



Florida
HEALTH



Adverse Childhood Experiences and Their Impact Upon Health and Education:

A Social Determinant Overview

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Charlotte, Hendry and Glades Counties

November 2019



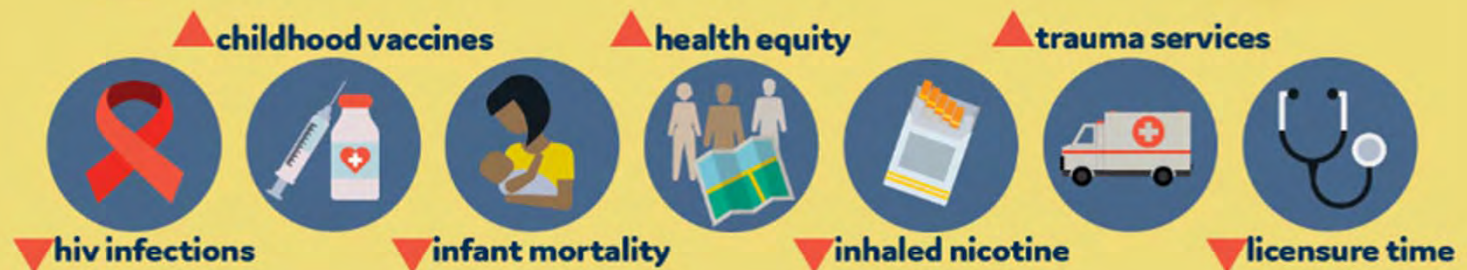
Learning Objectives

- Gain a understanding of Adverse Childhood experiences research and findings.
- Gain further insight into how the factors impacting health and education are interrelated and share the same causes.
- Understand mitigating strategies for cross-cutting programs that provide protective factors.
- Understand the medical implications of Adverse Childhood Experiences and the development of clinical protocols.



2016–18

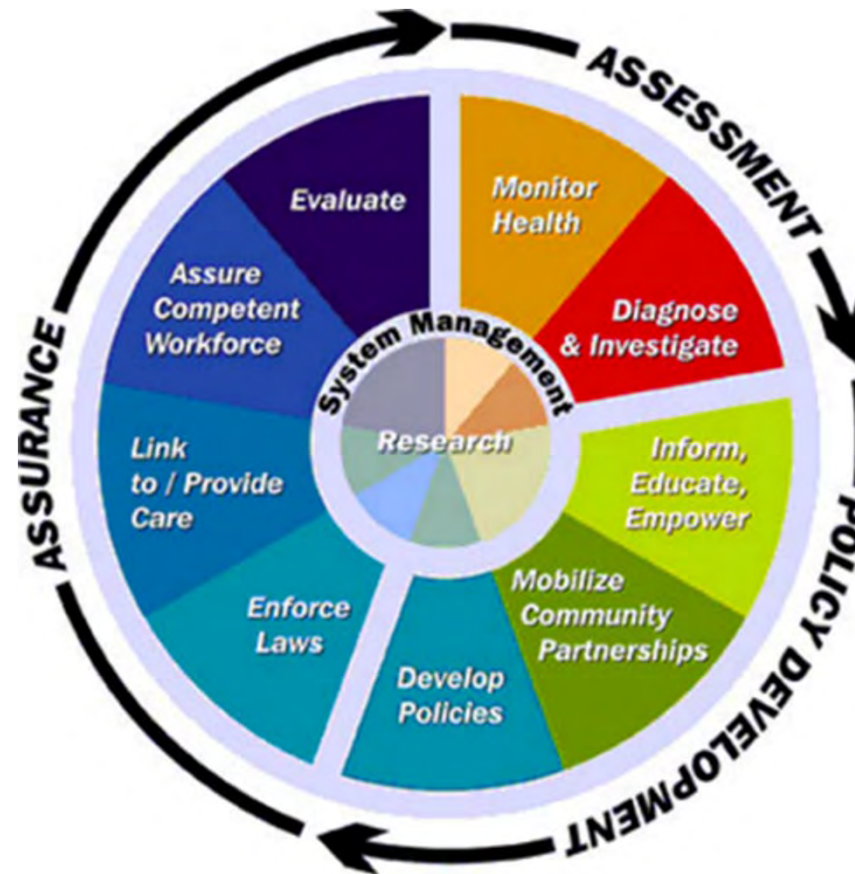
7 Florida Health Performs





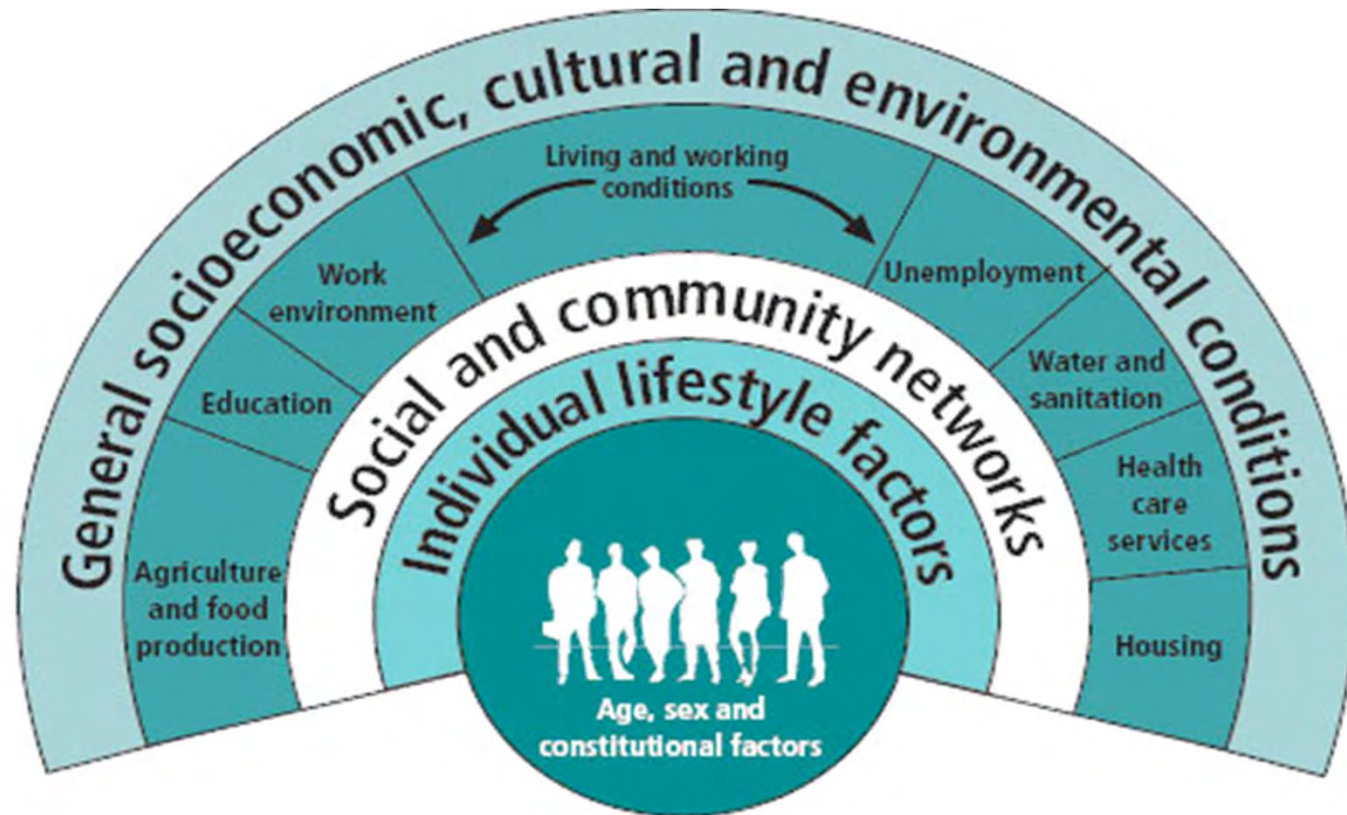


10 Core Components of Public Health



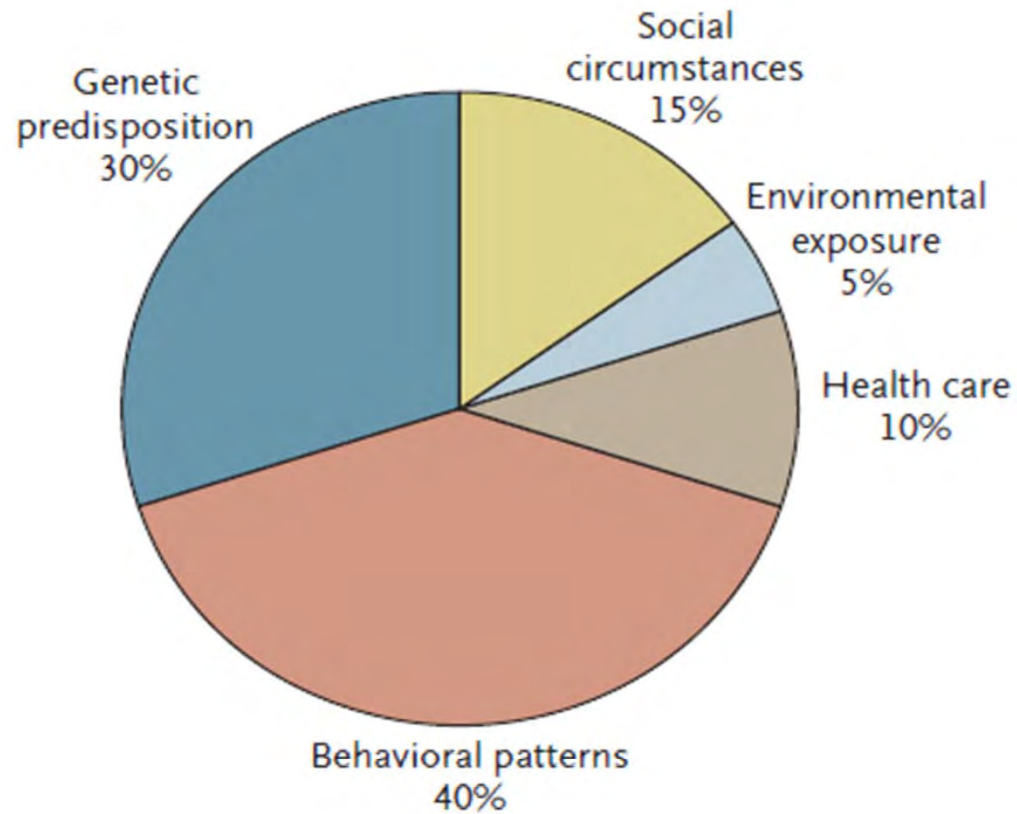


Social Determinants of Health





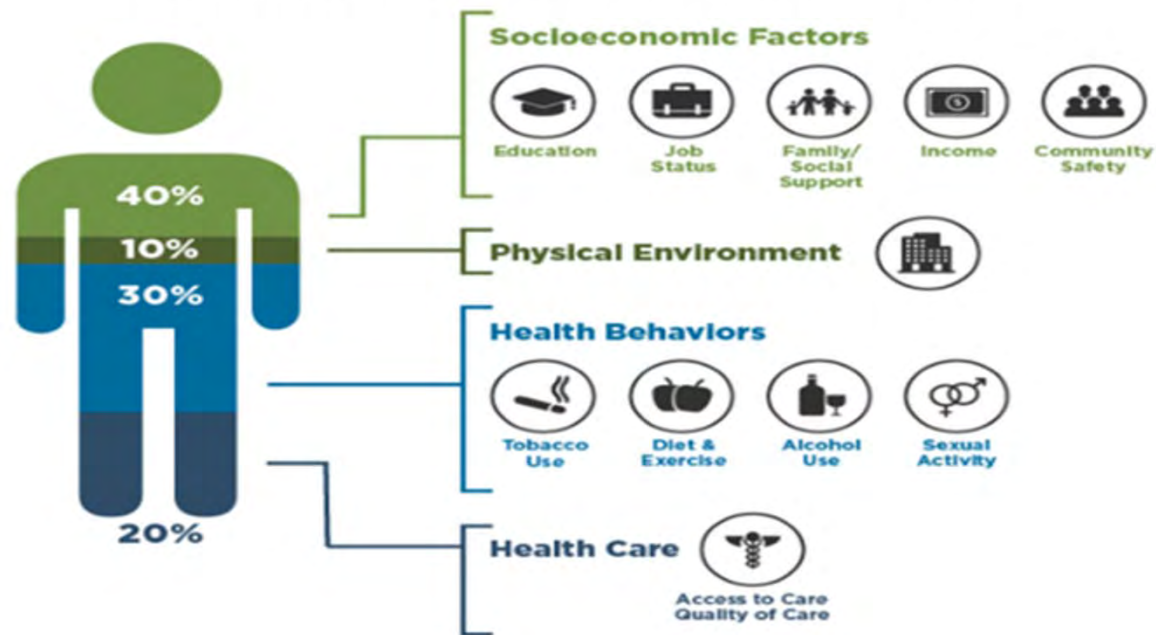
Proportional Causes of Poor Health Outcomes



Source: New England Journal of Medicine-2007



What Goes Into Your Health?



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

Adapted from The Bridgespan Group



Economics of Public Health

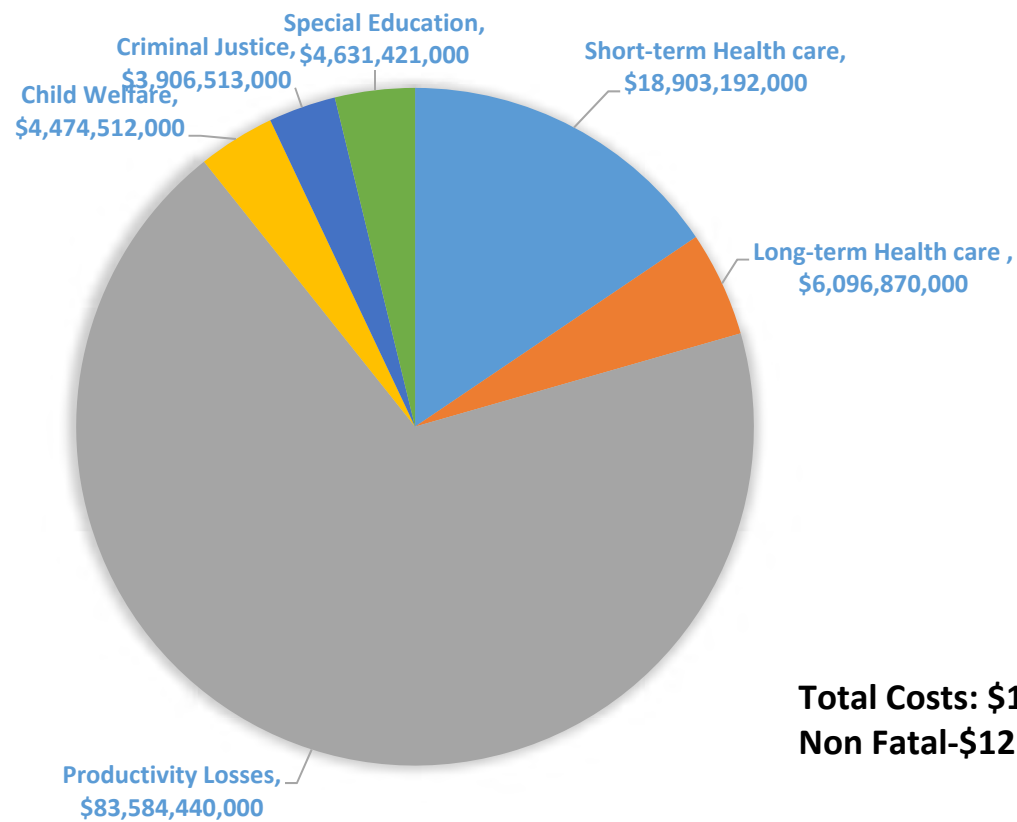
- **\$1 prevention yields \$50 Return on Investment (ROI)**
- 2015
 - National Commission on Prevention Priorities - the rising costs of health care poses a formidable challenge for businesses and policymakers.
 - Today, health care already accounts for 16% of the gross domestic product (GDP \$14,993,258M) and is projected to increase to 25% by 2025. In short, a healthier community is stronger economically.





TOTAL LIFETIME COSTS OF CHILD MALTREATMENT IN 2010 DOLLARS

X. FANG ET AL. / CHILD ABUSE & NEGLECT 36 (2012) 156–165

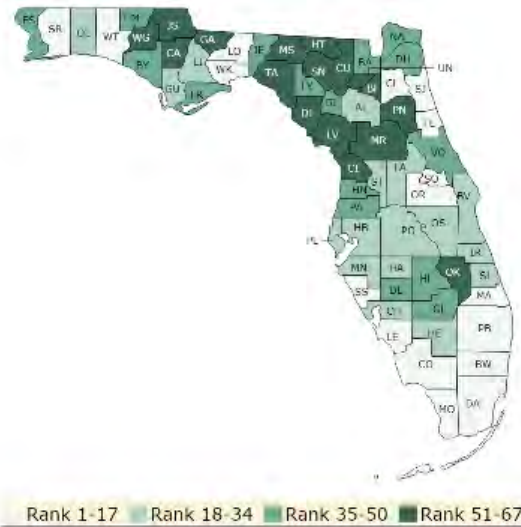


Total Costs: \$123.8B
Non Fatal-\$121.6 B



Health Factors and Outcomes

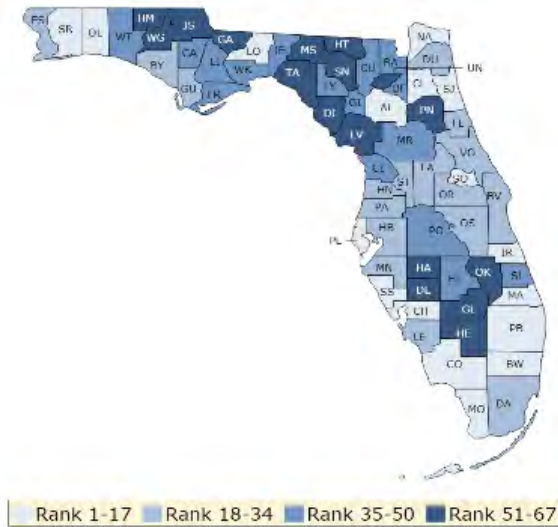
Health Outcomes



Flagler 9th

The overall rankings in health outcomes represent how healthy counties are within the state. The healthiest county in the state is ranked #1. The ranks are based on two types of measures: how long people live and how healthy people feel while alive

Health Factors

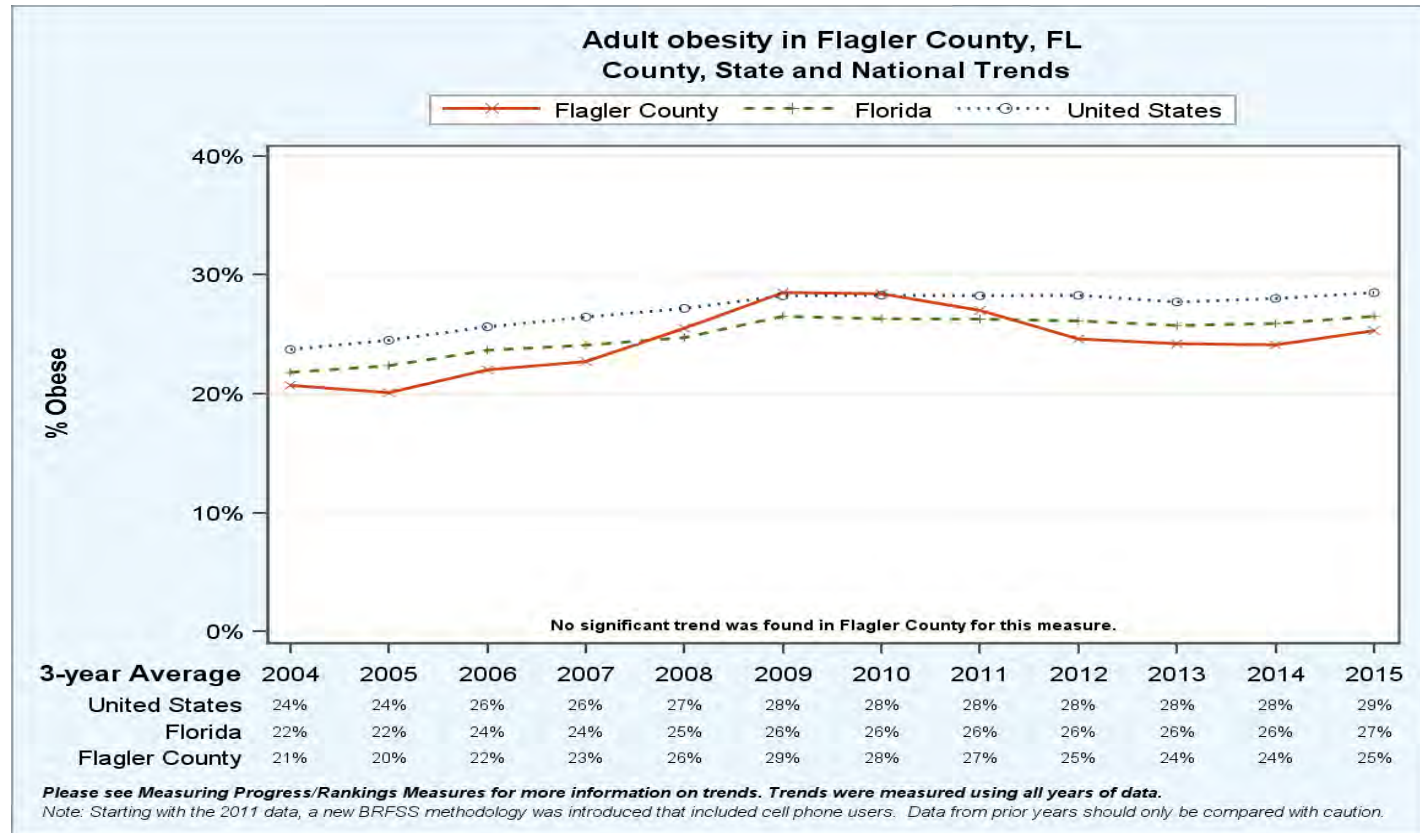


Flagler 21st

The overall rankings in health factors represent what influences the health of a county. They are an estimate of the future health of counties as compared to other counties within a state. The ranks are based on four types of measures: health behaviors, clinical care, social and economic, and physical environment factors.



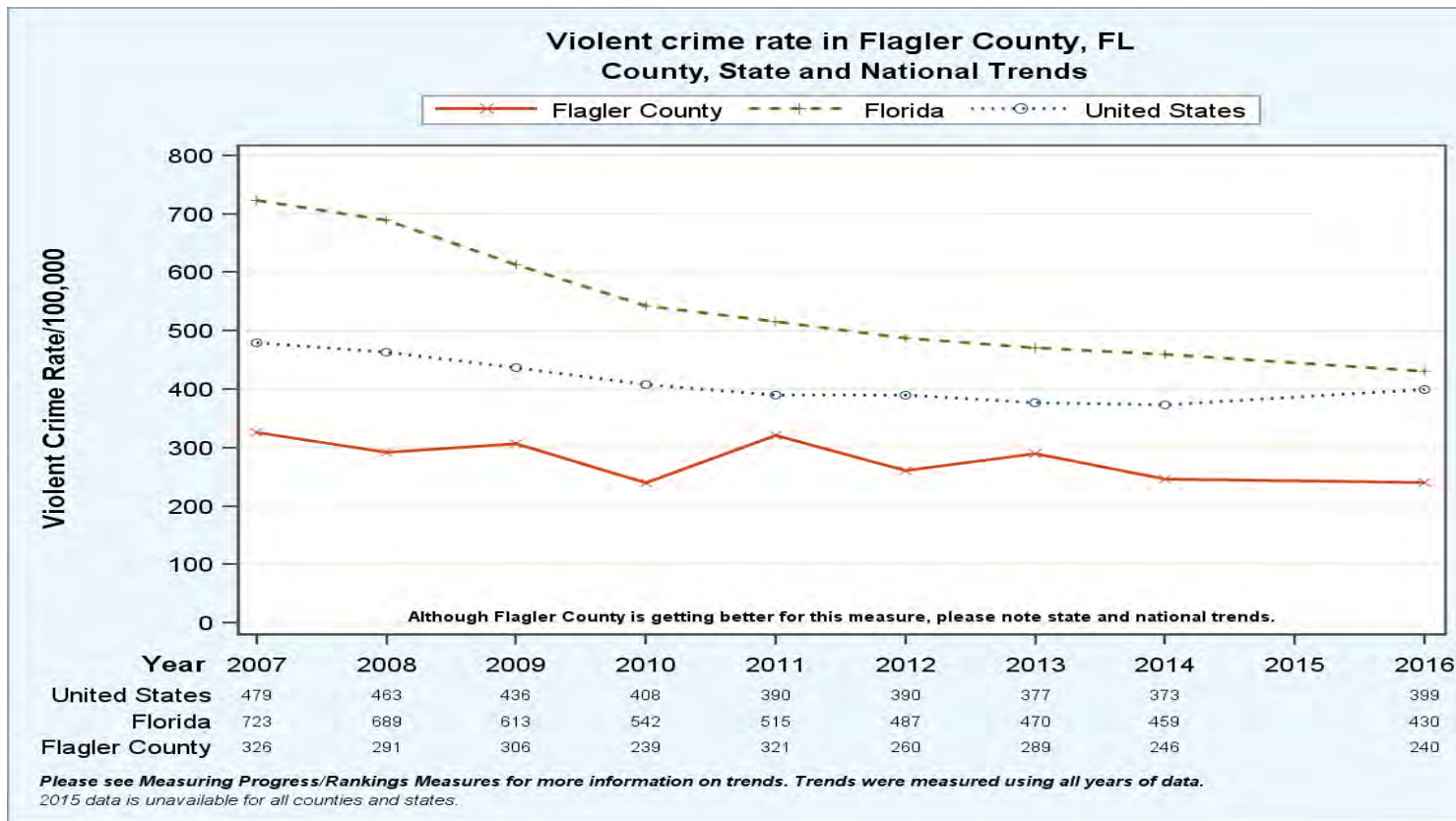
Factors: Adult Obesity



Percentage of adults that report a BMI of 30 or more



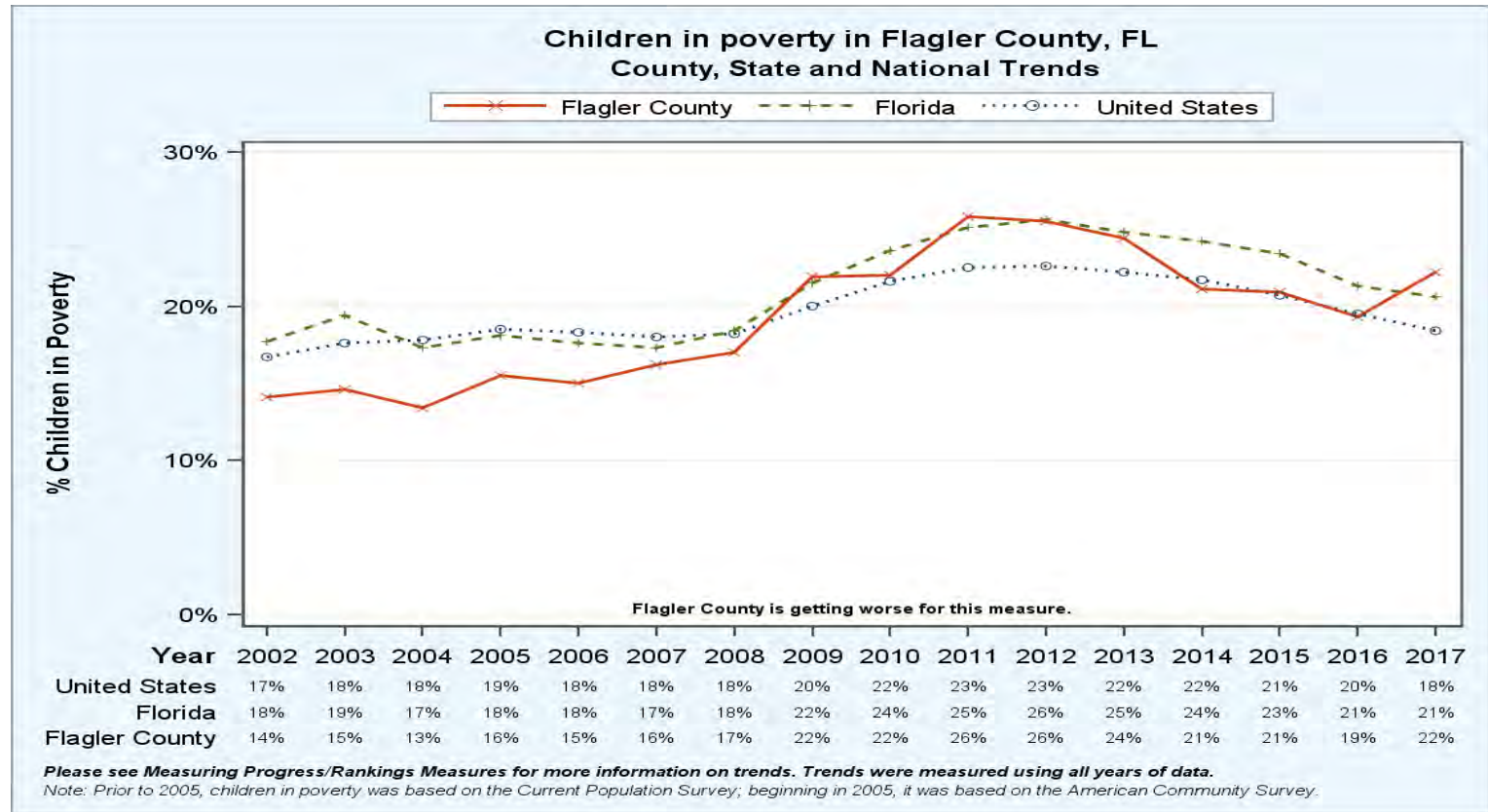
Factors: Violent Crimes



Number of reported violent crime offenses per 100,000 population



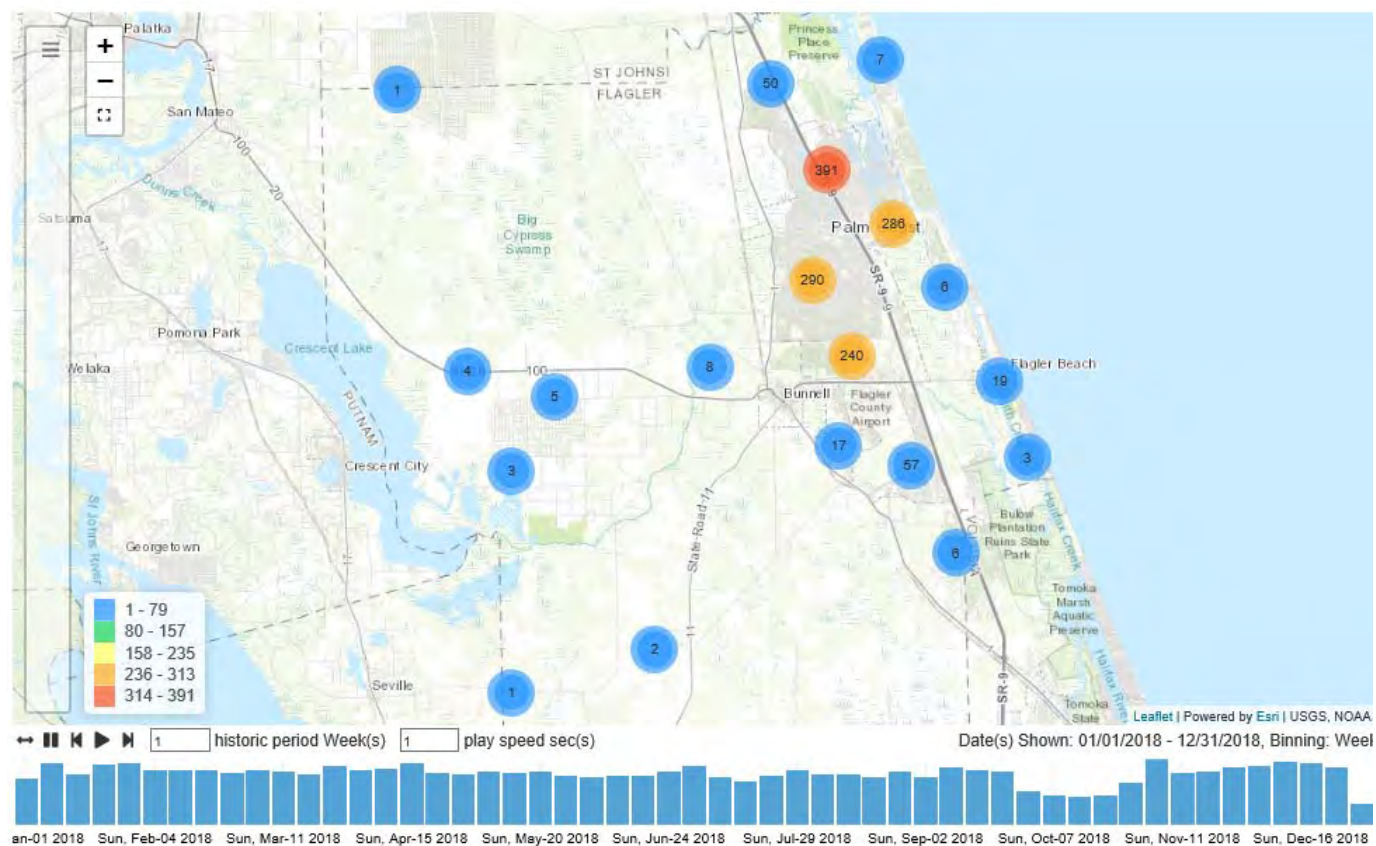
Factors: Children In Poverty



Percentage of children under age 18 in poverty

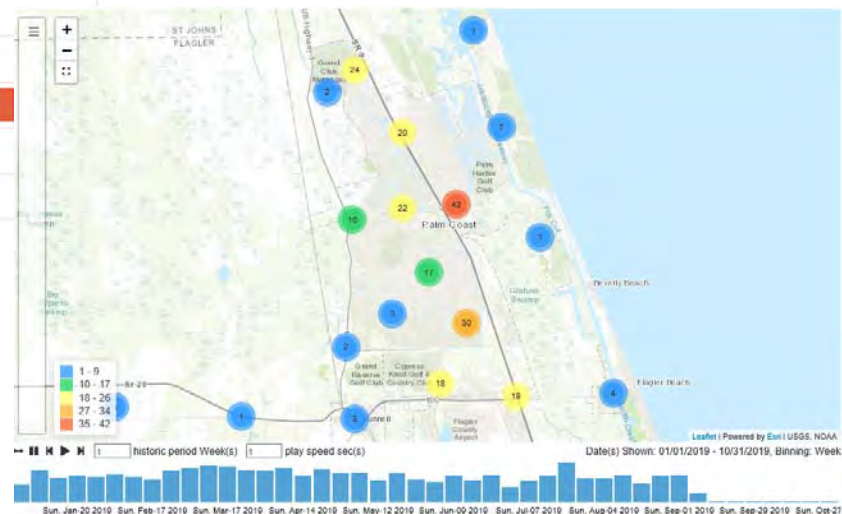
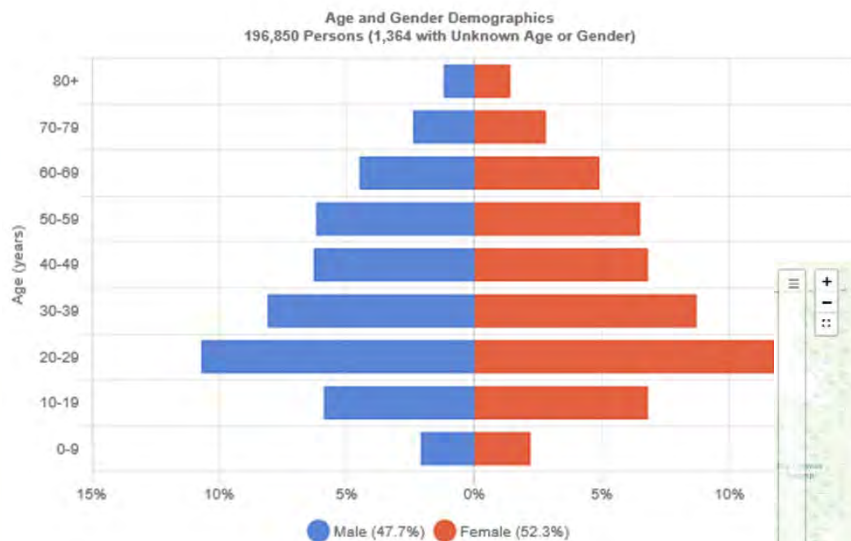


Opioid Events YTD as of 10/31/2019





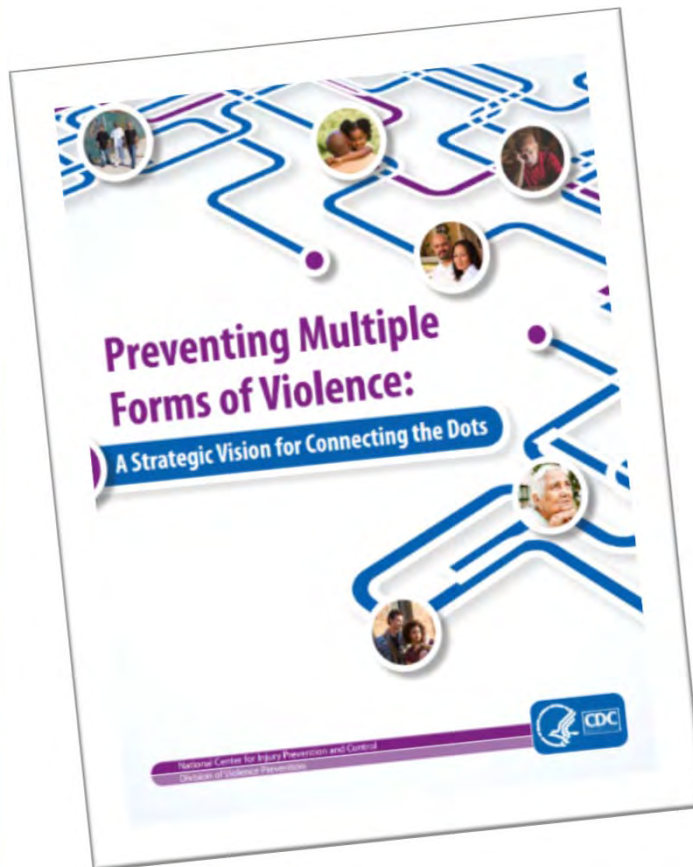
Vehicle Accidents YTD as of 10/31/2019



Source: Biospatial Online Reports 2019



CDC Strategic Plan



The different forms of violence—child abuse and neglect, youth violence, intimate partner violence, sexual violence, elder abuse and suicidal behavior—are interconnected and often share the same root causes.

Understanding the overlapping causes of violence and the things that can protect people and communities can help us better prevent violence in all its forms.
-CDC, 2016



The Division of Violence Prevention at CDC will strategically focus efforts on four key areas:

- Childhood and adolescence to achieve long-term impact
- Populations and communities at highest risk for experiencing or perpetrating violence
- Shared risk and protective factors that are most important for reducing multiple forms of violence
- Identification, implementation, and scaling-up of approaches that have cross-cutting impact

**Collaboration
is one of the
cornerstones of
public health.**



“Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today.” *

* Dr. Robert Block, the former President of the American Academy of Pediatrics



Early Stages of ACEs Research - Dr. Felitti, MD

- The ACE study originated in 1985 in Dr. Vincent Felitti's obesity clinic in California.
- Felitti was frustrated that a number of the people in his program dropped out, even though they were successfully losing weight.
- Upon reviewing the history of the people who dropped out, Felitti found that many people in his clinic had a background of adverse childhood experiences, such as physical or sexual abuse.
- He began to wonder if obesity might be, for some people, an unconscious defense that lingered as a result of adverse childhood experiences.





CDC-Kaiser Study

Dr. Felitti, MD & Dr. Anda MD, Et. Al.

- One of the largest investigations of childhood abuse and neglect and later life-health and well-being.
- Kaiser Permanente study from 1995-97
- 2 waves of data collection
- Over 17,000 HMO members from Southern California
- Published in the *American Journal of Preventive Medicine* in 1998, Volume 14



The prevalence estimates reported below are from the entire ACE Study sample (n=17,337).

Prevalence of ACEs by Category for CDC-Kaiser ACE Study Participants by Sex, Waves 1 and 2.

ACE Category	Women	Men	Total
	Percent (N = 9,367)	Percent (N = 7,970)	Percent (N = 17,337)
ABUSE			
Emotional Abuse	13.1%	7.6%	10.6%
Physical Abuse	27%	29.9%	28.3%
Sexual Abuse	24.7%	16%	20.7%
HOUSEHOLD CHALLENGES			
Mother Treated Violently	13.7%	11.5%	12.7%
Household Substance Abuse	29.5%	23.8%	26.9%
Household Mental Illness	23.3%	14.8%	19.4%
Parental Separation or Divorce	24.5%	21.8%	23.3%
Incarcerated Household Member	5.2%	4.1%	4.7%
NEGLECT			
Emotional Neglect ³	16.7%	12.4%	14.8%
Physical Neglect ³	9.2%	10.7%	9.9%

Note: ³Collected during Wave 2 only (N=8,629). Research papers that use Wave 1 and/or Wave 2 data may contain slightly different prevalence estimates.

ACE Score Prevalence for CDC-Kaiser ACE Study Participants by Sex, Waves 1 and 2.

Number of Adverse Childhood Experiences (ACE Score)	Women	Men	Total
	Percent(N = 9,367)	Percent (N = 7,970)	Percent (N = 17,337)
0	34.5%	38.0%	36.1%
1	24.5%	27.9%	26.0%
2	15.5%	16.4%	15.9%
3	10.3%	8.5%	9.5%
4 or more	15.2%	9.2%	12.5%

Note: Research papers that use Wave 1 and/or Wave 2 data may contain slightly different prevalence estimates.

Source: Centers for Disease Control and Prevention, Kaiser Permanente, The ACE Study Survey Data [Unpublished Data], Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2016.



2008 Behavioral Risk Factor Surveillance Survey - ACEs

Question FL10_1: Did your parents divorce or did you have a parent die during your childhood?	9,960	28%
Question FL10_2: Did you live with anyone who was a problem drinker, alcoholic, or who used illicit drugs?	9,958	18.7%
Question FL10_3: Was anyone in your childhood home mentally depressed, mentally ill, or tried to attempt suicide?	9,955	11.2%
Question FL10_4: Did parents or adults in your home ever push, grab, shove, slap, or throw something at each other?	9,954	16.2%
Question FL10_5: Were you abused by someone during your childhood?	9,954	11.3%



2014 Behavioral Risk Factor Surveillance Survey - ACEs

FL02.6 How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up? N=3918	19.7%
FL02.7 Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? N=3890	17.4%



2014 BRFSS ACE Follow-Up Results

- There is an association with current smoking and education, and no significantly statistic association with obesity.
- Adults being exposed to violent behaviors during their childhood were 1.5 times more likely to be a current smoker. (p-value=0.0035)
- Adults being exposed to violent behaviors during their childhood were two times less likely to have high school or higher education. (p-value=0.0035)



PREVALENCE BY EDUCATION

EDUCATION	0 ACE	1 ACE	2 ACES	3+ ACES
Less than High School	38.4%	28.1%	15.1%	18.4%
High School/GED	44.6%	29.6%	11.0%	14.8%
Greater than High School	53.3%	24.3%	11.2%	11.2%

PREVALENCE BY INCOME

INCOME	0 ACE	1 ACE	2 ACES	3+ ACES
Less than \$25,000	42.1%	28.4%	15.1%	18.4%
\$25,000-\$49,999	48.7%	27.8%	12.0%	11.5%
\$50,000 or more	53.9%	23.7%	10.9%	11.4%



HRSA October 2019 Report

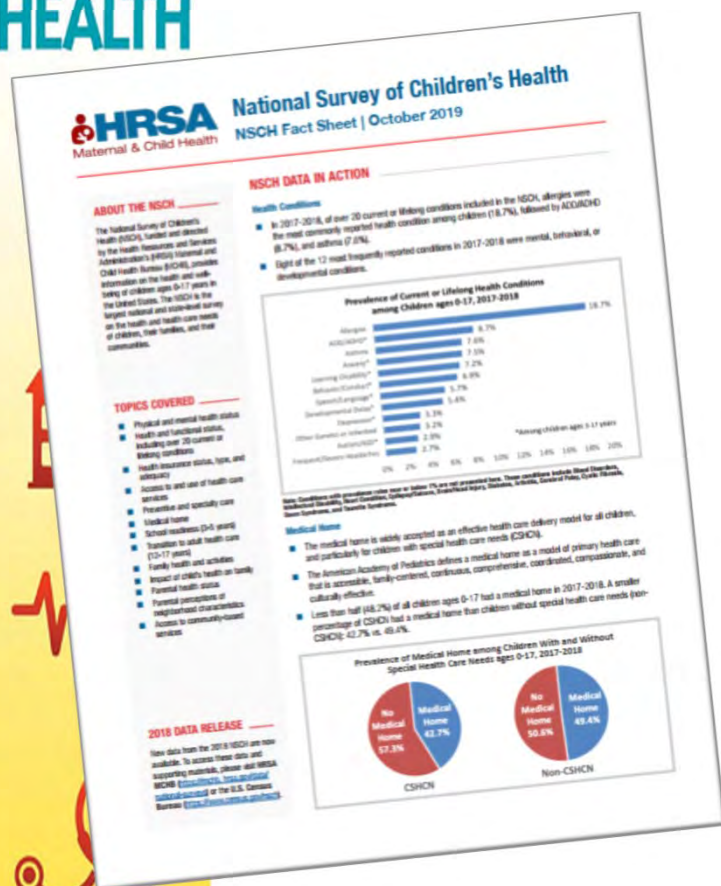
Adverse Childhood Experiences

In 2017-2018, one in three children ages 0-17 (33.3%) had experienced at least one ACE, and **14.1% had experienced two or more ACEs.**

The most prevalent ACE was “Parent/guardian divorced or separated” (23.4%), followed by “Lived with anyone with alcohol/drug problem” (8.0%), and “Parent/guardian served time in jail” (7.4%).

Reports of ACEs varied significantly by family income and race/ethnicity. Specifically:

- A larger percentage of children in households with incomes below **100% of the federal poverty level (FPL) experienced two or more ACEs** compared with children in households with incomes at or above **400% FPL (22.2% vs. 7.3%).**
- A larger percentage of non-Hispanic black children experienced two or more ACEs compared with non-Hispanic white children **(21.3% vs. 12.9%)**





THE TRUTH ABOUT ACEs

WHAT ARE THEY?

ACEs are
ADVERSE
CHILDHOOD
EXPERIENCES

HOW PREVALENT ARE ACEs?

The ACE study revealed the following estimates:*

The three types of ACEs include

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



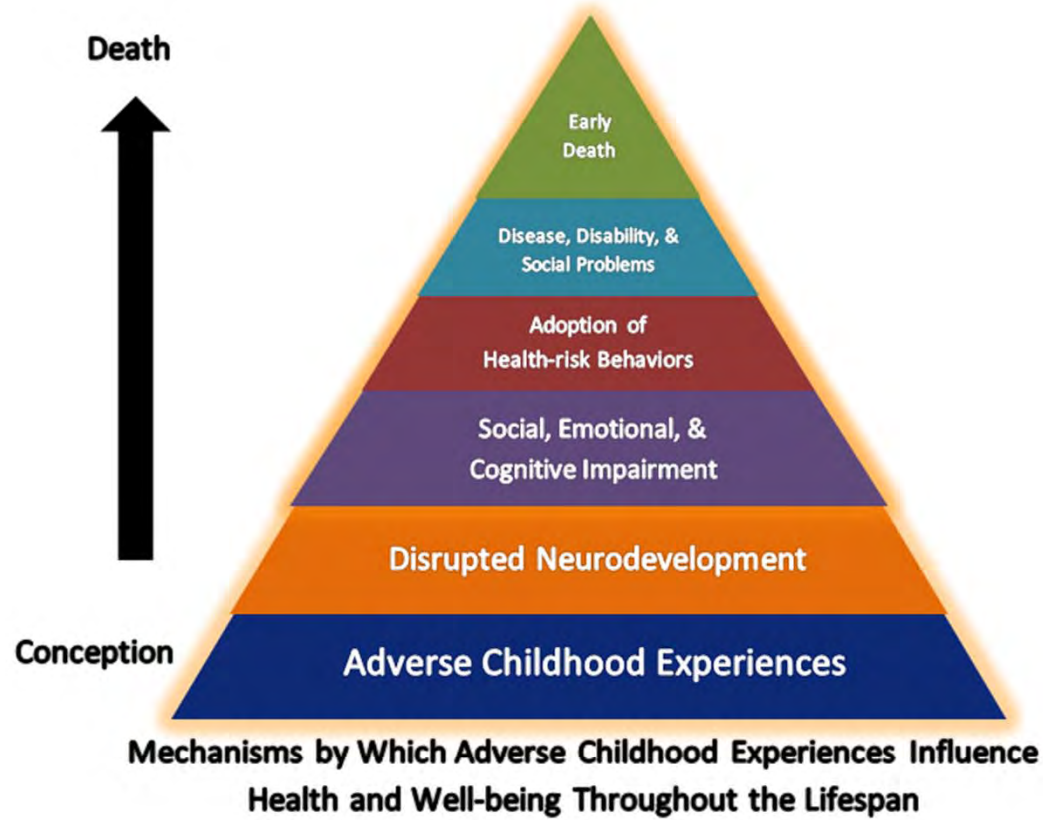
Substance Abuse



Divorce

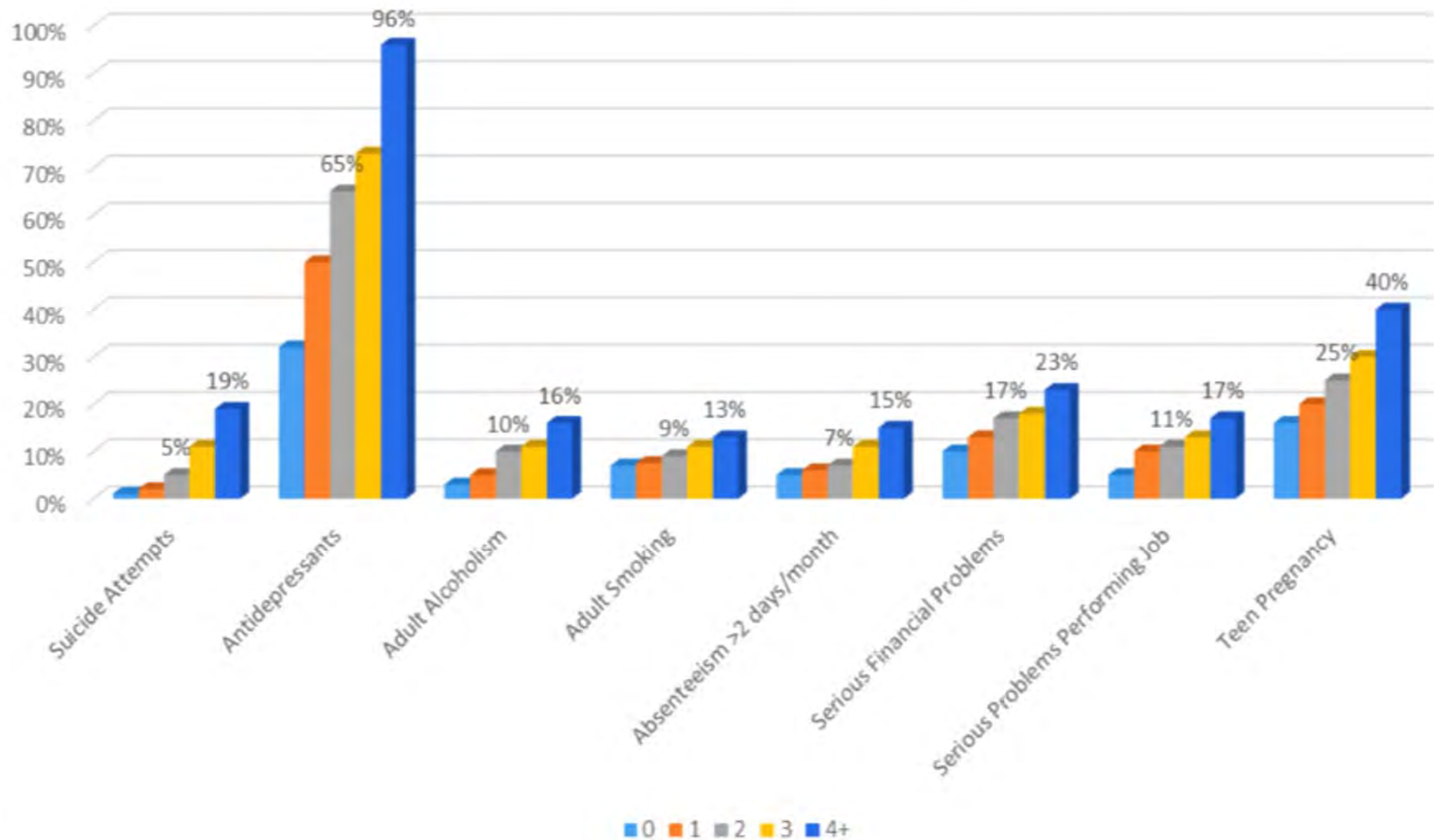
WHAT IMPACT DO ACEs HAVE?

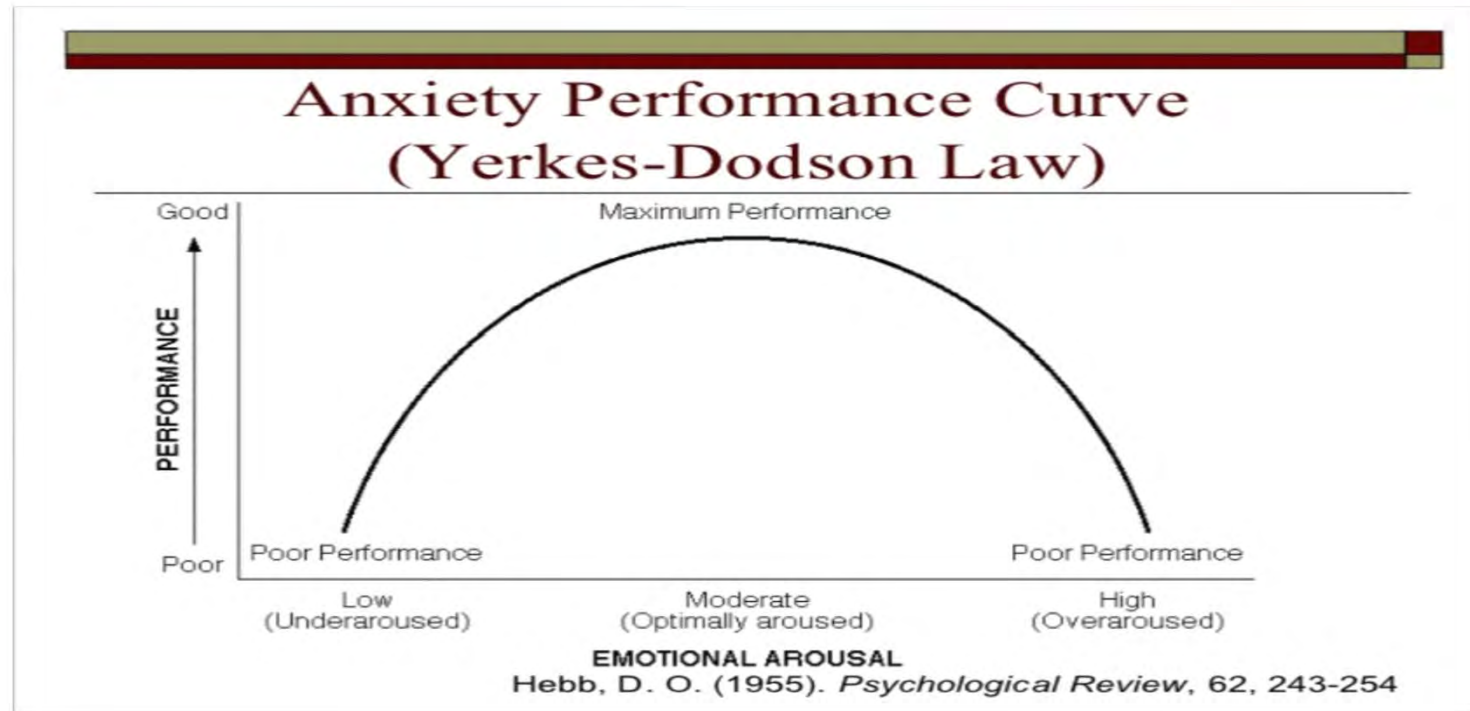
As the number of ACEs increases, so does





Impact of ACES on Mental Health, Health Risks, Social Function



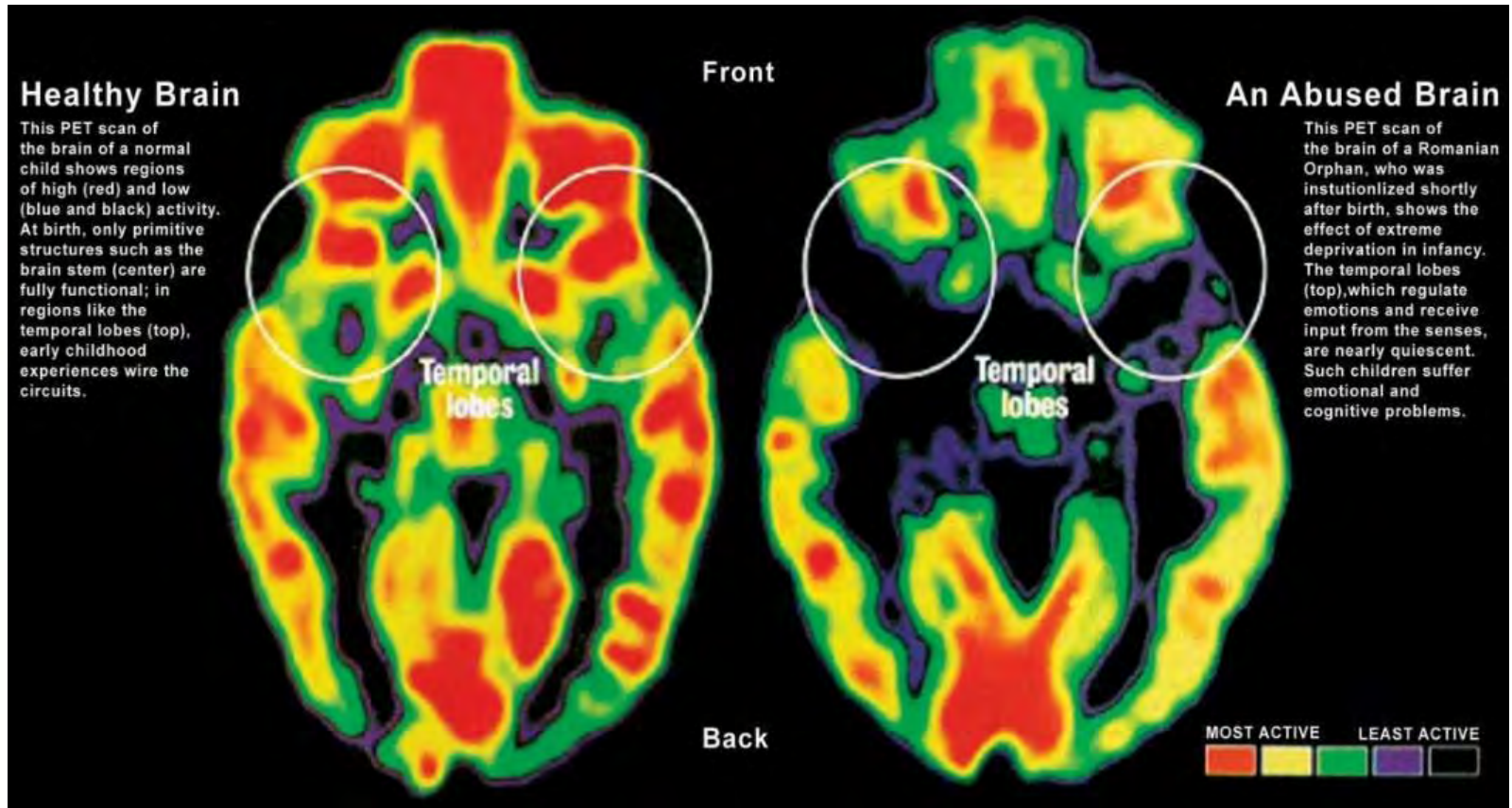


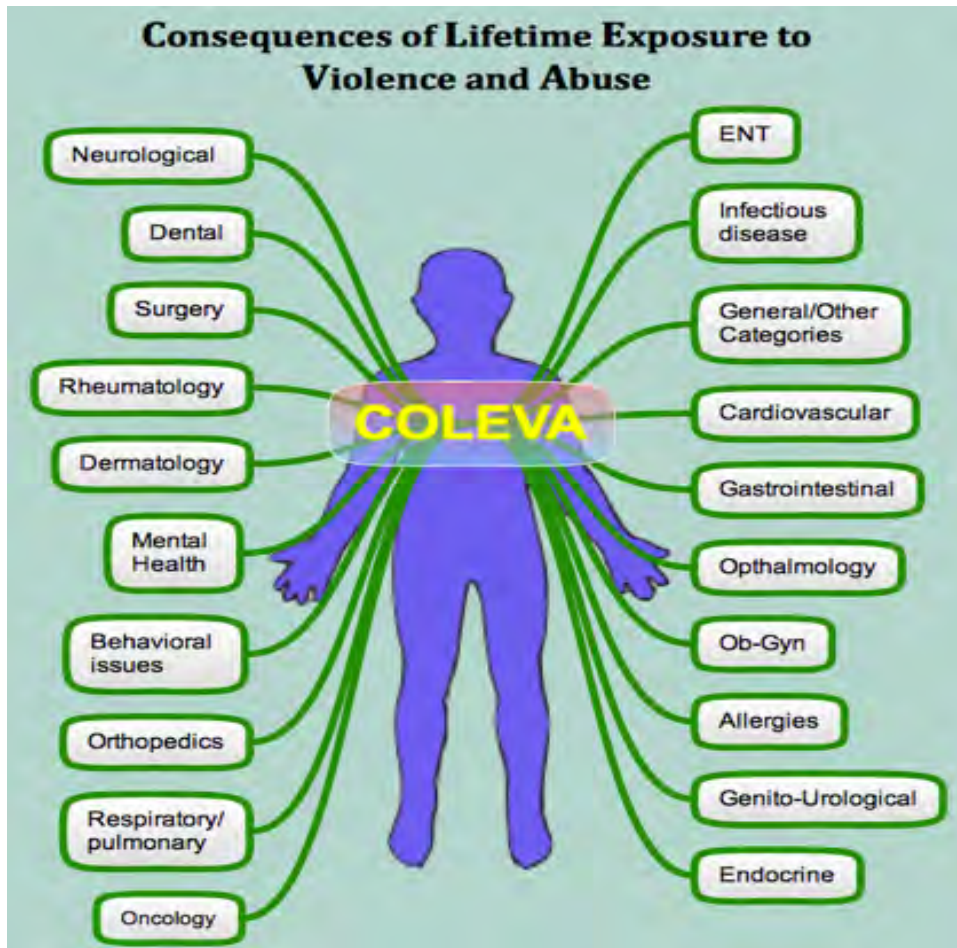
Relationship to glucocorticoids- (Diamond Et. al., 2007)

A 2007 review of the effects of stress hormones (glucocorticoids, GC) and human cognition revealed that memory performance vs. circulating levels of glucocorticoids does manifest an upside down U shaped curve and the authors noted the resemblance to the Yerkes–Dodson curve. For example, long-term potentiation (the process of forming long-term memories) is optimal when glucocorticoid levels are mildly elevated whereas significant decreases of LTP are observed after adrenalectomy (low GC state) or after exogenous glucocorticoid administration (high GC state).



Stressed Brains





News & Perspective > Psychiatry

Brain Imaging Shows Ability, Inability to Cope With Stress

Nancy A. Melville
July 21, 2016

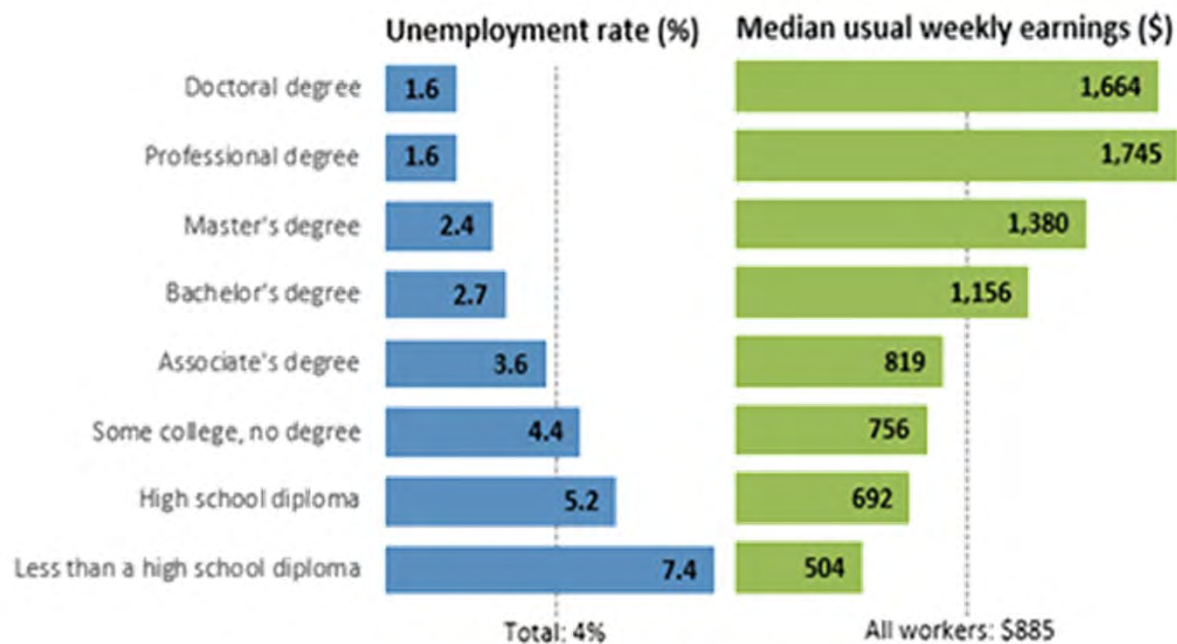
Distinct brain patterns visible on neuroimaging reveal patterns of response that correlate with the ability, or inability, to cope with psychological stress.

"The findings from this paper add to the field by showing how the brain responds to acute stress while it is happening and unfolding," first author Rajita Sinha, PhD, the Foundations Fund Professor of Psychiatry at Yale University and director of the Yale Stress Center, in New Haven, Connecticut told *Medicine & Medical News*.

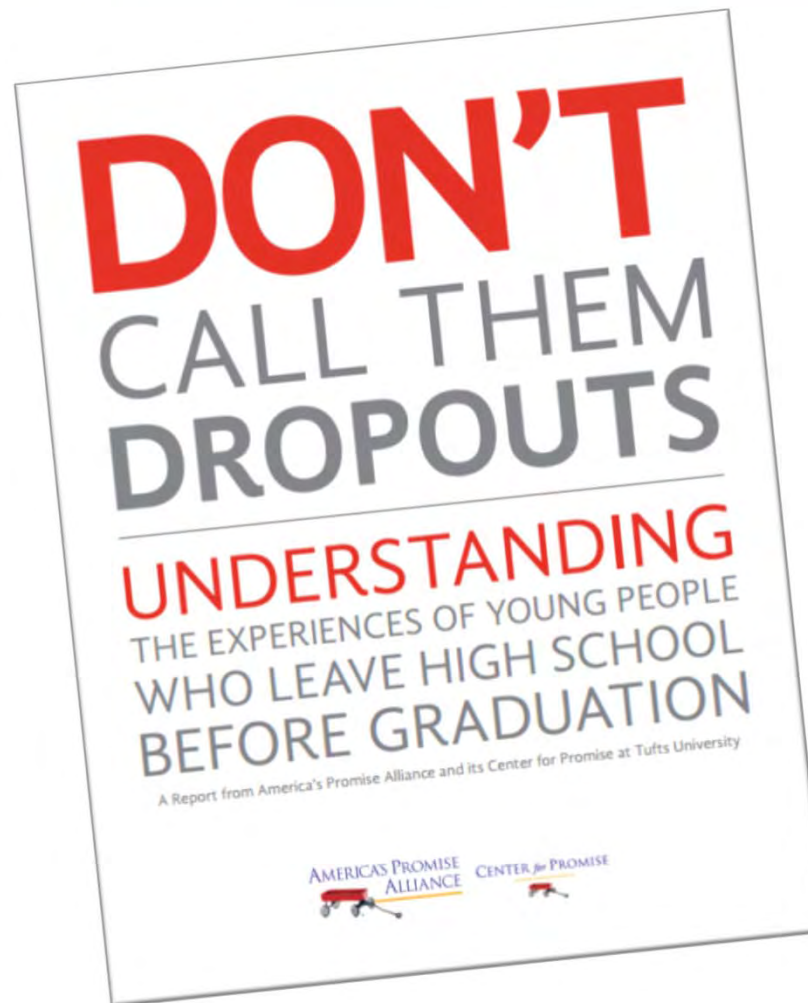


Education

Unemployment rates and earnings by educational attainment, 2016



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.
Source: U.S. Bureau of Labor Statistics, Current Population Survey.





America's Promise Alliance and Tufts University Study Methodology

- June- September 2013
- 30 Facilitated group interviews
- 16 communities across the U.S
- Final survey was 58 questions
- 3,000 respondents from all 50 states
- Participants recruited via phone and email through national partner organizations.
- 1,936 individuals (18-25 year olds)
- Additional 1,023 young adults who graduated HS in 4 years were included as well.

Source: www.GradNation.Org



Interrupted Enrollment Risk Factors Reported by Respondents



87% = Homelessness



79% = Incarcerated Parent



50% = Moving Homes



50% = Changing Schools



11% = Foster Care



Expectations Shift Behavior

Perceived Parent Characteristics of Students with Interrupted Enrollment

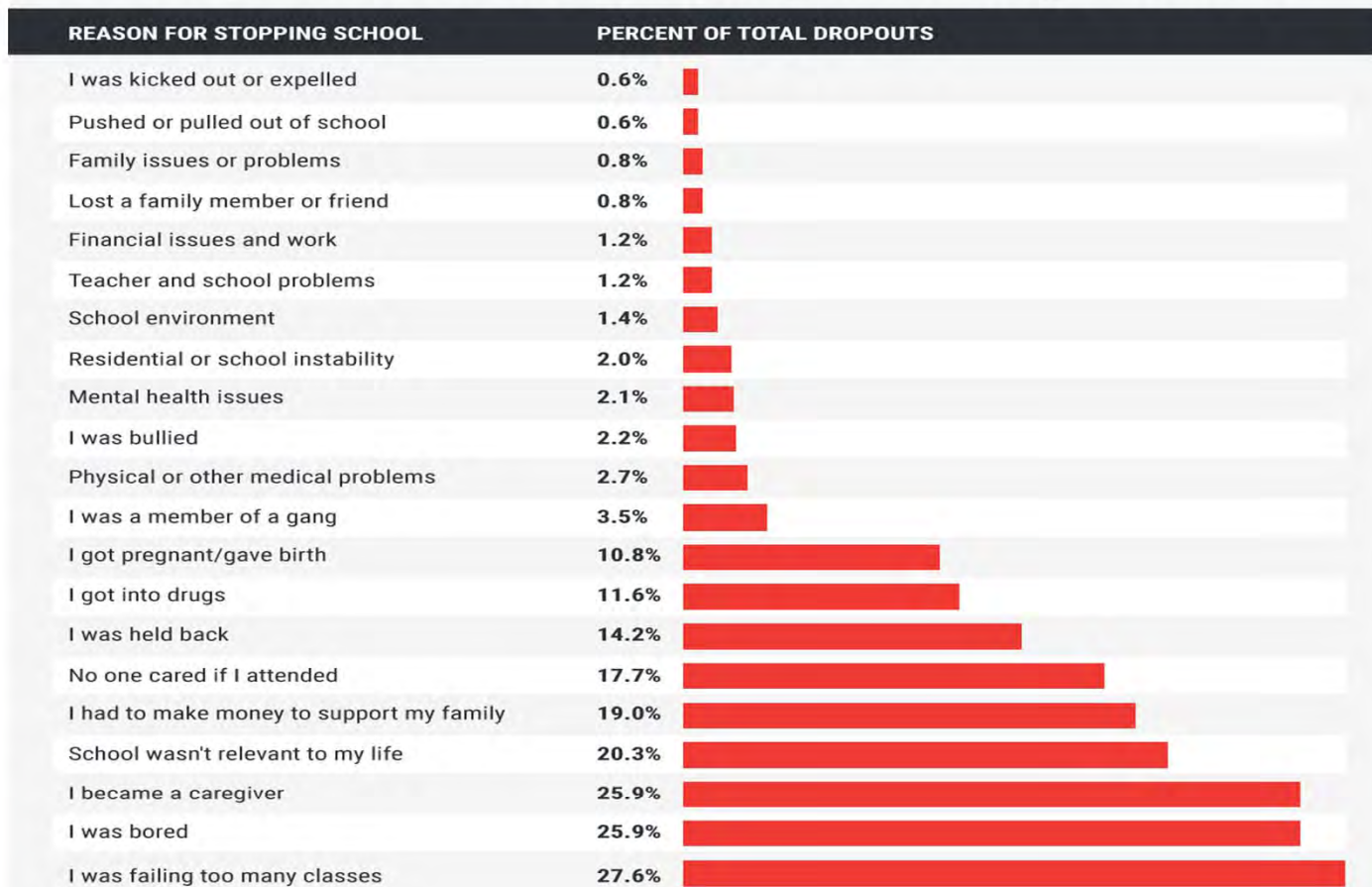
Characteristic	% Sample
Expected me to complete HS	85%
Knew my friends	74%
Expected me to complete college	69%
Asked about my school work	69%
Told me they were proud of me	63%
Called me names	38%
Used drugs in front of me	19%
Were in jail	18%
Were physically abusive	18%



About one-fifth of respondents had parents who had high educational expectations but were also verbally abusive.



The top reasons students drop out of high school



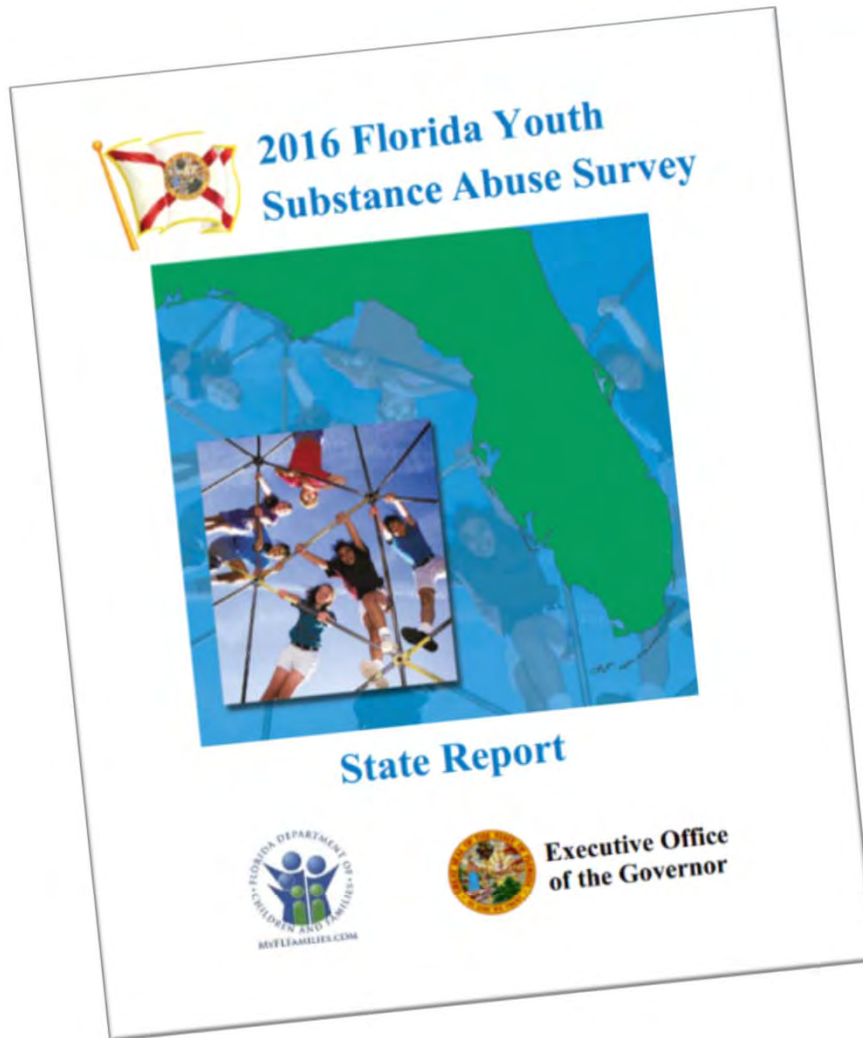
SOURCE: GradNation.org

TECH INSIDER



General Findings

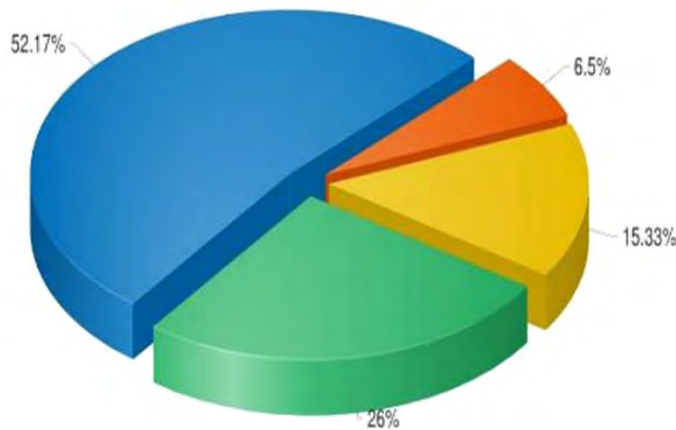




- Joint research by Florida Departments of Health, Education, Children and Families and Juvenile Justice.
- 65,776 Students
- 724 Schools

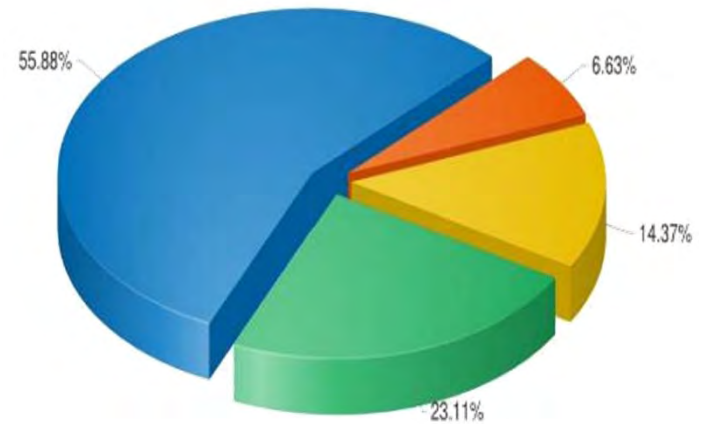


Q: All in all, I am inclined to think that I am a failure.



NO! no yes YES!

High School



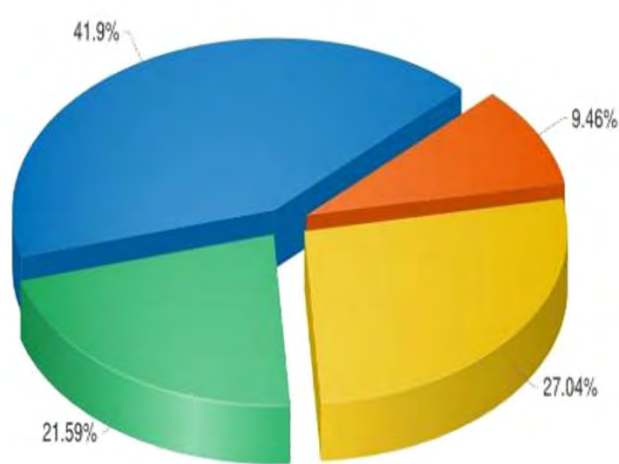
NO! no yes YES!

Middle School

Source: 2016 Florida Youth Substance Abuse Survey

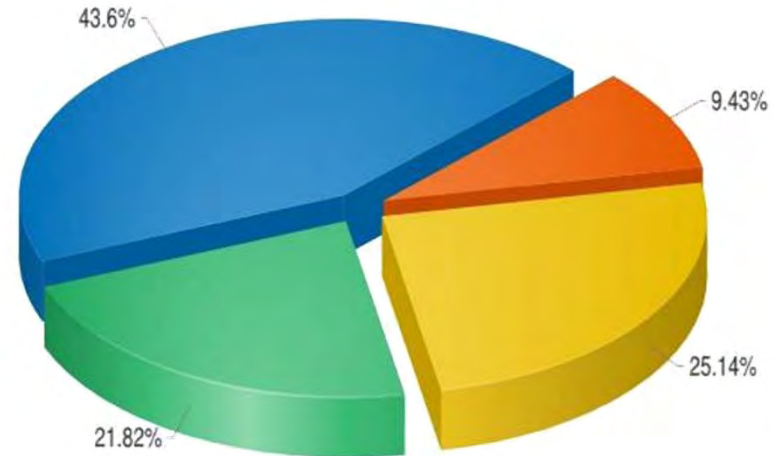


Q: At times I think I am no good at all.



NO! no yes YES!

High School



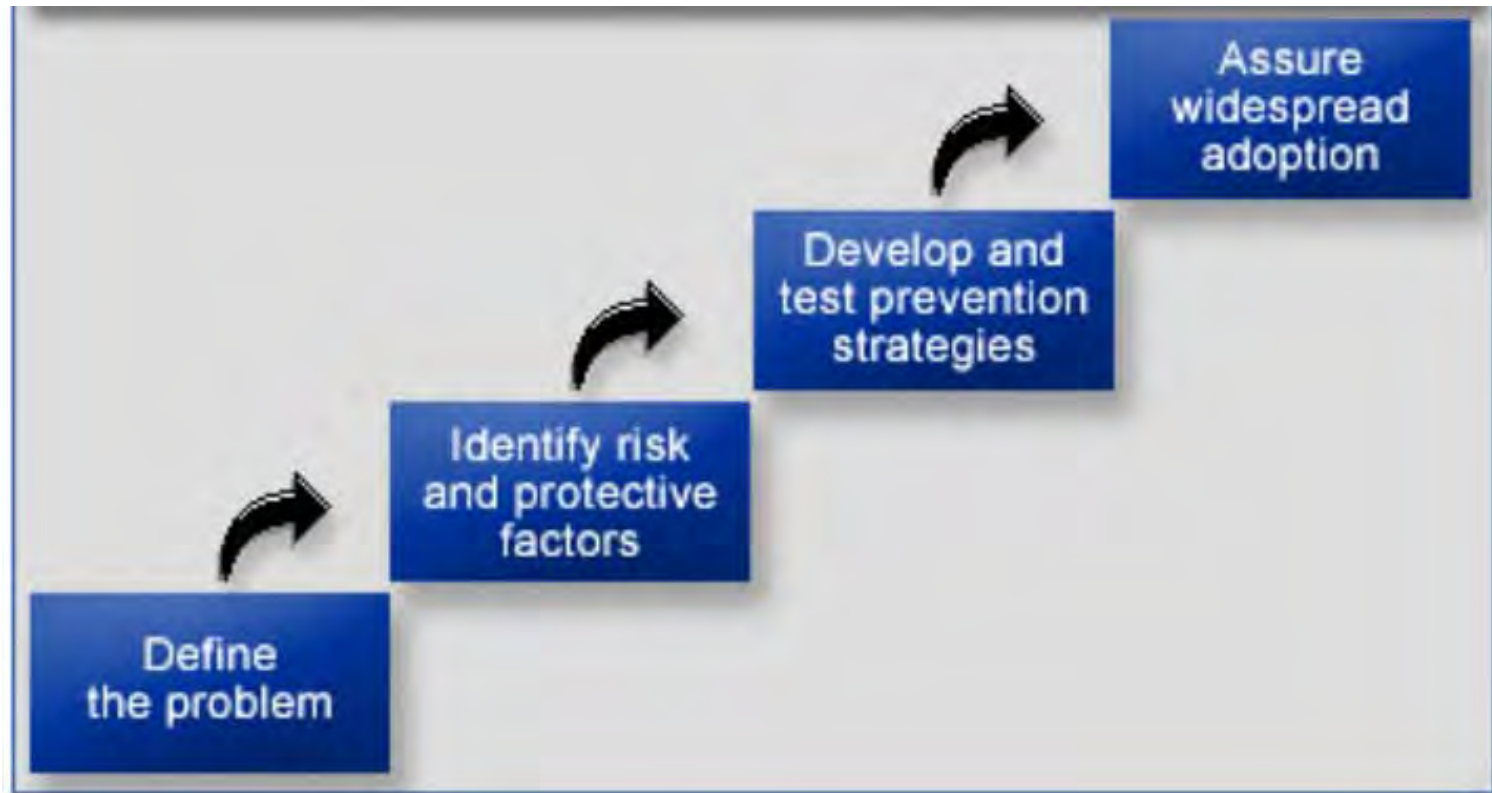
NO! no yes YES!

Middle School

Source: 2016 Florida Youth Substance Abuse Survey

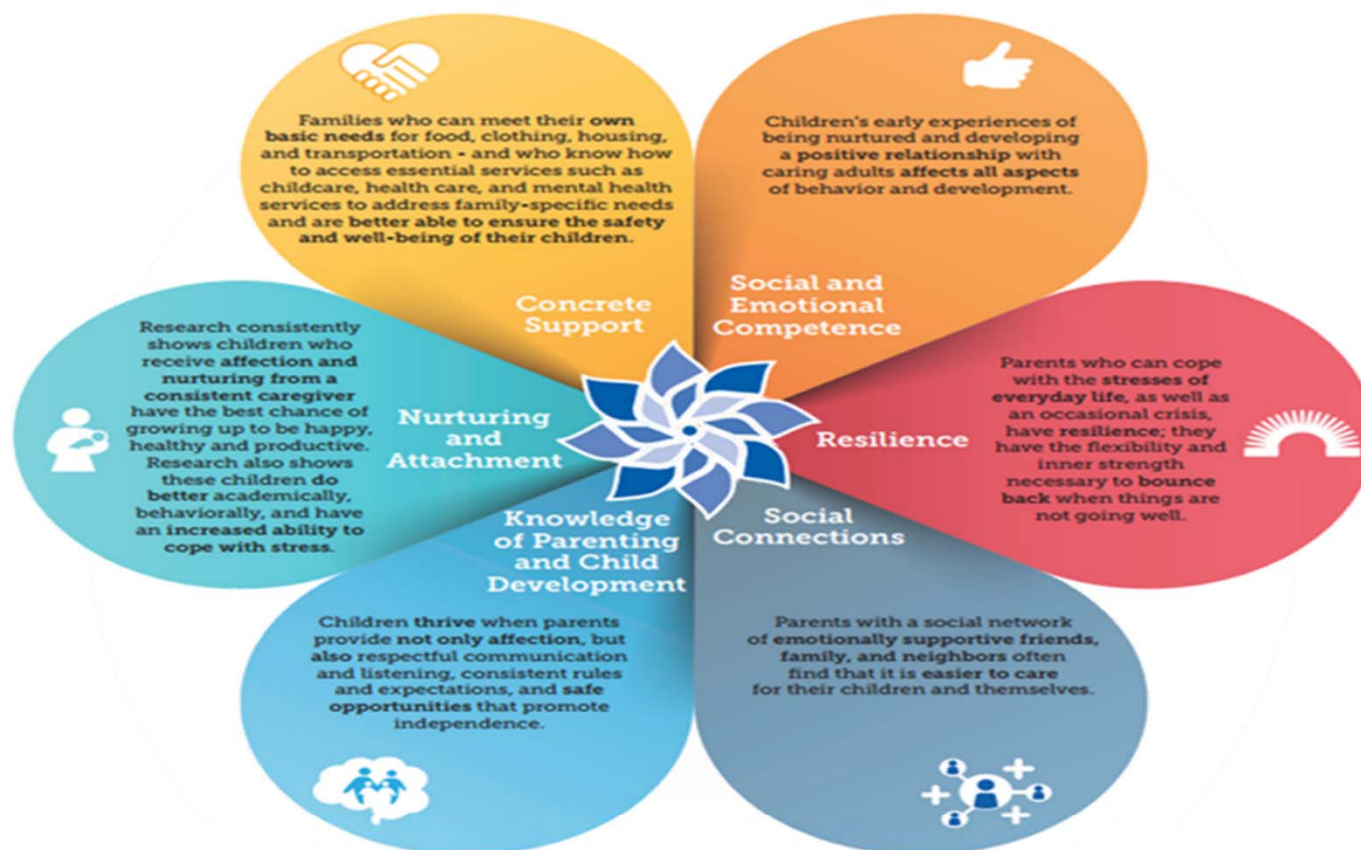


Applying the Public Health Model





SIX PROTECTIVE FACTORS



ACEs can have devastating impacts on long-term health.
When a child experiences adverse childhood experiences (ACEs), it can have life-long consequences for physical and mental health. But, one caring adult can make a difference. That's why we know building protective factors in parents, communities and businesses is important.



Playing Teen Sports May Protect From Some Damages Of Childhood Trauma

May 2019, Shots Health News, NPR



<https://www.npr.org/sections/health-shots/2019/05/28/727661899/playing-teen-sports-may-protect-from-some-damages-of-childhood-trauma>



Impact on Health System

- Visit 1, Survey was given to be filled out at home and returned.
- Visit 2, Questionnaire was reviewed with Pt.
 - 135,000 clients reviewed with a combination of Adult Medical Hx with questions relating to their developmental years.
- Results:
 - In subsequent year:
 - 35% reduction in outpatient visits
 - 11% reduction in ER visits



Changing the Conversation

- Impact of trauma on the person.
 - How has it impacted you?
- System of care.
- Protective Factors.
- Resiliency
- Treatment protocols
- Mentoring



Health Equity

Equality



Equity



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3



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Questions

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