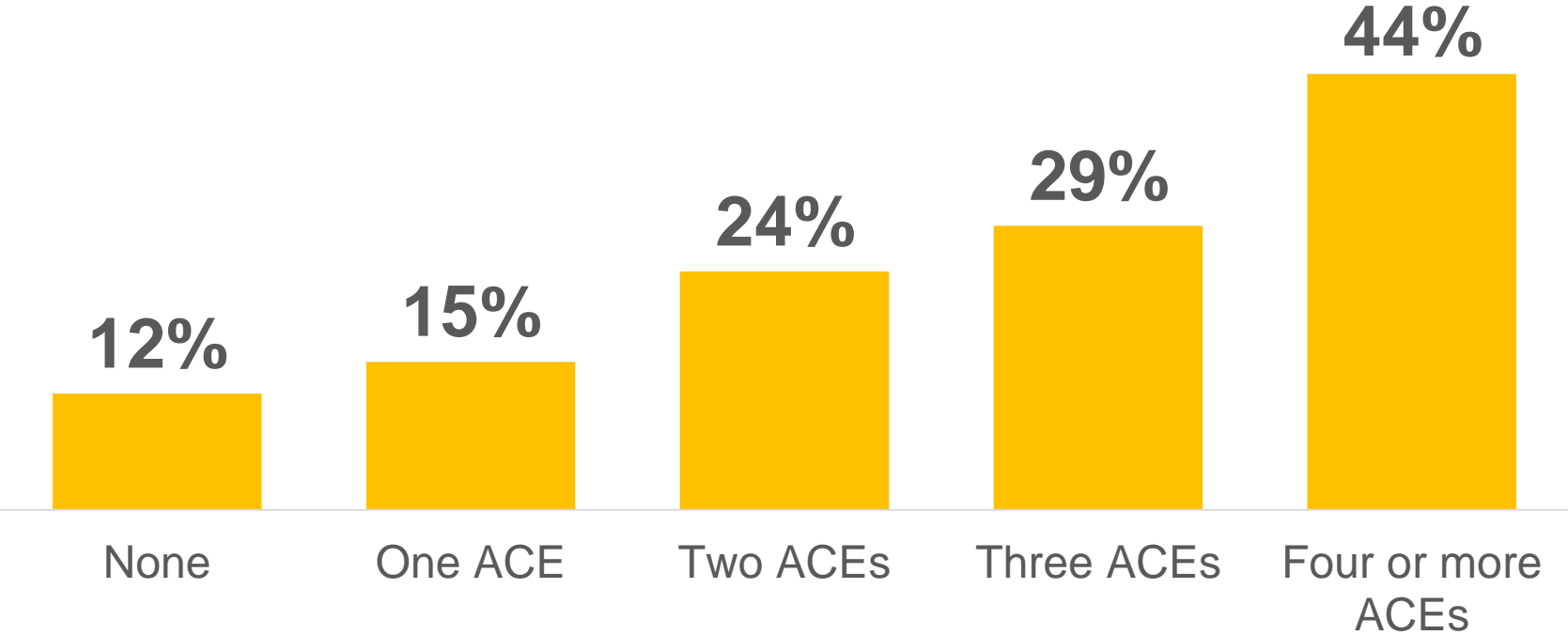


In 2016, **44 percent** of Michigan adults with four or more ACEs had been diagnosed with depression, compared to only **12 percent** of Michigan adults with no ACEs.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Diagnosed Depression by ACEs Load



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Health Outcomes Most Closely Associated with ACEs

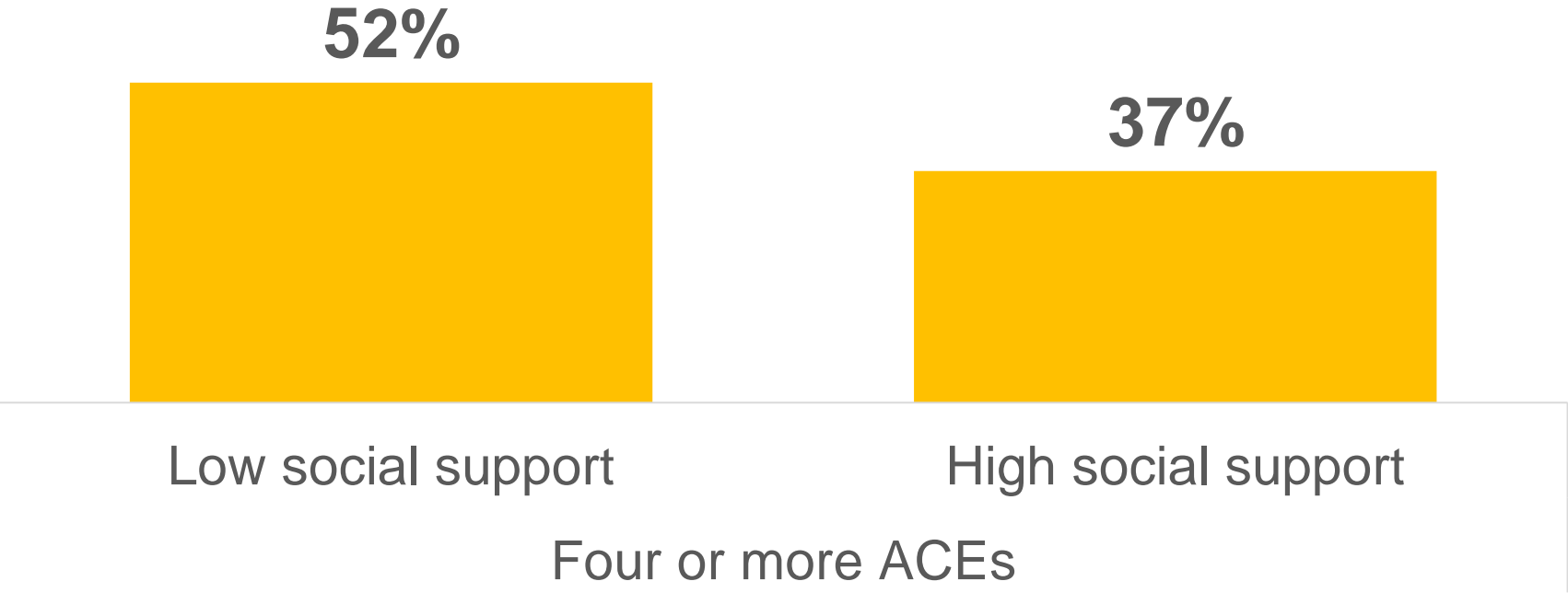
Condition	Pearson Chi-square*	Risk of Condition**	95% Confidence Interval
Diagnosed depression	Significant (<0.01)	2.41	2.40 to 2.42
Chronic obstructive pulmonary disease (COPD)	Significant (<0.01)	1.83	1.82 to 1.84
Poor mental health more than half of last month	Significant (<0.01)	1.82	1.81 to 1.82
Ever told asthma	Significant (<0.01)	1.69	1.68 to 1.69
General health status (poor)	Significant (<0.01)	1.64	1.64 to 1.65
Current asthma	Significant (<0.01)	1.57	1.56 to 1.58
Poor physical health more than half of last month	Significant (<0.01)	1.31	1.30 to 1.31
Cancer	Significant (<0.01)	1.06	1.06 to 1.07
Cardiovascular disease	Significant (<0.01)	1.03	1.03 to 1.03
Arthritis	Significant (<0.01)	1.00	1.00 to 1.01
Diabetes	Significant (<0.01)	0.98	0.98 to 0.99
Stroke	Significant (<0.01)	0.91	0.90 to 0.92
Coronary heart disease	Significant (<0.01)	0.85	0.84 to 0.85
Heart attack	Significant (<0.01)	0.72	0.71 to 0.72

*Alpha level set at 0.05 prior to analysis **The prevalence of the condition among those with one or more ACE compared to the prevalence among those with zero ACEs.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

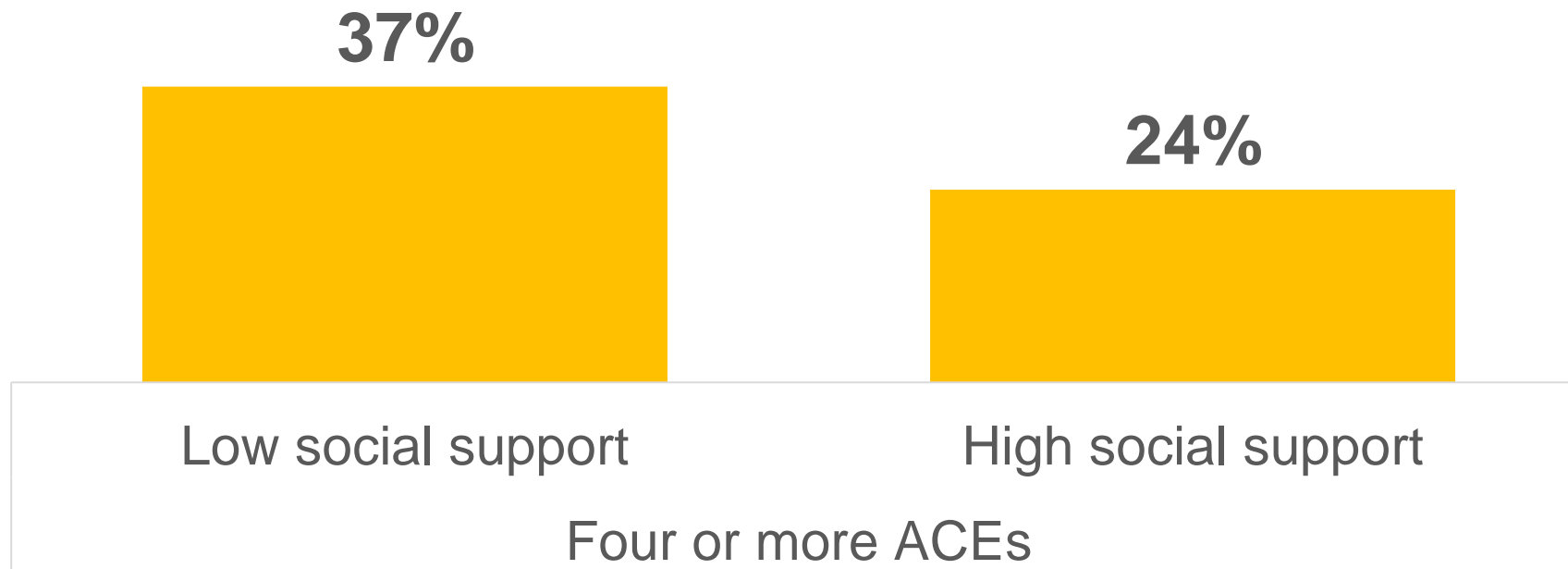
Diagnosed Depression and Social Support



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

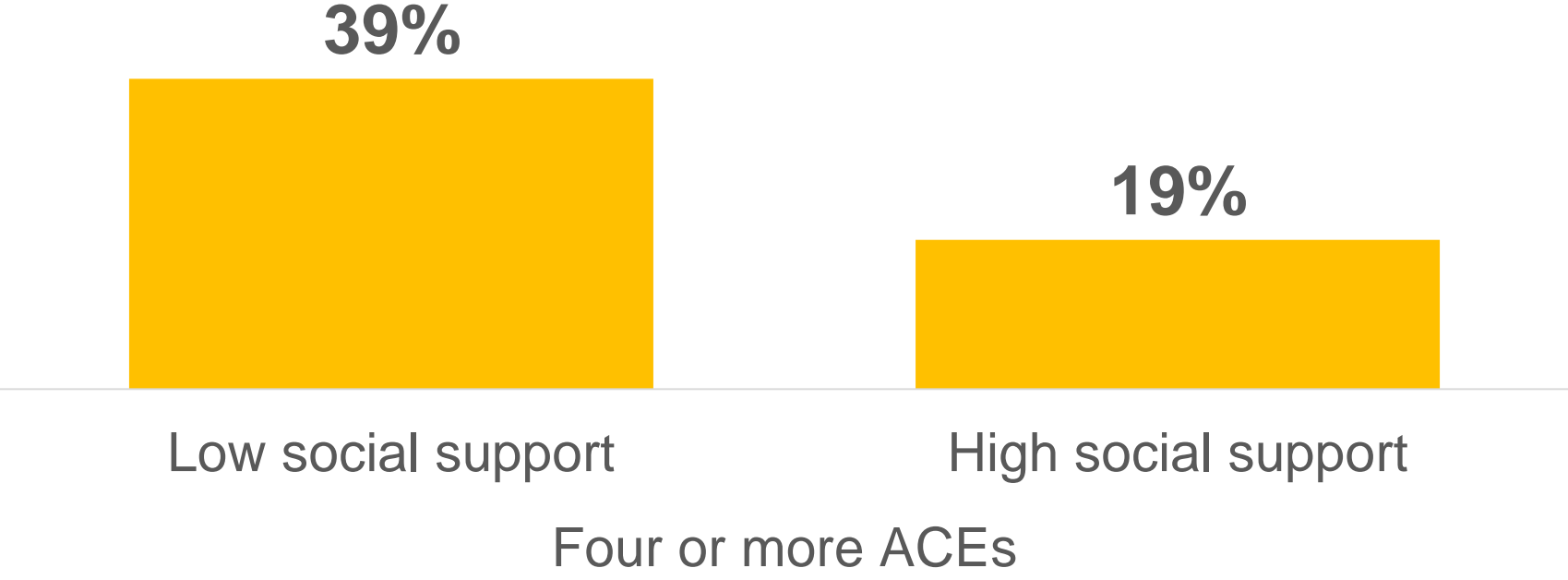
Fair or Poor Overall Health and Social Support



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.


Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Poor Physical Health and Social Support



Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.



Respondents with high social support exhibited a **7 to 29 percent** lower prevalence of negative health outcomes than respondents with low social support, depending on health outcome and ACEs load.

Analysis by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Felt that you belong at your high school

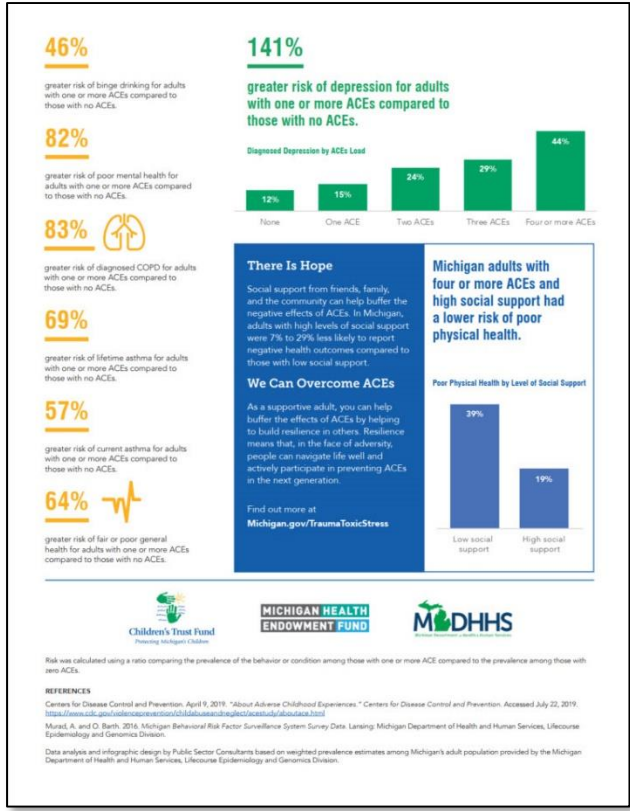
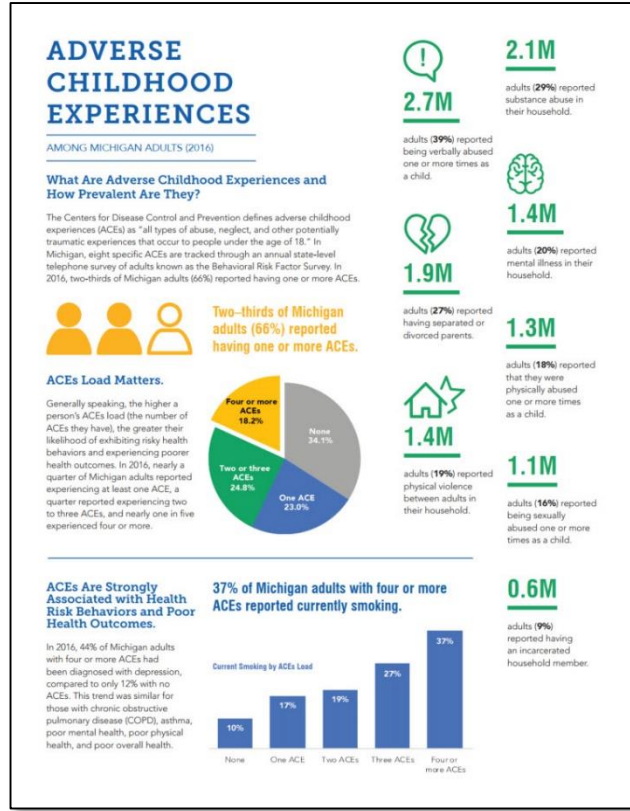
Felt supported by your friends

Two adults took a genuine interest in you

Able to talk with your family
about your feelings

Enjoyed participating in
community traditions

Family stood up for you in difficult times



Analysis and graphic design by Public Sector Consultants based on weighted prevalence estimates among Michigan's adult population provided by the Michigan Department of Health and Human Services.

Source: Murad A. and O. Barth. 2016. *Michigan Behavioral Risk Factor Surveillance System Survey Data*. Lansing: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division.

Train the Trainer

- Fidelity to the Science
- Common Language
- Common Meaning
- Tailored to Audience
- Widely Tested
- Delivers Understanding, Compassion, Motivation to Act



UNDERSTANDING
Adverse Childhood Experiences



Understanding
N. E. A. R.
Neuroscience
Epigenetics
Adverse Childhood Experiences
Resilience

www.aceinterface.com



*Michigan ACE Initiative Master Trainers
Grassroots Observations*

- ***Nicki Britton***, Health Officer and Director of the Berrien County Health Department and Kresge Foundation Emerging Leader in Public Health
- ***Joe Thomas***, Field Service/Juvenile Drug Treatment Court Manager with the 9th Circuit Court Family Division and Manager of the Field Service Department
- ***J. Thomas Munley***, Coordinator- Mid-Michigan Trauma Collaborative, Child and Family Charities

1/21/2020

CASA: Court Appointed Special Advocate



Fostering STARS



Fostering STARS



Certificate: Childhood Trauma and Treatment + Documentary

**“Resilience” =
Awakening!**

Resilience

“

NO MATTER HOW OLD YOU ARE — OR HOW OLD YOUR CHILD MAY BE, THERE ARE SCIENTIFICALLY SUPPORTED AND RELATIVELY SIMPLE STEPS THAT YOU CAN TAKE TO REBOOT THE BRAIN, CREATE NEW PATHWAYS THAT PROMOTE HEALING, AND COME BACK TO WHO IT IS YOU WERE MEANT TO BE.

”

- DONNA JACKSON NAKAZAWA



Steps to Healing

- ▶ One healthy adult /regular contact with child
- ▶ Before you can regulate emotions, you must know what they are!
- ▶ Teach Emotion Intelligence (**adults and youth**)
 - ▶ Be able to name emotions and the why?
- ▶ Learn the triggers that set the child off. Know yours!
 - ▶ Smells, sounds, similar look to abuser
- ▶ Remove SHAME! It wasn't the child's fault

What More Can We Do?

Adopt a Public Health approach to Child Maltreatment and other ACEs by:

1. Screening for ACEs in systems that serve children and families.
2. Building capacity to prevent & treat child trauma.
3. Increasing access to trauma-informed services for children & families.
4. Integrating and enhancing programs to target synergistic ACEs with highest cumulative risks.
5. Integrating trauma services across family-serving systems.

1/21/2020

Resource URLs

ACES

- TED Talk www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime
- CDC www.cdc.gov/violenceprevention/acestudy/index.html
- Academy on Violence and Abuse www.avahealth.org/aces_best_practices/

Evidence Based Treatment & Prevention

- NCTSN www.nctsn.org
- ISTSS <https://www.istss.org/>
- Children's Bureau <http://www.acf.hhs.gov/programs/cb>
- SAMHSA <http://www.samhsa.gov/ebp-web-guide>
- Maternal Depression <http://www.movingbeyonddepression.org/>

Advocacy & Policy

- AAP www.aap.org/en-us/Pages/Default.aspx
- APAs www.apa.org & www.psychiatry.org
- AACAP www.aacap.org

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Quick Reference for Questions or more information

Website: Mlace.org
Facebook: www.facebook.com/MichiganACE
YouTube: <https://www.youtube.com/channel/UC7h4KhtA.gPa6JyElRb2UofQ>

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