Adverse Childhood Experiences and Trauma Informed Schools

June, 2019

Patrick Sidmore, MSW





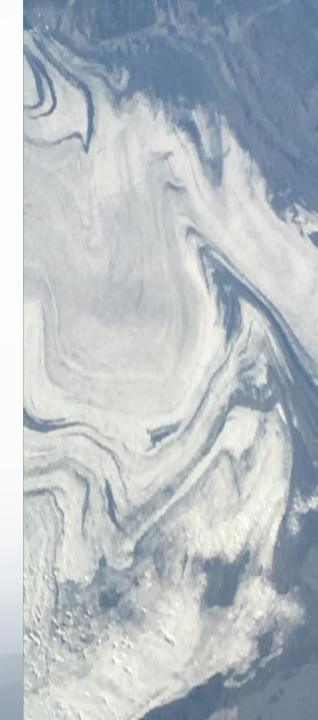
Greetings from Juneau!





Agenda

- 1. Introduction
- 2. Trauma and the Brain
- 3. Stress and the Stress Response
- 4. ACEs Adverse Childhood Experiences
- 5. Self-Regulation
- **6.** Co-Regulation = Skilled Relationships
- 7. Protective Factors
- 8. Trauma Engaged Schools



Questions

At what age are children most likely to be expelled from school in the U.S.?

What skills can mitigate the impacts of exposure to trauma and toxic stress?

What percentage of special education plans of children in Alabama can be accounted for by childhood stressors?

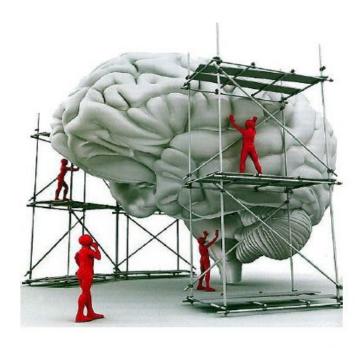
In 2018 what percentage of incidents reported about Alabama students were for for disobedience or profanity?

Rank the following "protective factors" for drug use and for depression/suicidal ideation.

<u>Drug Use</u>	Depression/Suicide	
	After School Activities	
	Not Feeling Alone	
	Teachers Care	
	Matter in Community	
	Clear Rules	

The Brain





2



Built from the Ground Up



Growth Built on Previous Growth

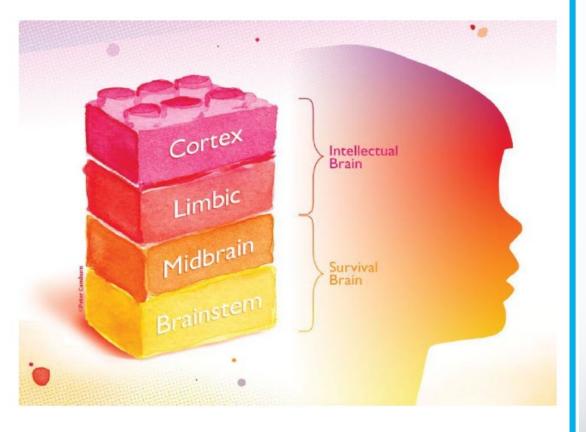
Strong Foundations

Scaffold and Support



Abstract thought Planning for future **Decision-making** Self-awareness & insight **Balancing emotions Empathy** Memory Attention **Emotions Motor Regulation** Sleep **Digestion** "Staying alive"→ respiration, heart rate...

Building Blocks of the Brain



Peter Camburn

Slide Courtesy of Linda Chamberlain, Ph.D.



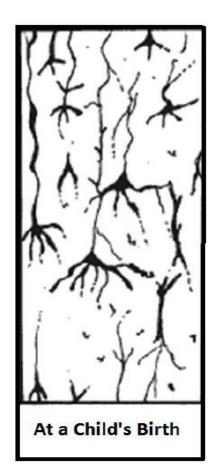
What is stress?

- The set of changes in the body and the brain that are set into motion when there are overwhelming threats to physical or psychological well-being.
- When we are threatened the body activates physiological responses including increases in heart rate, blood pressure, and production of stress hormones such as cortisol

(From Neurons to Neighborhoods, National Research Council and Institute of Medicine, 2000)



Wired Up – Wired Down











- Learning how to cope with adversity is important part of healthy development
- Homeostasis
- Stability
- Balance



Slide Courtesy of Shirley Pittz



Types of Stress

 Positive Stressmoderate, short-lived stress responses, such as brief increases in heart rate or mild changes in stress hormone levels

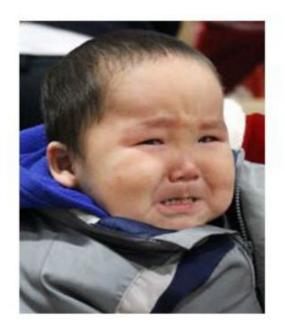


7



 Tolerable Stress- could disrupt brain architecture but is buffered by supportive relationships that facilitate adaptive coping





Slide Courtesy of Shirley Pittz



Q

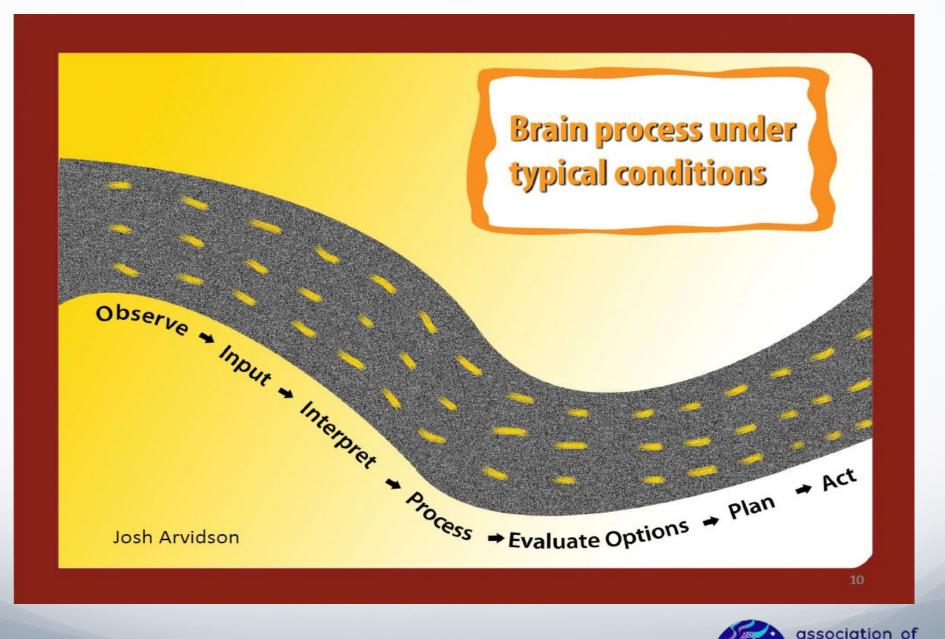
•Toxic Stress- strong and prolonged activation of the body's stress management systems in the absences of the buffering protection of adult support



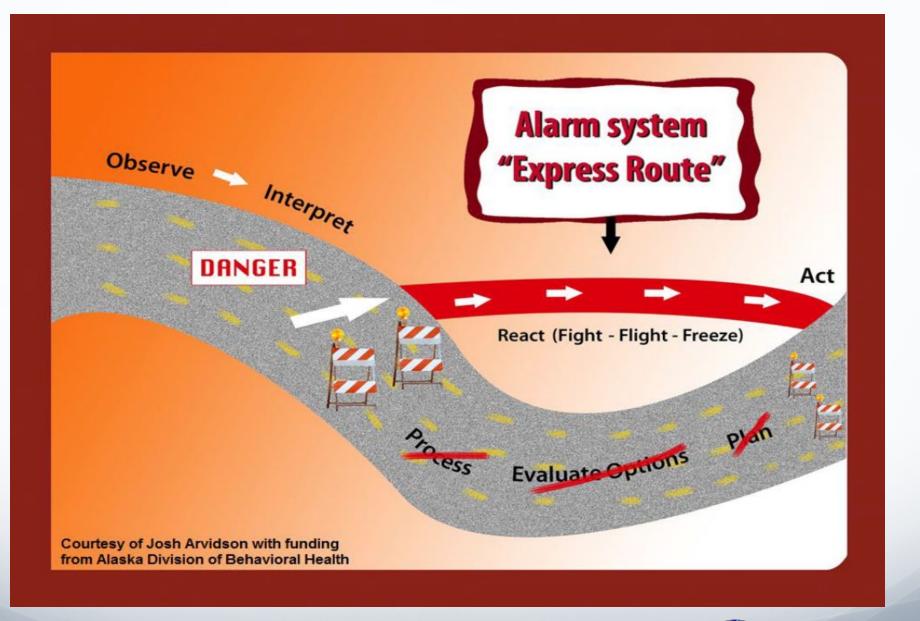
Slide Courtesy of Shirley Pittz



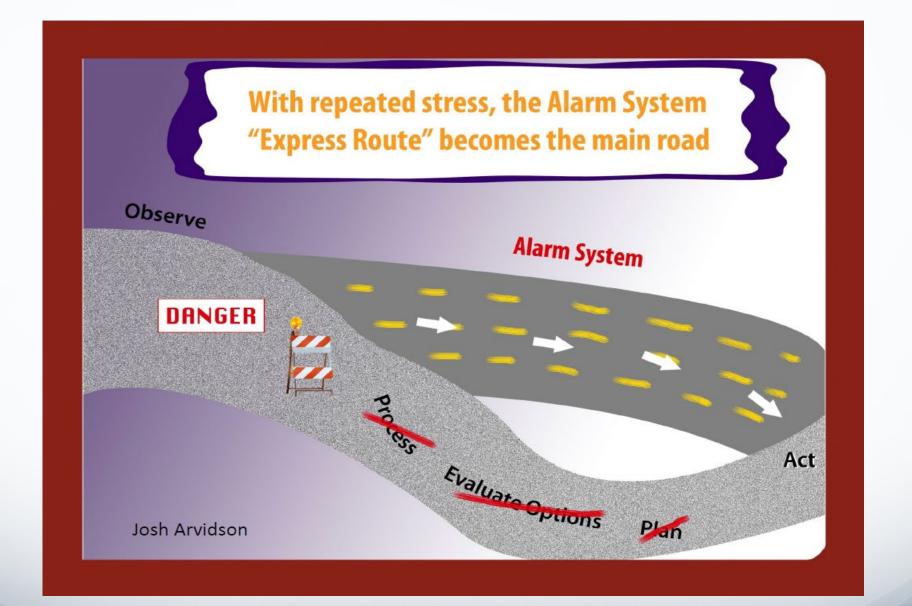
0













Consider how this wiring may impact work and school performance





Divide:	3)75 3 goes into 7 2 times with some extra!
Multiply:	√2 3)75 2×3=6
Subtract:	3)75 -6
Bring Down:	3)75 - <u>6</u> 1 15
Repeat:	3)75 15÷3=5 -6 15 -15 -15



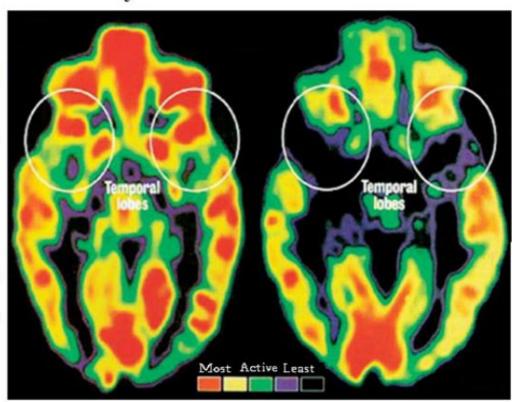
What does it look like?

PET SCANS

Healthy Brain

Abused Brain

The brain of a normal child shows regions of high (red) and low (blue and balck) activity. At birth, only primitive structures such as the brain stem (center) are fully functional: in regions like the temporal lobes (top) early childhood experiences wire the circuits.



The brain of a Romanian orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivationin infancy. The temporal lobes (top), which regulate emotions andreceive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems

Centers for Disease Control and Prevention





What are ACEs?

Adverse Childhood Experiences (ACEs):

Abuse:

- Emotional
- Sexual
- Physical

Neglect:

- Physical
- Emotional

Household Dysfunction:

- Living with someone with mental illness
- Witnessing domestic violence
- Experiencing a separation or divorce
- Living with someone abusing substances
- Living with someone who was incarcerated





Original ACE Study

Adverse Childhood Experiences Are Common

Household dysfunction:

Substance abuse	27 %	
Parental separation/divorce	23%	
Mental illness	17 %	
Battered mother	13%	
Criminal behavior	6 %	
Abuse:		
Psychological	11%	
Physical	28%	
Sexual	21%	
Neglect:		



15%

10%

Emotional

Physical

Poor Outcomes Associated with ACEs

Elevated ACE scores raise the likelihood of poor outcomes.











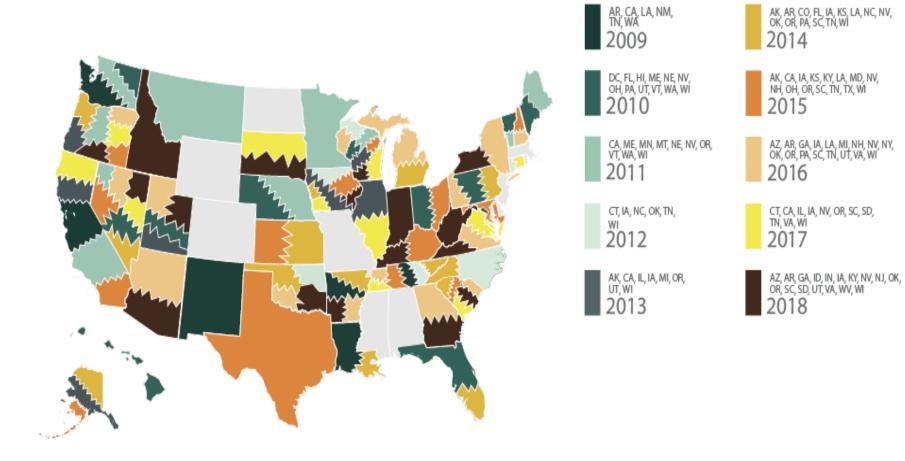








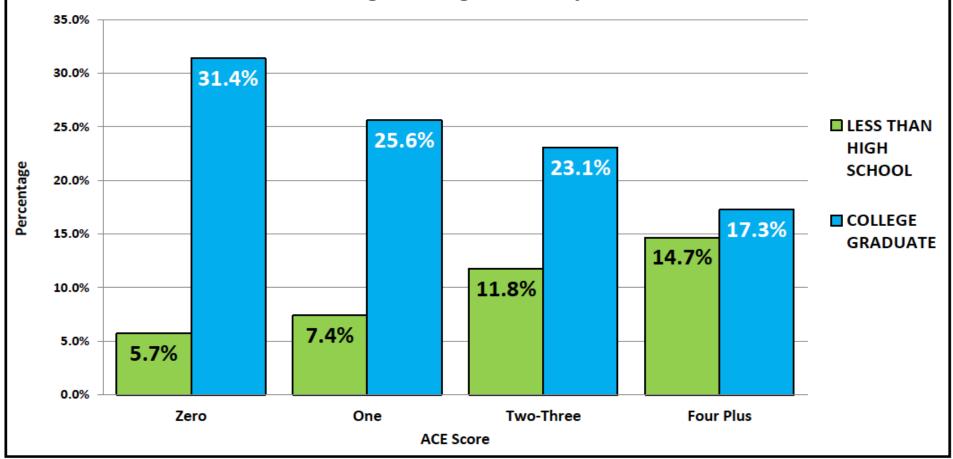
THE **ACE** STUDY CONTINUES



Although the study ended in 1997, some states are collecting information about ACEs in their population through the Behavioral Risk Factor Surveillance System (BRFSS).



Percentage of Alaskan Adults who Report Graduating from College or Not Graduating from High School by ACE Score





Source: Alaska data from the 2013 Alaska Behavioral Risk Factor Surveillance System, Alaska Department of Health and Social Services, Division of Public Health, Section of Chronic Disease Prevention and Health Promotion



Children's Adverse Childhood Experiences



ACE Score: Measure of Level of Stress

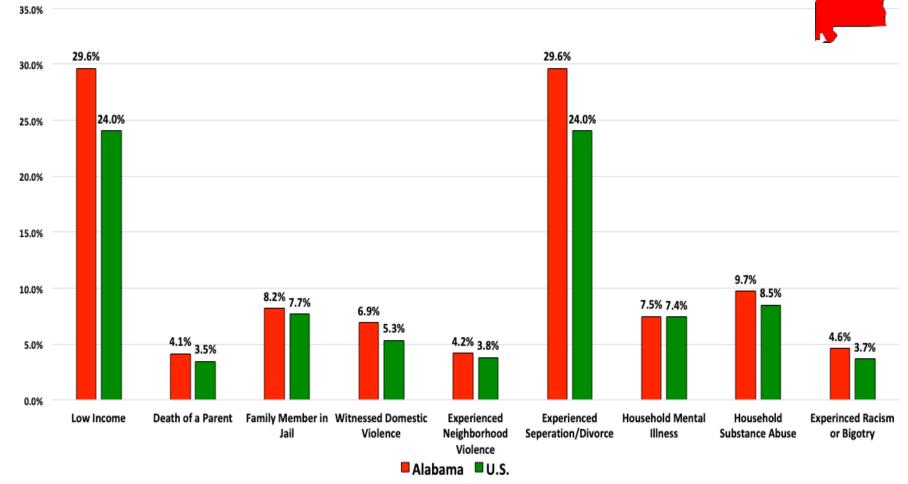
Adverse Experiences:

- Low income
- 2. Divorce/separation of parent
- 3. Death of parent
- 4. Parent served time in jail
- Witness to domestic violence
- 6. Victim of neighborhood violence
- Lived with someone who was mentally ill or suicidal
- Lived with someone with alcohol/drug problem
- Treated or judged unfairly due to race/ethnicity

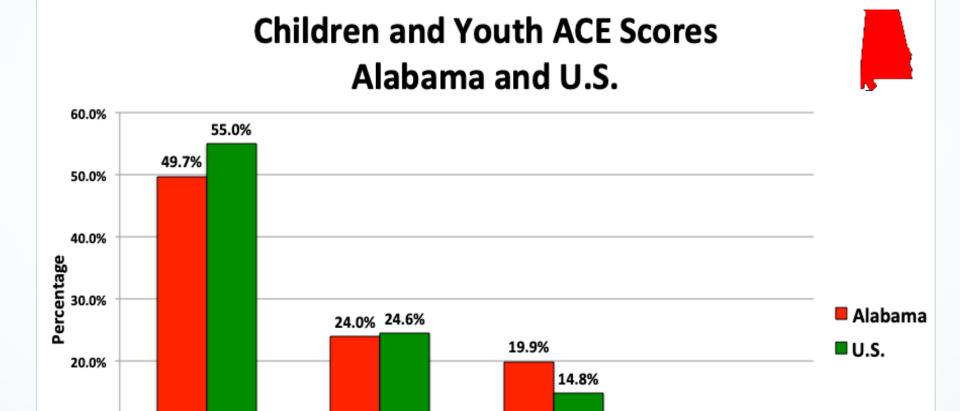












ACE Score

Two-Three

Child and Adolescent Health Measurement Initiative (2018). "2016-2017 National Survey of Children's Health: Guide to Topics and Questions". Data Resource Center for Child and Adolescent Health, supported By Cooperative Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB).

One

10.0%

0.0%

Zero



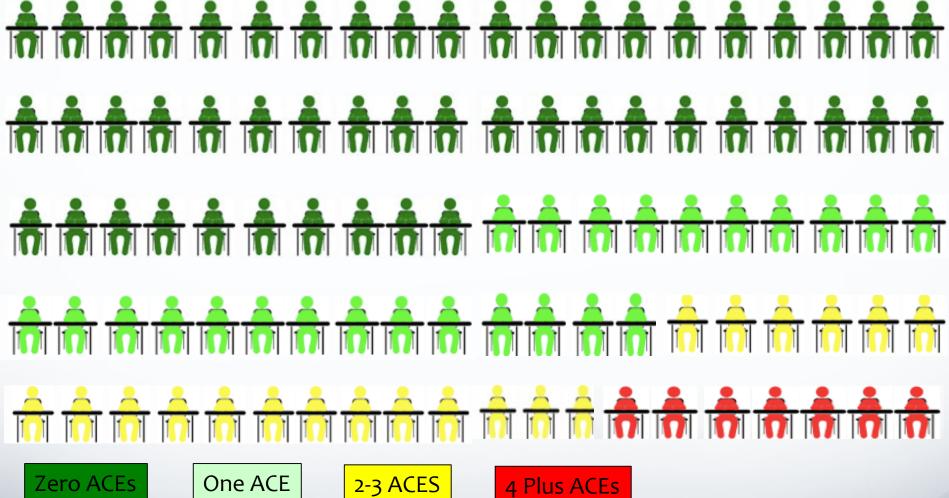
6.4%

Four Plus

5.6%

Population – ACEs Alabama Kids Ages Birth through 17







Separation/Divorce

One ACE 2-3 ACES

4 Plus ACEs



Population – ACEs Alabama Kids Ages Birth through 17





Zero ACEs

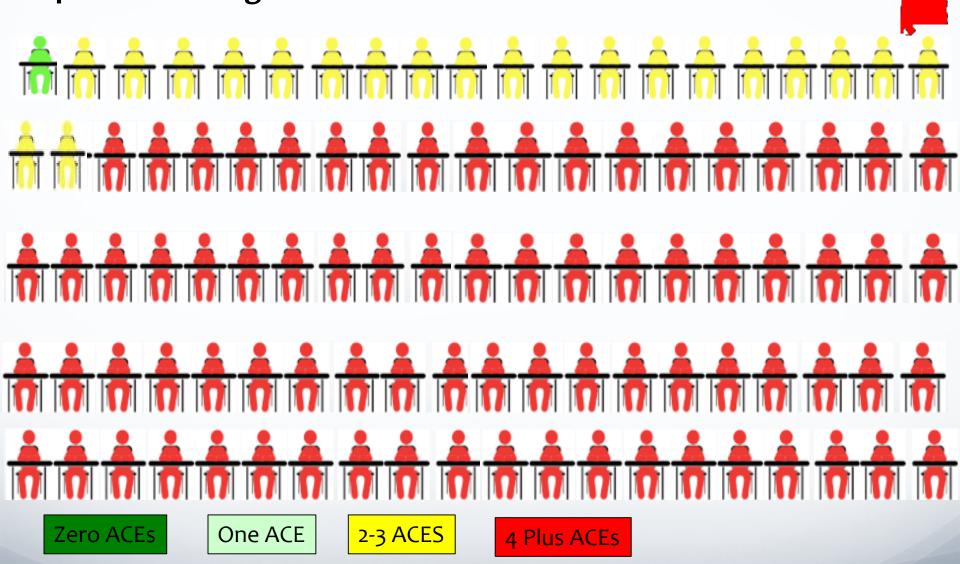
One ACE

2-3 ACES

4 Plus ACEs



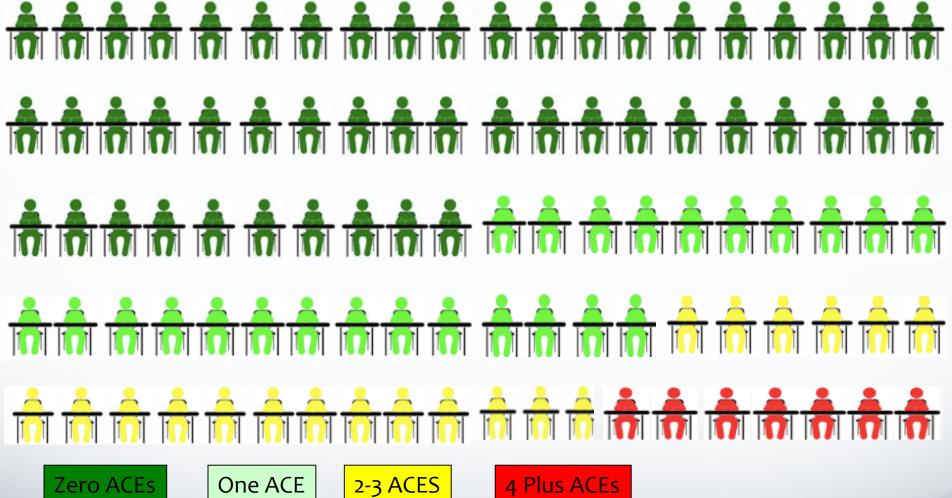
Experienced Neighborhood Violence





Population – ACEs Alabama Kids Ages Birth through 17



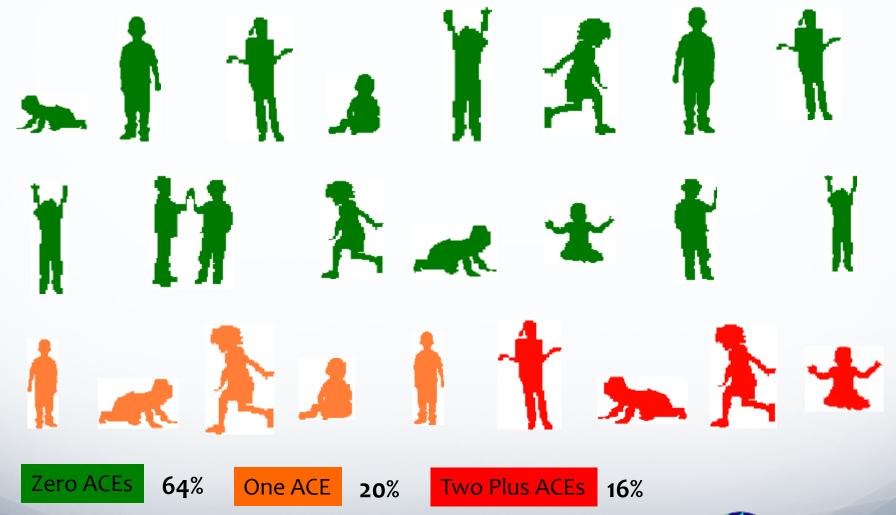




Witnessed Domestic Violence One ACE 2-3 ACES 4 Plus ACEs

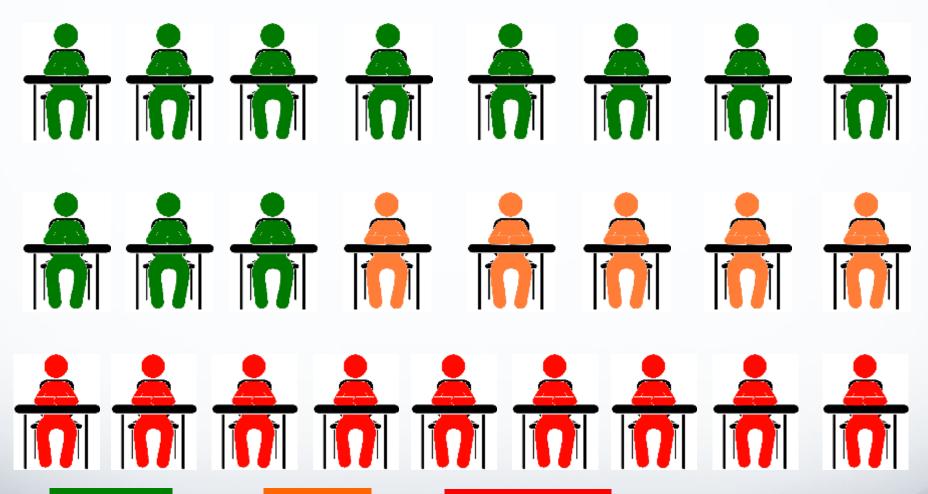


Alabama - ACE Scores Ages Birth - 5





Alabama - ACE Scores Ages 6 - 11

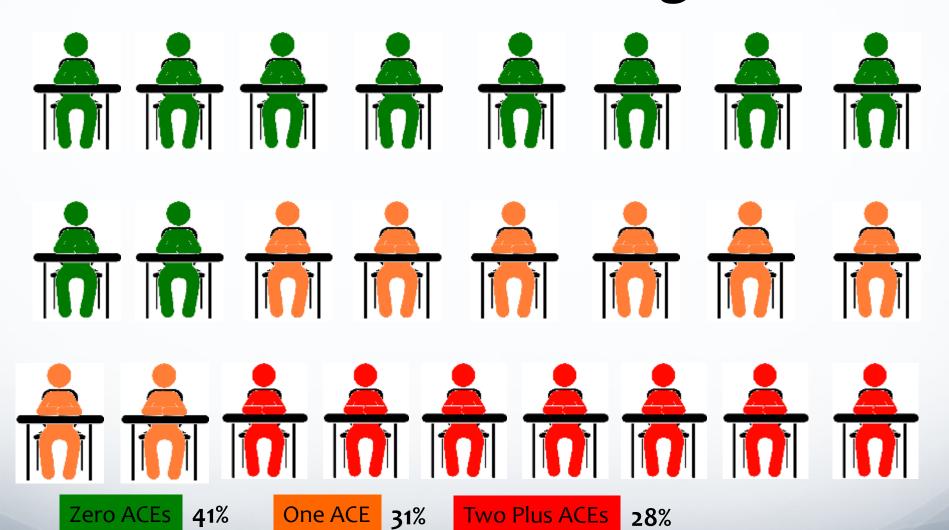


Zero ACEs 45%

One ACE 22% Two Plus ACEs 33%



Alabama - ACE Scores Ages 12 - 17





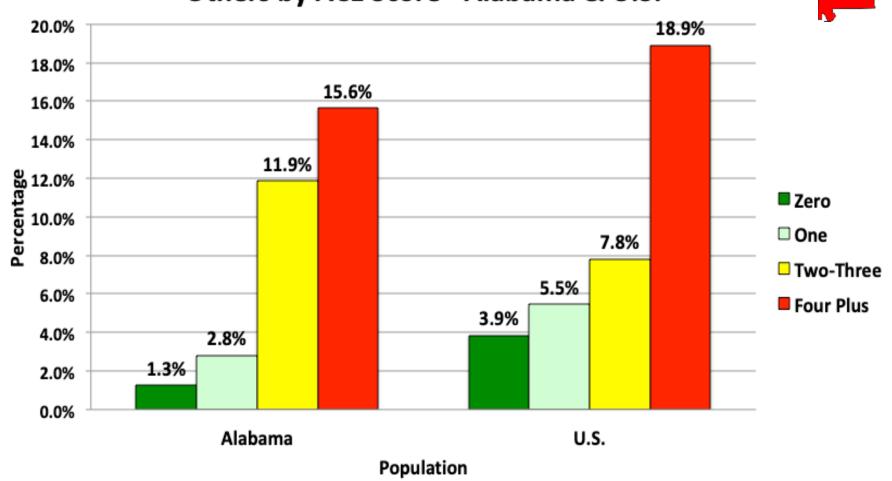
Links with Educational Measures for Children in Alabama



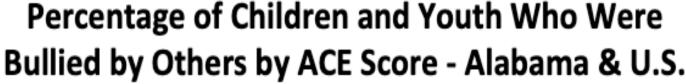




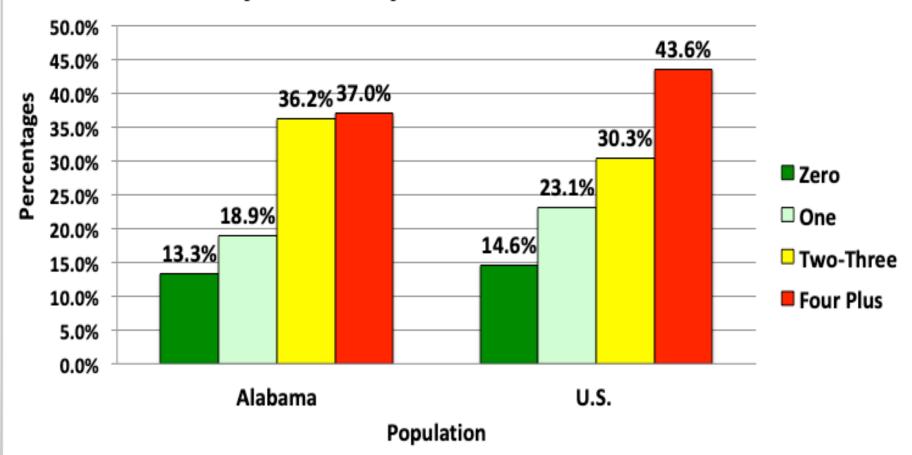














Absences from School

Days Missed Increases with ACEs



Exposure to Instructional Time Being Absent =

Missed Opportunities

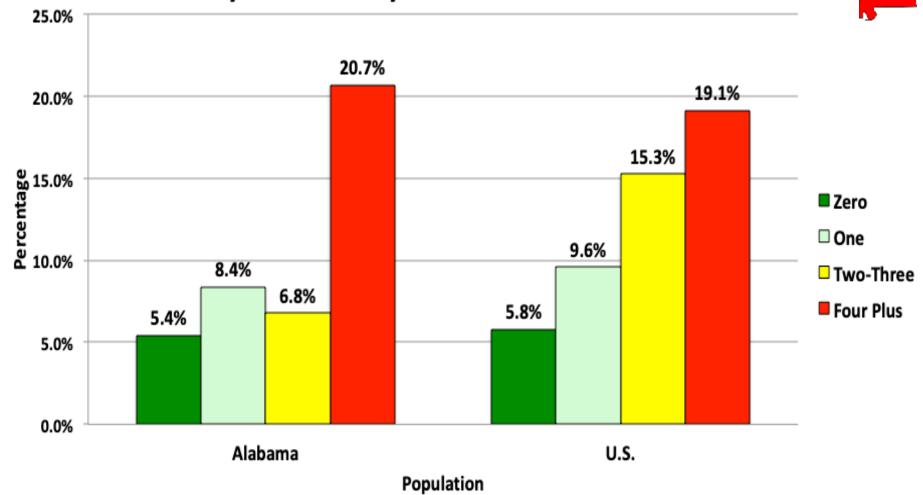


Later Educational Success

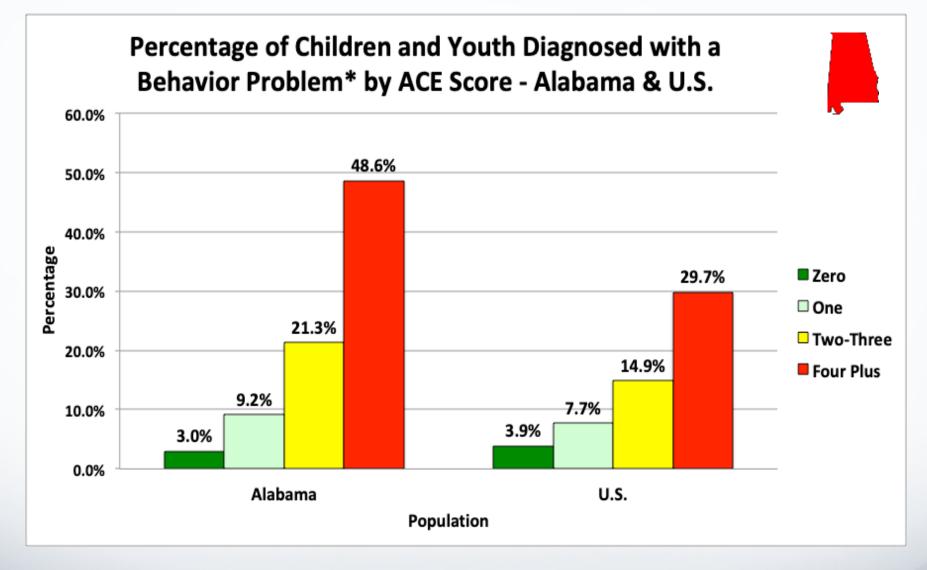


Percentage of Childen and Youth Who Missed Seven or More Days of School by ACE Score - Alabama & U. S.



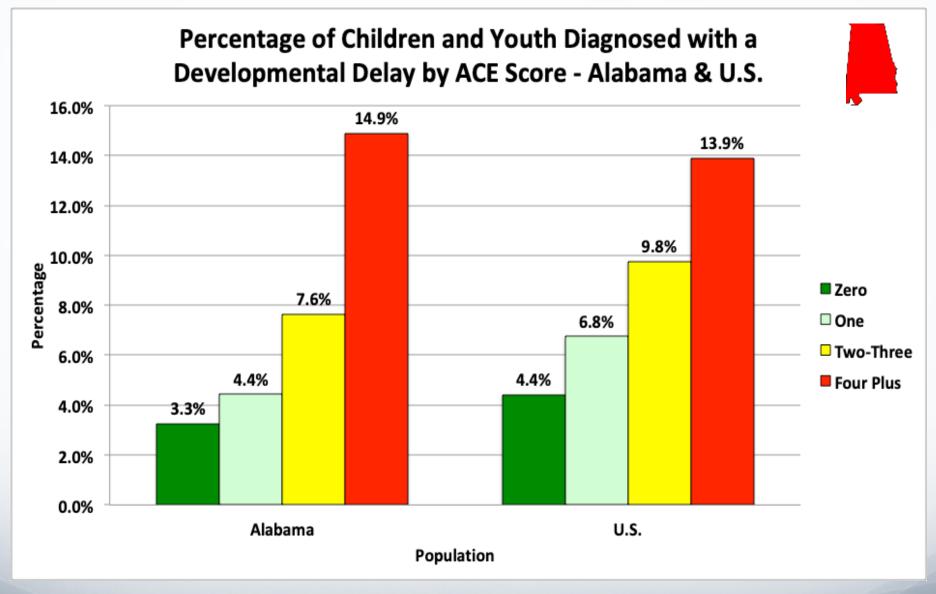




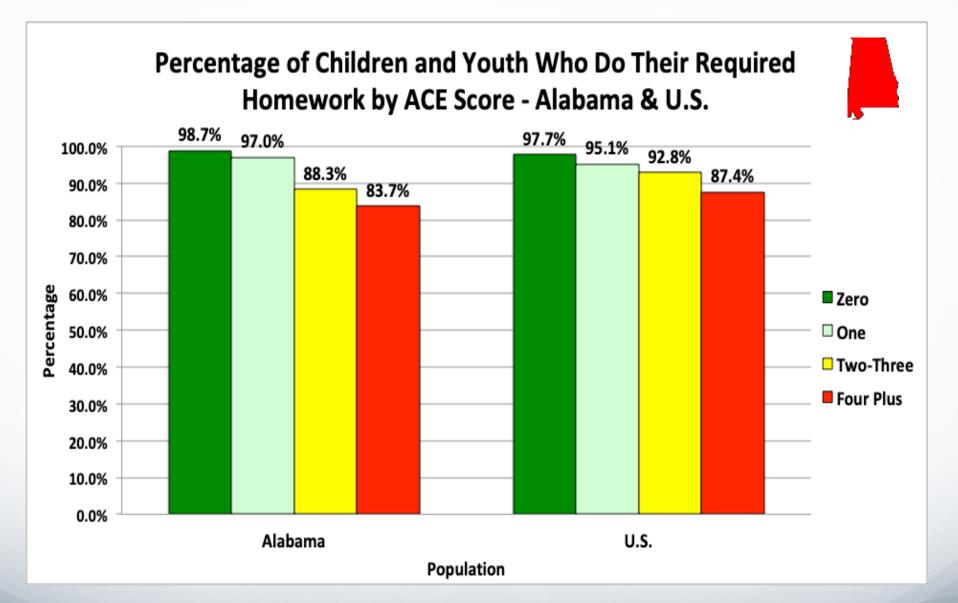


*Behavior Problem is defined as Conduct Disorder or Oppositional Defiance

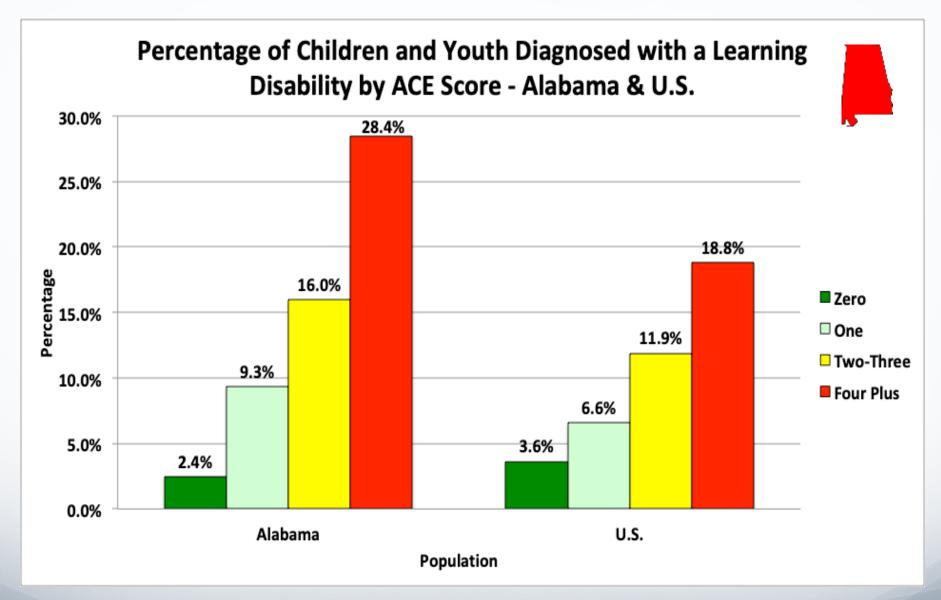








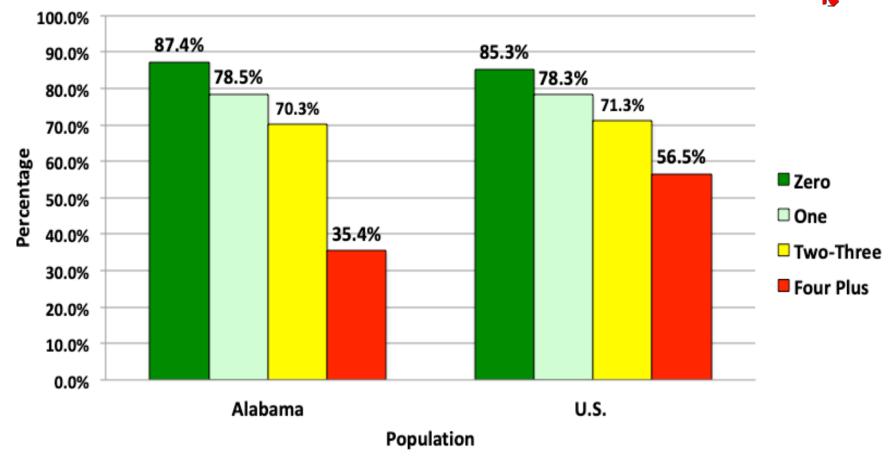




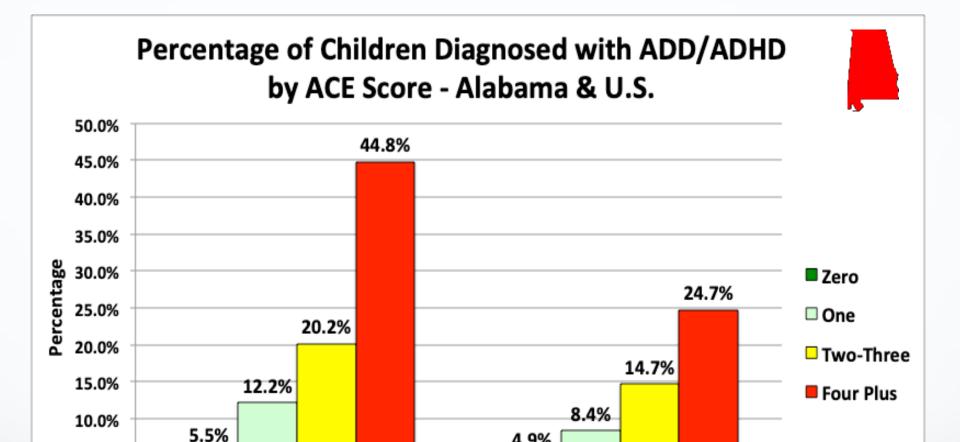








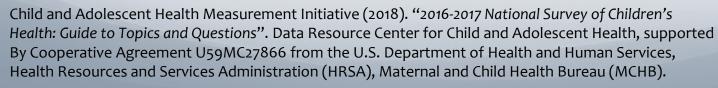




Population

4.9%

U.S.

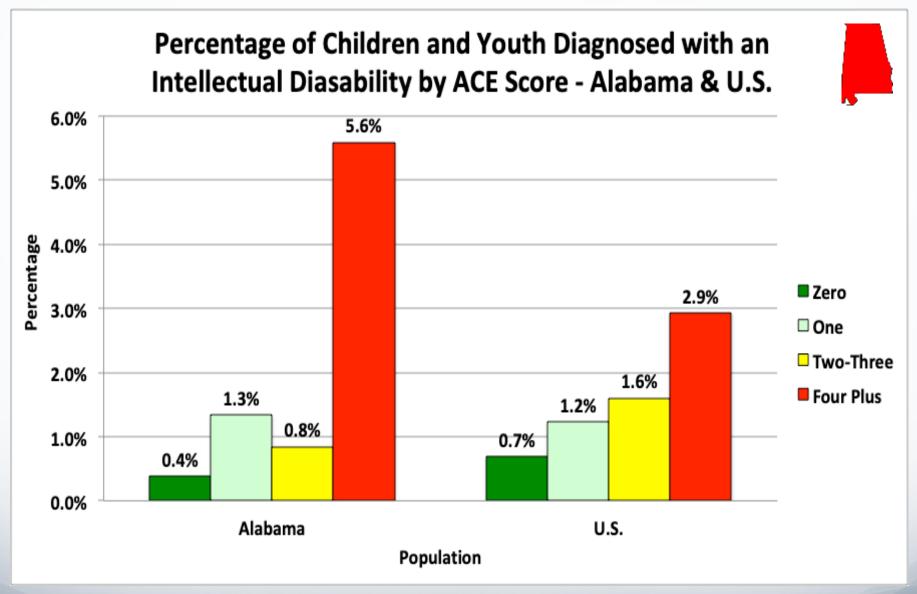


Alabama

5.0%

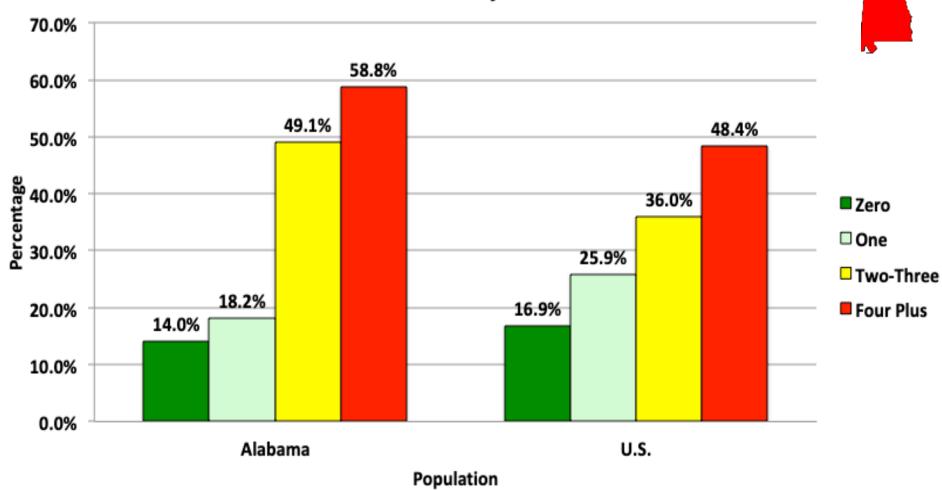
0.0%



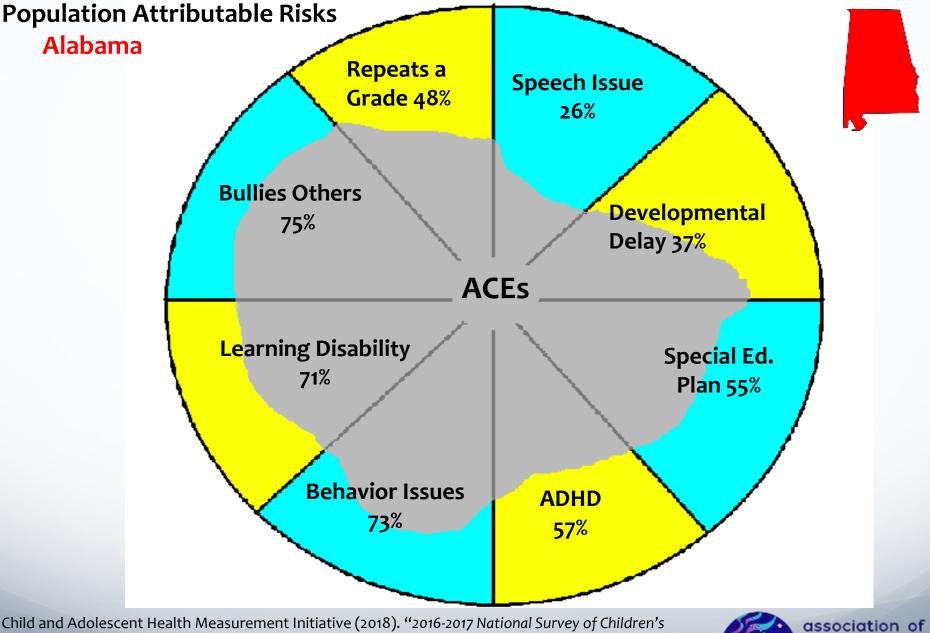




Percentage of Childen and Youth Who Had Calls Home From School for Behavior Problems by ACE Score - Alabama & U.S











Question

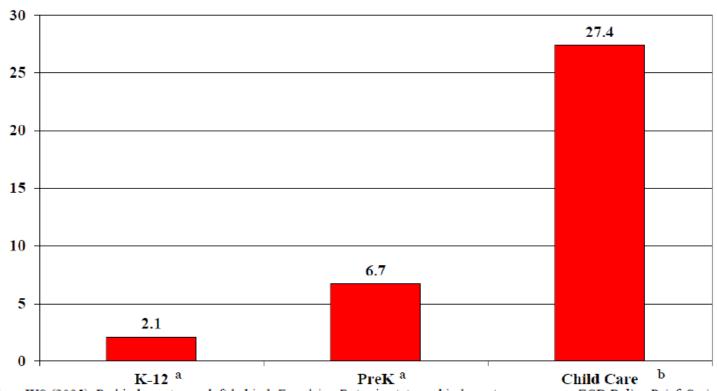
What can we learn from our colleagues in Early Childhood?





Expulsion Rates (per 1,000)





a. Gilliam, WS (2005). Prekindergarteners left behind: Expulsion Rates in state prekindergarten programs. *FCD Policy Brief, Series No.* 3. Available: www.ziglercenter.yale.edu/publications/briefs.html

b. Gilliam, WS & Shahar, G (2006). Preschool and child care expulsion and suspension: Rates and predictors in one state. *Infants and Young Children*, 19, 228-245.

Yale school of medicine

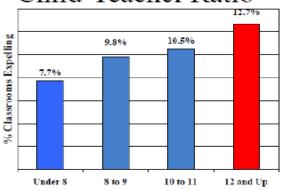
Yale Child Study Center

SLIDE 2

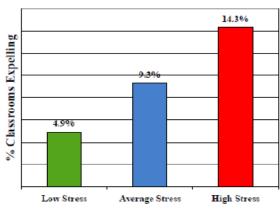


Many Factors Predict Preschool Expulsion 100

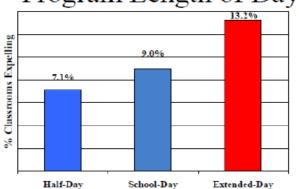
Child-Teacher Ratio



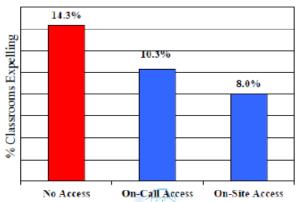
Teacher Job Stress



Program Length of Day



Access to Behavioral Supports



Yale school of medicine

Yale Child Study Center

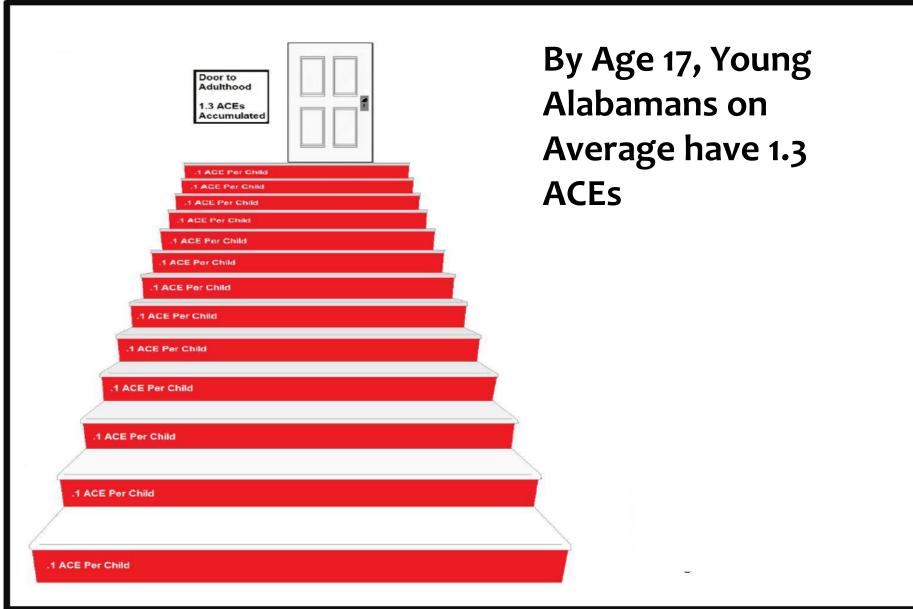
SLIDE 4



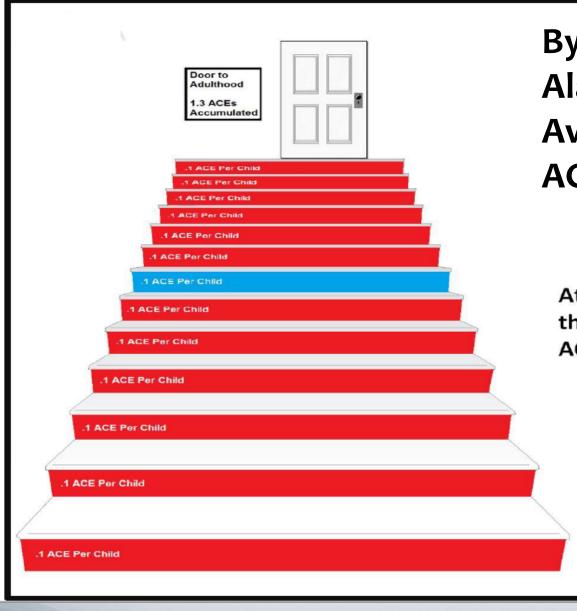
Growing Up











By Age 17, Young Alabamans on Average have 1.3 ACEs

At what age do you think that they are half-way to their total ACEs?





By Age 17, Young Alabamans on Average have 1.3 ACEs

At what age do you think that they are half-way to their total ACEs?

AGE 3 or 4







Trauma and Protective Factors

What Should We Focus on?

Lessons from the National Survey of Children's Health 2011-2012



SOURCE: CHILD AND ADOLESCENT HEALTH MANAGEMENT INITIATIVE (2012). "2011-2012 NATIONAL SURVEY OF CHILDREN'S HEALTH (2012), U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, HEALTH RESOURCES AND SERVICES ADMINISTRATION. GRAPHICS AND ANALYSIS DONE BY THE ALASKA MENTAL HEALTH BOARD AND ADVISORY BOARD ON ALCOHOLISM AND DRUG ABUSE STAFF



Health

Children with Special Health Care Needs Screener CSHCN Screener©

Qualifying Answers:

- 1. Prescription Drug Use
- 2. Elevated Service Need
- 3. Functional Limitations
- 4. Special Therapies
- 5. Ongoing Emotional, Development or Behavioral Conditions



Stress

Adverse Childhood Experiences

Qualifying Answers:

- 1. Witnessed Domestic Violence
- 2. Lived with Household Substance Abuse
- 3. Lived with Household Mental Illness
- 4. Experienced Separation or Divorce
- 5. Death of a Parent
- 6. Neighborhood Violence
- 7. Experienced Racism or Bigotry
- 8. Experienced Poverty
- 9. An Incarcerated Family Member



Protective Factors

Various Questions and Scales to Which Measure Strengths

Qualifying Answers:

- 1. Family Structure
- 2. Detracting Neighborhood Elements
- 3. Neighborhood Cohesion
- 4. After School Activities
- 5. Self Regulation Skills
- 6. Parents Mental Health



Family Structure

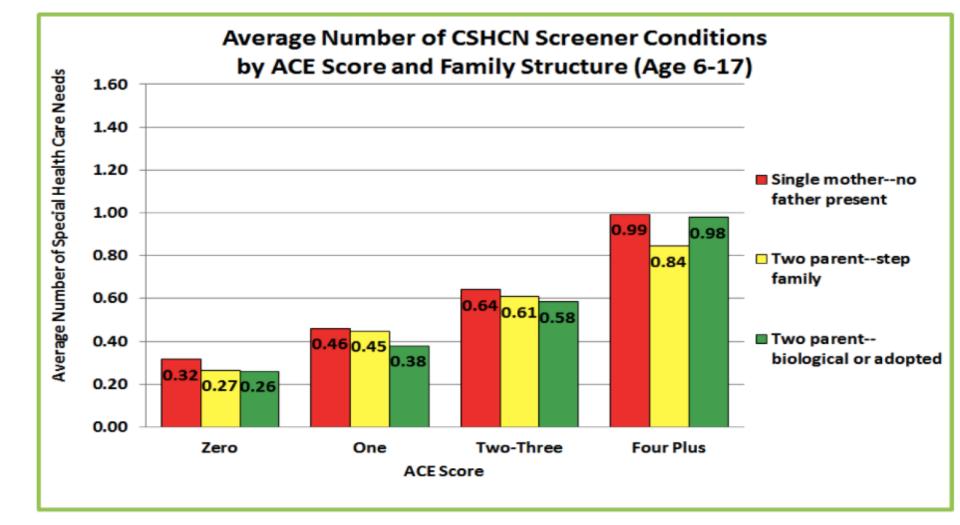
- 1. Single Mother No Father Present
- 2. Two Parent Step Family
- Two Parent Biological or Adopted













Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



Detracting Elements

- 1. Litter or Garbage About
- 2. Dilapidated Housing
- Broken Windows or Graffiti

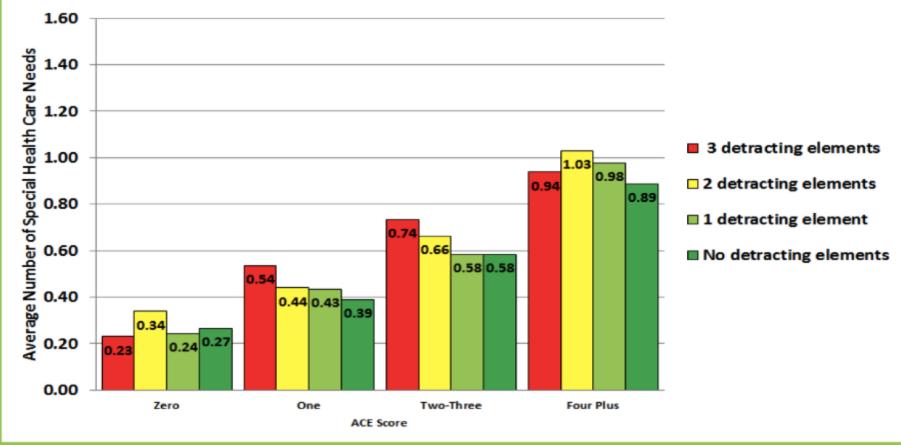








Average Number of CSHCN Screener Conditions by ACE Score and Number of Detracting Neighborhood Conditions (Age 6-17)





Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



Neighborhood Cohesion

- 1. People Help Each Other Out
- 2. Watch Each Others Children
- 3. People to Count On
- 4. Adults I Can Trust

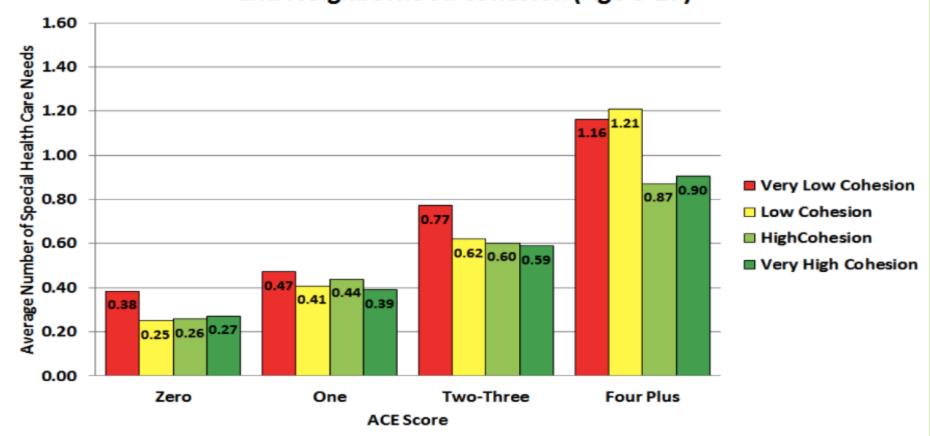








Average Number of CSHCN Screener Conditions by ACE Score and Neighborhood Cohesion (Age 6-17)





Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



After School Activities

- During the past 12 months, was your child on a sports team or did he/she take sports lessons after school or on weekends?
- 2. During the past 12 months, did he/she participate in any clubs or organizations after school or on weekends?
- 3. During the past 12 months, did he/she participate in any other organized activities or lessons, such as music, dance, language, or other arts?

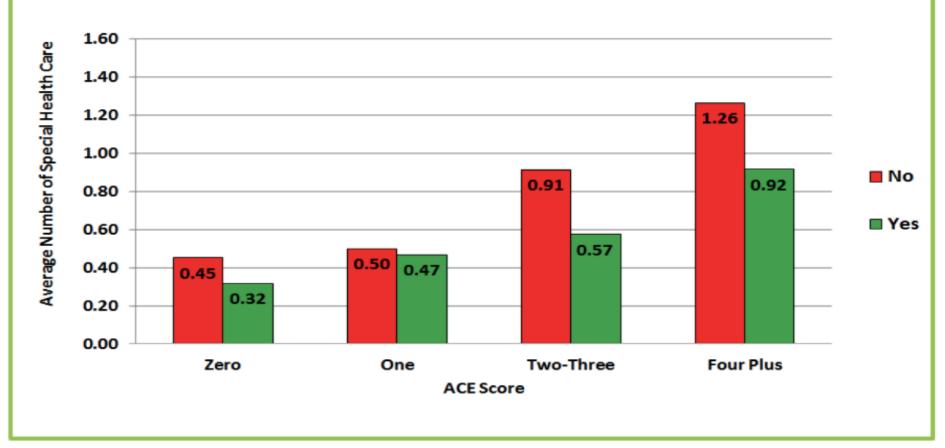








Average Number of CSHCN Screener Conditions by ACE Score and Participation in After School Activities (Age 6-17)





Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



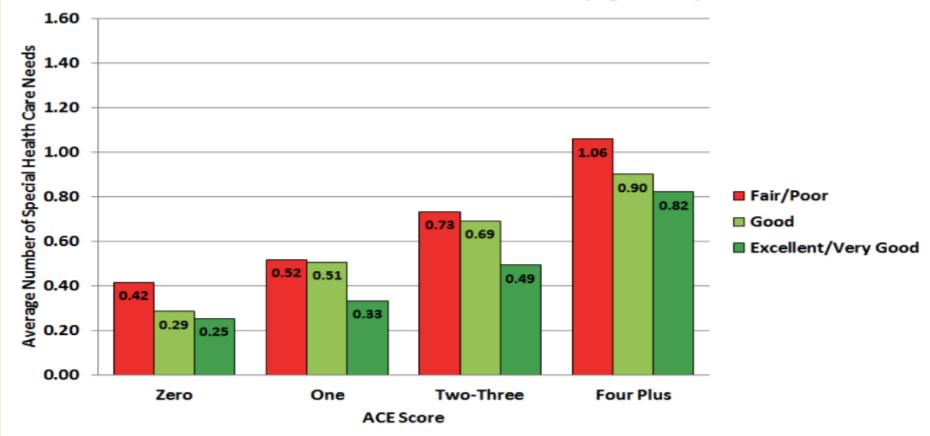
Parents' Mental Health

Poor/Fair Good Very Good/Excellent





Average Number of CSHCM Conditions by ACE Score and Father's Mental Health Status (Age 6-17)

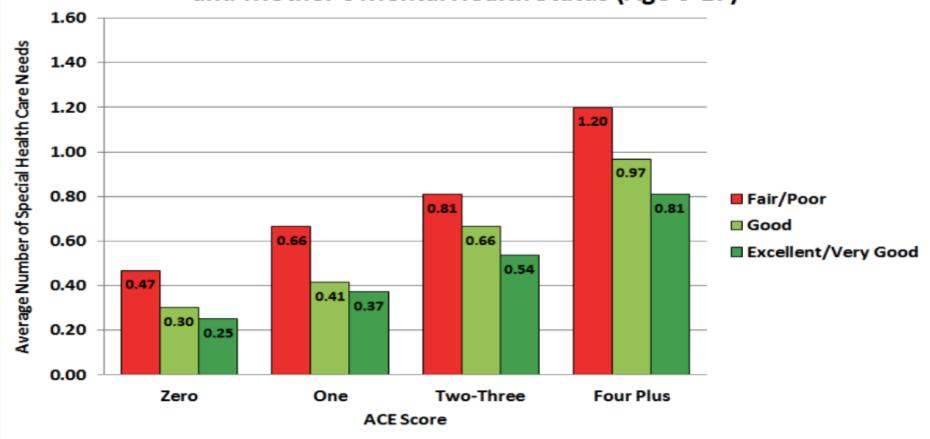




Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



Average Number of CSHCM Conditions by ACE Score and Mother's Mental Health Status (Age 6-17)



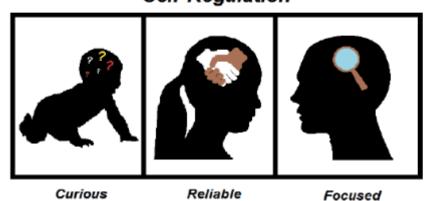


Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff



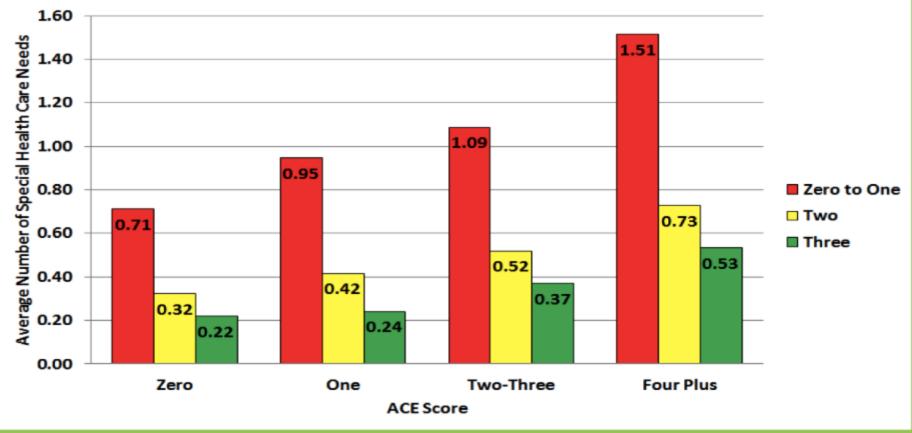
Self Regulation

- Finishes tasks and follows through on commitments
- 2. Stays calm and in control when facing a challenge
- 3. Shows interest and curiosity in learning new things Self-Regulation





Average Number of CSHCN Conditions by ACE Score and Number of Self-Regulation Skills (Age 6-17)





Source: Child and Adolescent Health Management Initiative (2012). "2011-2012 National Survey of Children's Health (2012), U.S. Department of Health and Human Services, Health Resources and Services Administration. Graphics and analysis done by the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse Staff





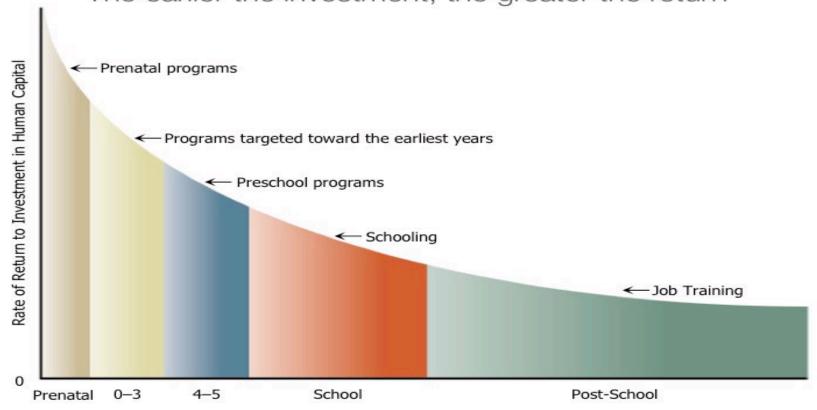
Willpower
Executive Functioning
Flexibility
Effortful Control

Emotional Regulation Self-Control Self-Management



EARLY CHILDHOOD DEVELOPMENT IS A SMART INVESTMENT

The earlier the investment, the greater the return



Source: James Heckman, Nobel Laureate in Economics

Source: Heckman Equation



SEVEN KEY PRINCIPLES OF SELF-REGULATION

SELF-REGULATION:

- serves as the foundation for lifelong functioning
- is defined from an applied perspective as the act of managing cognition and emotion
- enactment is influenced by a combination of individual and external factors
- can be strengthened and taught
- is dependent on "co-regulation" provided by parents or other caregiving adults
- can be disrupted by prolonged or pronounced stress and adversity including poverty and trauma experiences
- develops over an extended period from birth through young adulthood and beyond



Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). Self-Regulation and Toxic Stress: Foundations for Understanding Self- Regulation from an Applied Developmental Perspective. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.



SEVEN KEY PRINCIPLES OF SELF-REGULATION

SELF-REGULATION:

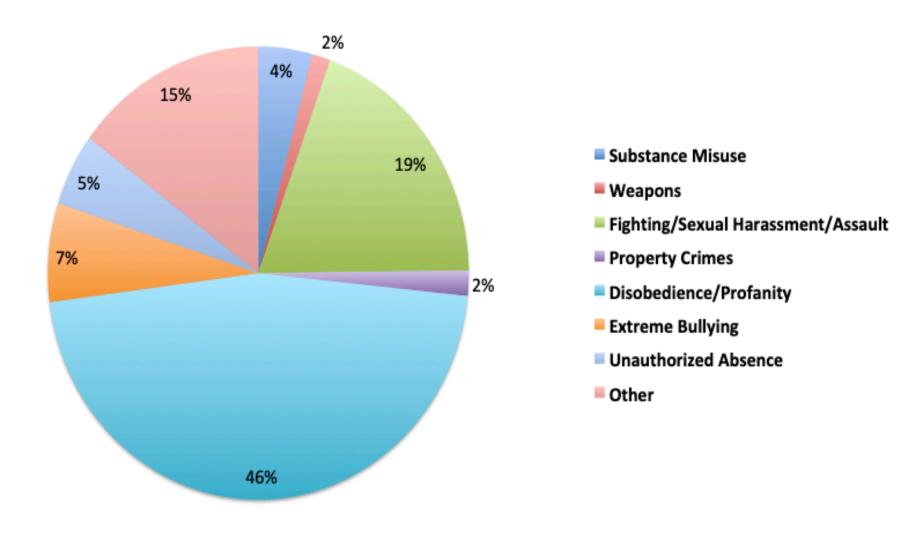
- serves as the foundation for lifelong functioning
- is defined from an applied perspective as the act of managing cognition and emotion
- enactment is influenced by a combination of individual and external factors
- can be strengthened and taught
- is dependent on "co-regulation" provided by parents or other caregiving adults
- can be disrupted by prolonged or pronounced stress and adversity including poverty and trauma experiences
- develops over an extended period from birth through young adulthood and beyond



Murray, Desiree W., Rosanbalm, Katie, Christopoulos, Christina, and Hamoudi, Amar (2015). Self-Regulation and Toxic Stress: Foundations for Understanding Self- Regulation from an Applied Developmental Perspective. OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.



2018 Incidents by Type



Source: Annual School Incident Report, 2018, State of Alabama



Protective Factors:

- Comfortable Seeking Help From Three or More Adults
- Feel That They Matter to People in Their Community
- Don't Feel Alone
- Feel Teachers Care About Them
- Parents Discuss School About Every Day With Them
- Two or More Days in Organized Activities
- Spend at Least 3 Hours Volunteering
- Believe Their School Has Clear Rules



Risk Factors

- 1. Smoked cigarettes
- 2. Had at least one drink of alcohol
- 3. Binge drinking
- 4. Used marijuana one or more times
- 5. Misused prescription pain medication

- 1. Felt so sad or hopeless for two weeks in a row to stop usual activities
- 2. Seriously considered suicide during past year
- 3. Made a suicide plan during the past year
- 4. Attempted suicide one or more times during the past year



Misuse of Six Substances

RISK BEHVIORS 30 Day Prior Use	Spend 3+ hours volunteering per week	2+ days in organized activities	Parents discuss school about every day	Have 3+ adults comfortable seeking help from	Strongly agree or agree that matter to people in community	Strongly agree or agree that school has clear rules	Strongly agree or agree that teachers care	Strongly disagree or disagree that feel alone
Cigarettes		47%	42%	45%		43%	51%	57%
Alcohol					28%	27%	36%	33%
Binge Alcohol					31%		37%	47%
Marijuana			22%		32%		43%	34%
Prescription Pain Medication	-80%			52%			41%	64%
Heroin	-267%	-244%				71%	78%	89%

Source: Alaskan, Traditional High School, Youth Risk Survey, 2017, Alaska Division of Public Health



Depression and Suicide

RISK BEHAVIORS	Spend 3+ hours volunteering per week	Parents discuss school about every day	2+ days in organized activities	Strongly agree or agree that school has clear rules	Strongly agree or agree that teachers care	Have 3+ adults comfortable seeking help from	Strongly agree or agree that matter to people in community	Strongly disagree or disagree that feel alone
Felt so sad or hopeless for two weeks in a row to stop usual activities				33%	35%	39%	42%	67%
Seriously considered suicide during past year				38%	39%	49%	59%	76%
Made a suicide plan during the past year				39%	35%	46%	50%	76%
Attempted suicide one or more times during the past year		37%	39%	34%	52%	48%	49%	81%

Source: Alaskan, Traditional High School, Youth Risk Survey, 2017, Alaska Division of Public Health



Answers

At what age are children most likely to be expelled from school in the U.S.?

Age 4

What skills can mitigate the impact of exposure to trauma and toxic stress?

Self-Regulation

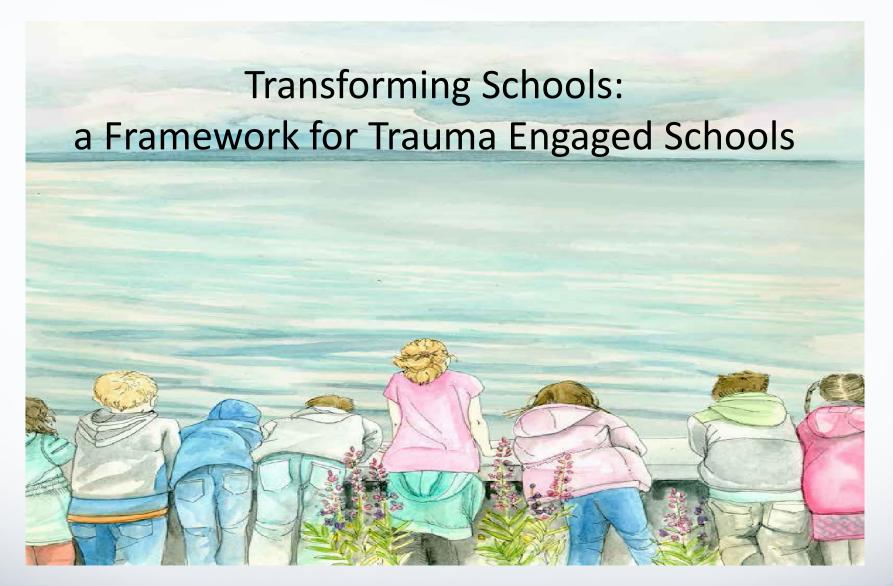
What percentage of special education plans of children in Alabama can be accounted for by childhood stressors? 55%

In 2018 what percentage of incidents reported about Alabama students were for for disobedience or profanity? 46%

Rank the following "protective factors" for drug use and for depression/suicidal ideation.

Drug Us	<u>Depress</u>	<u>ion/Suicide</u>
5	After School Activities	5
1	Not Feeling Alone	1
2	Teachers Care	3
4	Matter in Community	2
3	Clear Rules	4





https://aasb.org/new-framework-focuses-on-transforming-school-practices-to-address-the-impacts-of-trauma/

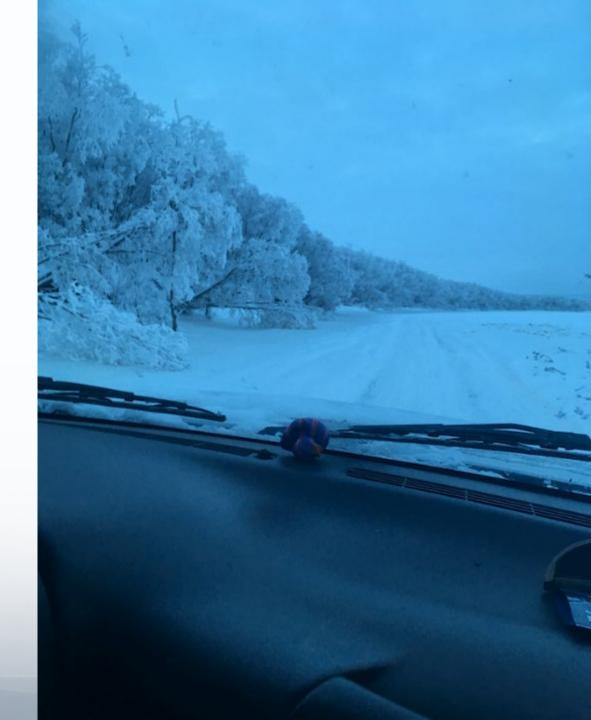






Thank you

Patrick Sidmore psidmore@aasb.org



Resources

Alaska - Trauma Engaged School Framework

— https://aasb.org/new-framework-focuses-on-transforming-school-practices-to-address-the-impactsof-trauma/

Heckman Equation

— https://heckmanequation.org

National Child Traumatic Stress Network - Schools

— https://www.nctsn.org/resources/all-nctsnresources?search=schools&resource_type=All&trauma_type=All&language=All&audience=All&other =All

Overcoming ACEs in Alaska

— http://dhss.alaska.gov/abada/ace-ak/Pages/default.aspx

Economic Costs of Adverse Childhood Experiences in Alaska

— http://dhss.alaska.gov/abada/ace-ak/Documents/ACEsEconomicCosts-AK.pdf



Resources

Self-Regulation and Toxic Stress

https://www.acf.hhs.gov/opre/resource/self-regulation-and-toxic-stress-foundations-for-understanding-self-regulation-from-an-applied-developmental-perspective

Co-Regulation

— https://fpg.unc.edu/sites/fpg.unc.edu/files/resources/reports-and-policy-briefs/Co-RegulationFromBirthThroughYoungAdulthood.pdf

Adverse Childhood Experiences – Centers for Disease Control and Prevention

— https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html

