Risk Factors of Trauma, ACES, and Social Determinants of Health

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Trauma as a Risk Factor

Research study concludes:
Each additional type of trauma experienced by youth in study increased likelihood of problem behavior 1.06-1.22 times

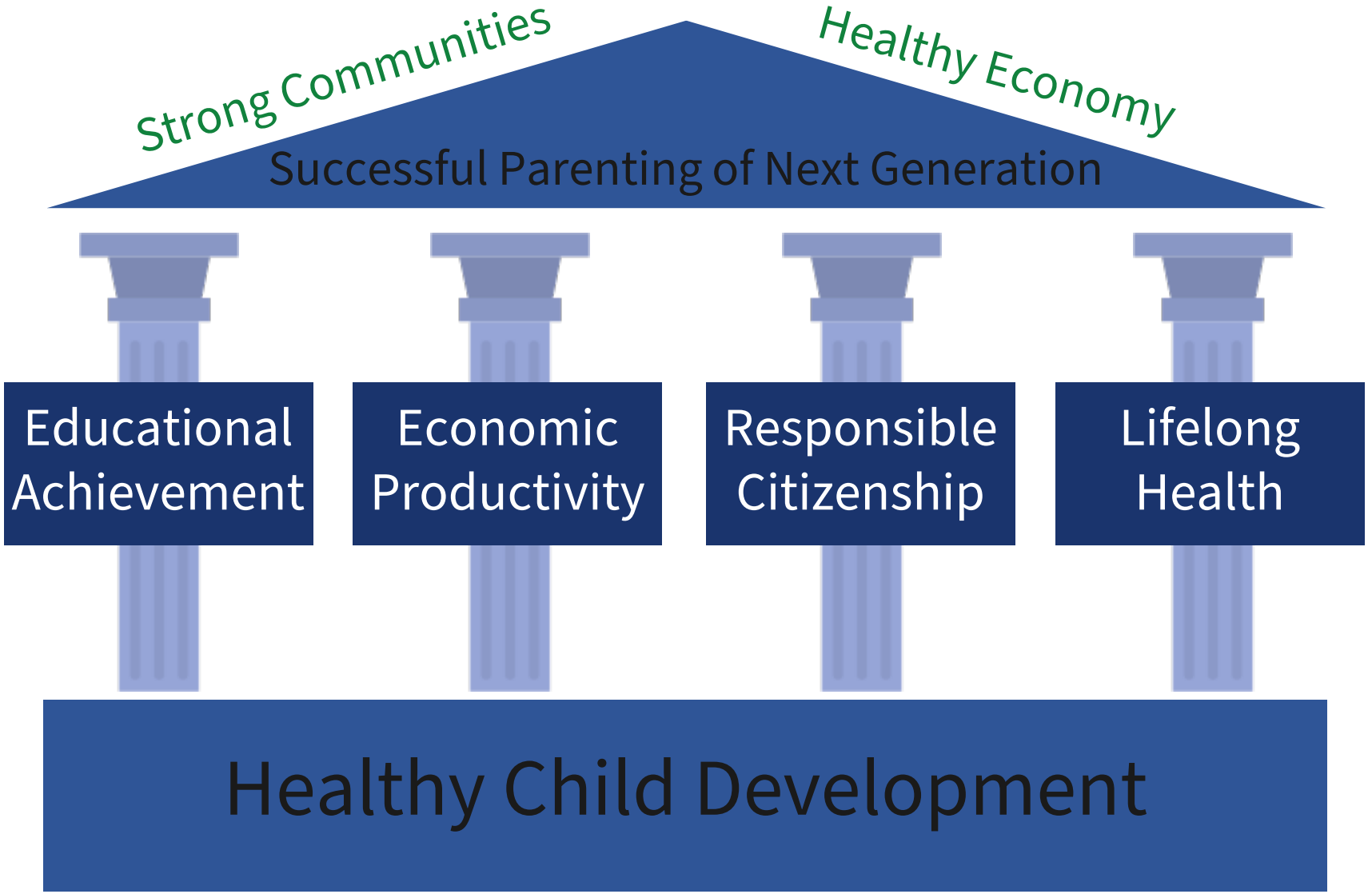
- Attachment difficulties
- Skipping school
- Running away from home
- Substance misuse
- Suicidality
- Criminality
- Self-injury
- Alcohol use
- Victim of sexual exploitation

Source: Layne, et al. UCLA-Duke University Center for Child Traumatic Stress. Psychological Trauma: Theory, Research, Practice, and Policy, 2014.

The Prevalence of Trauma

- 1 in 4 children experience trauma or maltreatment[1]
- 1 in 4 women experience domestic violence[1]
- 1 in 5 women; 1 in 71 men experience rape at some point in their lives[1]
  - 12% of women and 30% of men were younger than 10 when they were raped[1]
- Over 80% of children who live in dangerous neighborhoods have experienced trauma[2]

Source: [1]CDC statistics on abuse and violence in the United States
[2]National Center for Children in Poverty, 2007



Source: Building Strong Brains Initiative, TCCY, 2018.

Four Core Concepts of Development

1. Brain Architecture
2. "Serve and Return"
3. Toxic Stress
4. Resilience

Source: Building Strong Brains Initiative, TCCY, 2018.

What are ACEs?

- Adverse Childhood Experiences
- Originated in 1995
- Based on 3 specific kinds of adversity

Source: Center of the Developing Child, Harvard University, 2019

Adversity

1. Physical and Emotional Abuse
2. Neglect
3. Household Dysfunction

Source: Center of the Developing Child, Harvard University, 2019

ACEs and Toxic Stress

- Correlation between early adversity and poor outcomes later in life
- Trigger biological reactions
- Biological reactions lead to toxic stress

Source: Center of the Developing Child, Harvard University, 2019

Types of Stress

Positive Stress

Short, stressful events like meeting new people or starting the first day of school are healthy for brain development. They prepare the brain and body for stressful situations later in life.

Tolerable Stress

Tragic, unavoidable events like a natural disaster or losing a loved one aren't good for us. But if supportive caregivers are around to buffer the stress response, these events won't do lasting damage to the brain and body.

Toxic Stress

Ongoing, repeated exposure to abuse or neglect is bad for brain development. If no supportive adults are present to help buffer the stress response, stress hormones will damage developing structures in the child's brain. The result is an increased vulnerability to lifelong physical and mental health problems, including addiction.

Source: Building Strong Brains Initiative, TCCY, 2018.

Body's Response to Different Types of Stress

POSITIVE

A normal and essential part of healthy development

EXAMPLES
getting a vaccine, first day of school

TOLERABLE

Response to a more severe stressor, limited in duration

EXAMPLES
loss of a loved one, a broken bone

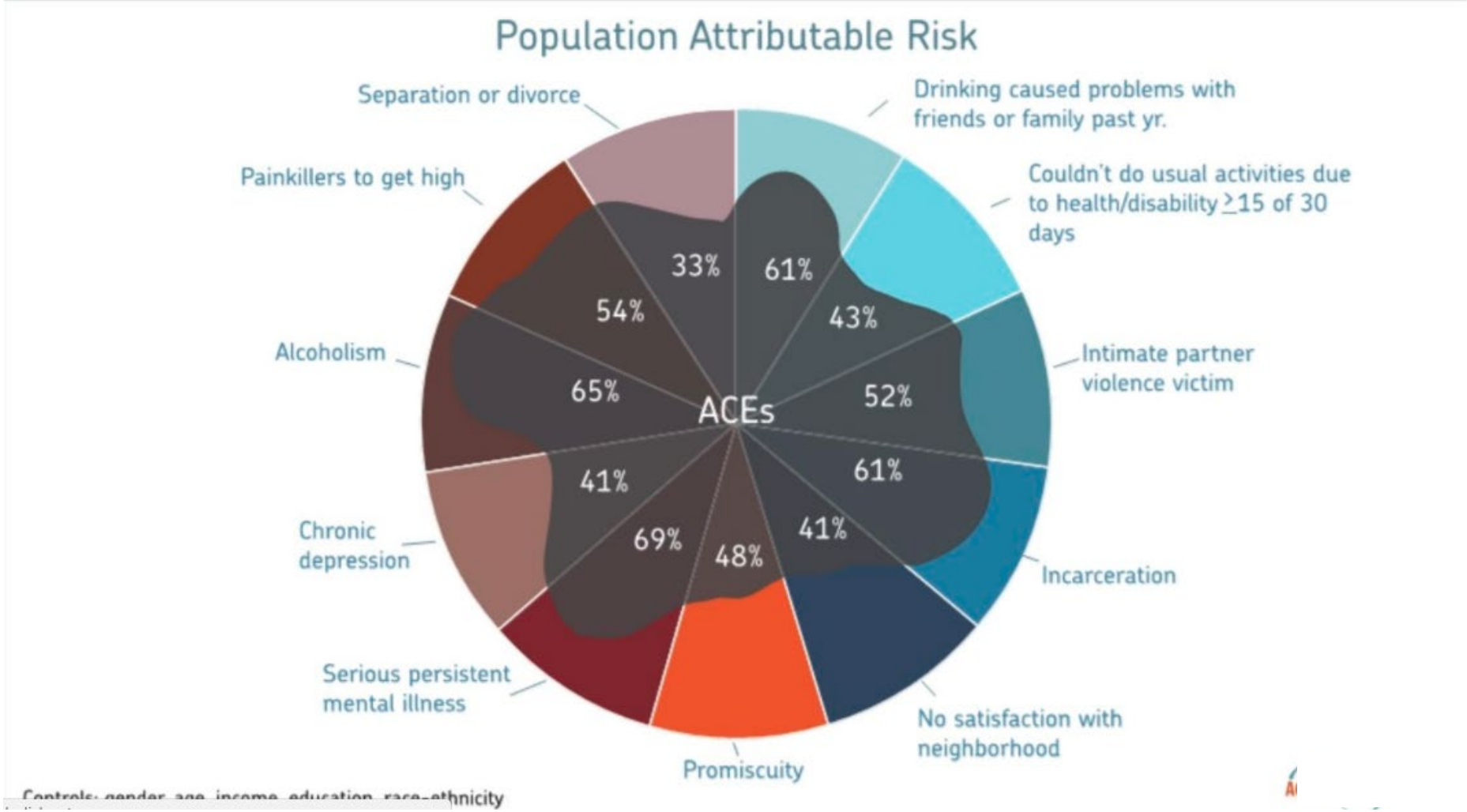
TOXIC

Experiencing strong, frequent, and/or prolonged adversity

EXAMPLES
physical or emotional abuse, exposure to violence

Source: Building Strong Brains Initiative, TCCY, 2018.

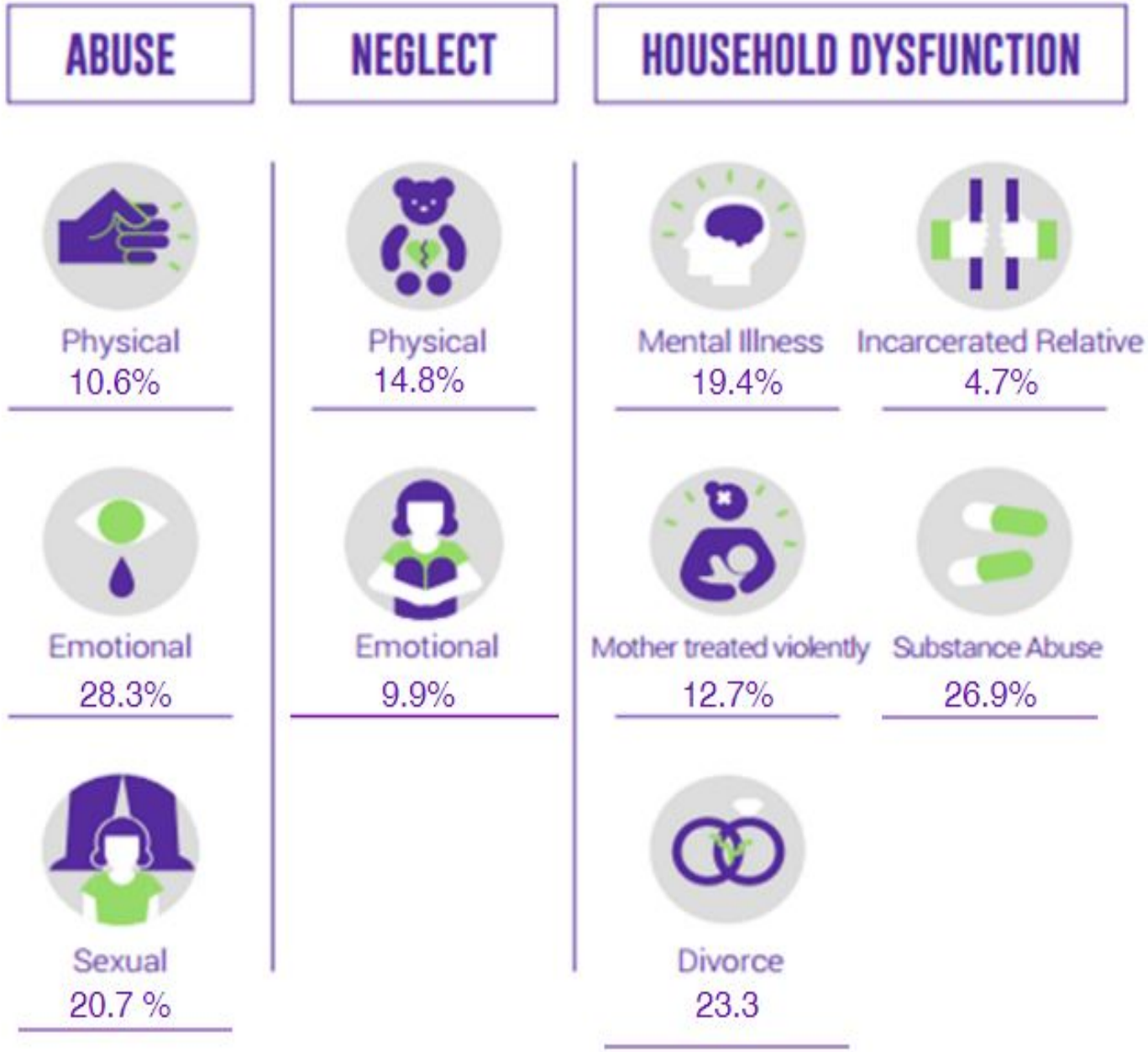
ACEs Compromise Community Prosperity



Source: Building Strong Brains Initiative, TCCY, 2018.

Source: Perkins, 2016

ACEs Risk Factors



Source: Center of the Developing Child, Harvard University, 2019

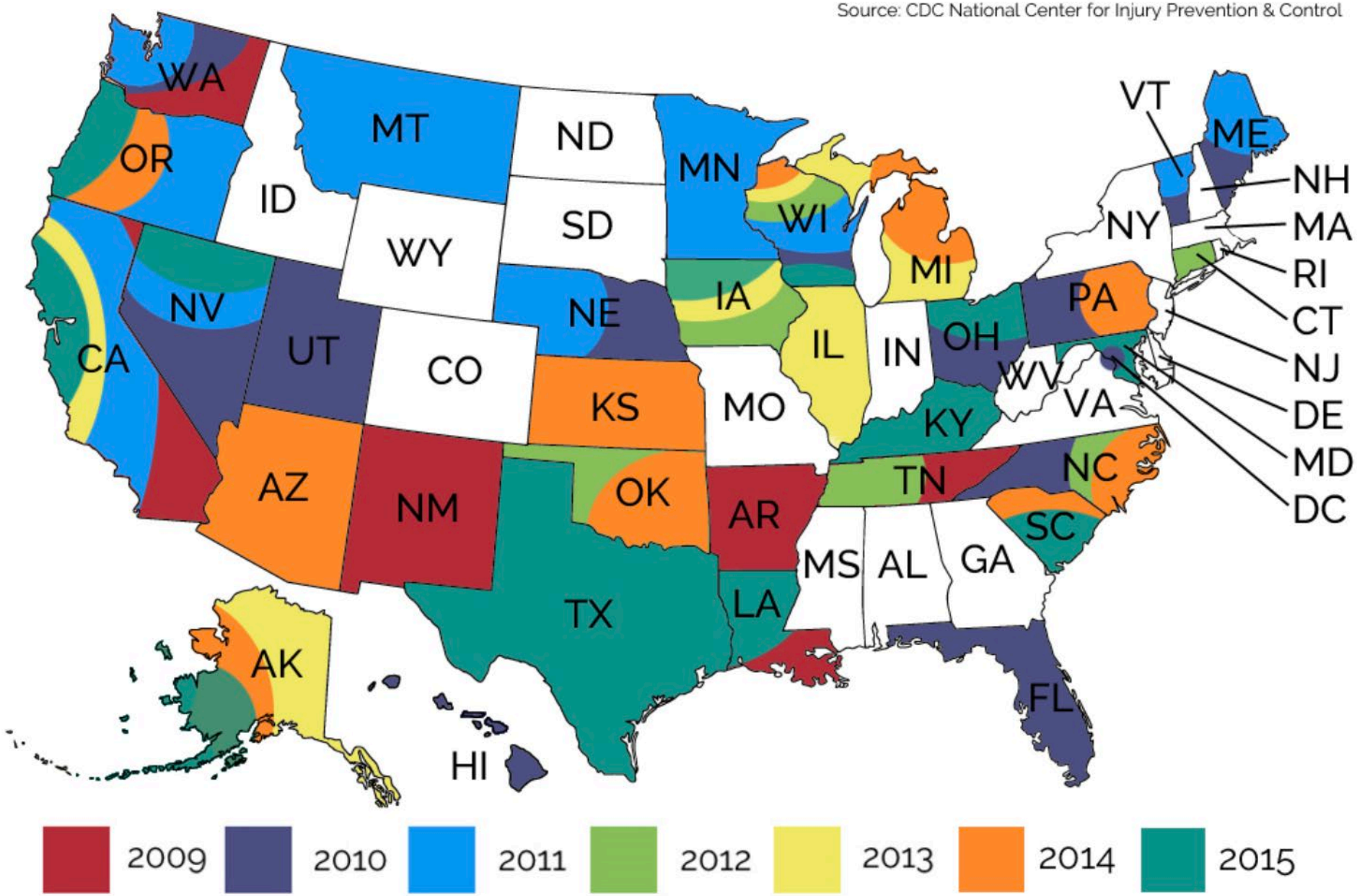
ACEs Protective Factors

- Resilience
- Therapeutic interventions
- Trauma-informed care
- Screening and referral
- Prevent long-term effects of ACEs
  - Reduce stress
  - Build responsive relationships
  - Strengthen life skills

Source: Center of the Developing Child, Harvard University, 2019

States Collecting ACEs Data 2009 - 2015

Source: CDC National Center for Injury Prevention & Control



What is Health Equity?

A basic principle of public health
- all people have a right to health
- when everyone has the opportunity to “attain their full health potential” and no one is “disadvantaged from achieving this potential because of their social position or other socially determined circumstance.”

Health disparities
- Differences in the incidence and prevalence of health conditions and health status between groups
- affect marginalized groups of people
- referred to as health inequities when they result from the systematic and unjust distribution of critical conditions

People in disparate groups experience:
- worse health
- less access to the social determinants or conditions (e.g., healthy food, good housing, good education, safe neighborhoods, freedom from racism and other forms of discrimination) that support health

Source: Ramirez, et al. Promoting Health Equity, CDC, 2008.

Social Determinants of Health

Social determinants of health are the conditions in which people are born, grow, live, work and age that shape health.

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Source: Kaiser Family Foundation

Factors

- Socioeconomic status
- Education
- Neighborhood and physical environment
- Employment
- Social support networks
- Access to health care

Source: Kaiser Family Foundation

What do SDH Have To Do With Substance Use and Misuse?

- Stress is a well-known risk factor in the development of addiction and in addiction relapse vulnerability
- Early life stress has deleterious effects on the brain
- The changes to these pathways show underlying pathophysiology associated with stress-related risk of addiction
- Impact
  - Stress regulation
  - Impulse control
  - Perpetuation of compulsive drug-seeking and relapse susceptibility

Source: Ann N Y Acad Sci. 2008 Oct: 1141: 105-130.

Stress

Processes involving…

- Perception
- Appraisal
- Response

…to harmful, threatening, or challenging events or stimuli.

Source: Ann N Y Acad Sci. 2008 Oct: 1141: 105-130.

Vulnerability

- Stress and the development of addictive behaviors
- Chronic adversity and increased vulnerability to drug use
- Stress exposure escalates drug self-administration

Source: Ann N Y Acad Sci. 2008 Oct: 1141: 105-130.

Age and Impact

Evidence suggests early-life stress and chronic stress significantly affect the mesolimbic dopamine pathways and play a role in drug self-administration

Source: Ann N Y Acad Sci. 2008 Oct: 1141: 105-130.

Why address SDH?

- Improve individual and population health
- Advance health equity

Source: CDC, Social Determinants of Health

Create Partnerships to Address SDH

- Develop structure and collaborative process
- Assess resources and build capacity
- Move forward and build capacity with partners

Source: Ramirez, et al. Promoting Health Equity, CDC, 2008.

SDH Resources

- Community Commons
  - Vulnerable Populations Footprint
  - Location Opportunity Footprint
  - Map Room
  - Data/Mapping Tools
  - Community Health Needs Assessment
  - Wellbeing Measurement Framework

Source: https://www.communitycommons.org/collections/Maps-and-Data

Initiatives

Outside of the health care system

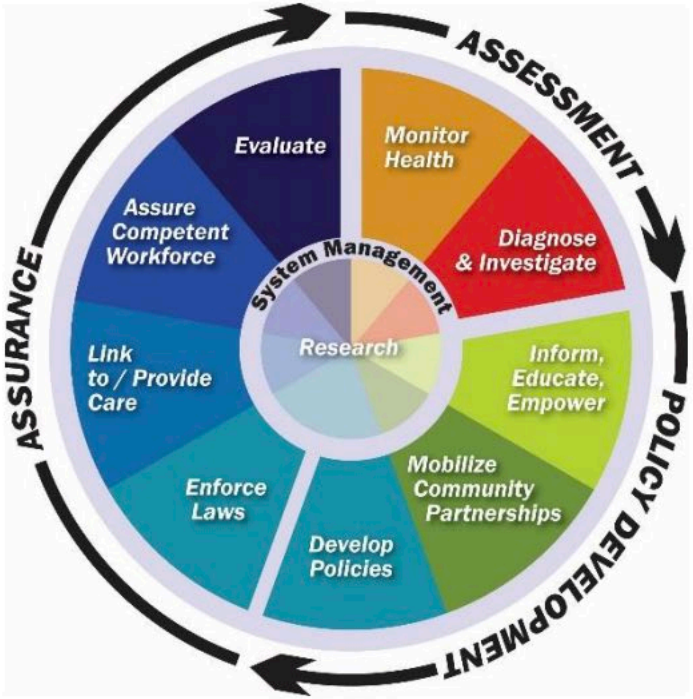
- Shape policies and practices that promote health and health equity

Within the health care system

- Medicaid-specific initiatives focused on addressing social needs
- Medicaid delivery system and payment reform initiatives
- Managed care plans and providers addressing social needs

Source: Kaiser Family Foundation

Public Health Services and SDH



10 Essential Services

5 Key Areas of SDOH

Source: CDC, Public Health Gateway; 10 Essential Services

Challenges

- Policies
- Limited resources
- Lack of focus on initiatives
- Enforcing requirements
- Reducing funding for public health
- Reducing funding for social services

Source: Kaiser Family Foundation

Bringing it all together

Trauma-Informed Care

- Emerging shift in paradigm and practice
- Ecological approach
- Universal design for trauma survivors
- Entire system is used as a vehicle for intervention
- Strengths-based framework
- Requires coordination

Source: DeCandia, Guarino. Trauma-Informed Care: An Ecological Response; Journal of Child and Youth Care Work, 2015.

Basis of Trauma-Informed Care

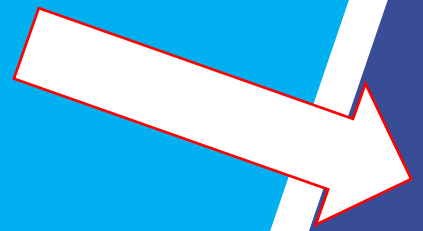
Trauma-informed care represents an ecological approach to trauma intervention based on the understanding that:

- Environmental factors influence well-being;
- Health is, at least in part, socially-determined;
- Interventions must target individual, interpersonal, and community systems

Source: DeCandia, Guarino. Trauma-Informed Care: An Ecological Response; Journal of Child and Youth Care Work, 2015.

Trauma-Informed Care

"How can I fix you?"



"What do you need to support your development and recovery?"

Source: DeCandia, Guarino. Trauma-Informed Care: An Ecological Response; Journal of Child and Youth Care Work, 2015.

Benefits of Trauma-Informed Care

- Decreased emotional reactions for program participants
- Decreased crises in programs
- Enhanced sense of safety
- Greater collaboration among service providers

"A cost-effective approach to addressing trauma as compared to standard or traditional programming."

Source: DeCandia, Guarino. Trauma-Informed Care: An Ecological Response; Journal of Child and Youth Care Work, 2015.

Wrap Up

- ACEs are fact, not fate
- Addressing social determinants of health can significantly shape health
- Trauma-informed care as a practice is an emerging practice

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BRAINSTORMING

In small groups:

Identify a list of risk factors related to trauma in your community.

Prioritize the most important risk factor.

Identify potential protective factors that could mitigate the risk factor.

Identify potential partners who could help.

Examples of SDH

Infant mortality	Infant mortality increases as mother's level of education decreases. In 2004, the mortality rate for infants of mothers with less than 12 years of education was 1.5 times higher than for infants of mothers with 13 or more years of education.
Cancer deaths	In 2004, the overall cancer death rate was 1.2 times higher among African Americans than among Whites
Diabetes	As of 2005, Native Hawaiians or other Pacific Islanders (15.4%), American Indians/Alaska Natives (13.6%), African Americans (11.3%), Hispanics/Latinos (9.8%) were all significantly more likely to have been diagnosed with diabetes compared to their White counterparts (7%).
HIV/AIDS	African Americans, who comprise approximately 12% of the US population, accounted for half of the HIV/AIDS cases diagnosed between 2001 and 2004.12 In addition, African Americans were almost 9 times more likely to die of AIDS compared to Whites in 2004
Tooth decay	Between 2001 and 2004, more than twice as many children (2–5 years) from poor families experienced a greater number of untreated dental caries than children from non-poor families. Of those children living below 100% of poverty level, Mexican American children (35%) and African American children (26%) were more likely to experience untreated dental caries than White children (20%).1
Injury	In 2004, American Indian or Alaska Native males between 15–24 years of age were 1.2 times more likely to die from a motor vehicle-related injury and 1.6 times more likely to die from suicide compared to White males of the same age

Source: Ramirez, et al. Promoting Health Equity, CDC, 2008.

Examples of SDH

Access to care	**• In 2006, adults with less than a high school degree were 50% less likely to have visited a doctor in the past 12 months compared to those with at least a bachelor's degree. In addition, Asian American and Hispanic adults (75% and 68%, respectively) were less likely to have visited a doctor or Access to care other health professional in the past year compared to White adults (79%)** **• In 2004, African Americans and American Indian or Alaska Natives were approximately 1.3 times more likely to visit the emergency room at least once in the past 12 months compared to Whites**
Insurance coverage	• In 2007, Hispanics were 3 times more likely to be uninsured than non-Hispanic Whites (31% versus 10%, respectively) • In 2007, people in families with income below the poverty level were 3 times more likely to be uninsured compared to people with family income more than twice the poverty level • Residents of nonmetropolitan areas are more likely to be uninsured or covered by Medicaid and less likely to have private insurance coverage than residents of metropolitan areas
Employment	•As of December 2007, the unemployment rate varied substantially by racial/ethnic group (4% among Whites, 6% among Hispanics/Latinos, and 9% among African Americans) and by age and gender (4.5% among adult men, 4.9% among adult women, and 15.4% among teenagers) • In 2007, African Americans and Hispanics/Latinos were more likely to be unemployed compared to their White counterparts.16 Further, adults with less than a high school education were 3 times more likely to be unemployed than those with a bachelor's degree.
Education	•Since the Elementary and Secondary Education Act first passed Congress in 1965, the federal government has spent more than $321 billion (in 2002 dollars) to help educate disadvantaged children. Yet nearly 40 years later, only 33% of fourth-graders are proficient readers at grade level.17 While the reading performance of most racial/ethnic groups has improved over the past 15 years, minority children and children from low-income families are significantly more likely to have a below basic reading level. • According to the National Assessment of Adult Literacy, African American, Hispanic/Latino, and American Indian/Alaska Native adults were significantly more likely to have below basic health literacy compared to their White and Asian/Pacific Islander counterparts. Hispanic/Latino adults had the lowest average health literacy score compared to adults in other racial/ethnic groups • The high school dropout rates for Whites, African Americans, and Hispanics/Latinos have generally declined between 1972 and 2005. However, as of 2005, Hispanics/Latinos and African Americans were significantly more likely to have dropped out of high school (22% and 10%, respectively) compared to Whites (6%)

Source: Ramirez, et al. Promoting Health Equity, CDC, 2008.

Examples of SDH

Access to resources	• Lower income and minority communities are less likely to have access to grocery stores with a wide variety of fruits and vegetables • In spite of recent legislation, many teenagers who go to a store or gas station to purchase cigarettes are not asked to show proof of age. African American male students (19.8%) were significantly less likely to be asked to show proof of age than were White (36.6%) or Hispanic (53.5%) male students
Income	•Low socioeconomic status (SES) is associated with an increased risk for many diseases, including cardiovascular disease, arthritis, diabetes, chronic respiratory diseases, and cervical cancer as well as for frequent mental distress • The real median earnings of both men and women who worked full time decreased between 2005 and 2006 (1.1% and 1.2% change, respectively), with women earning only 77% as much as men
Housing	• In 2005, American Indians or Alaska Natives were 1.5 times more likely and African Americans were 1.3 times more likely to die from residential fires and burns than Whites • Homeless people are diverse with single men comprising 51% of the homeless population, followed by families with children (30%), single women (17%) and unaccompanied youth (2%). The homeless population also varies by race and ethnicity: 42% African-Americans, 39% Whites, 13% Hispanics/ Latinos, 4% American Indians or Native Americans and 2% Asian Americans. An average of 16% of homeless people are considered mentally ill; 26% are substance abusers
Transportation	• Rural residents must travel greater distances than urban residents to reach health care delivery sites • 38.9% of Hispanic/Latinos, 55.2% of African Americans, and 29.6% of Asian Americans live in households with one vehicle or less compared to 24.5% of Whites • Low-income minorities spend more time traveling to work and other daily destinations than do low-income Whites because they have fewer private vehicles and use public transit and car pools more frequently.

Source: Ramirez, et al. Promoting Health Equity, CDC, 2008.