



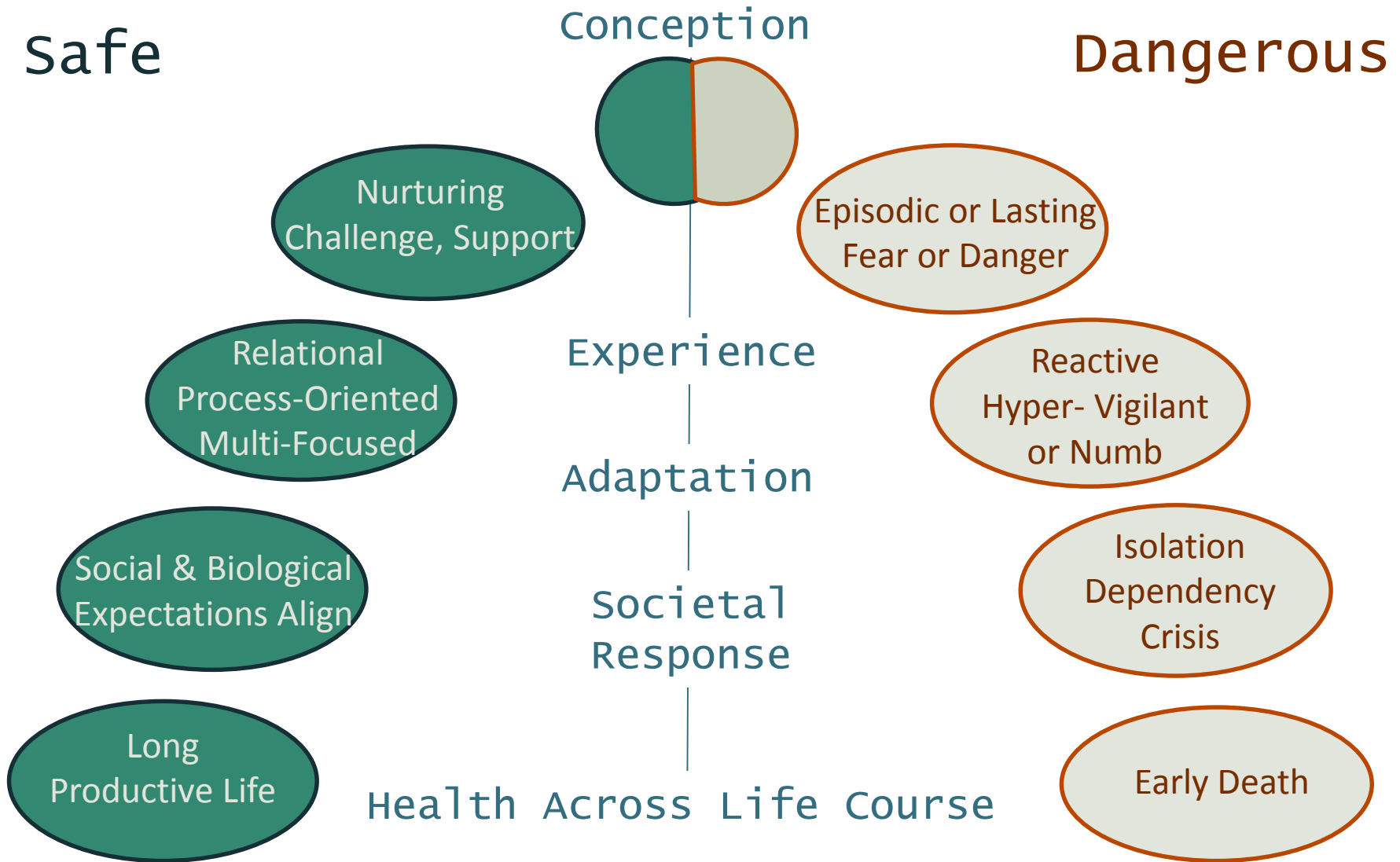
foundation for  
**healthy generations**

CREATING ENDURING HEALTH EQUITY

# ACEs & Work

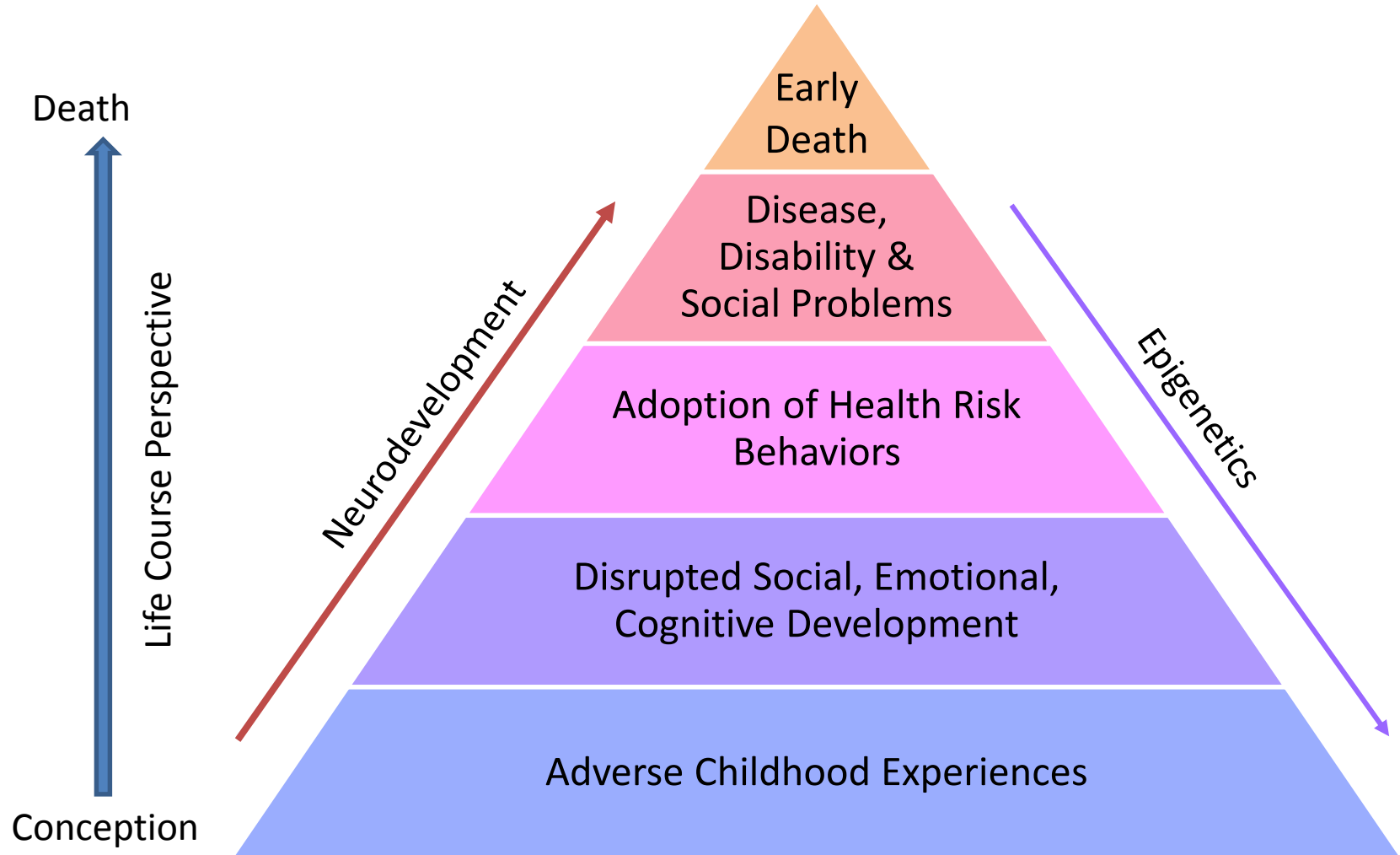


# Experience & Adaptation



# Adverse Childhood Experience

## “The ACE Study”



# Experiences Considered

## Indicators of Family Dysfunction

1. Mentally ill, depressed or suicidal person in home
2. Drug addicted or alcoholic family member
3. Parental discord – indicated by divorce, separation, abandonment
4. Witnessing domestic violence against the mother
5. Incarceration of any family member

## Abuse

6. Child physical abuse
7. Child sexual abuse
8. Child emotional abuse

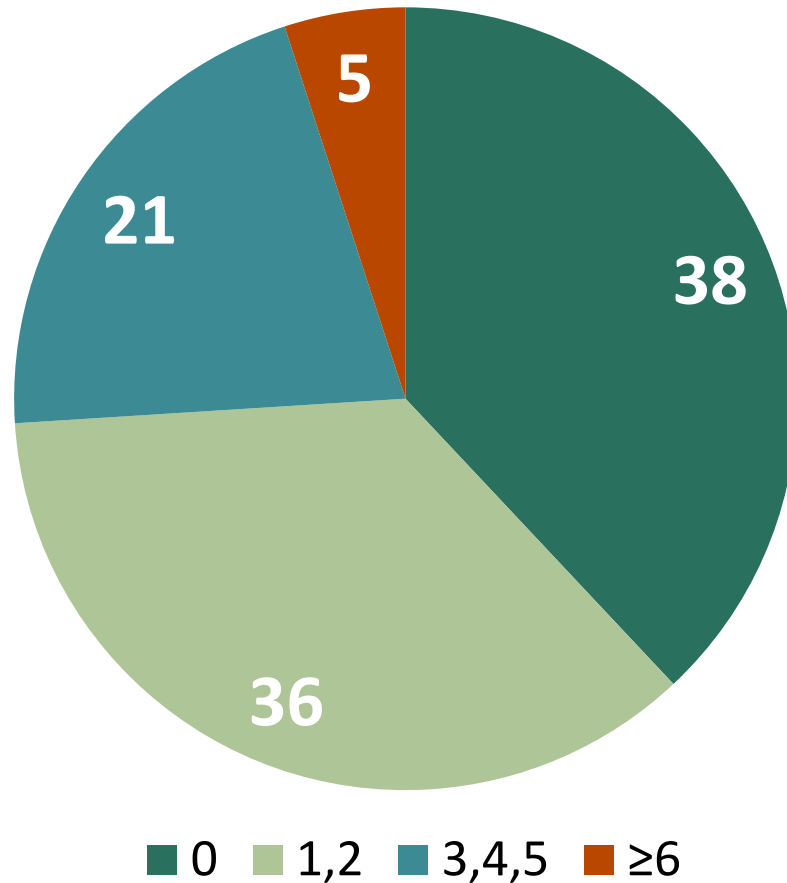
## Neglect

9. Physical Neglect
10. Emotional Neglect

**ACE Score = Number of Categories (1-10)**



# ACEs are Common



**62% of adults  
have  $\geq 1$  ACE**

**5% have  $\geq 6$**



# Major Findings

## ACE Categories (ACEs) are Interrelated

- 87% of people with 1 have >1

## ACEs are Common

- Nearly 2/3 of adults have  $\geq 1$ ; 27% have  $\geq 3$ ; 5% have  $\geq 6$

## Accumulation of ACEs Matters

- Higher # (ACE Score) = higher population risk

## Graded Relationship: Disease, Disability, Social, Productivity

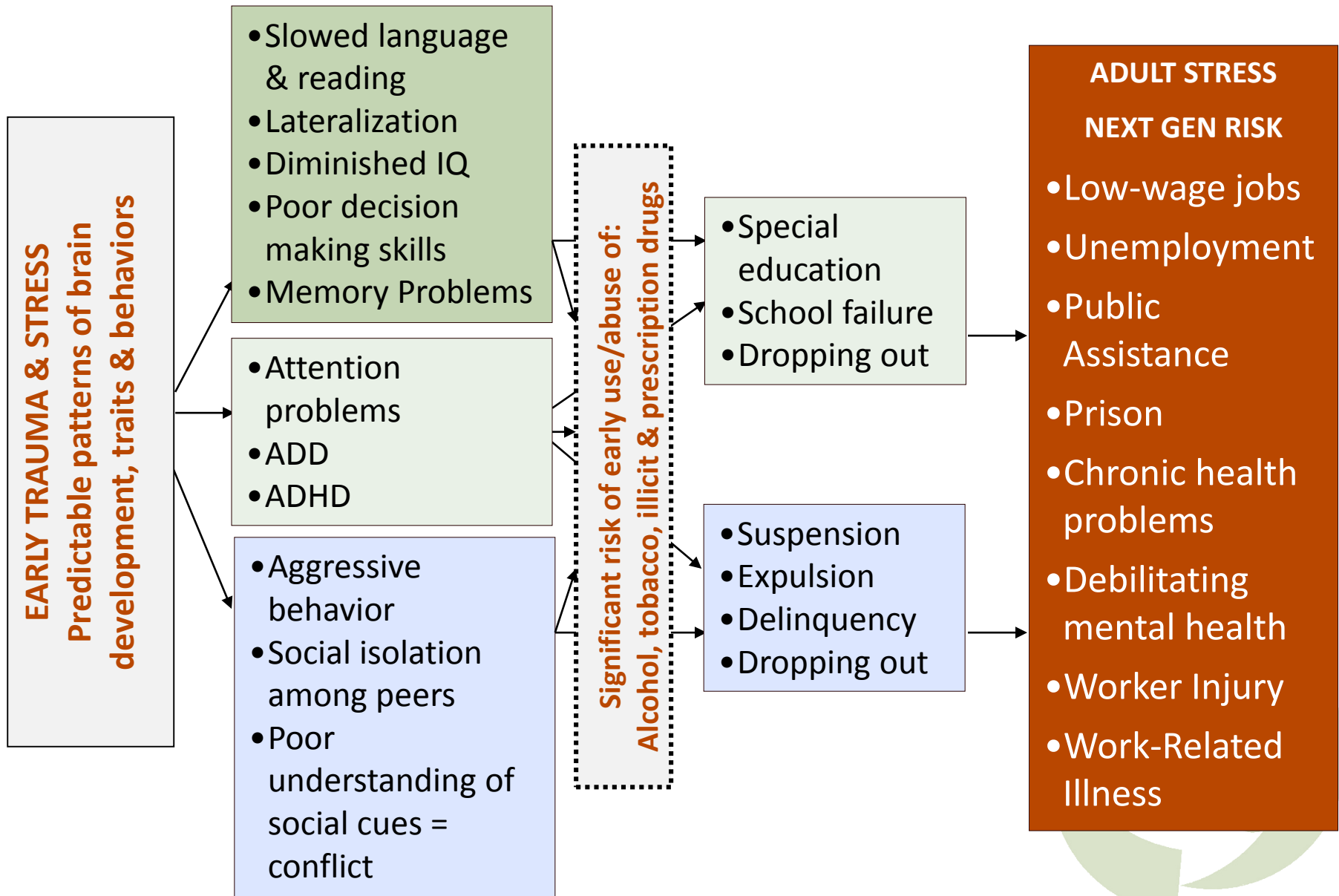
## Scores= Good Proxy Measure Childhood Toxic Stress Dose

## ACEs are the Most Powerful Known Determinant of Health

- Mental, Physical, Behavioral, Productivity, Disability, & Social Problems



# The Fast Track to Poverty

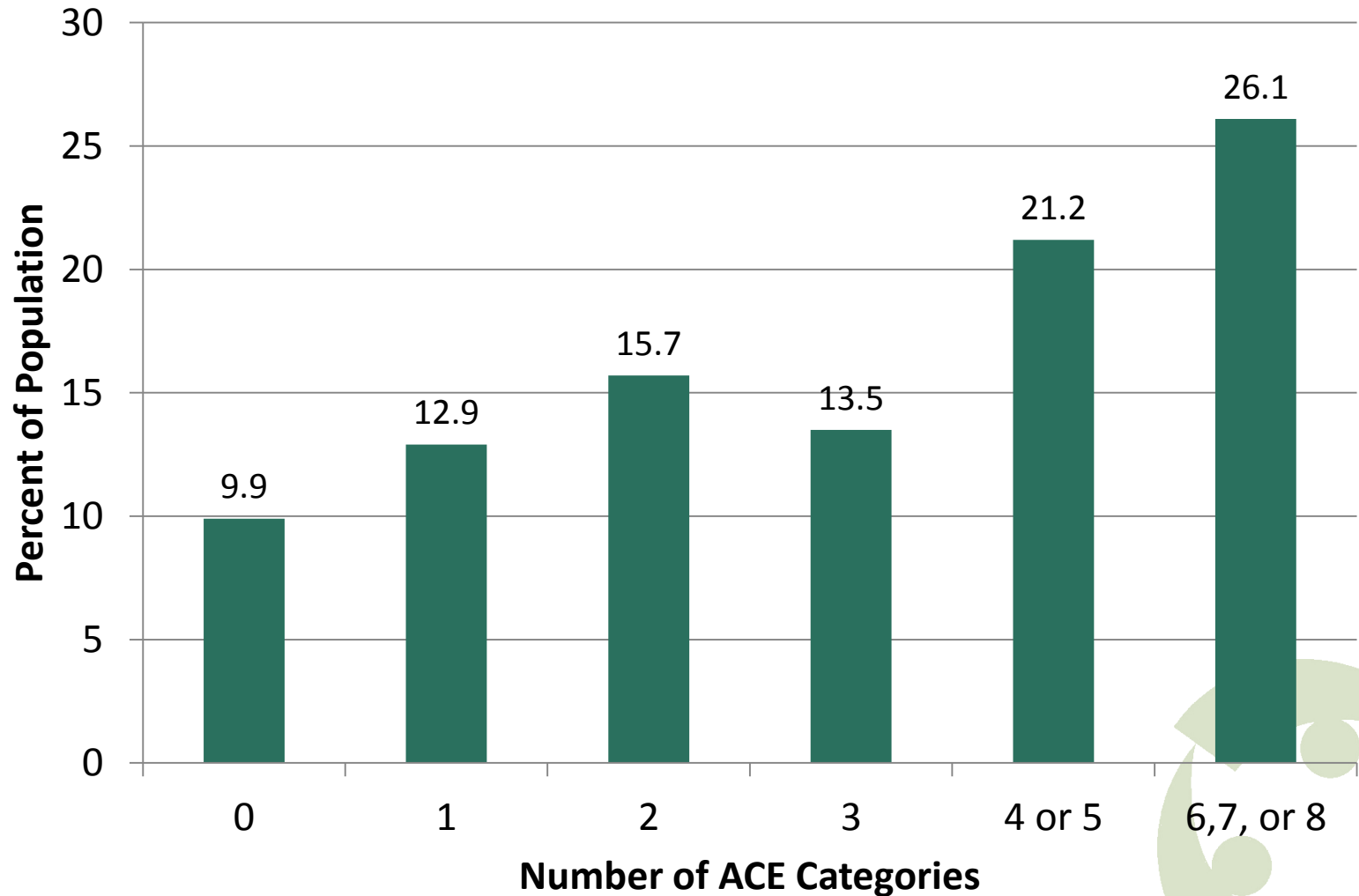


# Adverse Childhood Experience & Risks for Workplace Injury/Illness

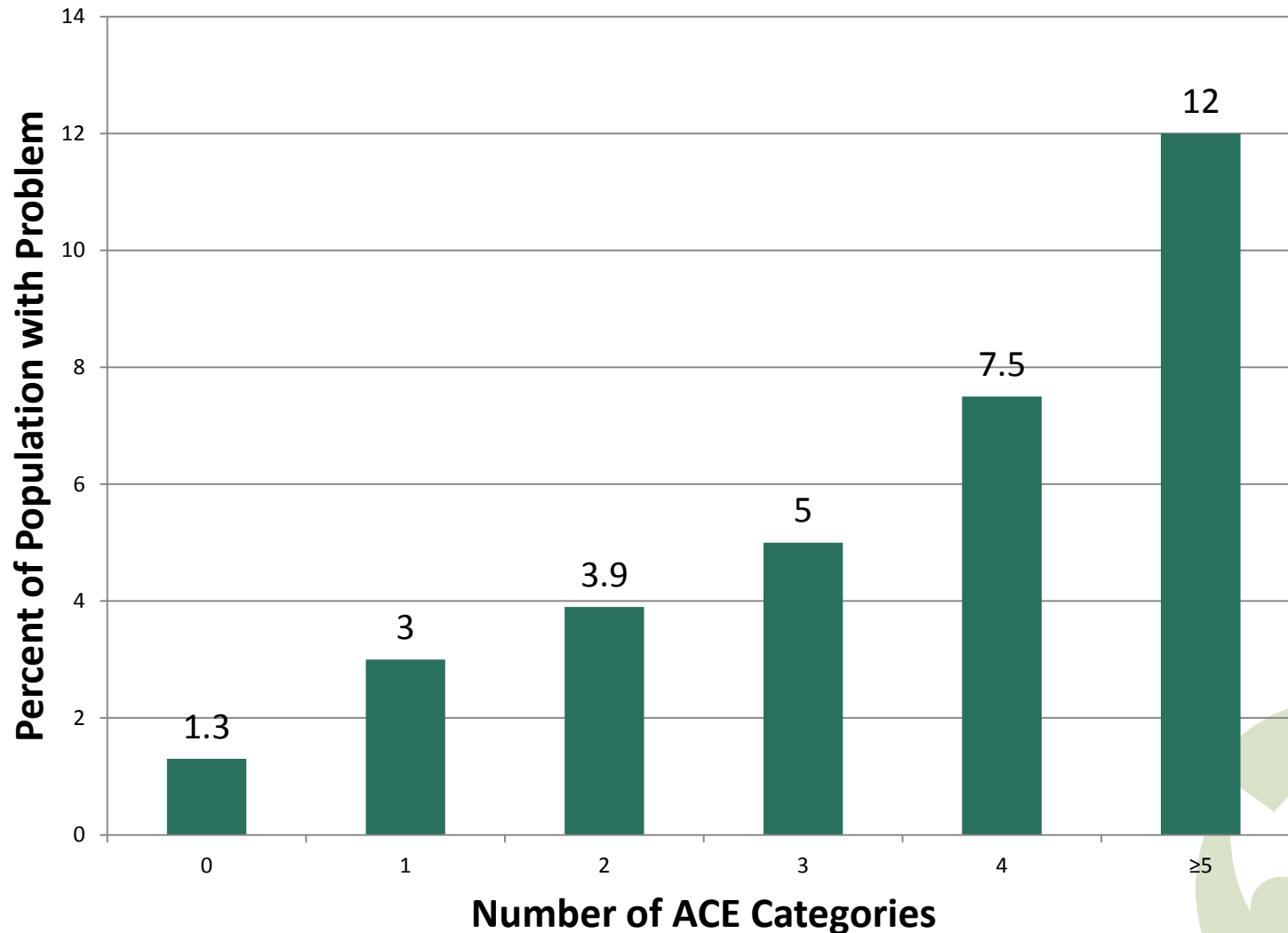




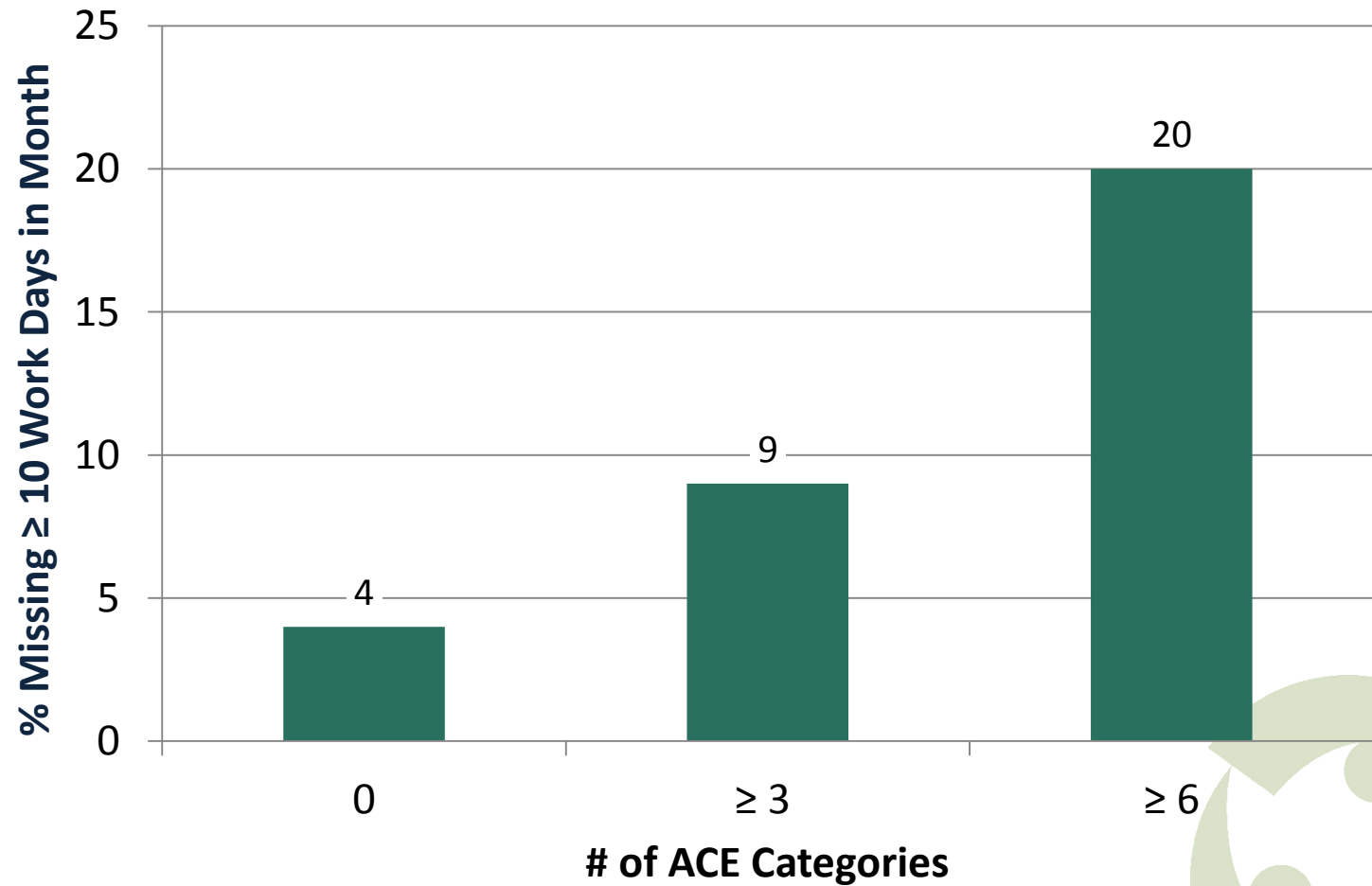
# Insufficient Sleep $\geq 21$ of 30 Days



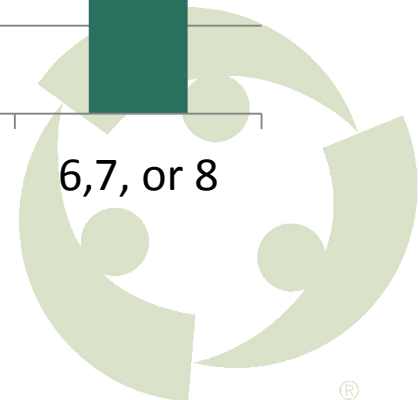
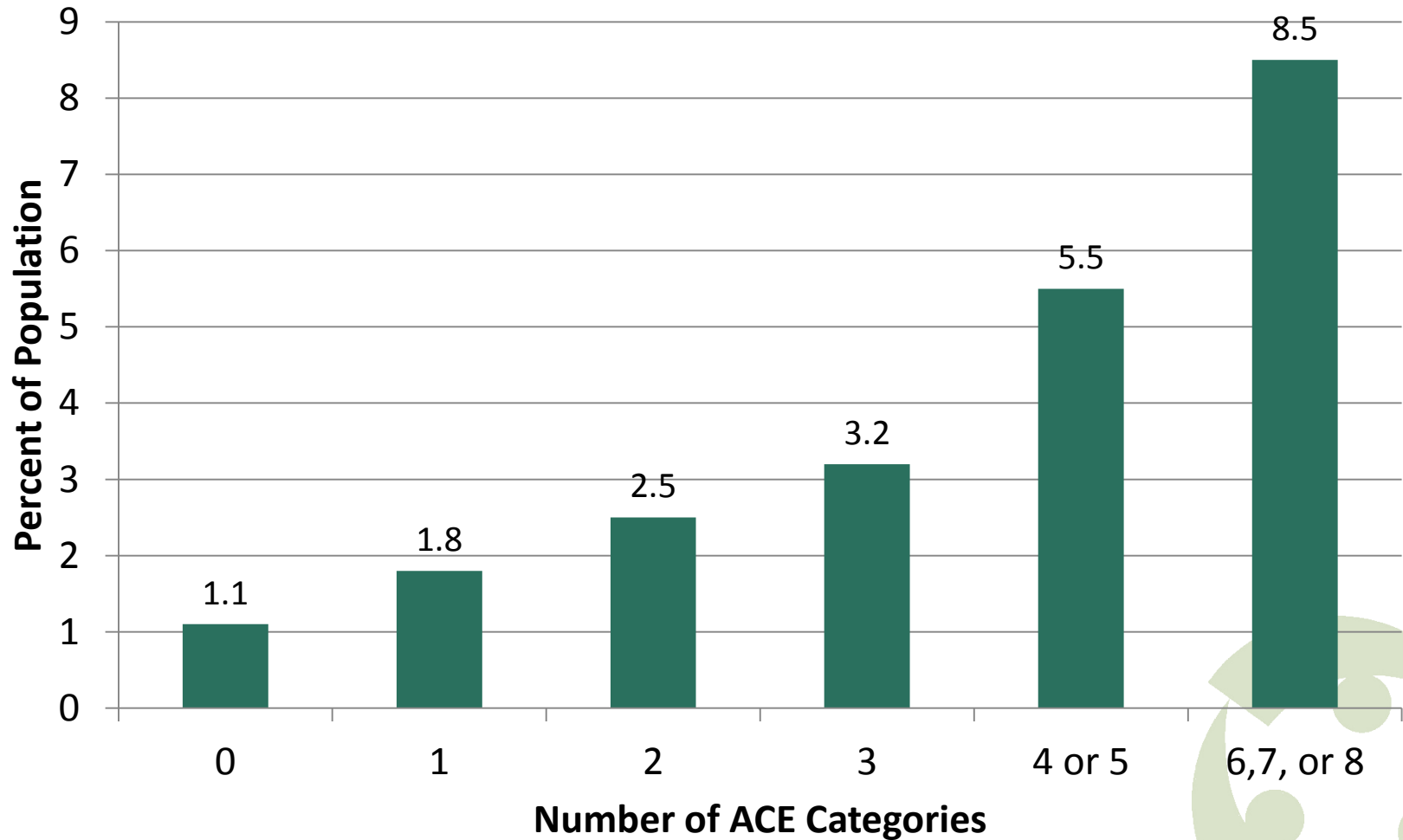
# Ever Had a Drug Problem



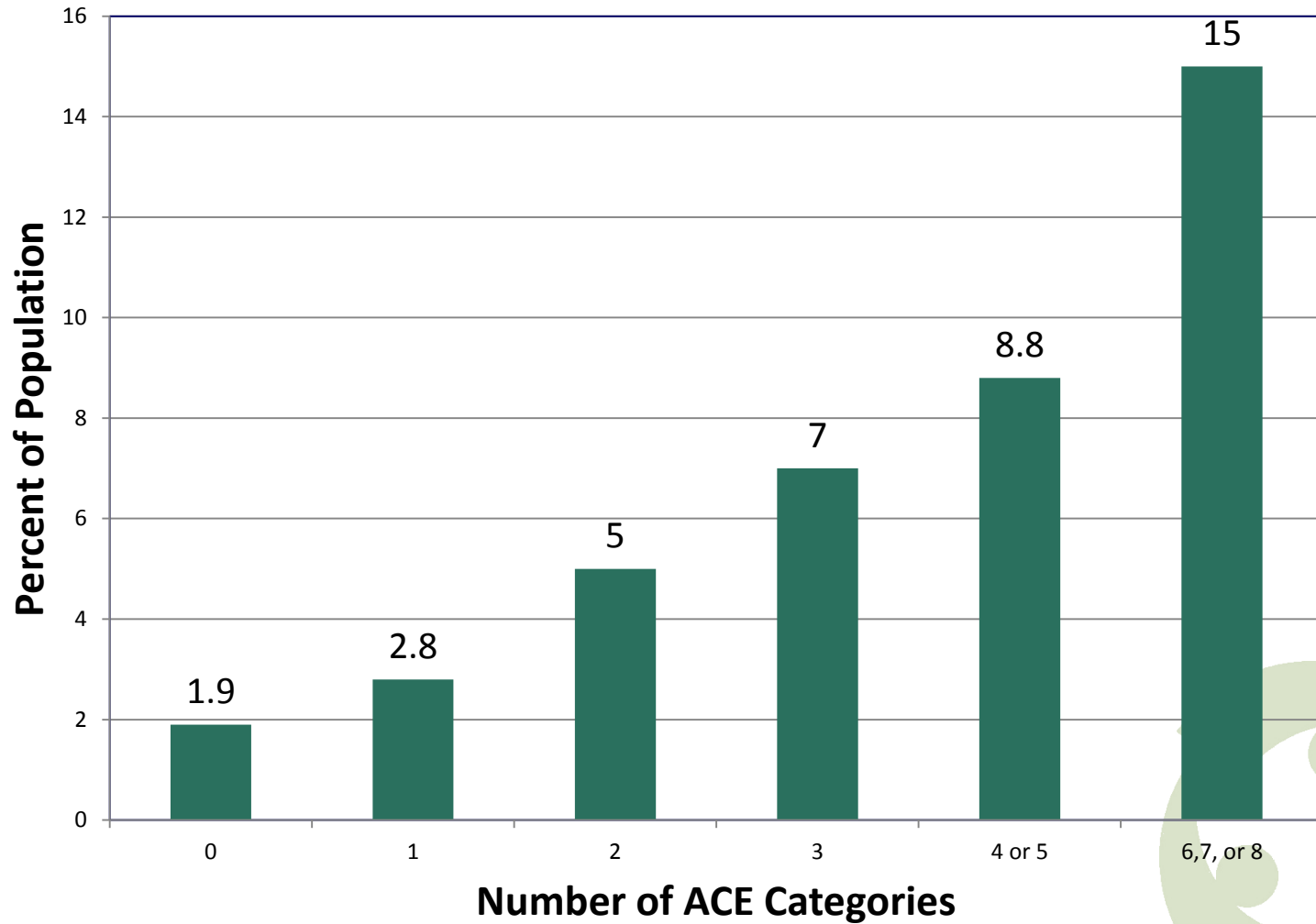
# Missed Work



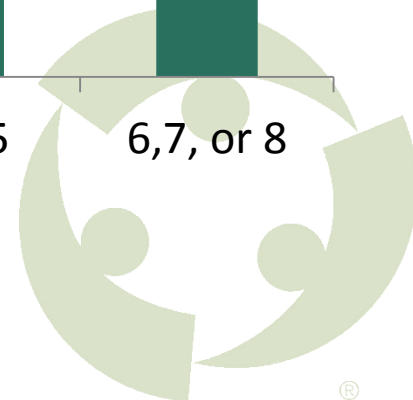
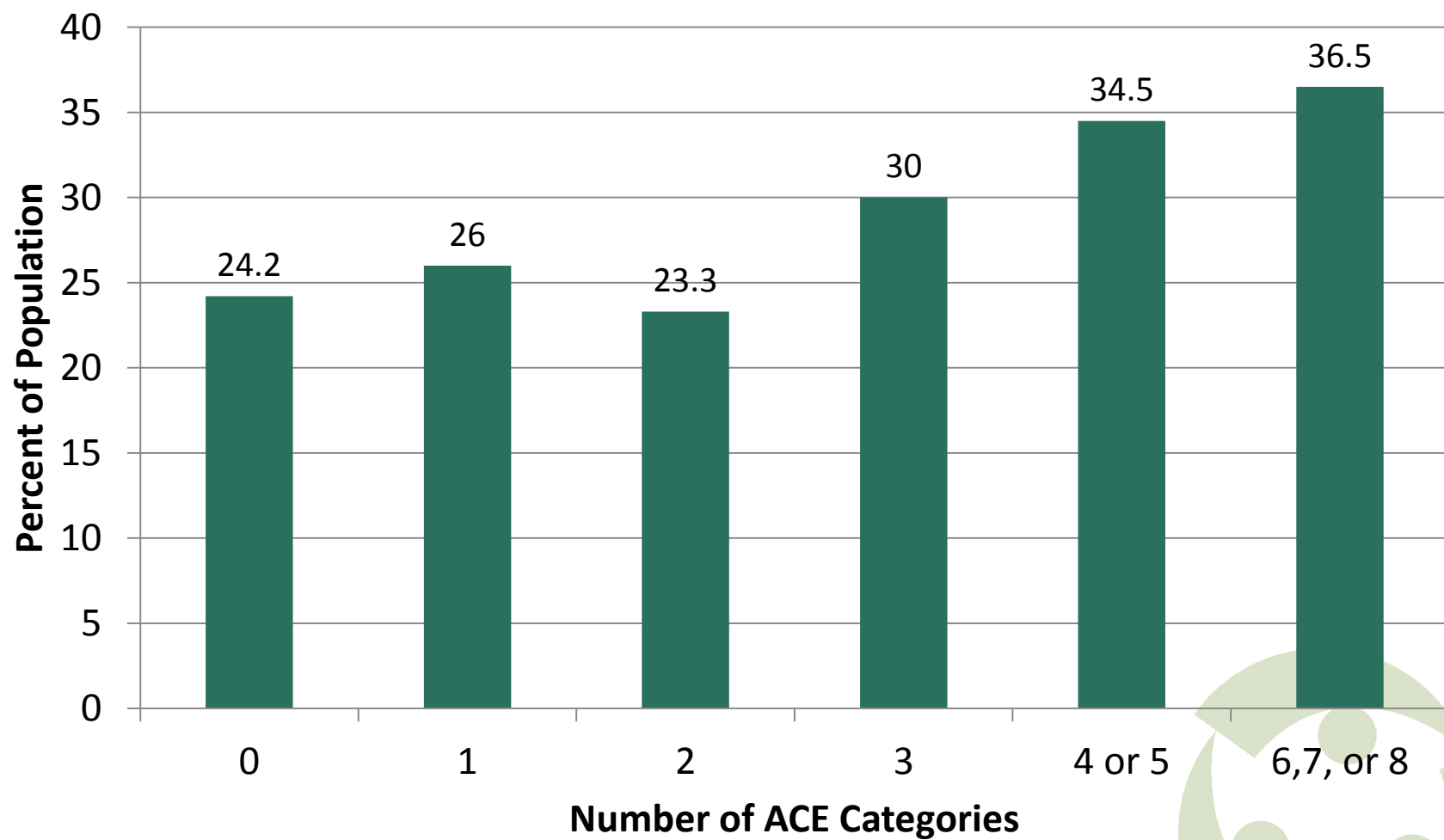
# Missed Work $\geq 30$ Days Due to Mental Health



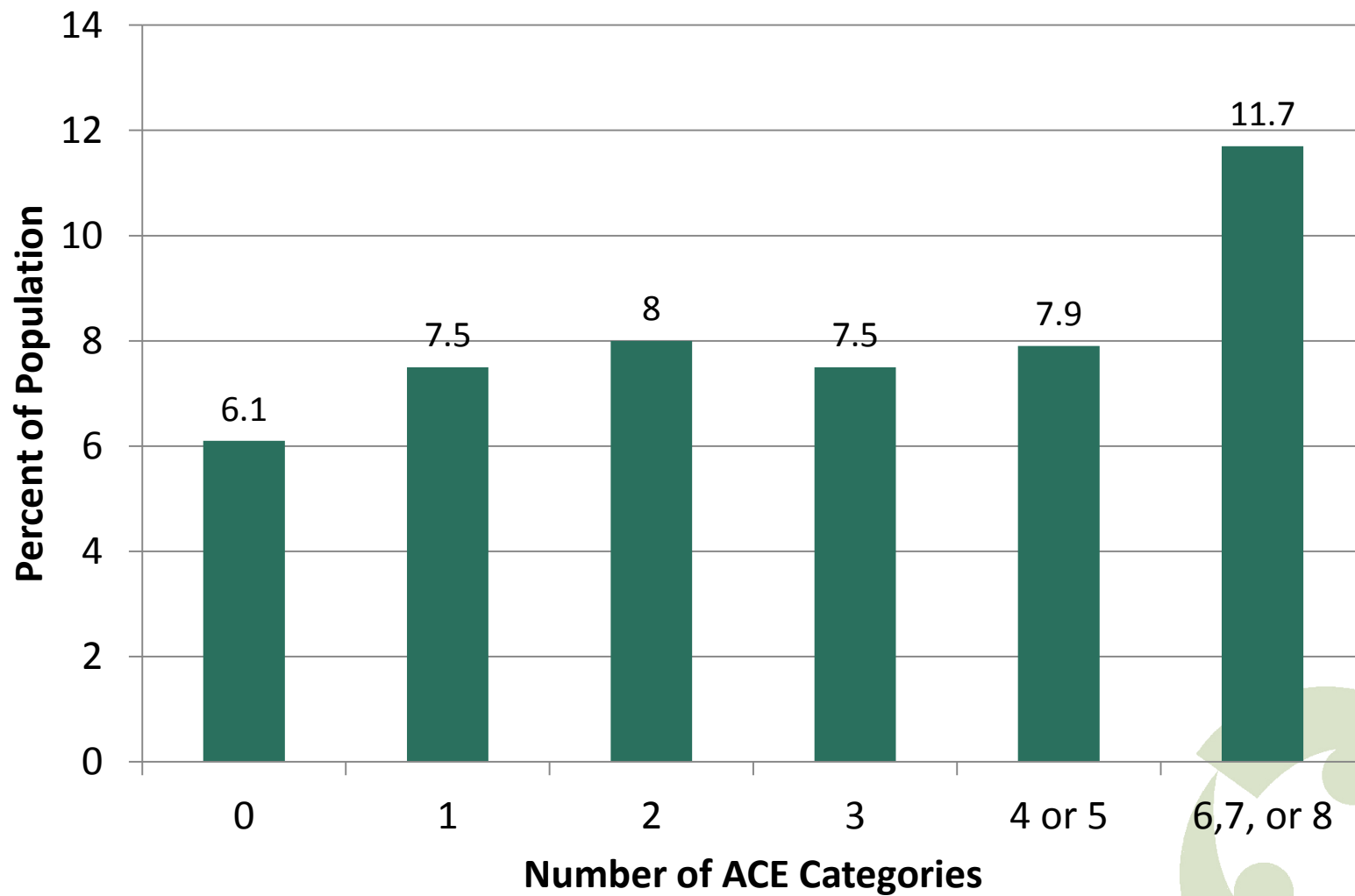
# Anxiety



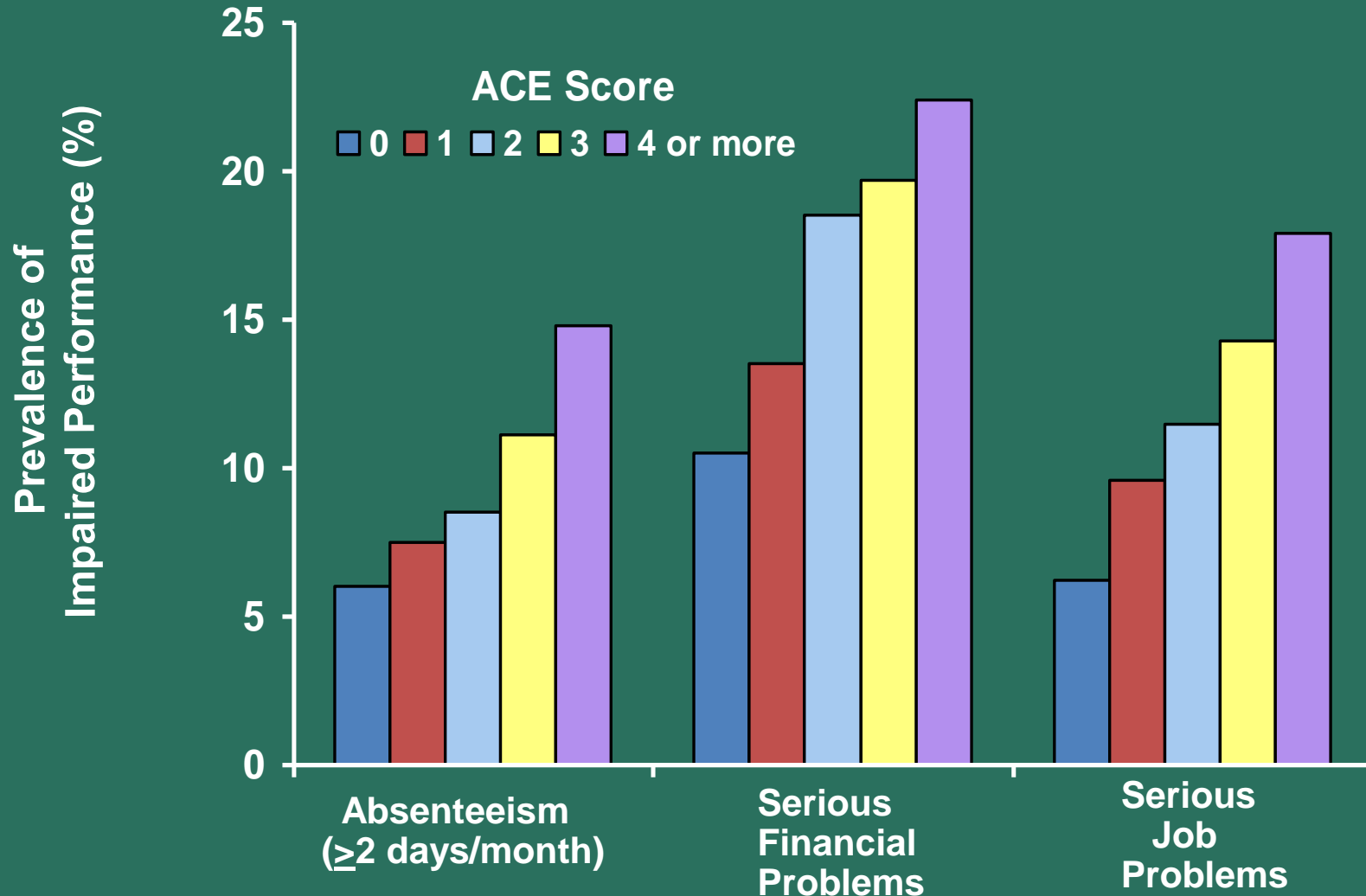
# Obesity



# Diabetes



# ACE Score and Indicators of Impaired Worker Performance

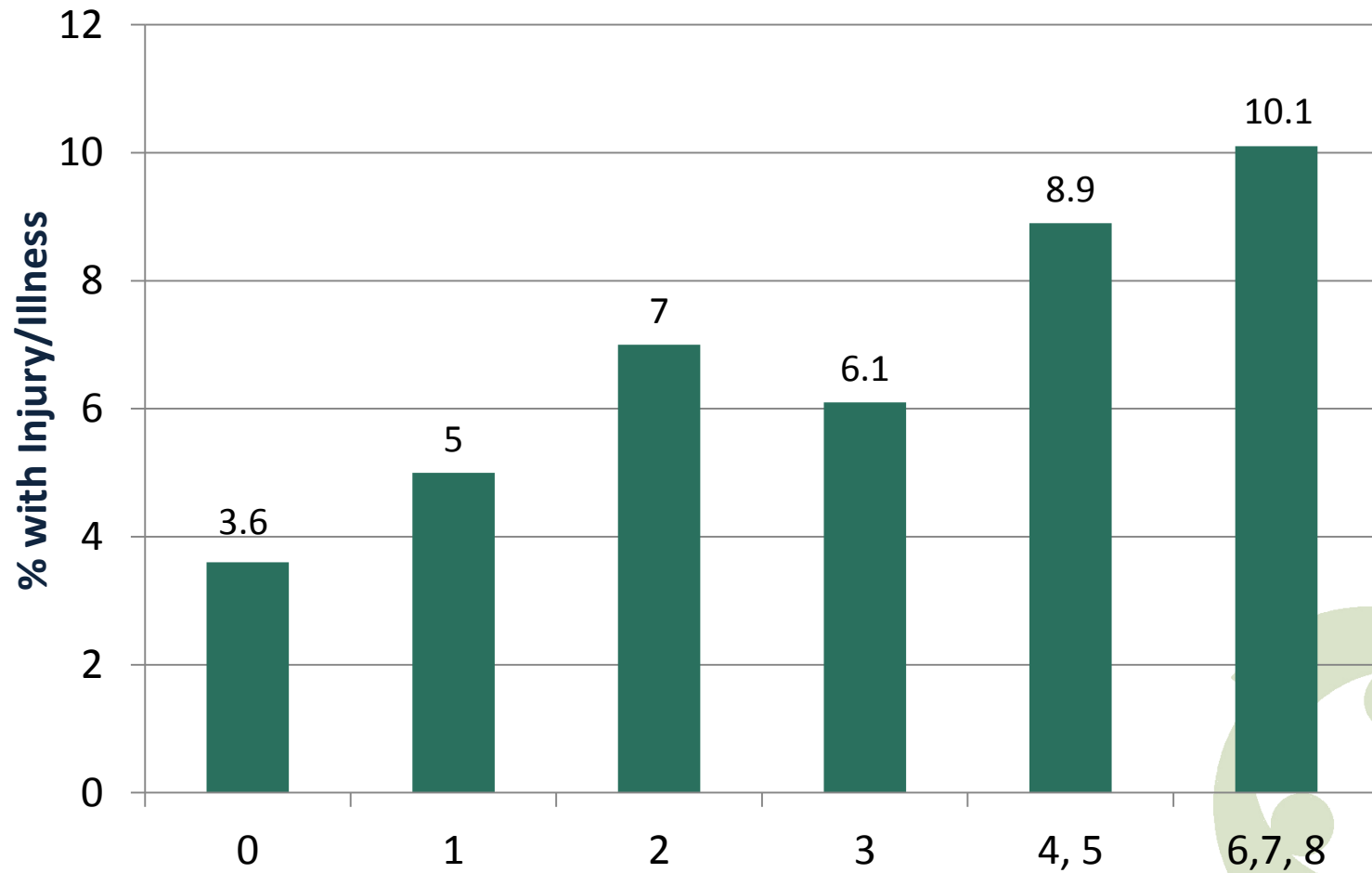




# Adverse Childhood Experience & Worker Injury, Work-Related Illness



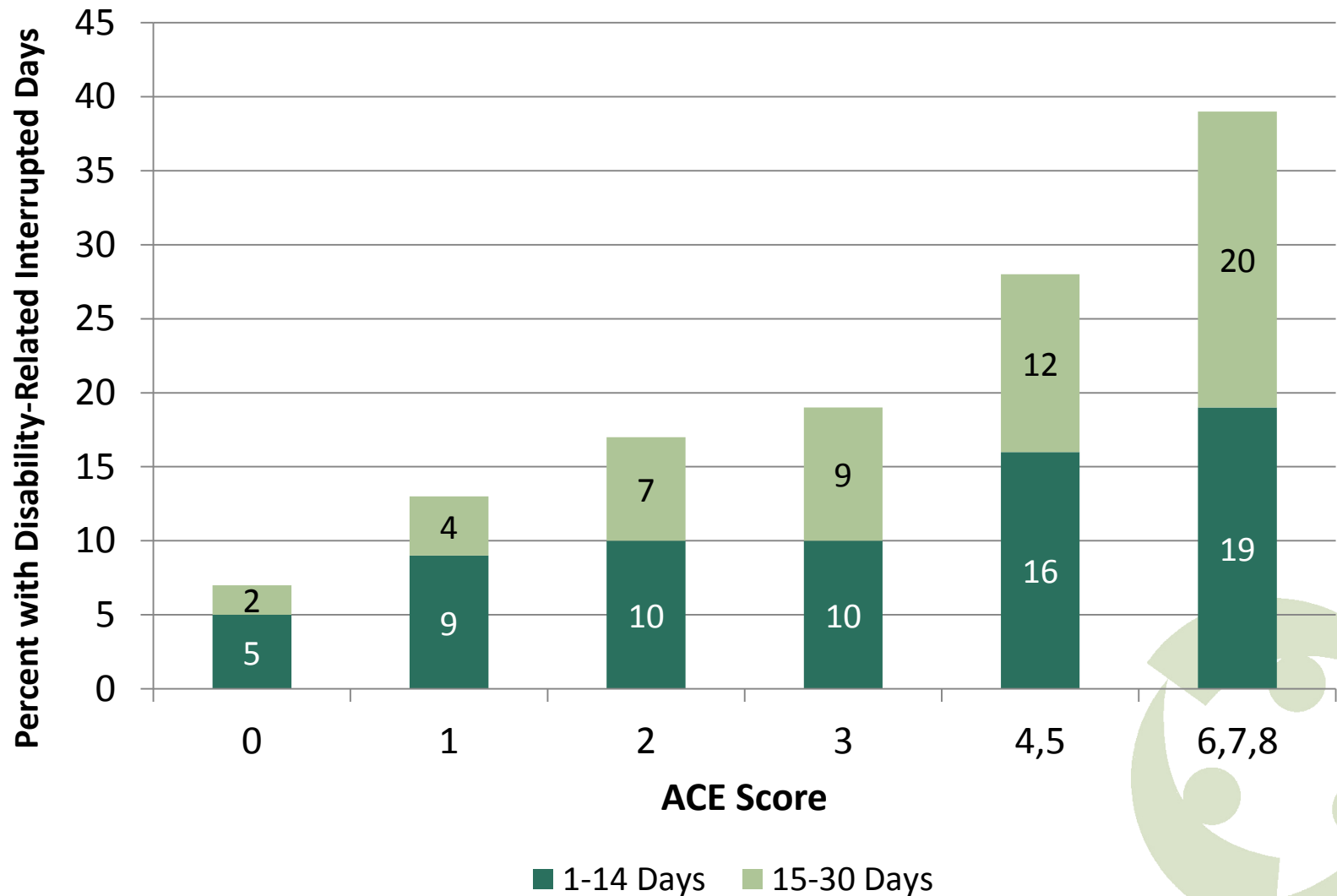
# Work-Related Injury or Illness in Past Year



# Adverse Childhood Experience & Barriers to Returning to Work

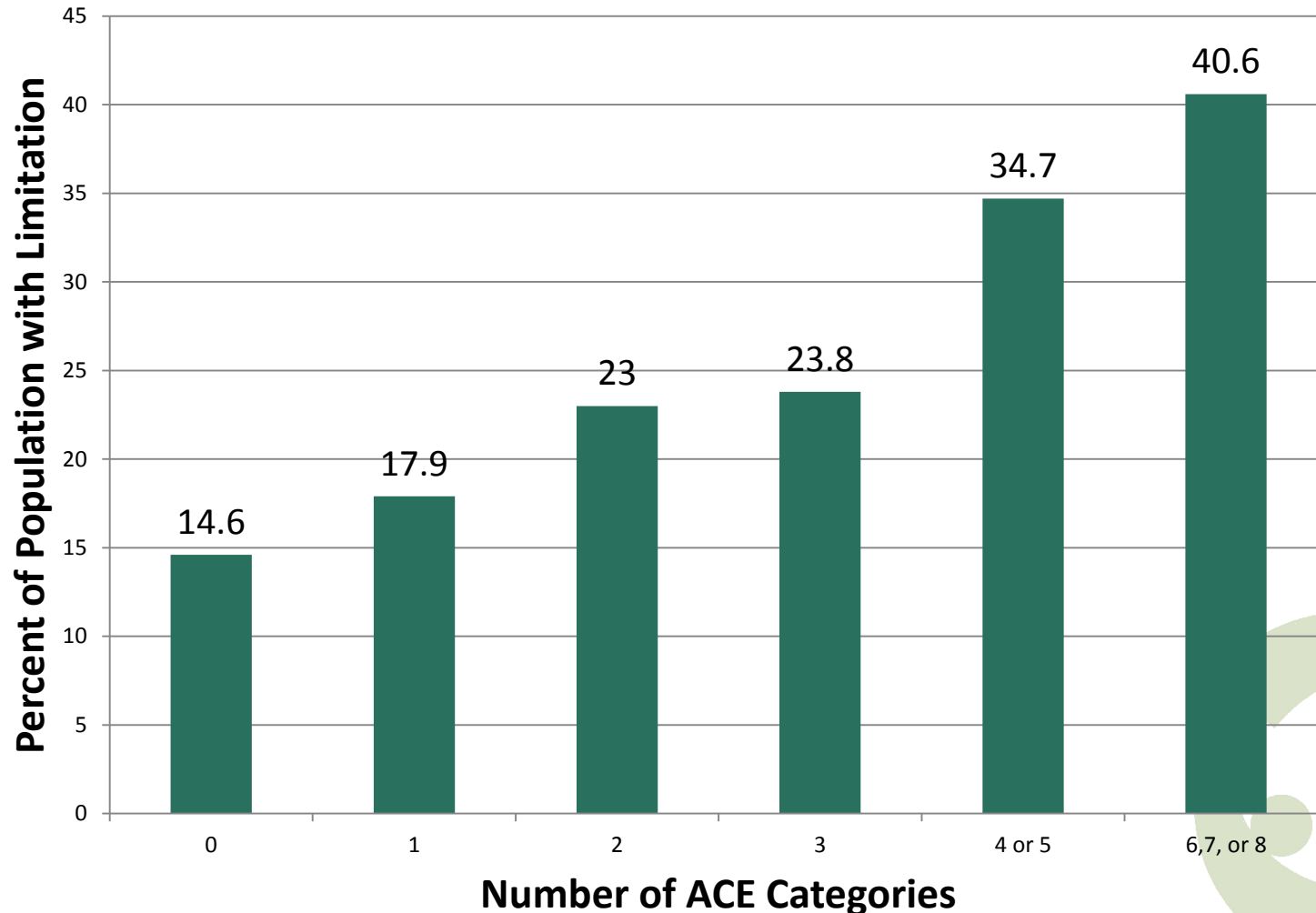


# Disability-Related Days When Can't Do Usual Activities

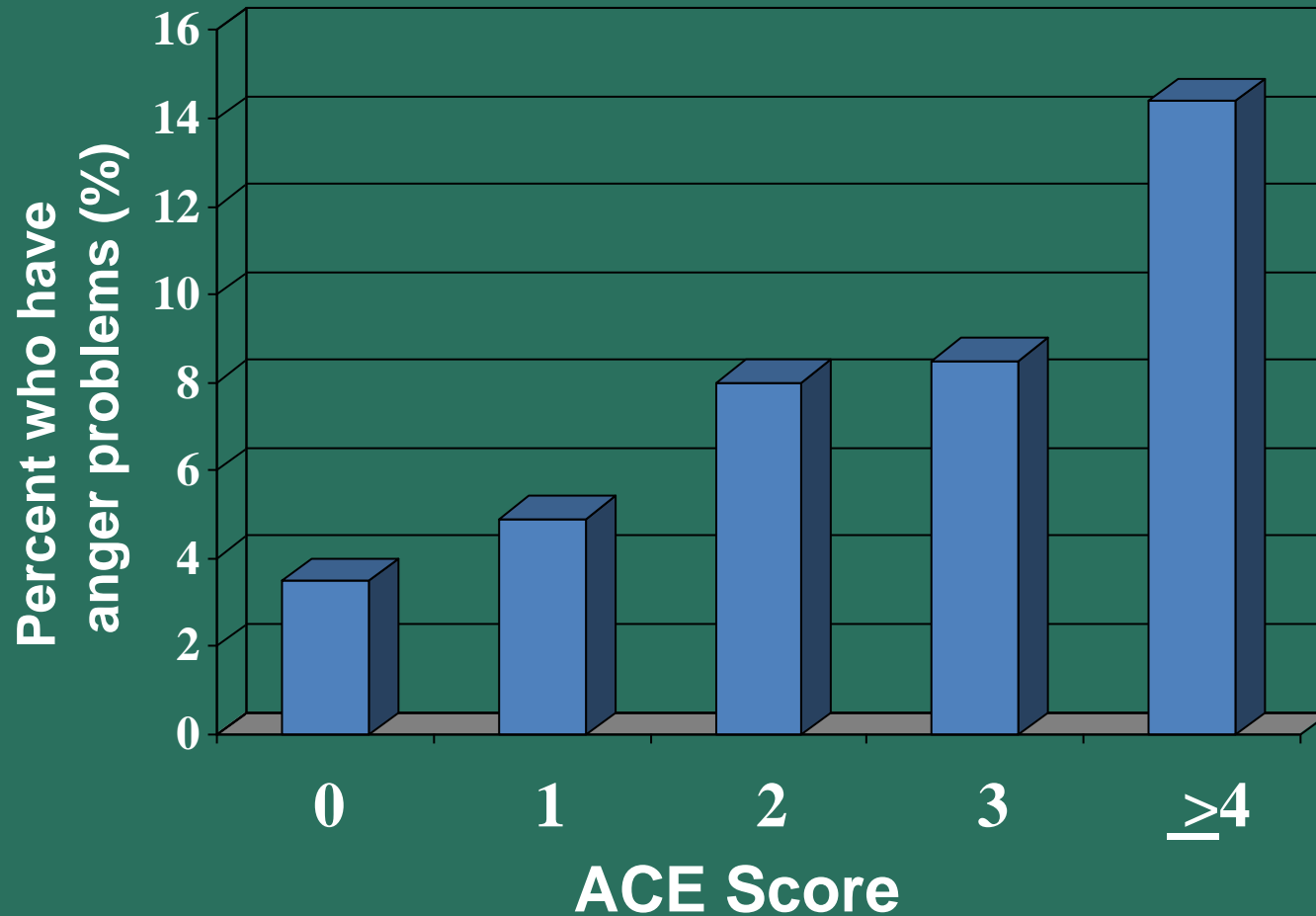


# Activity Limitation

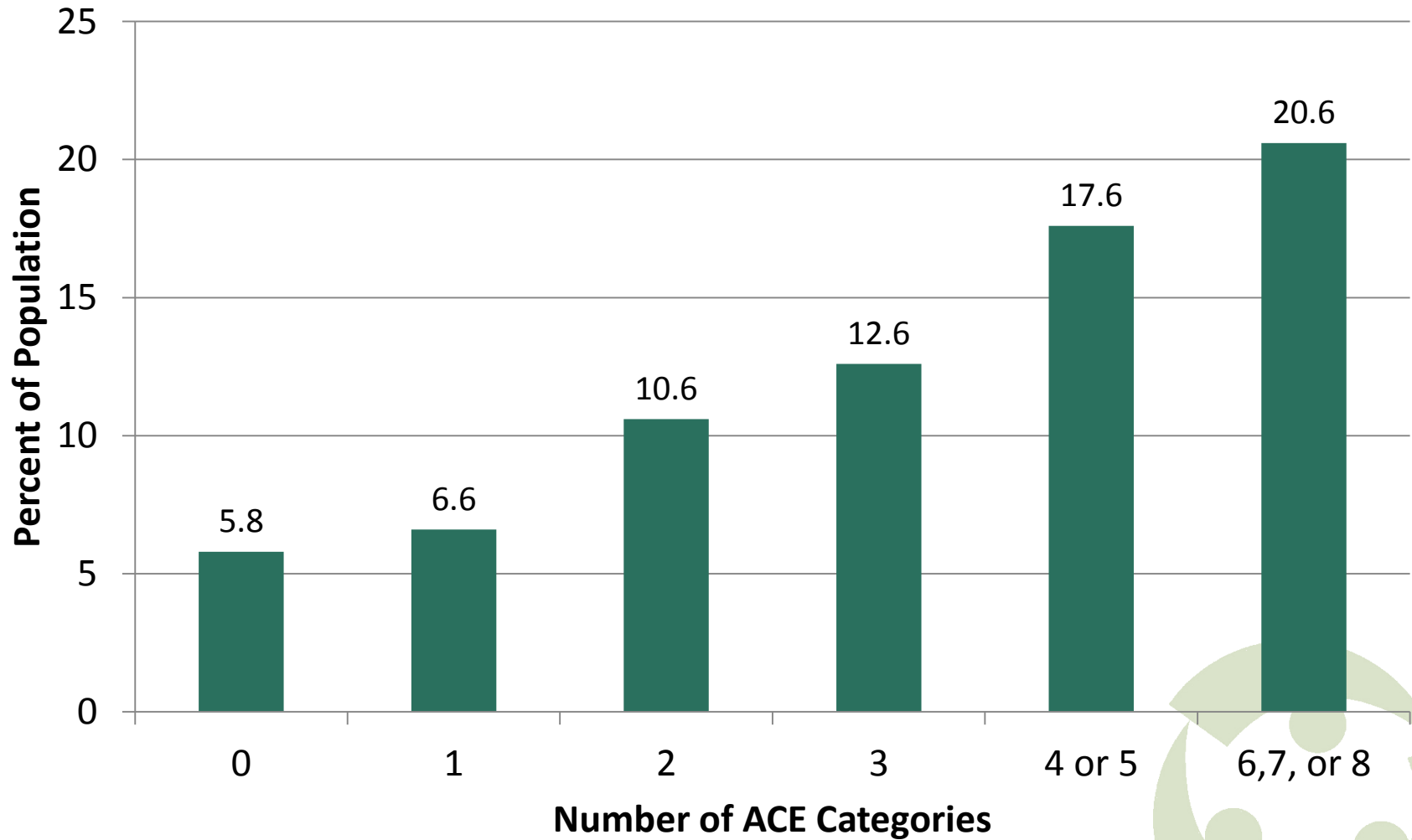
Due to Mental, Physical or Emotional Problems



# The ACE Score and Difficulty Controlling Anger

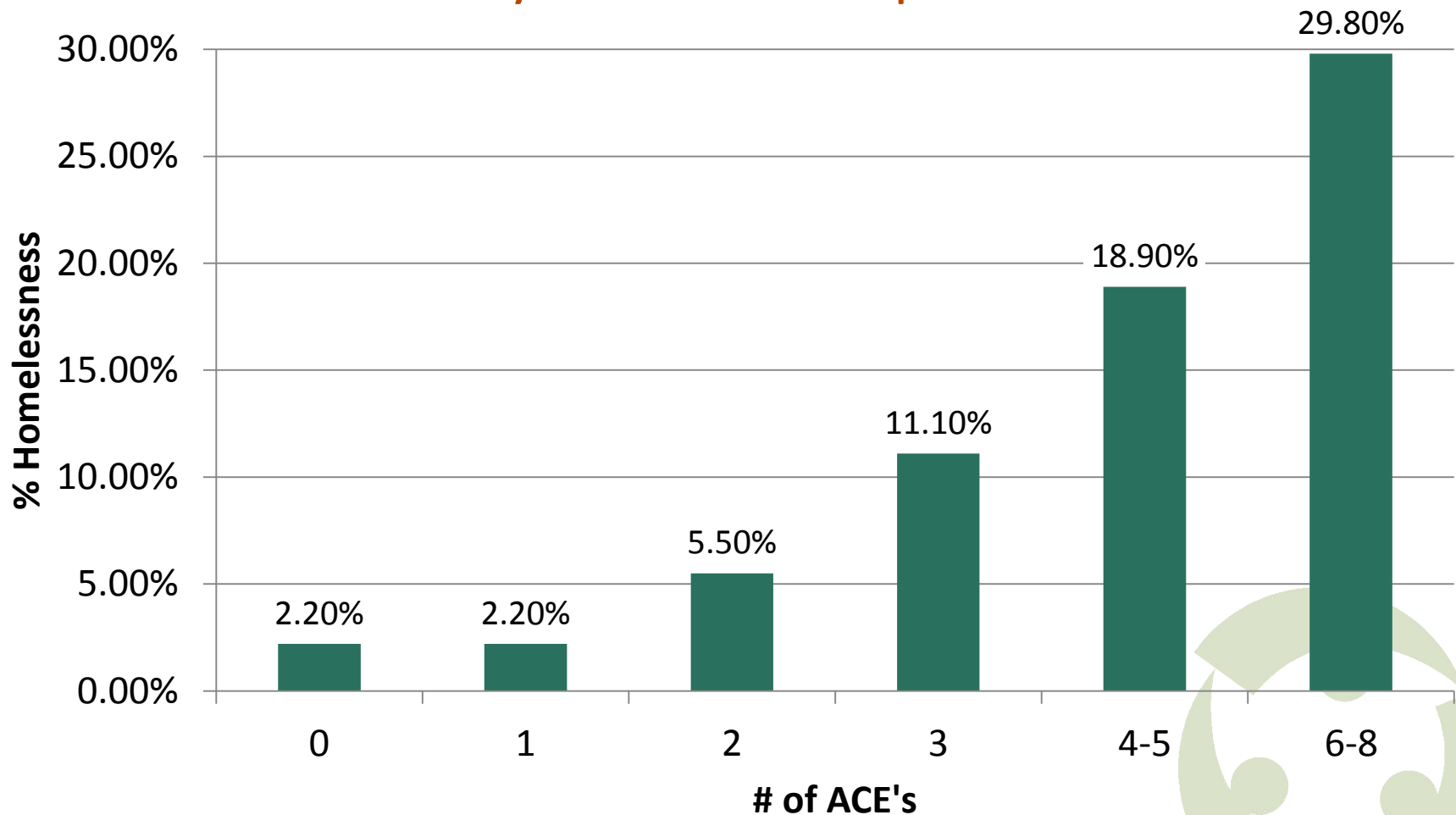


# $\geq 14$ of 30 Unhealthy Mental Health Days



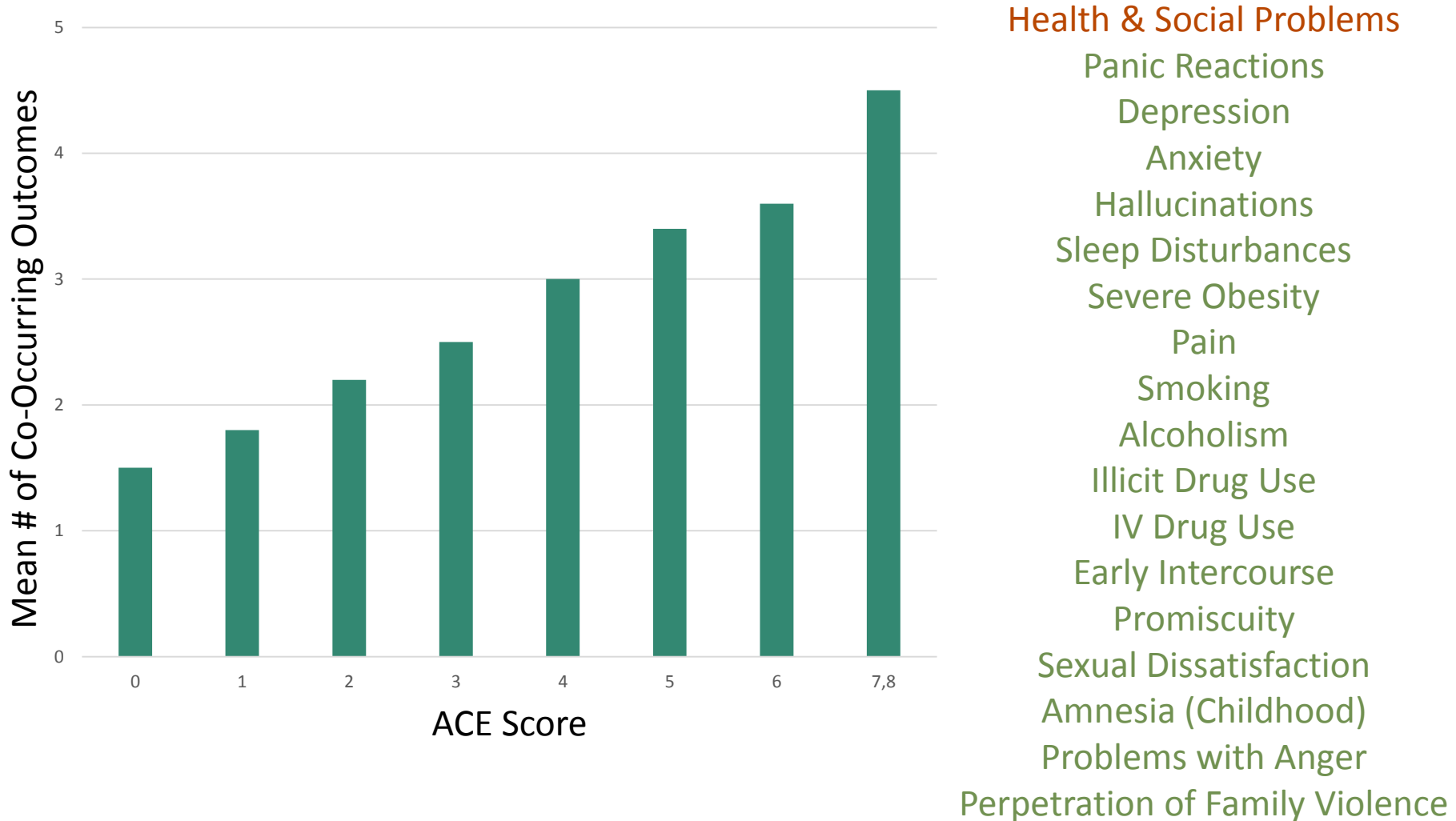
# ACEs & History of Homelessness

## 25-54 yr Old Adult Population





# ACEs and Co-Occurring Problems



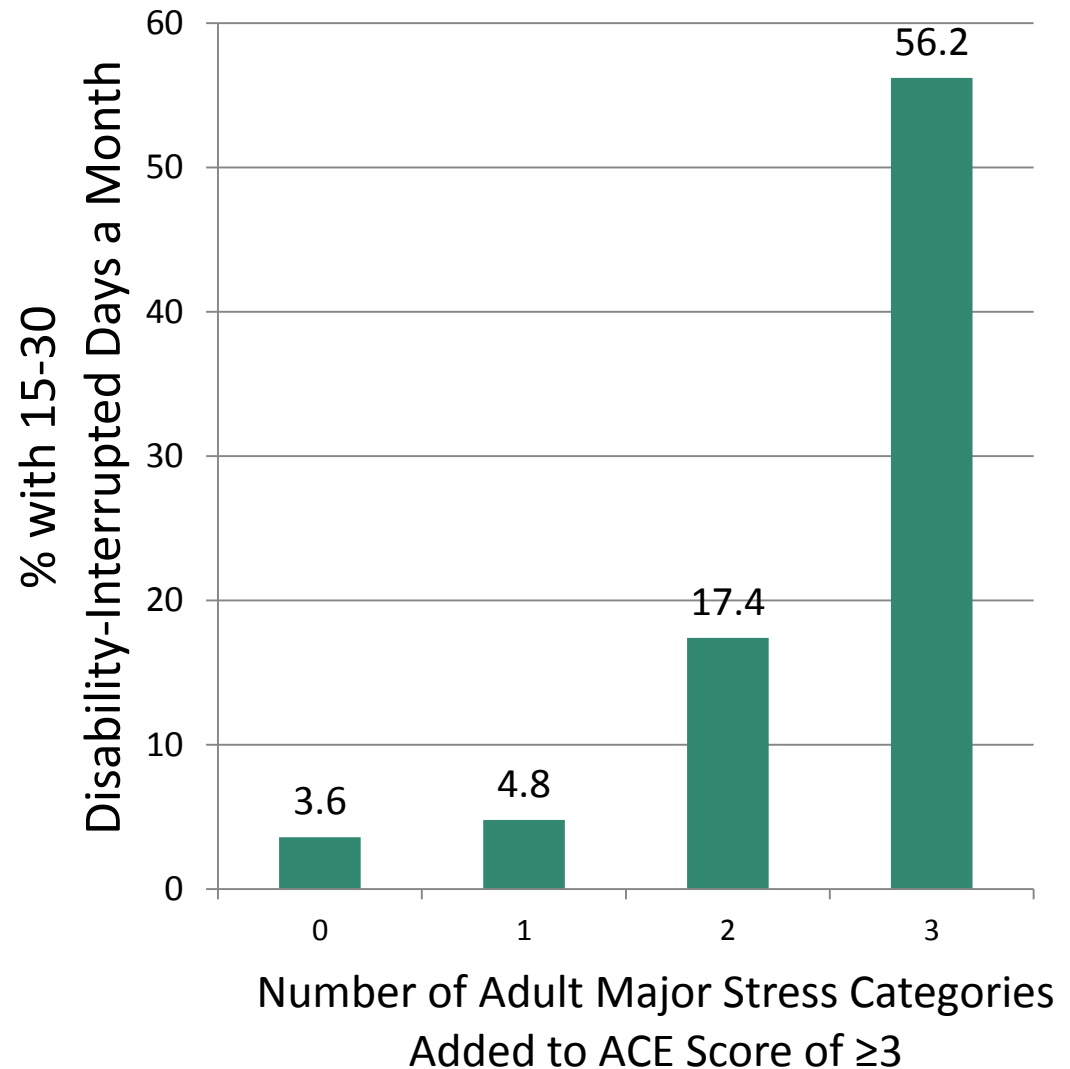
# Adult Adversity Compounds Effects

**Adults with  $\geq 3$  ACEs**

**Plus**

**Major Stress Categories:**

- 1. Homelessness**
- 2. Incarceration**
- 3. Chronic illness**
- 4. Separation/Divorce**
- 5. Severe Depression**
- 6. Work-related Injury/  
Illness**



# Outcomes Attributable to ACEs

## Risk

Smoking  
Heavy drinking  
Obesity  
Risk of AIDS  
Taking painkillers to get high  
Obesity

## Prevalent Disease

Cardiovascular  
Cancer  
Asthma  
Diabetes  
Auto immune  
COPD  
Ischemic heart disease  
Liver disease

## Poor Mental Health

Frequent mental distress  
Sleep disturbances  
Nervousness  
MH problem requiring medication  
Emotional problems restrict activities  
Serious & persistent mental illness

## Intergenerational ACE Transmission

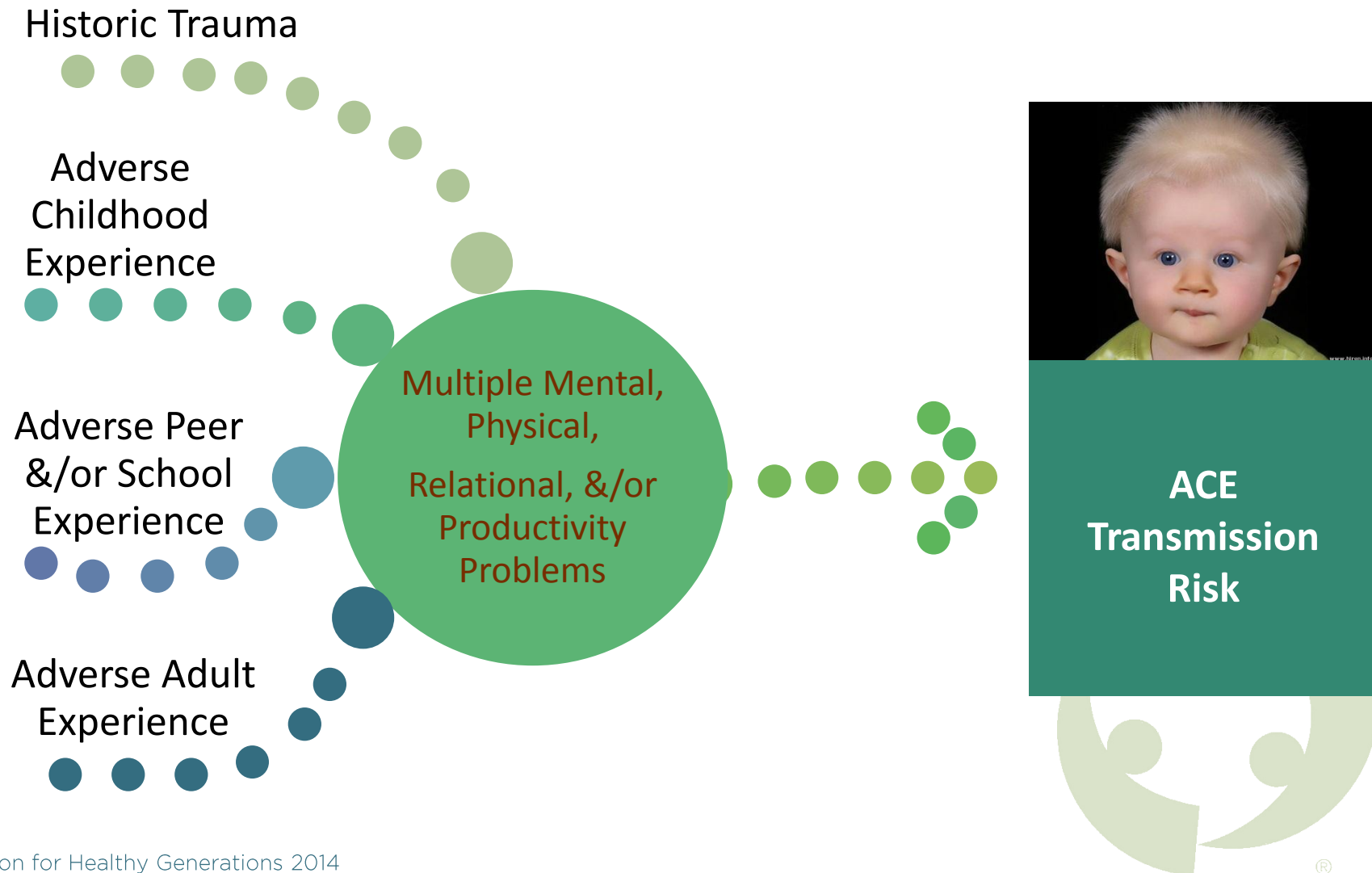
Mental Illness  
Drugs or Alcohol Problem  
Multiple divorces, separations  
Victim of family violence  
Adult incarceration

## Health & Social Problems

Fair or poor health  
Life dissatisfaction  
Health-related limits to quality of life  
Disability that impedes daily functioning  
Don't complete secondary education  
Unemployment  
History of adult homelessness



# Cascade of Experience- Societal Response Matters



# The Help that Helps

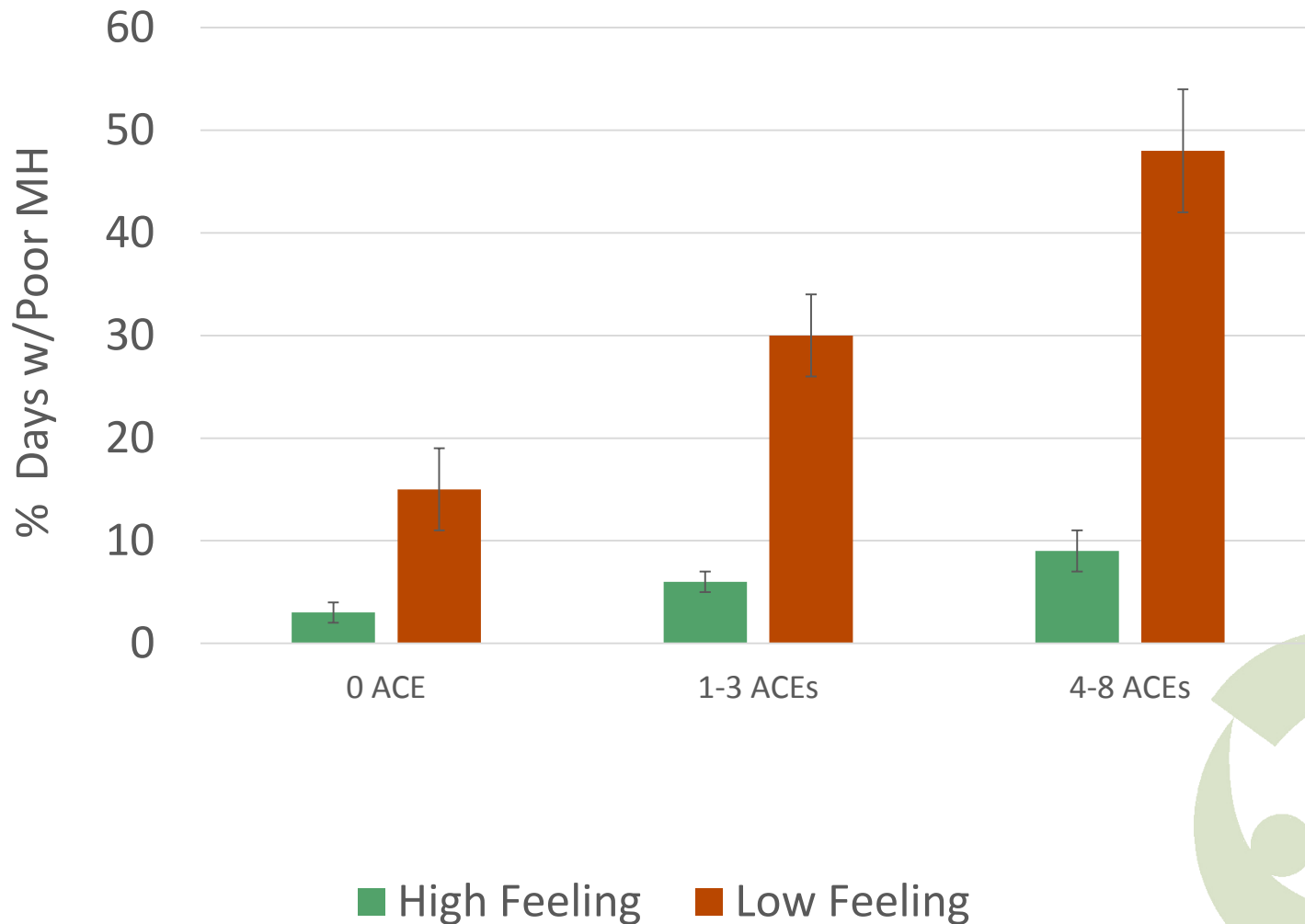
## Three Resilience Themes Each Make a Difference

They are even more powerful when we Layer Up...

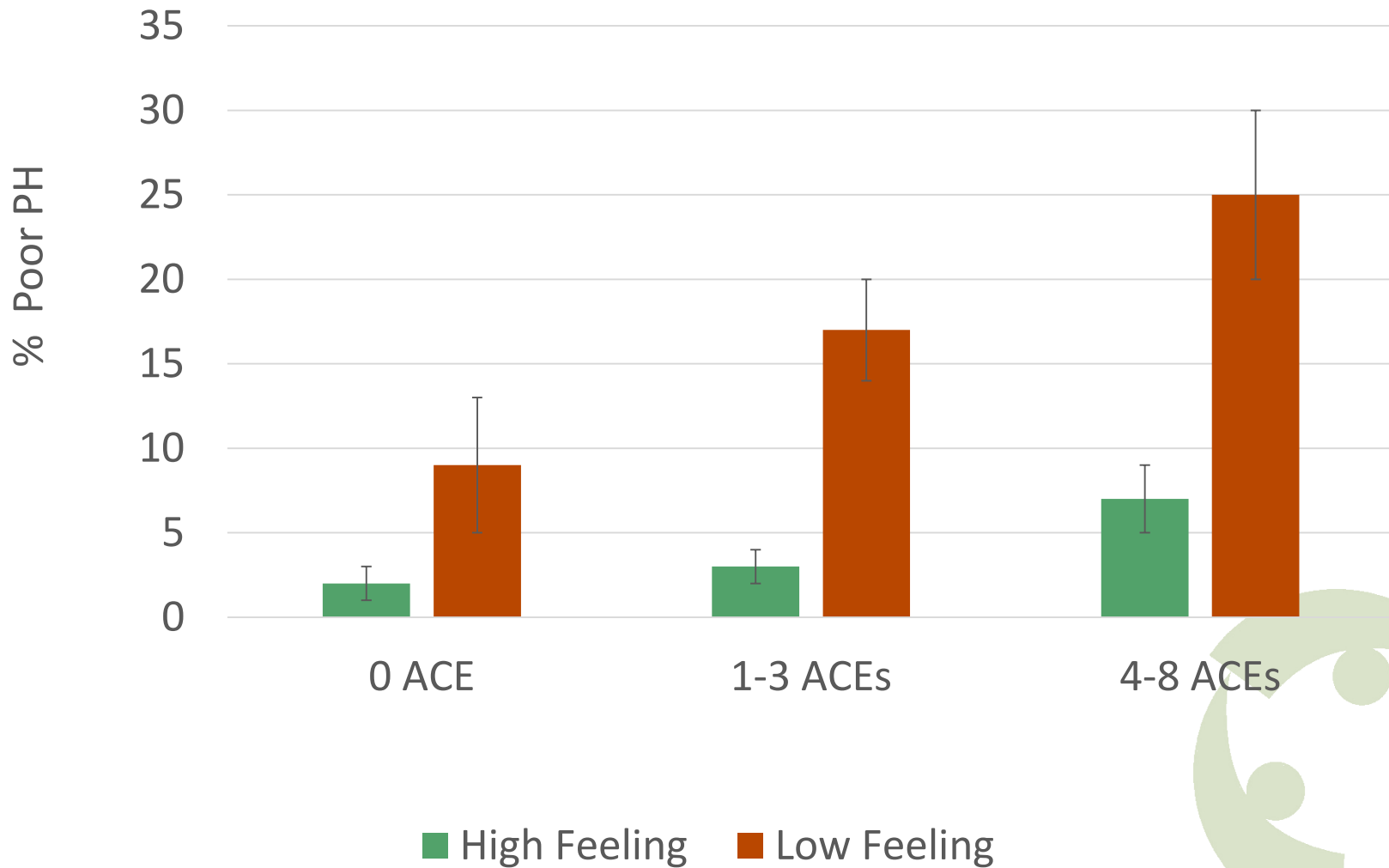
1. **Feeling** socially & emotionally supported, satisfied with life and hopeful
2. **Experiencing** hope plus two or more people who give concrete help when needed
3. **Community reciprocity** in watching out for children, intervening when they are in trouble, asking for help from friends and doing favors for one another (Community Reciprocity).



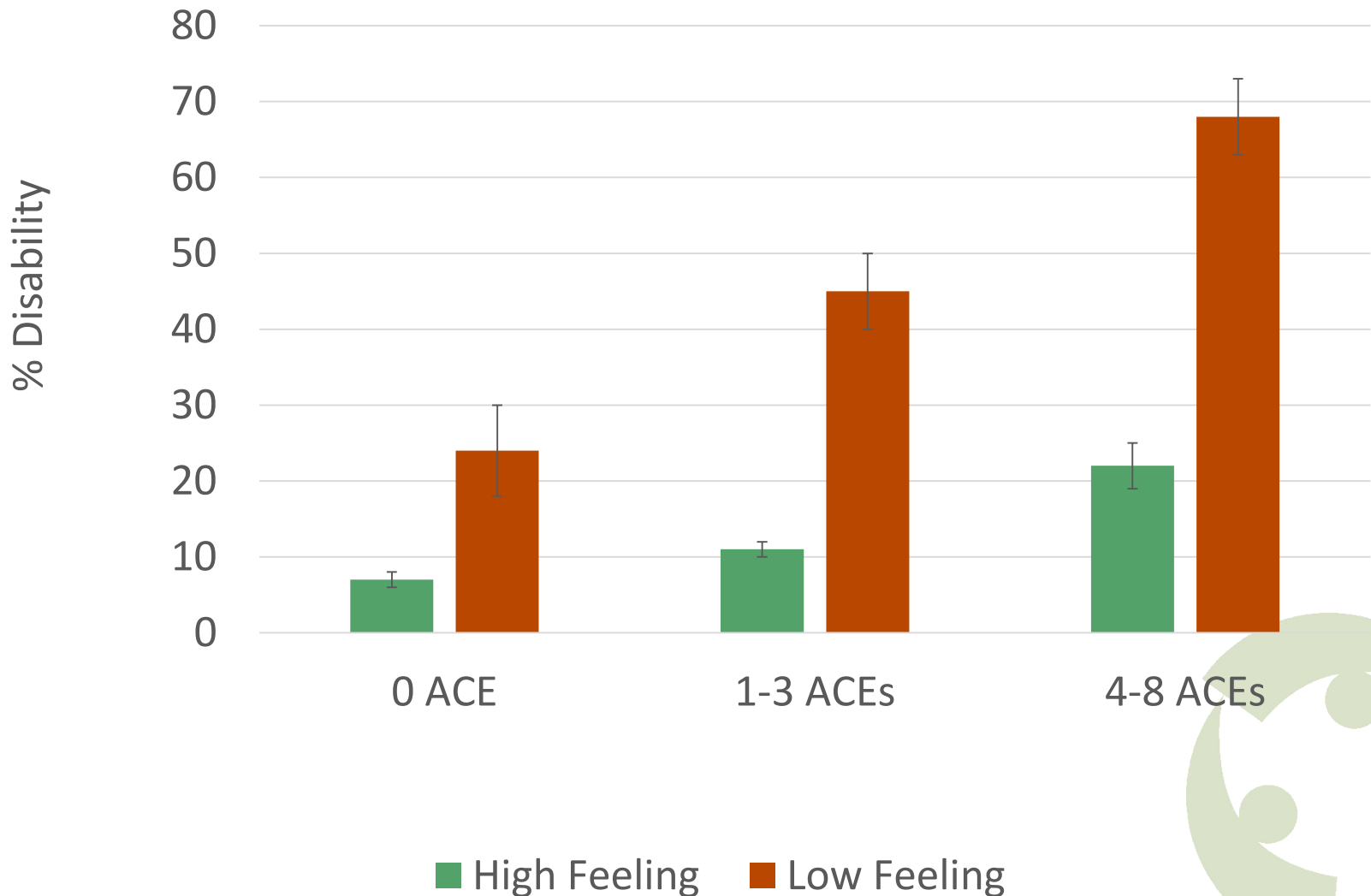
# Poor Mental Health Days & Feeling Supported, Satisfied, Hopeful



# Poor Physical Health & Feeling Supported, Satisfied, Hopeful

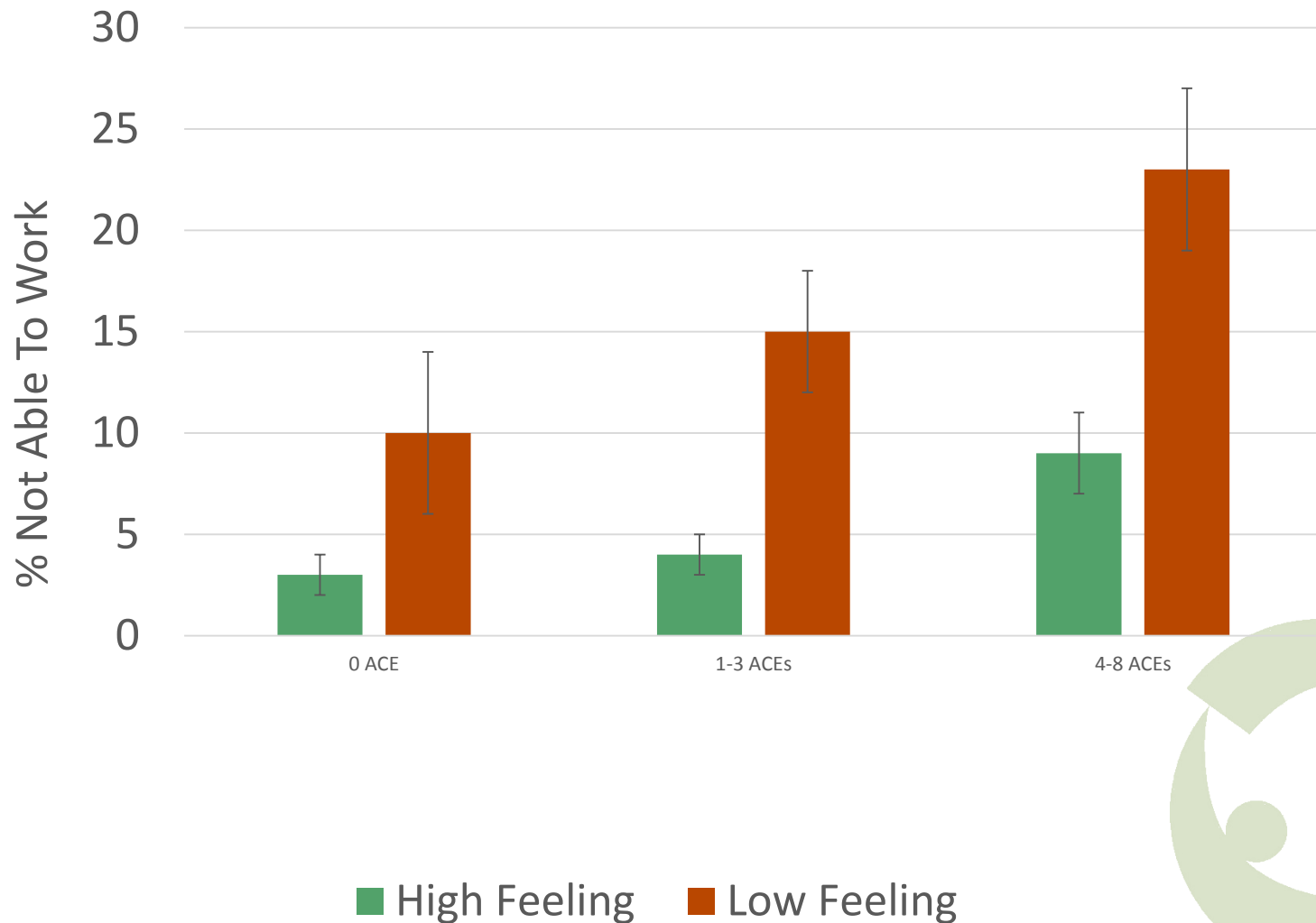


# Functional Disability & Feeling Supported, Satisfied, Hopeful





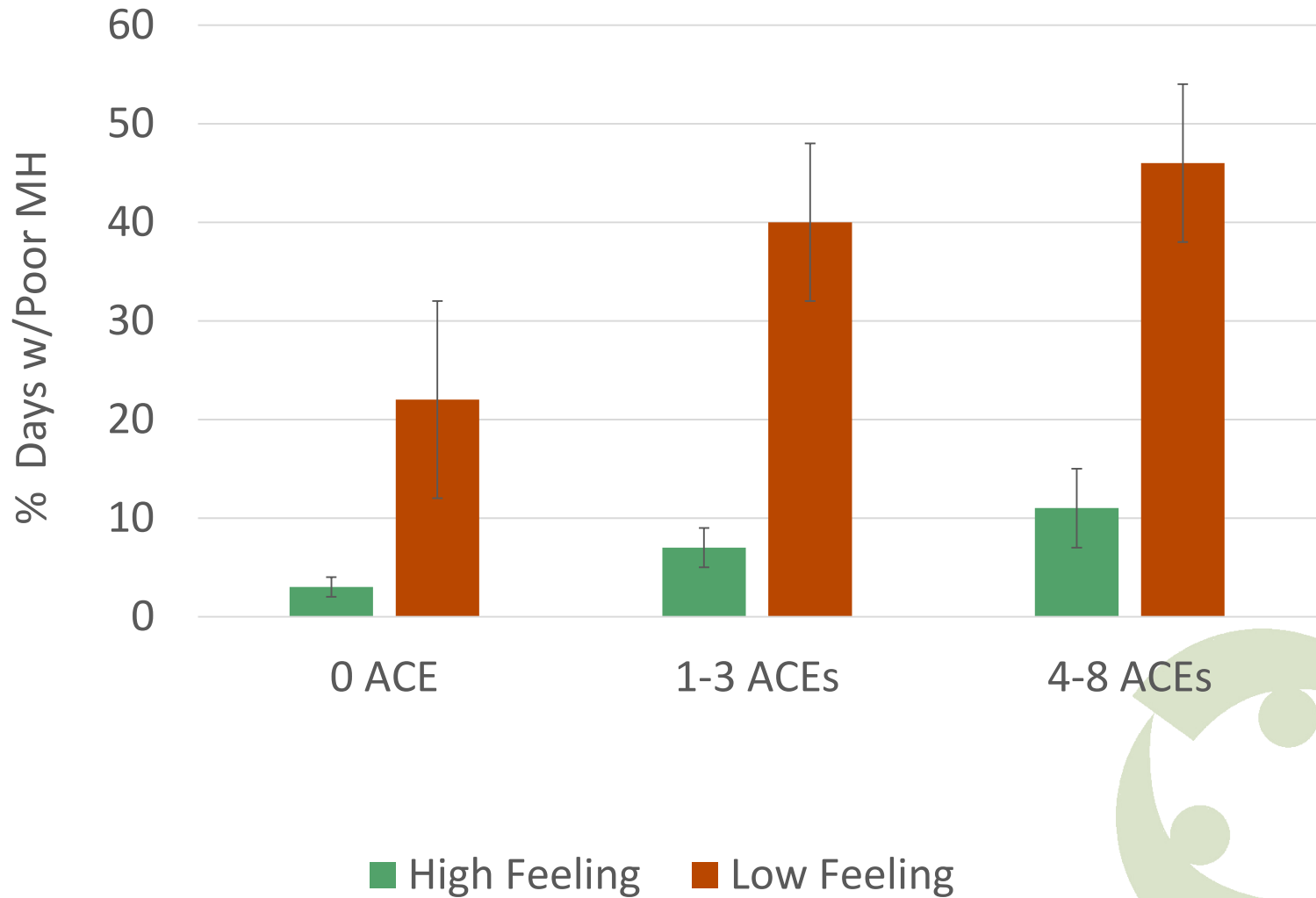
# Report Not Being Able to Work & Feeling Supported, Satisfied, Hopeful



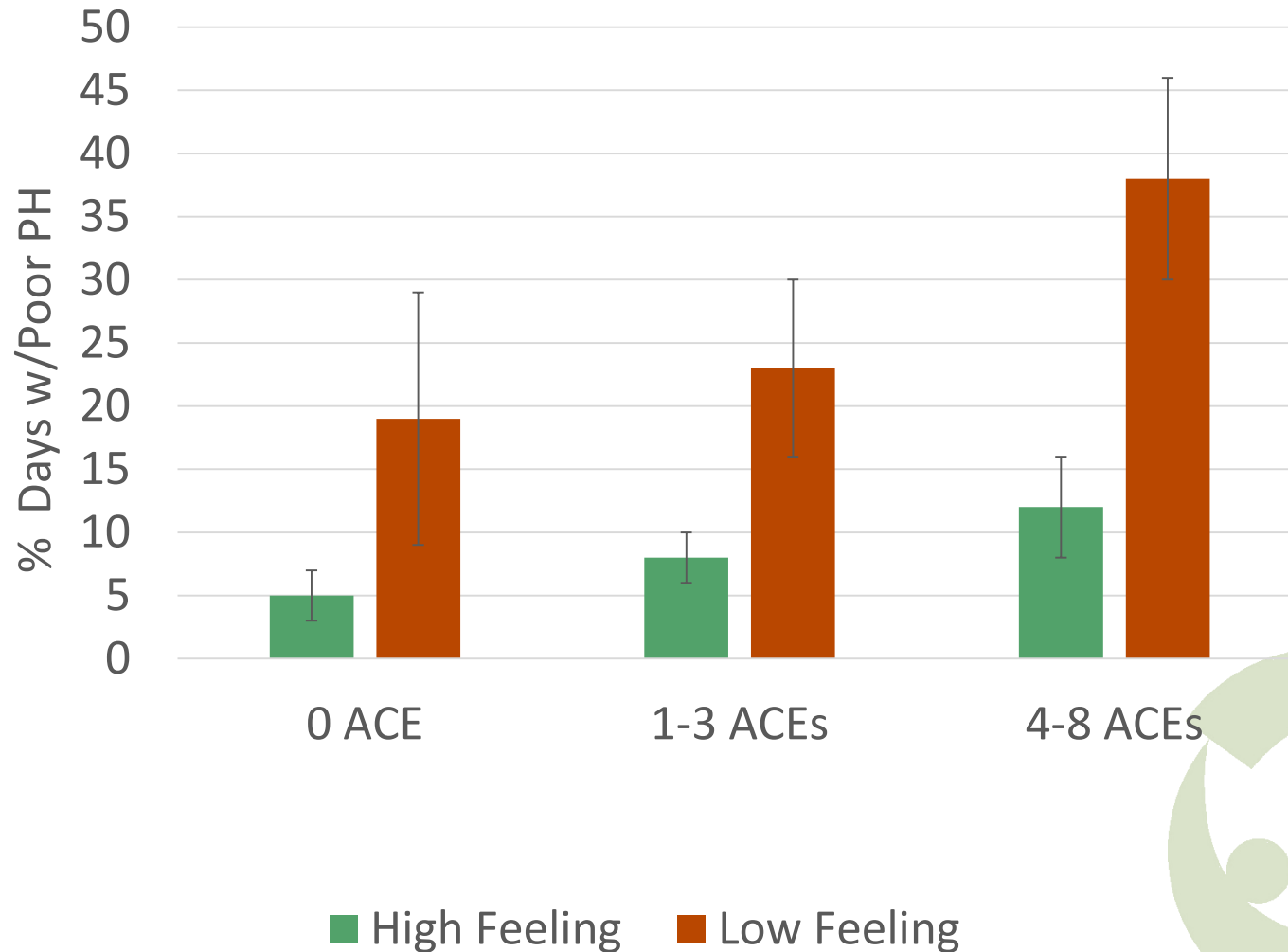
# Experiencing Hope + At Least Two People Who Help



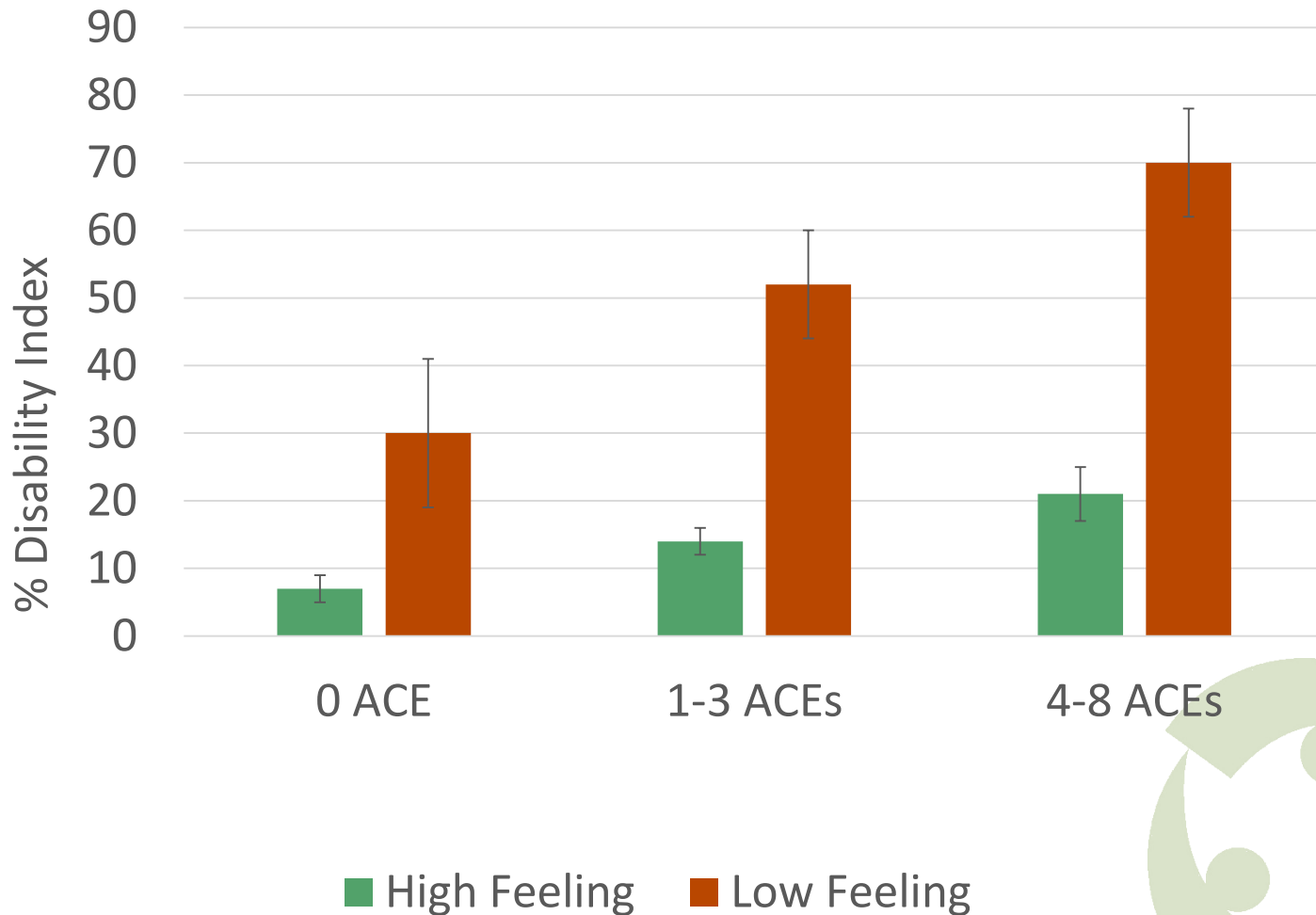
# Poor Mental Health Days & Experiencing Help & Hope



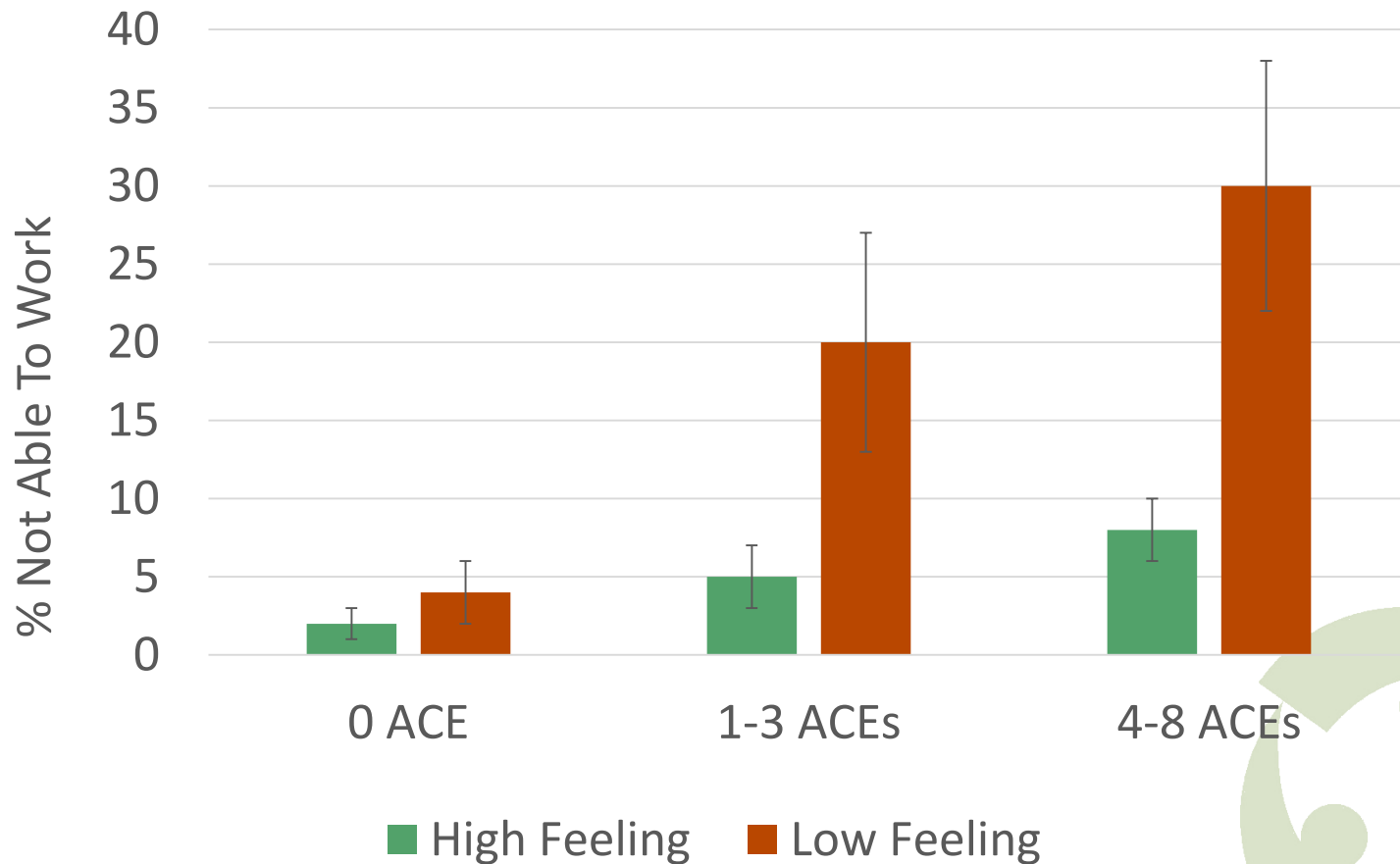
# Poor Physical Health Days & Experiencing Help & Hope



# Functional Disability & Experiencing Help & Hope



# Report Not Being Able to Work & Experiencing Help & Hope



# Community Reciprocity

- a. Watching out for children,
- b. Intervening when they are in trouble,
- c. Reaching outside friendship circle to seek help for friends
- d. Doing favors for one another (Community Reciprocity).

A Rising Tide Lifts All Boats

Mental Illness

Obesity

Alcohol consumption

Physical activity meeting recommended levels



# Layer Up

## Strengths in All 3 Resilience Factors: Population-Level Impacts

1. **Feeling** socially & emotionally supported, satisfied with life and hopeful
2. **Experiencing** hope plus two or more people who give concrete help when needed
3. **Community reciprocity** in watching out for children, intervening when they are in trouble, asking for help for friends and doing favors for one another (Community Reciprocity).





# Protocol: Ask, Listen, Educate, Affirm

*“We now know that childhood experience has a big impact on health throughout our lives. These ACE questions are important for us to work together to improve your health and the health of your family.”*

When you know the ACE score, ask:

*“How have these experiences affected you through your life?”*

Support the next steps in the conversation, e.g.:

*“People with high ACE scores often have to work harder in many aspects of their lives... how have you managed to do so well?”* (Build from their answer to affirm their strengths and resilience.)

*“I am sorry these things happened in your childhood. We didn’t know back then; this science is new. Now that we know about the power of ACEs, how would you like to use that information to improve the health of your family?”*

# Develop Learning Collaborative; Systematically Test Innovation

ACE-Informed Communication with Customers

Decision Aids Informed by ACE Impacts to Executive Function

Screen for Depression among High ACE Patients, Use  
Combination to Improve Predictive Value of Health Testing

Consider Two Generations in Patient Interaction – Education &  
Support Should Include Reducing the Odds of High ACE Scores in  
the Next Generation

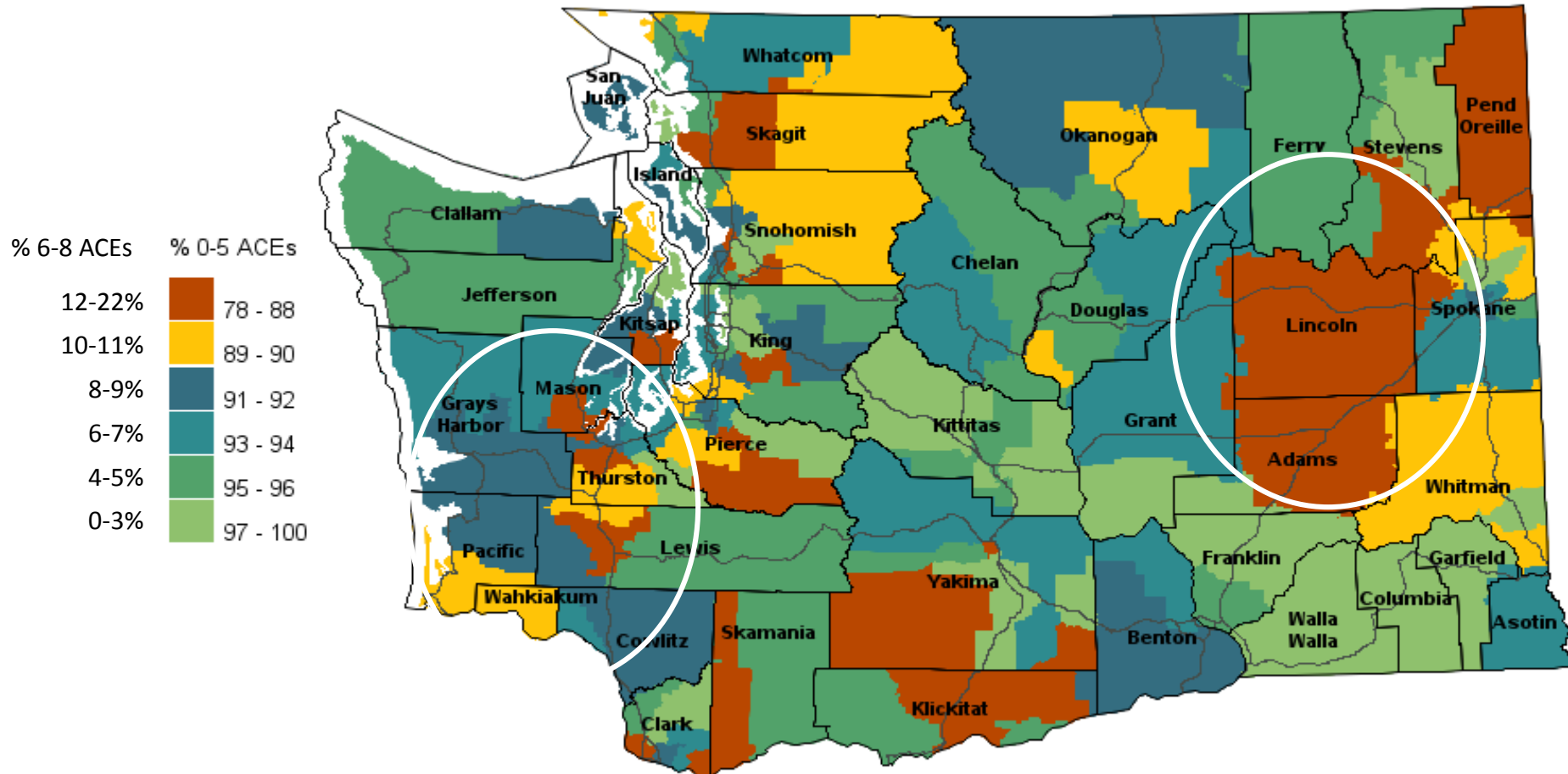


# Differential Help & Resource Distribution

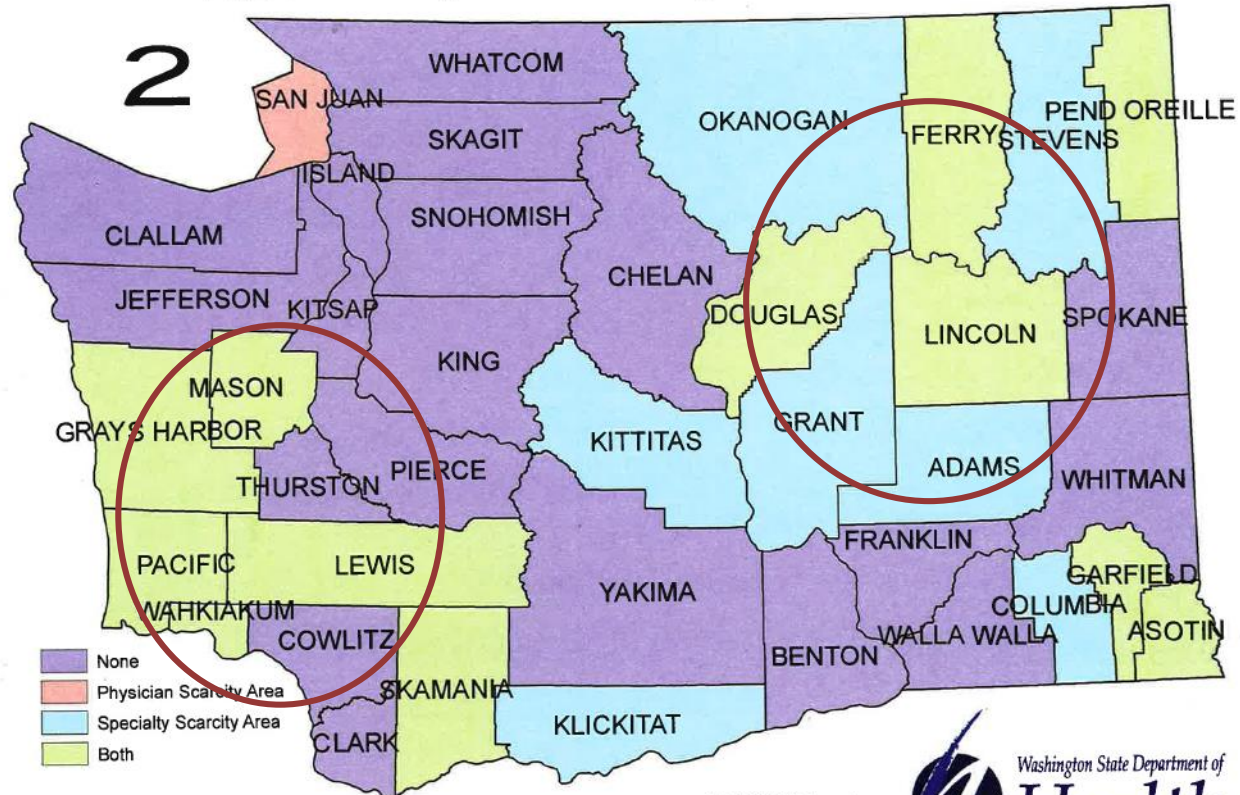


# Population with $\geq 6$ ACEs

## Ages 18-64



## Physician Scarcity Areas in Washington State, August 2007

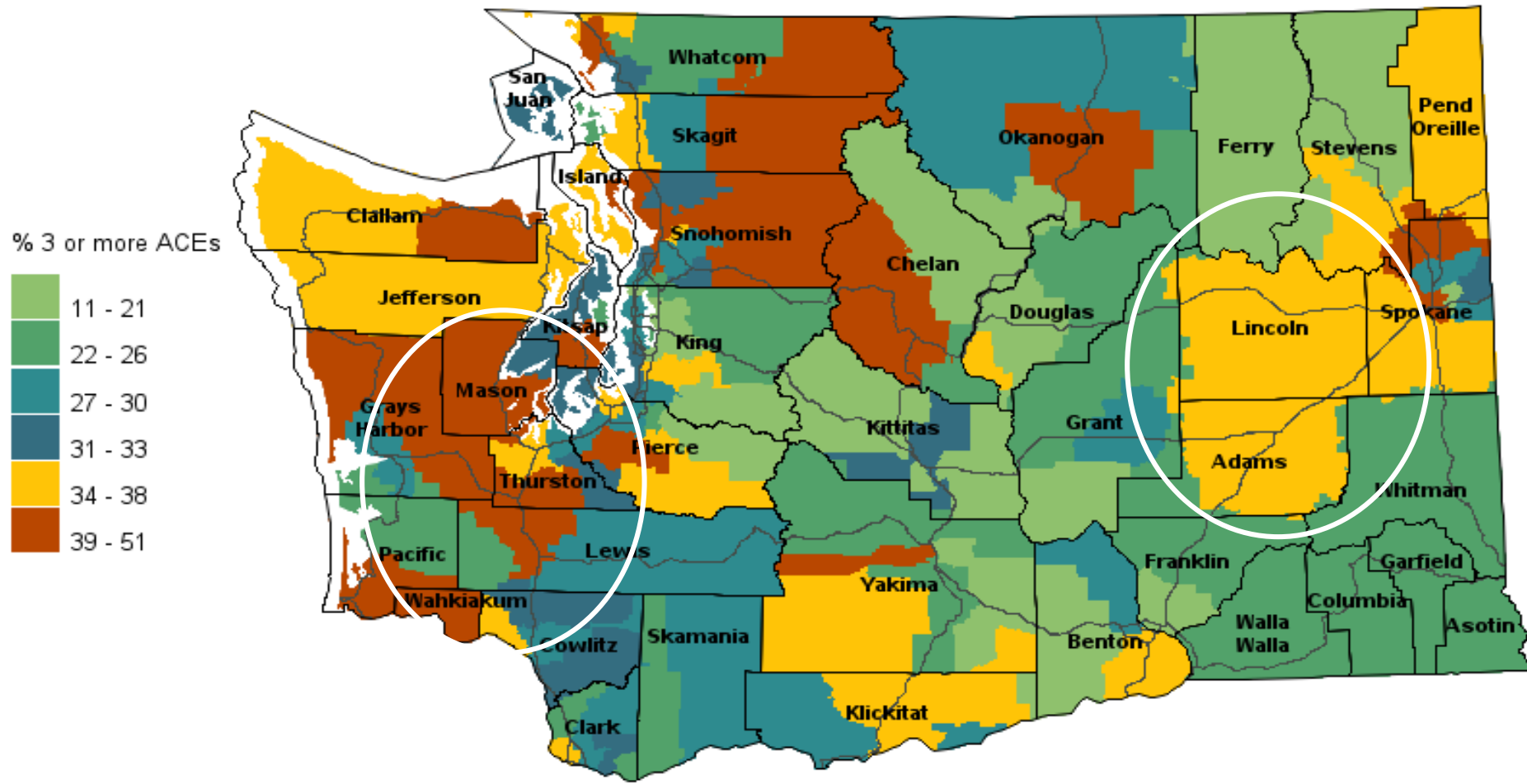


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# Population with $\geq 3$ ACEs, Ages 18-64

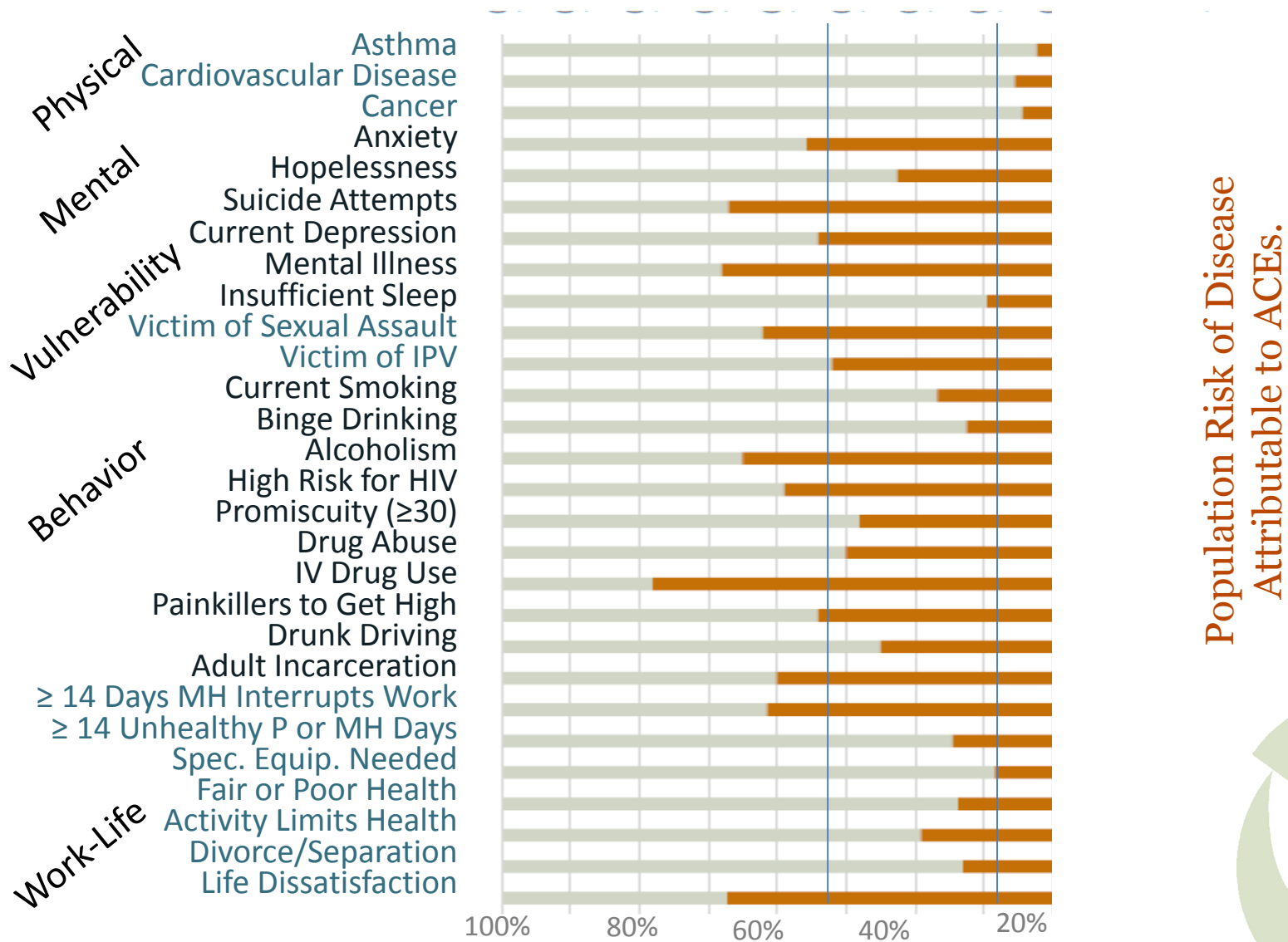


# New Era of Workforce Investment

1. **Effects Whole Person and Context** of Family, Community & Society - Understands Behavior as Language of Adaptation
2. **Considers Experience Over Time** - Prevents Escalation of Toxic Stress; Interrupts Accumulation and Transmission
3. **Invests in Positive Adaptation** through Healthful Relationships, Cultural Integrity & Hope-filled Engagement
4. **Employs Dual Generation Strategies** - Intentional Supports are Sensitive to Age/Stage and History of Adversity
5. **Shifts the Status-Quo Interplay of Stress & Neurogenesis** throughout Peer & Universal Systems



# The Magnitude of the Solution



Population Risk of Disease  
Attributable to ACEs.

ACE  
Prevention  
Reliably  
Predicts  
Concurrent  
Rate  
Reductions  
for All ACE-  
Attributable  
Problems







foundation for  
**healthy generations**

CREATING ENDURING HEALTH EQUITY

# Thank You

