

# Building Healing Behavioral Health Systems:

## Trauma-Informed/Healing-Centered Organizational Transformation

Adverse and Positive Childhood Experiences among Youths in Behavioral Health Populations



# Behavioral Health Administration & Universities Partnership



## UM SOM Psychiatry Department

- Division of Child and Adolescent Psychiatry (DCAP)
- Systems Evaluation Center (SEC)



## Bowie State University

- Department of Behavioral Sciences and Services

# Maryland Childhood Trauma and ACEs

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*The following data is available due to the efforts of:*

- The Maryland Department of Health: Prevention and Health Promotion Administration Center for Tobacco Prevention and Control
- The Maryland youth who participated in the surveys used in this project

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# Building Healing Behavioral Health Systems:

Adverse Childhood Experiences and  
Positive Childhood Experiences Background



# What are Adverse Childhood Experiences?

## ACE Overview

Childhood exposure to physical, emotional, or sexual abuse, neglect, and other stressors are known as adverse childhood experiences (ACEs)

- Experiencing violence, abuse, or neglect
- Witnessing violence
- Experiencing household substance misuse
- Experiencing household mental health problems
- Instability in the home (parental separation/divorce or household members in jail or prison)

# What are Adverse Childhood Experiences?

## ACE Surveys

### Household ACEs

#### Kaiser-Permanente<sup>a</sup>

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect
6. Parental Separation or Divorce
7. Household Domestic Violence
8. Household Substance Abuse
9. Household Mental Illness
10. Household Incarceration

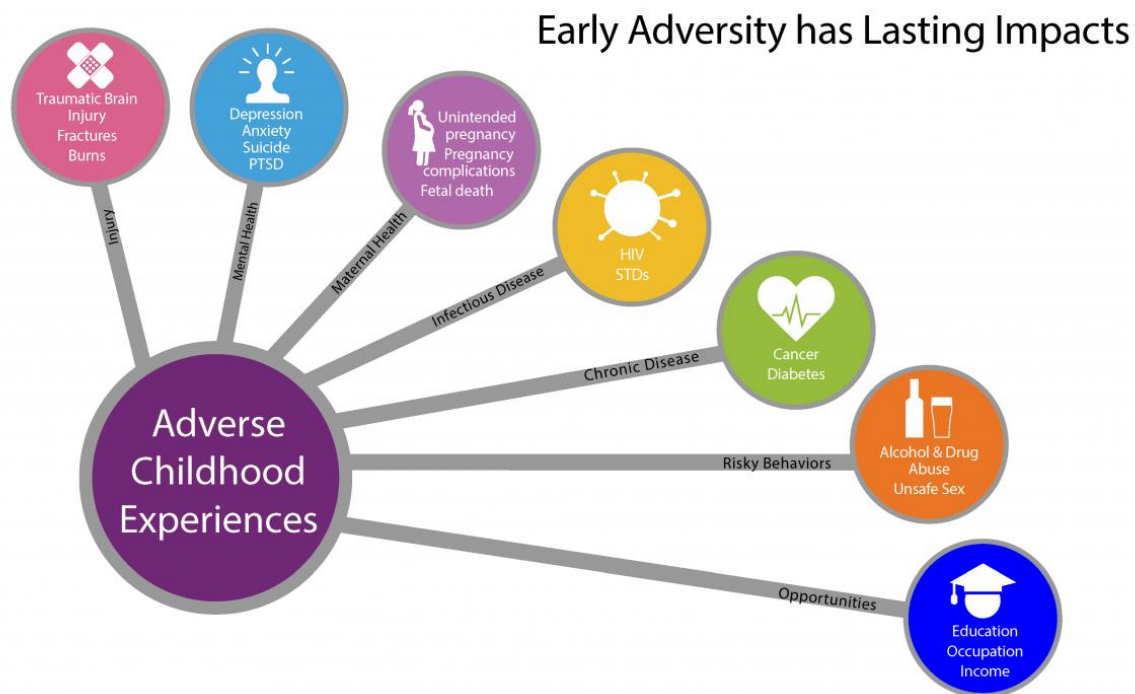
### Community ACEs

#### Philadelphia Urban Expansion<sup>b</sup>

1. Witnessed Violence
2. Felt Discrimination
3. Adverse Neighborhood Experience
4. Bullied
5. Lived in Foster Care

# What are Adverse Childhood Experiences?

## Negative Effects of ACEs



ACEs are linked to chronic health problems, early mortality, mental health problems, and substance use in adulthood.

ACEs contribute to increased frequency of:

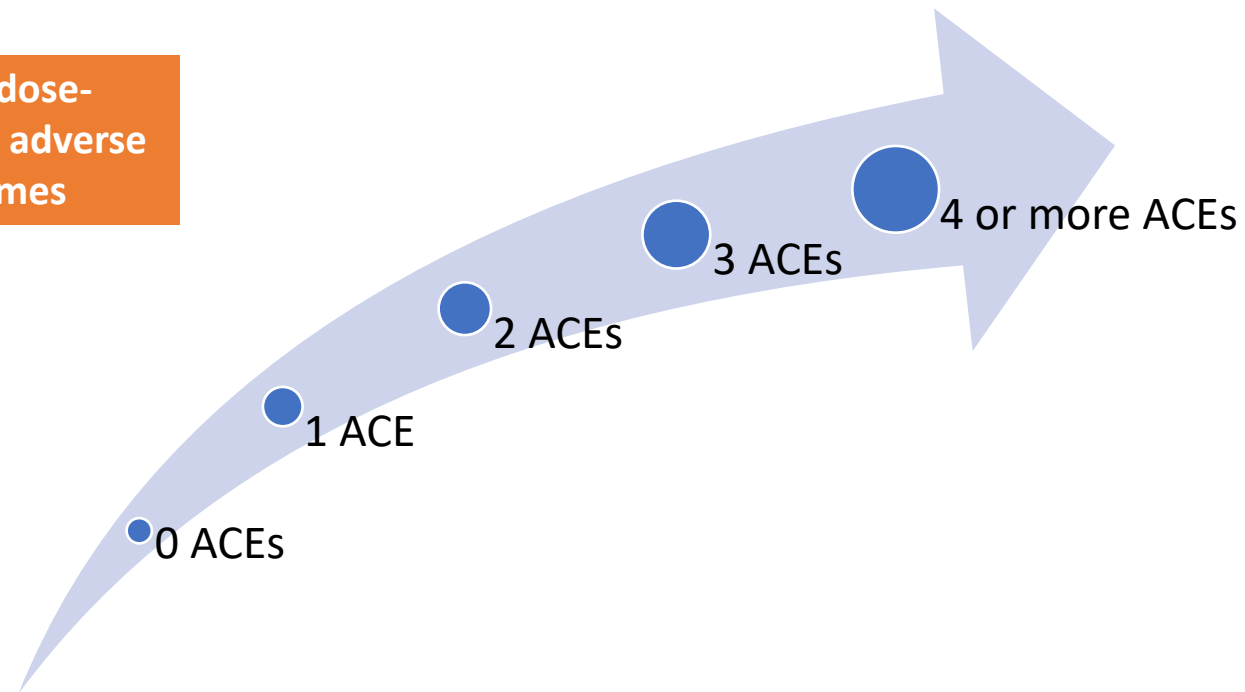
1. Reaction to Severe Stress and Adjustment (including PTSD)
2. Depression
3. Anxiety
4. Psychosis
5. Substance Use (Alcohol, Cannabis, Opioid, Other substance use)



# What are Adverse Childhood Experiences?

## Dose-Response Relationship

ACEs have been found to have a dose-response relationship with many adverse risk behaviors and disease outcomes



# Positive Childhood Experiences

1. Being able to talk openly to a family member or as a family about feelings and feel heard, accepted and supported.
2. Belief that family stood by them during difficult times.
3. Feeling safe and protected by an adult in the home.
4. Feeling supported by friends.
5. Having a sense of belonging and connection with a larger group who has “got your back” (e.g. school, church, clubs, neighborhood, etc.).
6. Enjoyment of participation in community traditions.
7. Relationship with at least one non-parent adult who takes genuine interest in you.

**Positive childhood experiences show a dose-response relationship with adult depression and/or poor mental health, as well as adult-reported social and emotional support**



# Building Healing Behavioral Health Systems:

Key Take Aways



# Key Take Aways

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- **More students with behavioral health challenges experience all ACEs than students without behavioral health challenges.**
- **Positive Childhood Experience mitigate the impact of ACEs** on behavioral health challenges by 18-69% and are associated with reducing risk from specific ACEs by 18-83%
- **Having three or more ACEs is associated with increased behavioral health risks for**
  - Mental health indicators, such as depression or suicide attempt (2.0-3.5 times)
  - Current alcohol or marijuana use (2.2-3.0 times) and
  - Ever using other illicit substances (2.4-3.7 times)

# Key Take Aways

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## Specific ACEs are associated with increased risk for:

- **Mental Health Challenges** (1.2 - 5.2 times)
  - Increased risk for Mental Health Challenges are most associated with Emotional Abuse (4.1-5.0 times) and Household Domestic Violence (2.7-5.2 times)
- **Current Alcohol Use, Binge Drinking or Marijuana use** (1.4-4.7 times)
  - Increased risk for Current Alcohol Use, Binge Drinking, or Marijuana Use are most associated with Household Domestic Violence (3.5-4.7 times)
- **Ever using other illicit substances** (1.9-22.7 times)
  - Increased risk for ever using illicit substances is most associated with Domestic Violence (5.5-22.7 times)
  - Household incarceration is second most associated with increased risk for ever using illicit substances by 1.9-8.9 times



# Building Healing Behavioral Health Systems:

Focused Data Study Methods



# Focused Data Studies

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- Focused Data Studies aim to describe and contextualize the prevalence of childhood trauma and ACEs in the State of Maryland Public Behavioral Health System, with two studies planned each year.
  - Study 1 primarily used publicly available aggregated data to compare Maryland and Nationwide prevalence for youths and adults.
  - Study 2 (this report) performed a “deeper dive” into data for Maryland’s high school youth.
  - Study 3 (planned) will enable a “deeper dive” into Maryland’s middle school youth data.

# Methods: Data Source

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- 2021 High School Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS)
- Maryland collaborates with the Centers for Disease Control and Prevention (CDC) to collect behavioral risk data through school systems using different surveys for middle-school and high-school students.
- Data received from the Maryland Department of Health: Prevention and Health Promotion Administration Center for Tobacco Prevention and Control.



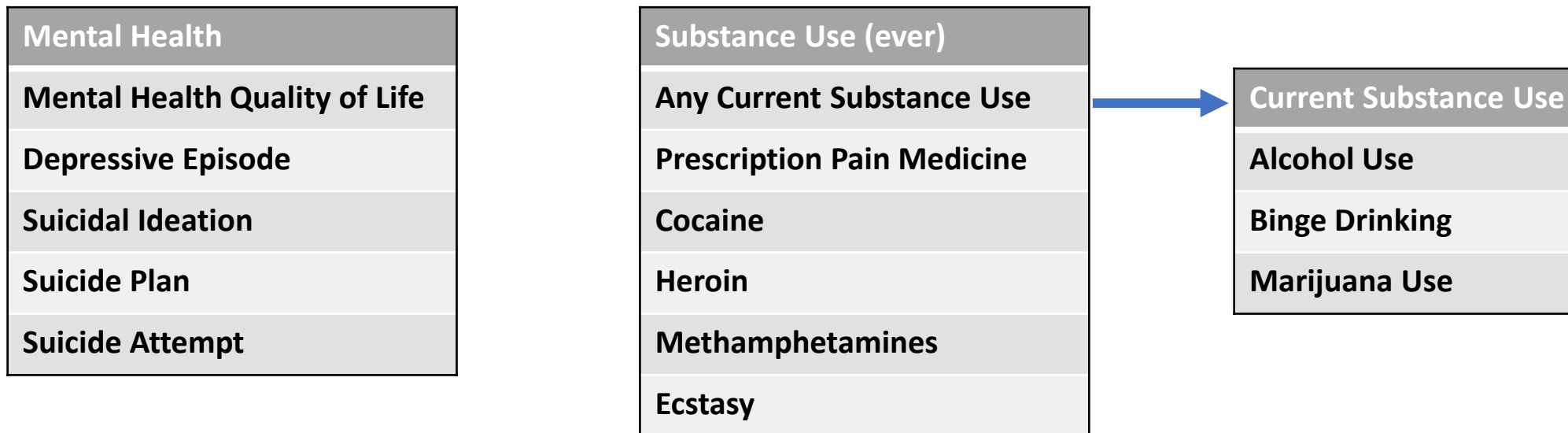
# Methods: Sample

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- The Positive Childhood Experiences (PCEs) analysis only includes students with behavioral health challenges, to best explore the impact of PCEs on these individuals.
- The remainder of the analyses includes all students to best understand the impact of each ACE across behavioral health indicators for individuals with behavioral health challenges compared to those without.
- All findings reported in this analysis are statistically significant unless otherwise stated.

# Methods: Identifying Individuals with Behavioral Health Challenges

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# Methods: ACEs available for Analysis

## ACE Surveys

### Household ACEs

#### Kaiser-Permanente<sup>a</sup>

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect
6. Parental Separation or Divorce
7. Household Domestic Violence
8. Household Substance Abuse
9. Household Mental Illness
10. Household Incarceration

### Community ACEs

#### Philadelphia Urban Expansion<sup>b</sup>

1. Witnessed Violence
2. Felt Discrimination
3. Adverse Neighborhood Experience
4. Bullied
  1. Bullied at School
  2. Electronic Bullying
5. Lived in Foster Care

Indicates Items Available for Analysis in the Maryland YRBS/YTS data

<sup>a</sup>Felitti, et al., (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ace) study. *American Journal of Preventive Medicine*, 14(4), 245–258.

<sup>b</sup>Source: [FindingsfromPhiladelphiaACESurveyandComparedACEQuestions.pdf](#)

# Methods: Identifying ACEs

- The original Kaiser ACE questions asked if individuals ever experienced each ACE with response options of Yes or No
- ACEs are counted in the YRBS/YTS when the following conditions are met:

| ACE  | YRBS/YTS Options   | ACE counted if             |
|--|--|----------------------------|
| <ul style="list-style-type: none"><li>• Emotional Abuse</li><li>• Household Domestic Violence</li></ul>  | Never<br>Rarely<br>Sometimes<br>Most of the Time<br>Always | Most of the time<br>Always |
| <ul style="list-style-type: none"><li>• Household Substance Use</li><li>• Household Mental Illness</li><li>• Household Incarceration</li><li>• Bullied at School</li><li>• Electronic Bullying</li></ul> | Yes<br>No  | Yes                        |

# Methods: ACE Count Threshold for Adverse Health Outcomes

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- The original 10-item Kaiser-Permanente ACE study found that an ACE count of 4 or more ACEs is implicated in poor health outcomes in adulthood
- The YRBS/YTS only collects 5 of the original Kaiser-Permanente ACEs, and 2 from the Philadelphia study
- Only the 5 Kaiser-Permanente items in the ACE counts for this analysis.
- Because fewer ACE items are collected in the YRBS/YTS, this analysis uses an ACE count of 3 or more ACEs as a threshold for increased poor outcomes in adulthood.

# Methods: PCEs available for Analysis

## Positive Childhood Experiences

1. Being able to talk openly to a family member or as a family about feelings and feel heard, accepted and supported.
2. Belief that family stood by them during difficult times.
3. Feeling safe and protected by an adult in the home.
4. Feeling supported by friends.
5. Having a sense of belonging and connection with a larger group who has “got your back” (e.g. school, church, clubs, neighborhood, etc.).
6. Enjoyment of participation in community traditions.
7. Relationship with at least one non-parent adult who takes genuine interest in you.

## PCE-like Experiences in YRBS/YTS

1. Participation in Extracurricular Activities at school such as sports, band, drama, clubs, or student government.
2. Feeling safe at school and on your way to or from school.
3. Having Food Security:
  1. Not worried that your food would run out before you got money to buy more.
  2. Did not run out of food when your family did not have the money to buy more.

Indicates Items Available for Analysis in the Maryland YRBS/YTS data

# Methods: Measurement of Increased Risk

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- Analysis included measuring the increased risk of having each ACE or decreased risk of each PCE with each behavioral health category
- Risk is measured by an odds ratio that indicates how many times more or less likely individuals are to have a specified ACE and behavioral health category
- The risks in this report are **not causal, they are associations**. For example, when discussing mental health and a specific ACE
  - **SAY**: There is a relationship between having experienced an ACE and experiencing mental health challenges
  - **NOT**: Experiencing an ACE causes mental health challenges

# Methods: Caveats

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- The YRBS/YTS uses 3 or more ACEs (of 5 collected) as a threshold for implications in adult health outcomes instead of the traditional 4 or more ACEs (of the 10 collected) by Kaiser-Permanente. As a result, findings on high ACE counts may or may not be comparable to other, publicly- available research.
- Some adverse outcomes for ACEs may not surface until adulthood. This report includes data collected from high school students. Because individuals may develop mental health or substance use issues after high school, the proportions for behavioral health outcomes will likely increase during adulthood.



# Methods: Caveats

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- Generally, ACE counts only include adverse events that occurred in childhood (before the age of 18).
- The YRBS/YTS asks students if they have ever experienced each ACE, without specifying events occurring in childhood, prior to age 18.
  - This analysis includes responses from 1,792 18-year-old students (6.4% of the weighted responses).
- It is possible that some ACEs reported by 18-year-old students were only experienced in adulthood and should not be counted as an adverse *childhood* experience.

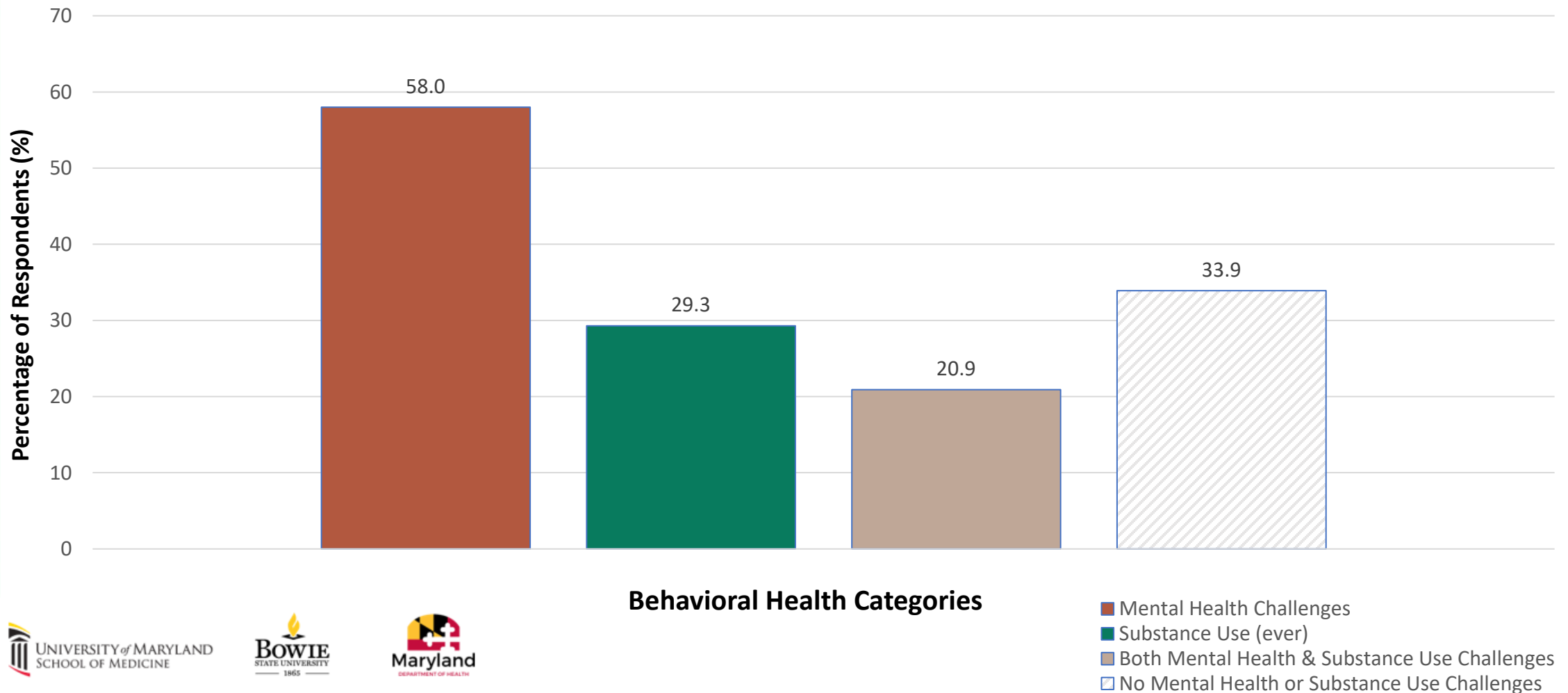


# Building Healing Behavioral Health Systems:

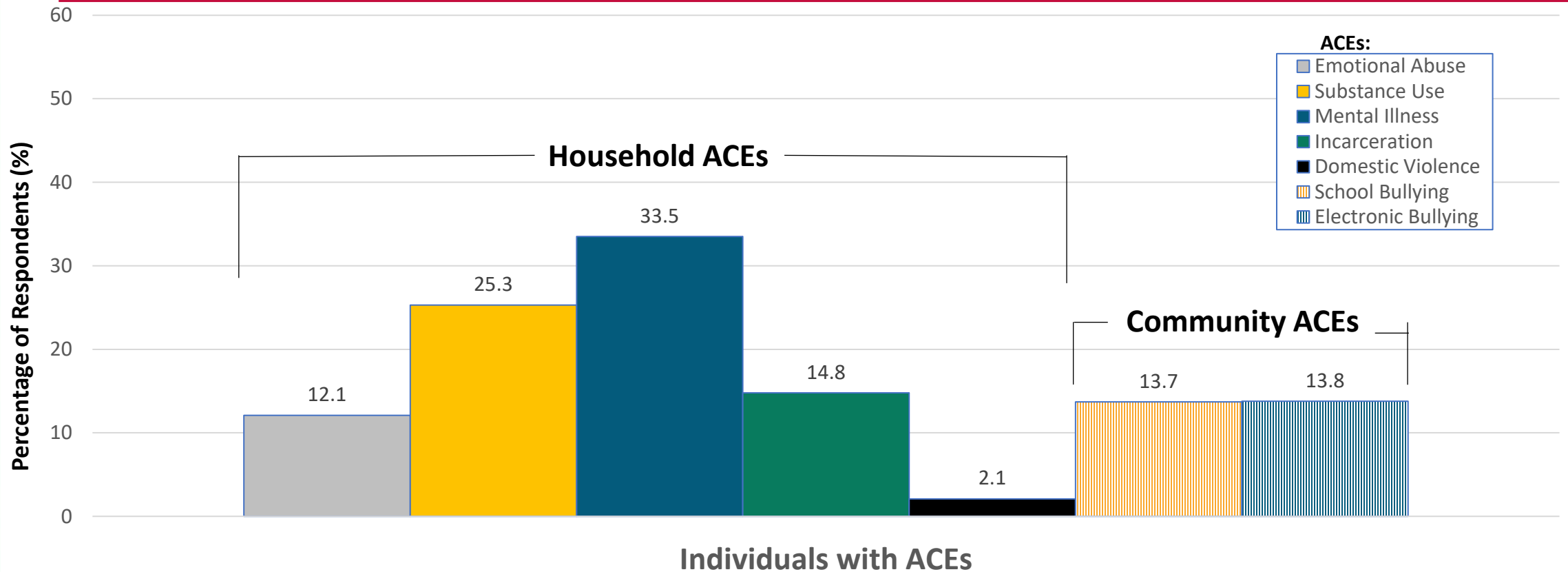
Behavioral Health Categories and Adverse Childhood Experiences



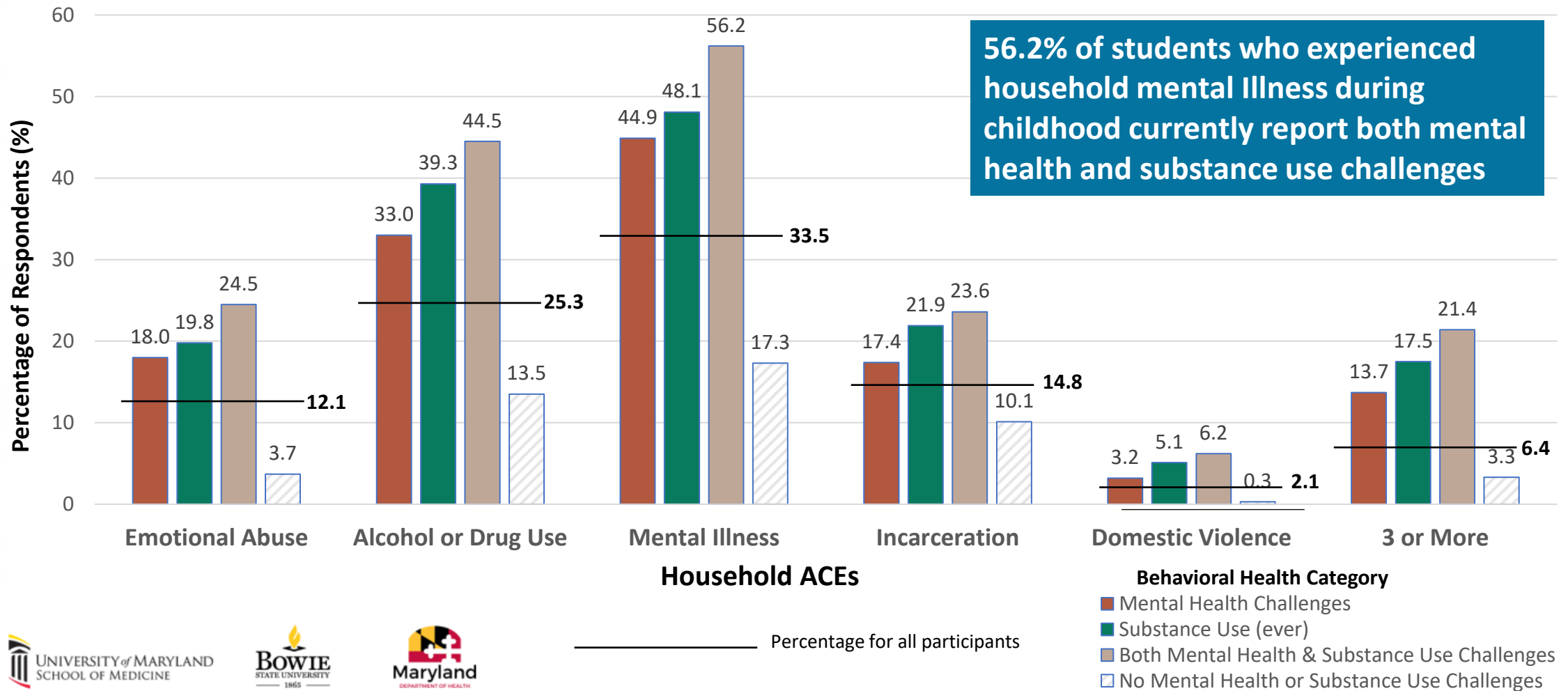
# Behavioral Health among High School Students



# ACEs among High School Students



# Household ACEs and Behavioral Health



# 3+ ACEs and Behavioral Health

Individuals with 3+ ACEs are more likely to experience behavioral health challenges

3.3 times more likely to experience mental health challenges

13.7%

MH

4.1%

No  
MH

Mental Health Challenges

2.8 times more likely to ever use substances

17.5%

SU

6.3%

No  
SU

Substance Use (ever)

3.3 times more likely to use substances and experience mental health challenges

21.4%

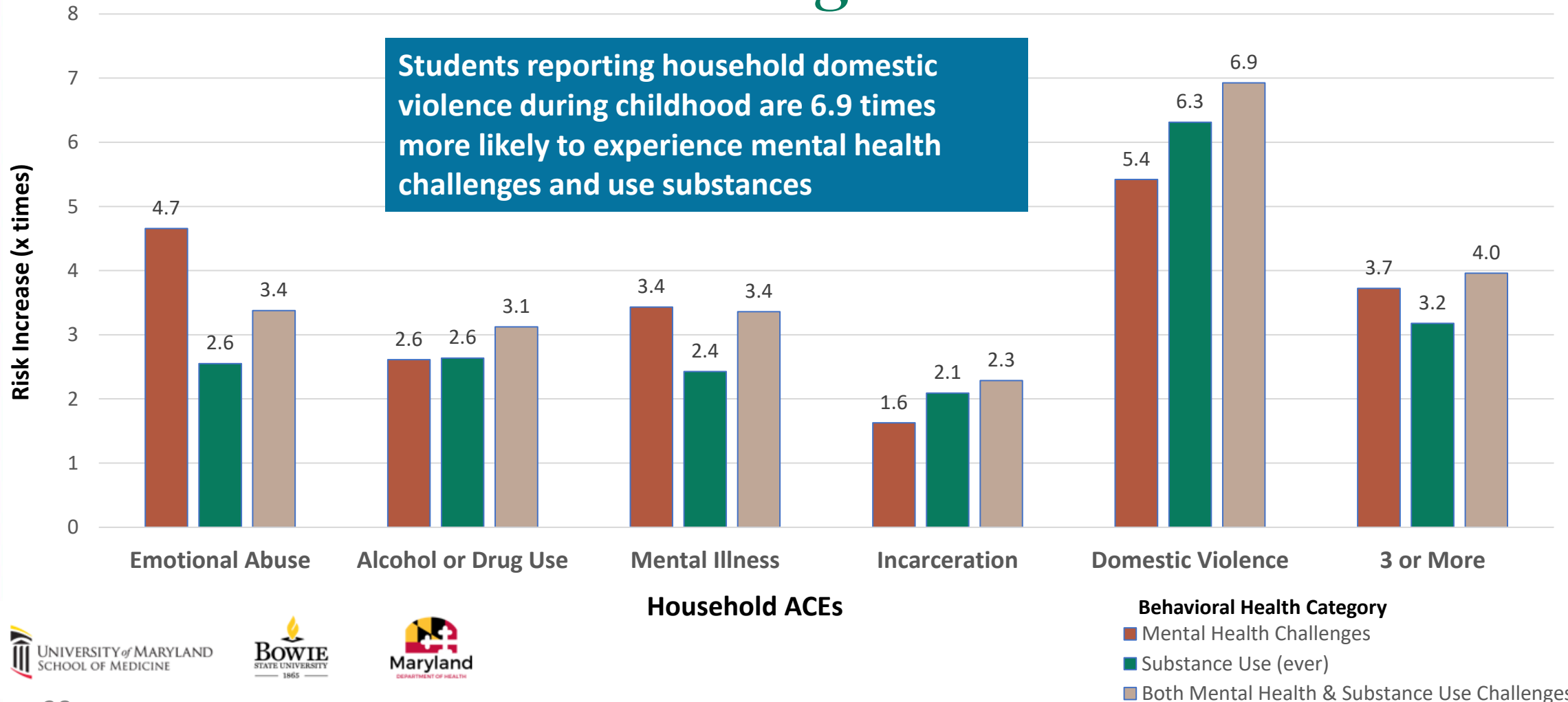
MH  
& SU

6.4%

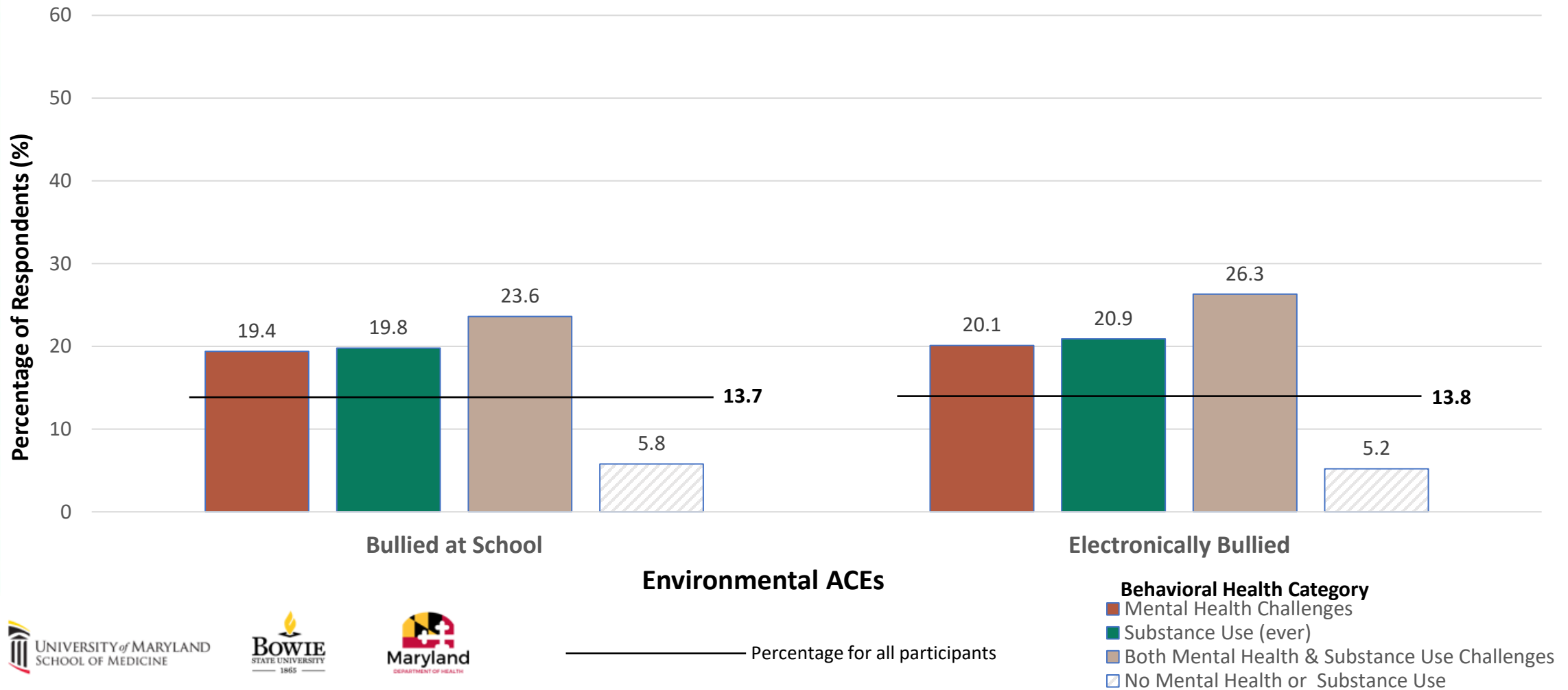
No  
MH  
& SU

Both Mental Health and Substance Use Challenges

# Household ACEs Increase Risk of Behavioral Health Challenges

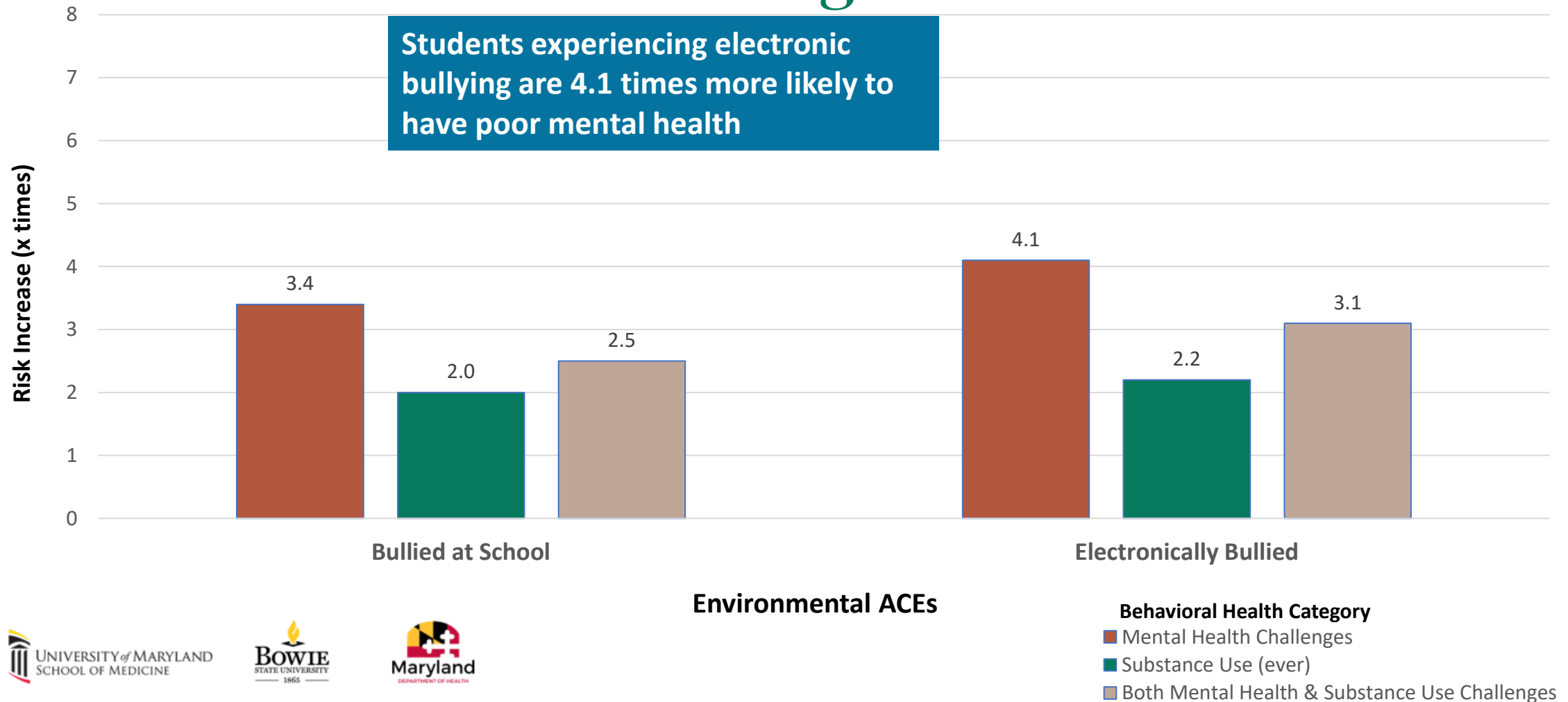


# Community ACEs and Behavioral Health





# Community ACEs Increase Risk of Behavioral Health Challenges



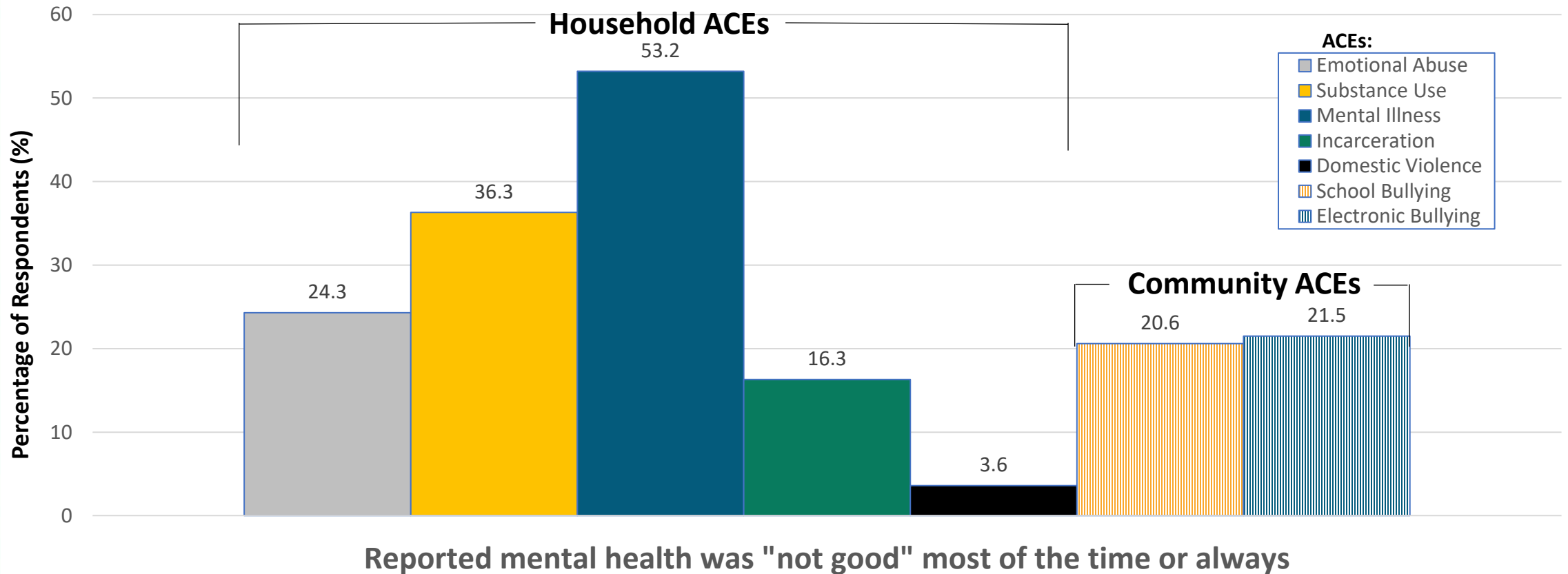


# Building Healing Behavioral Health Systems:

Mental Health Indicators and  
Adverse Childhood Experiences

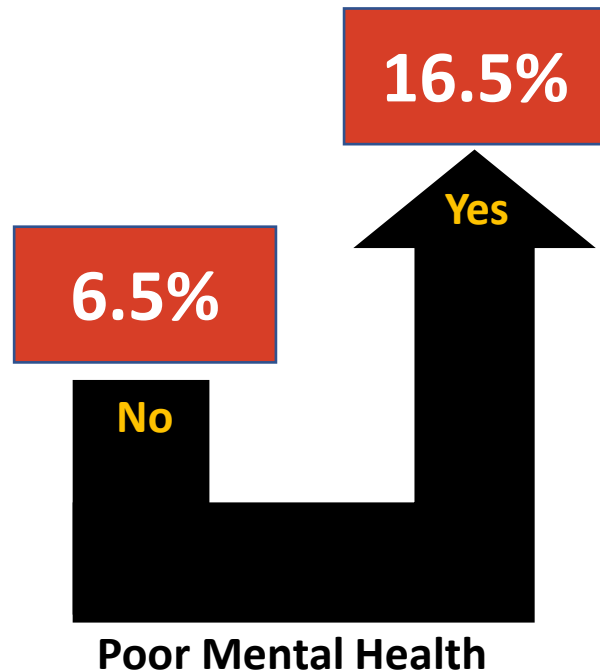


# Poor Mental Health and ACEs



# 3+ ACEs and Mental Health Indicators

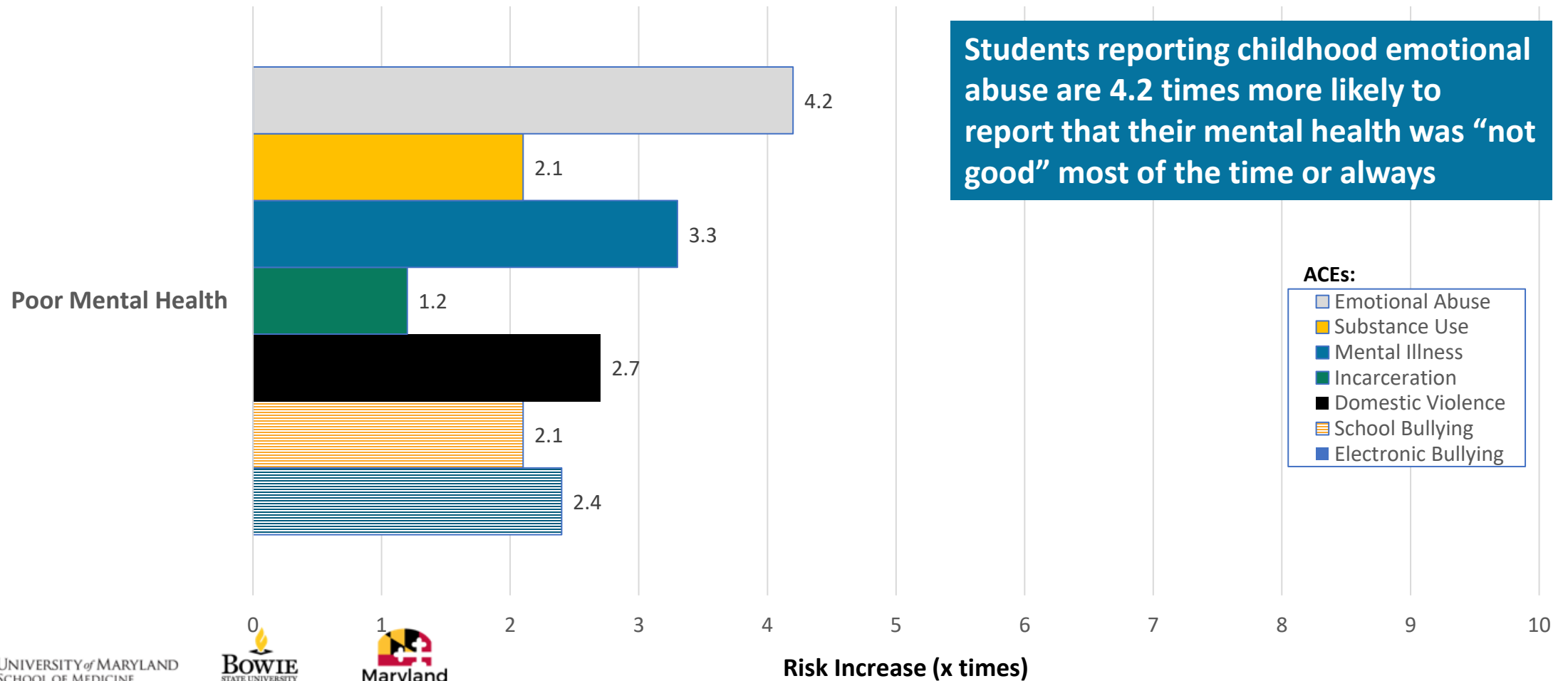
Individuals with 3+ ACEs are more likely to experience poor mental health



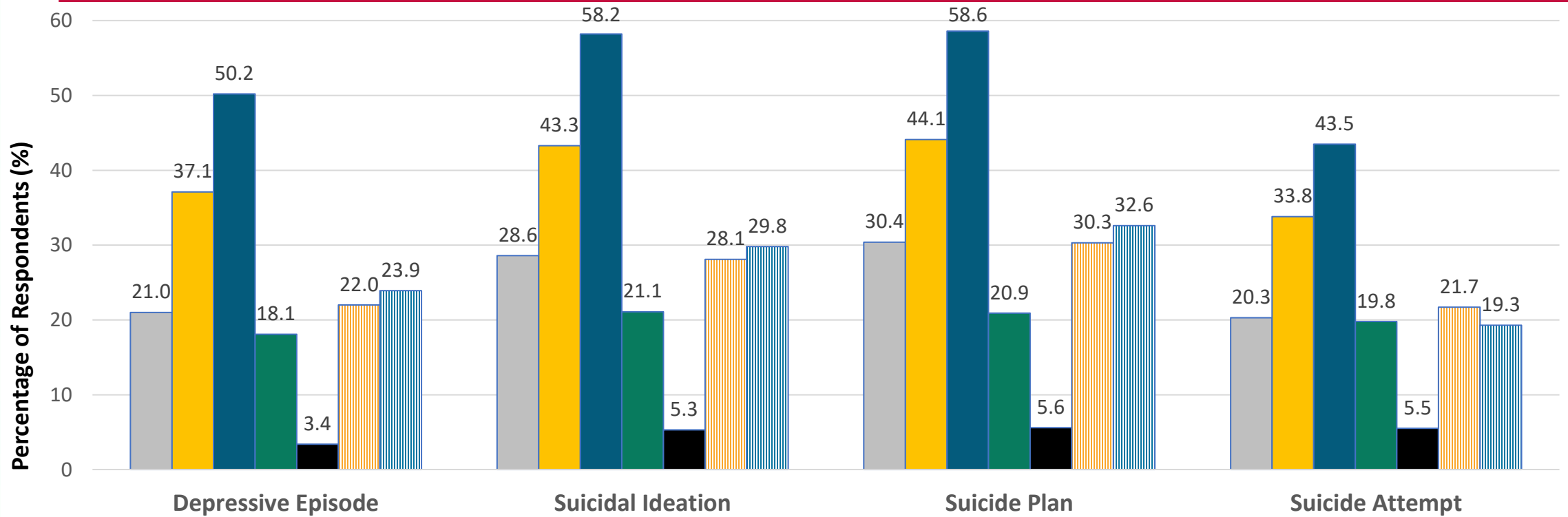
2.5 times more likely to report that their **mental health** was “not good” most of the time or always

Count of 5 of the original 8 ACE items available

# ACEs Increase Risk of Poor Mental Health



# Mental Health Indicators and ACEs

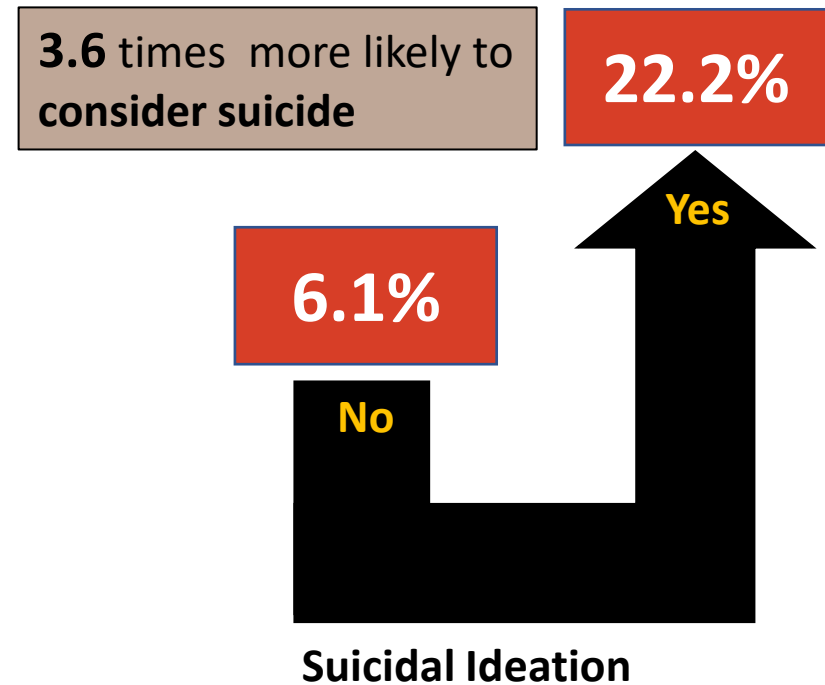
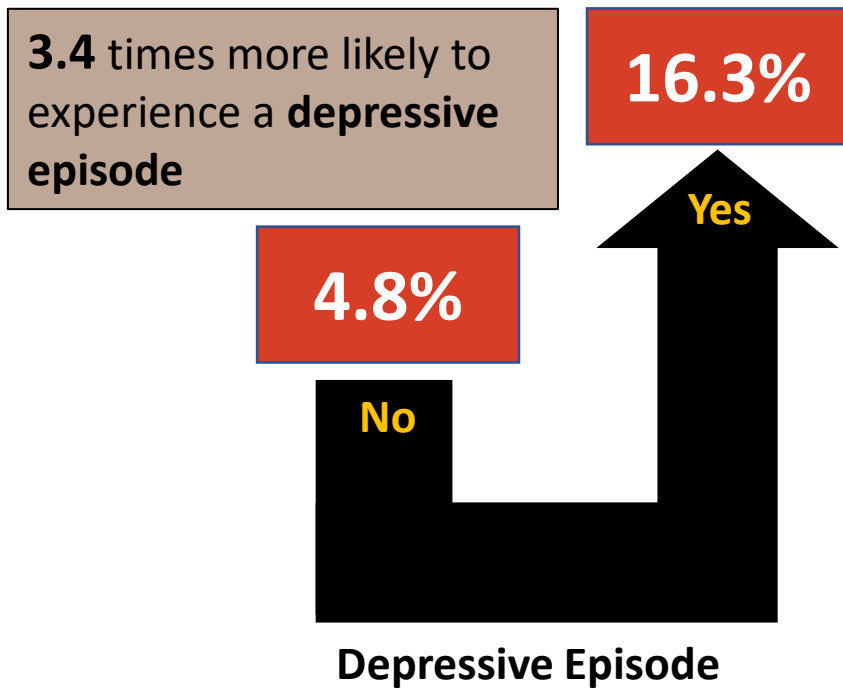


Mental Health Indicators

- ACEs:**
- Emotional Abuse
  - Substance Use
  - Mental Illness
  - Incarceration
  - Domestic Violence
  - School Bullying
  - Electronic Bullying

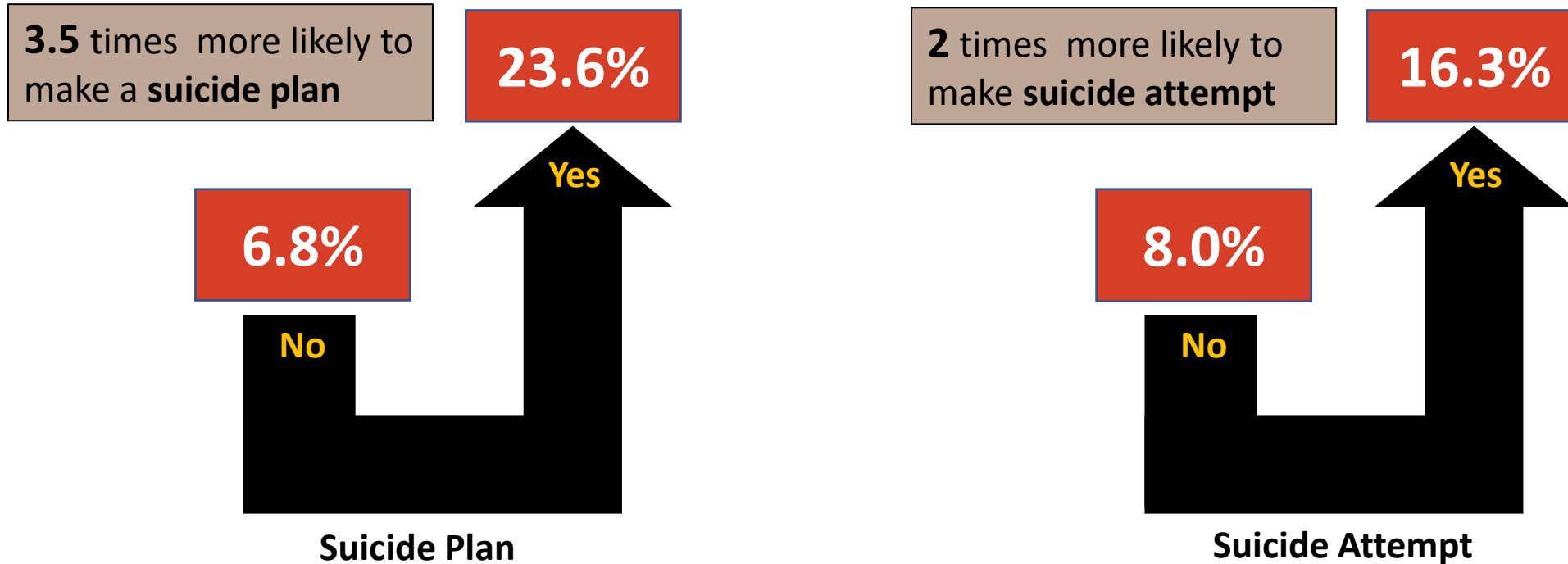
# 3+ ACEs and Mental Health Indicators

Individuals with 3+ ACEs are more likely to experience mental health difficulties



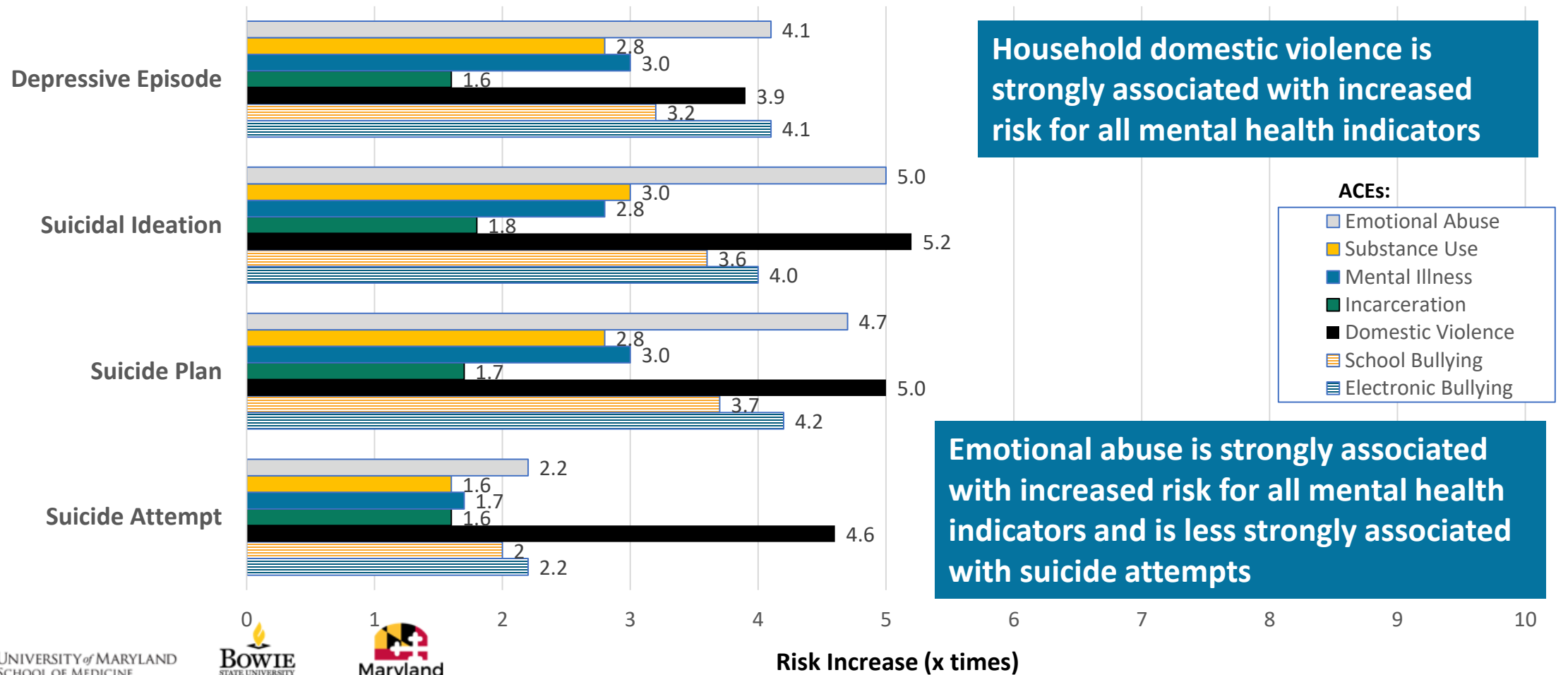
# 3+ ACEs and Mental Health Indicators

Individuals with 3+ ACEs are more likely to experience mental health difficulties





# ACEs Increase Risk of Mental Health Challenges



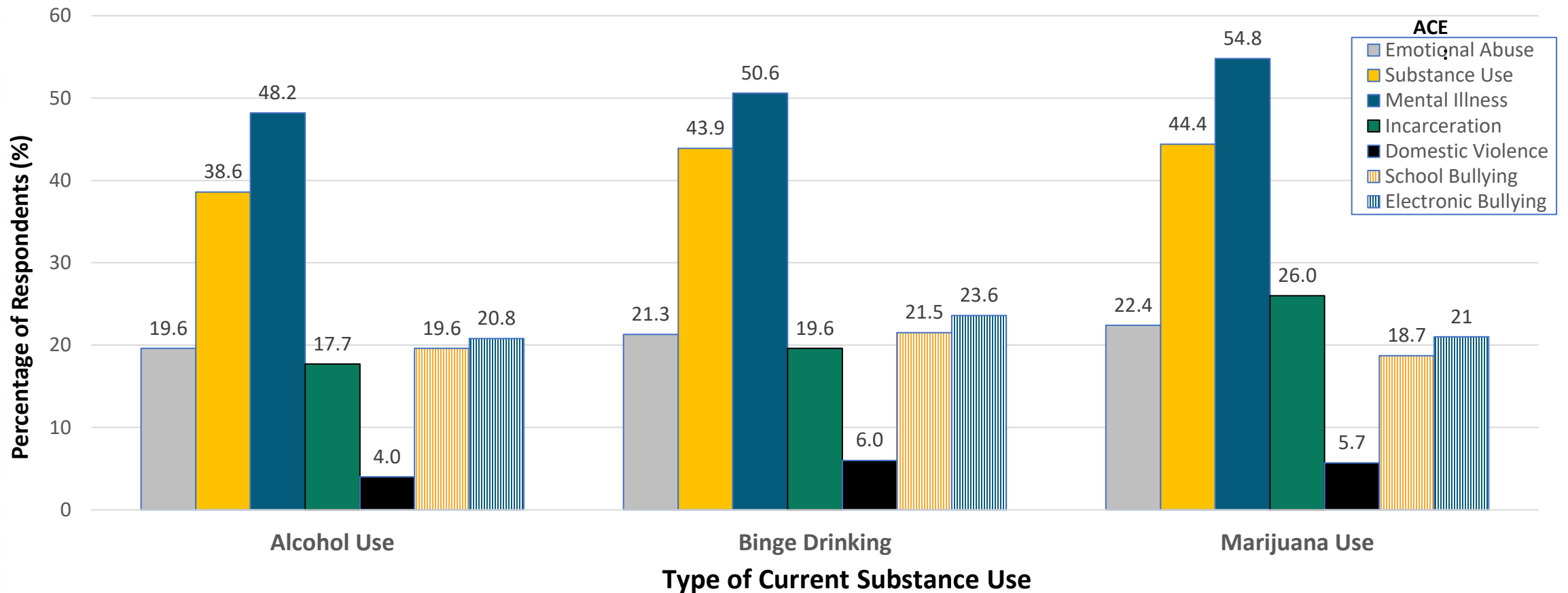


# Building Healing Behavioral Health Systems:

Substance Use and  
Adverse Childhood Experiences



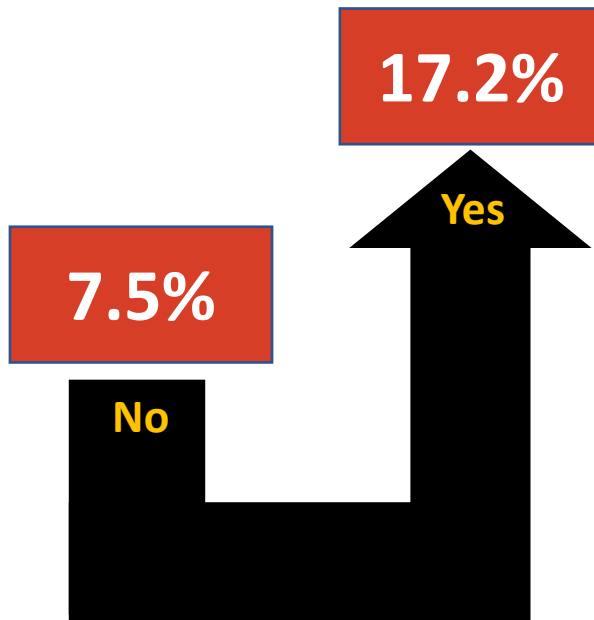
# Current Substance Use and ACEs



# 3+ ACEs and Current Substance Use

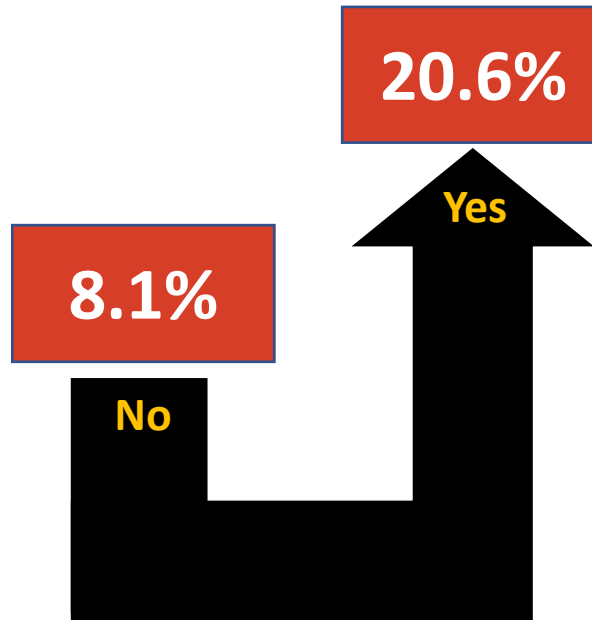
Individuals with 3+ ACEs are more likely to currently use substances

2.2 times more likely to use alcohol



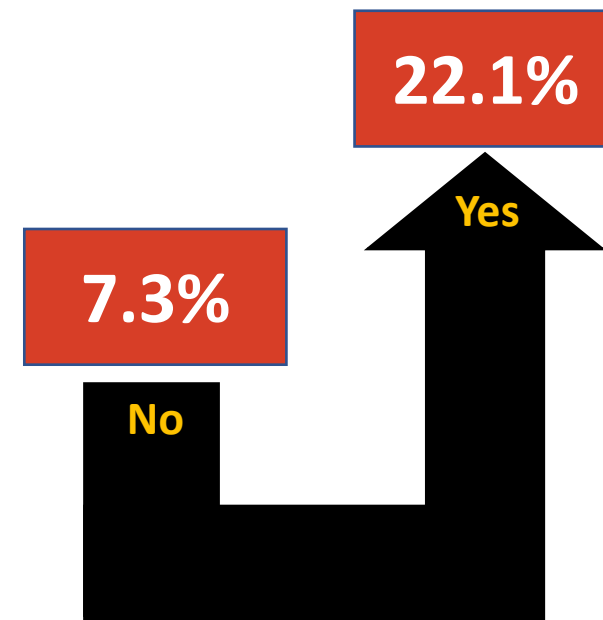
Alcohol Use

2.5 times more likely to binge drink



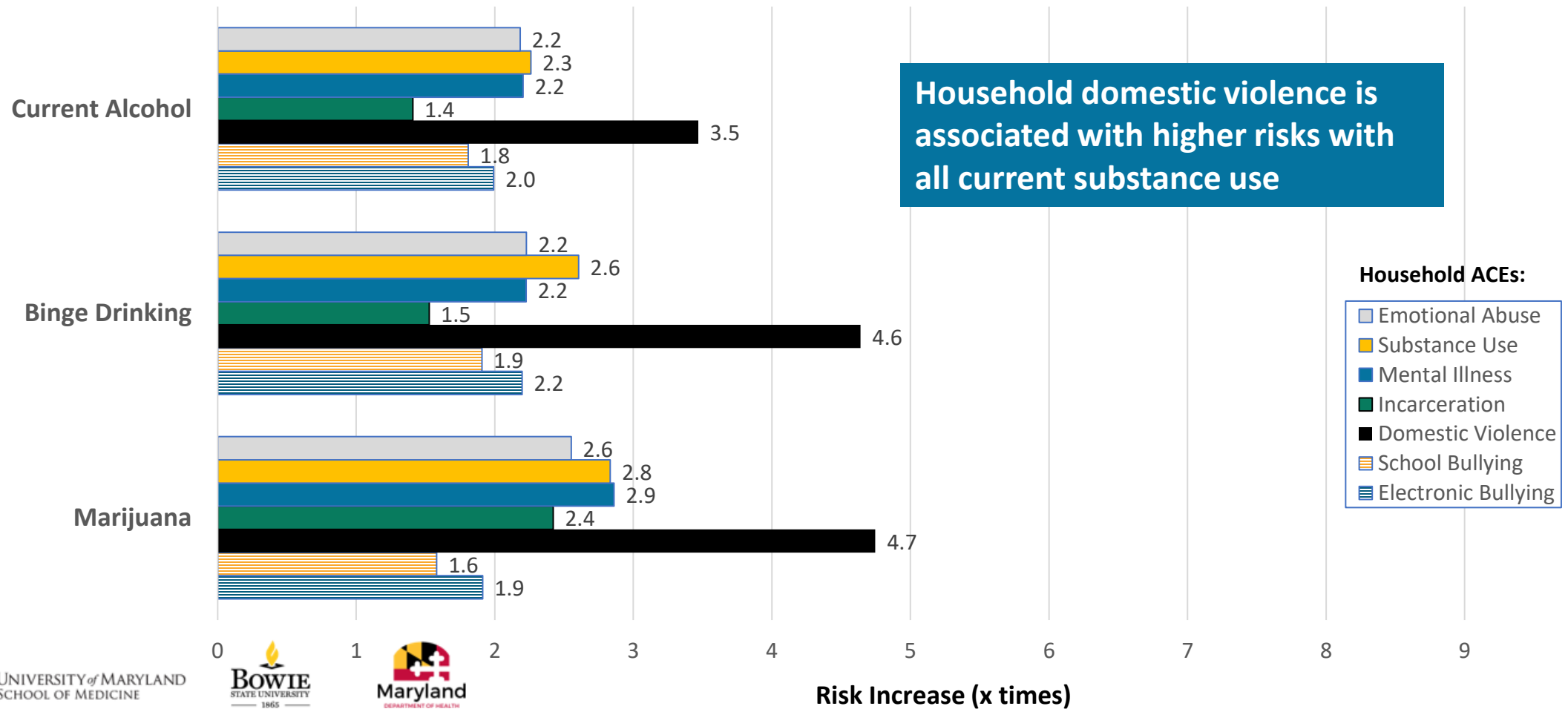
Binge Drinking

3 times more likely to use marijuana



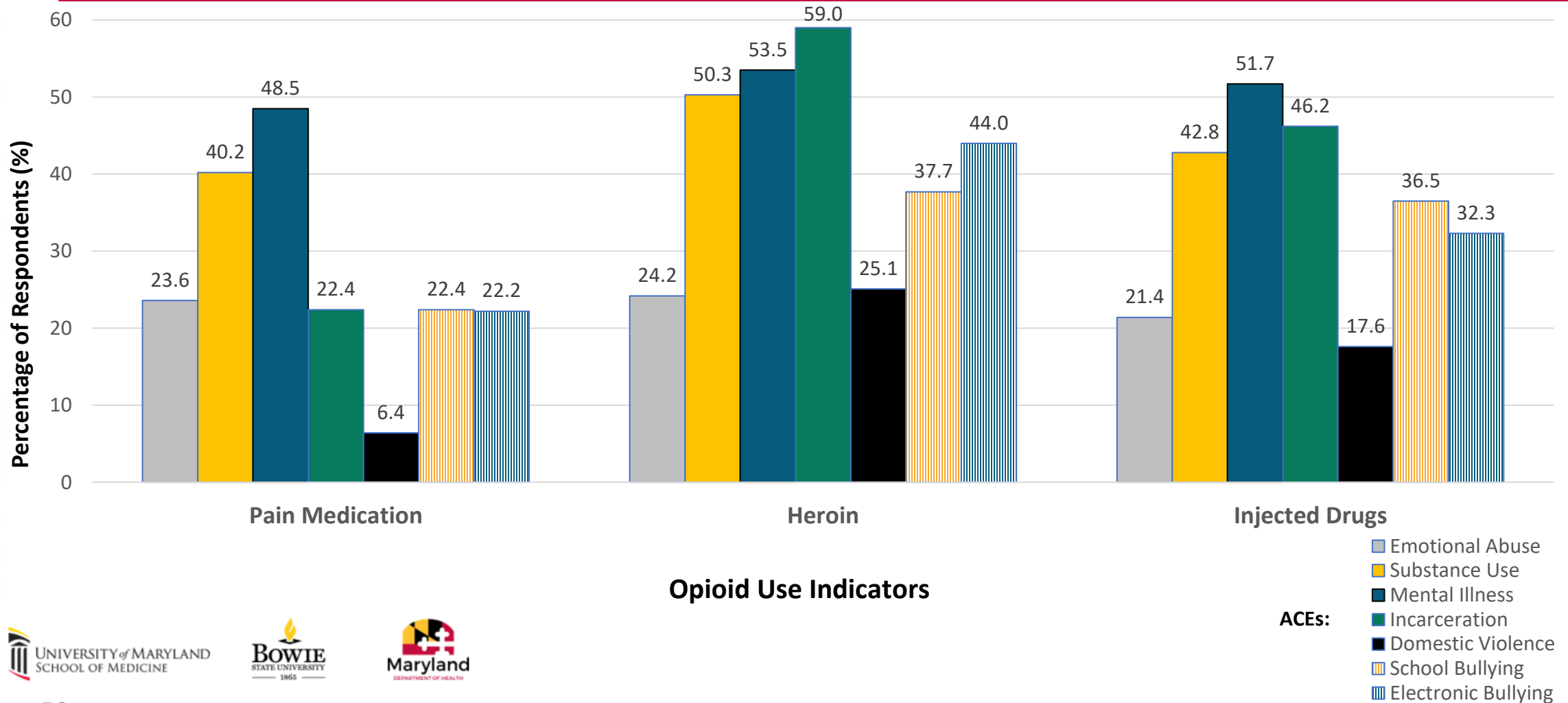
Marijuana Use

# ACEs Increase Risk of Current Substance Use



Household domestic violence is associated with higher risks with all current substance use

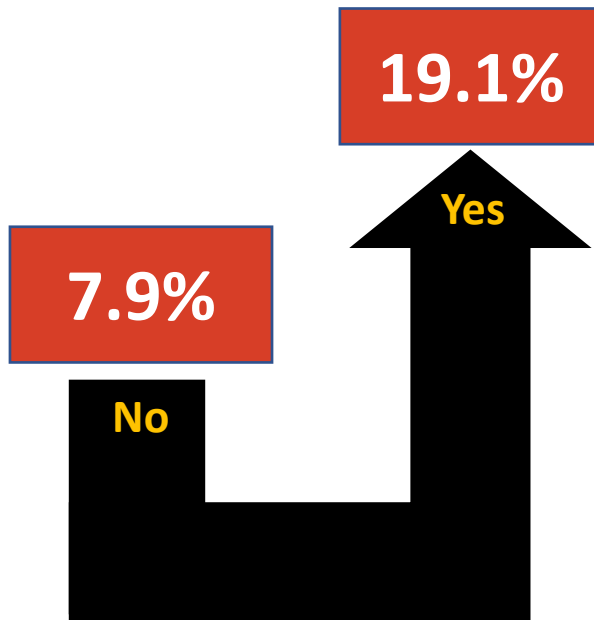
# Opioid Use (ever) and ACEs



# 3+ ACEs and Opioid Use (ever)

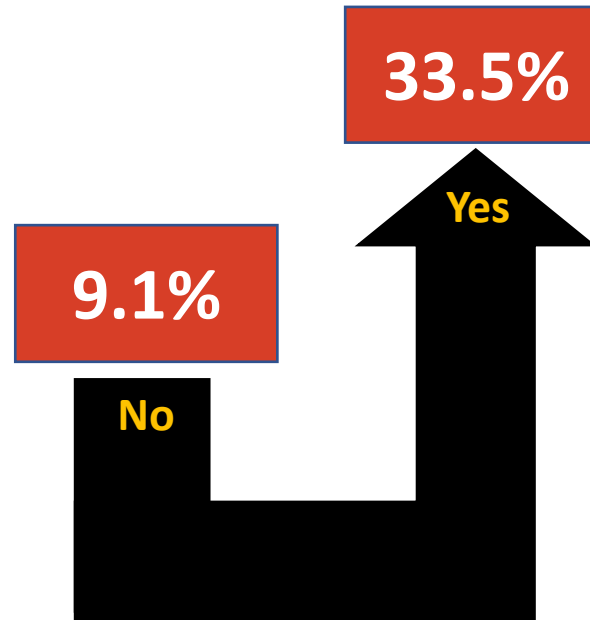
Individuals with 3+ ACEs are more likely to try opioids

2.4 times more likely to try pain medications



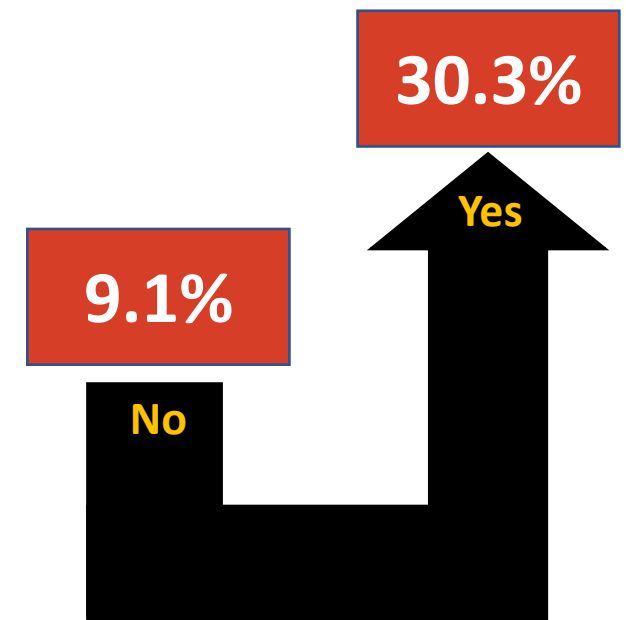
Pain Medications

3.7 times more likely to try heroin



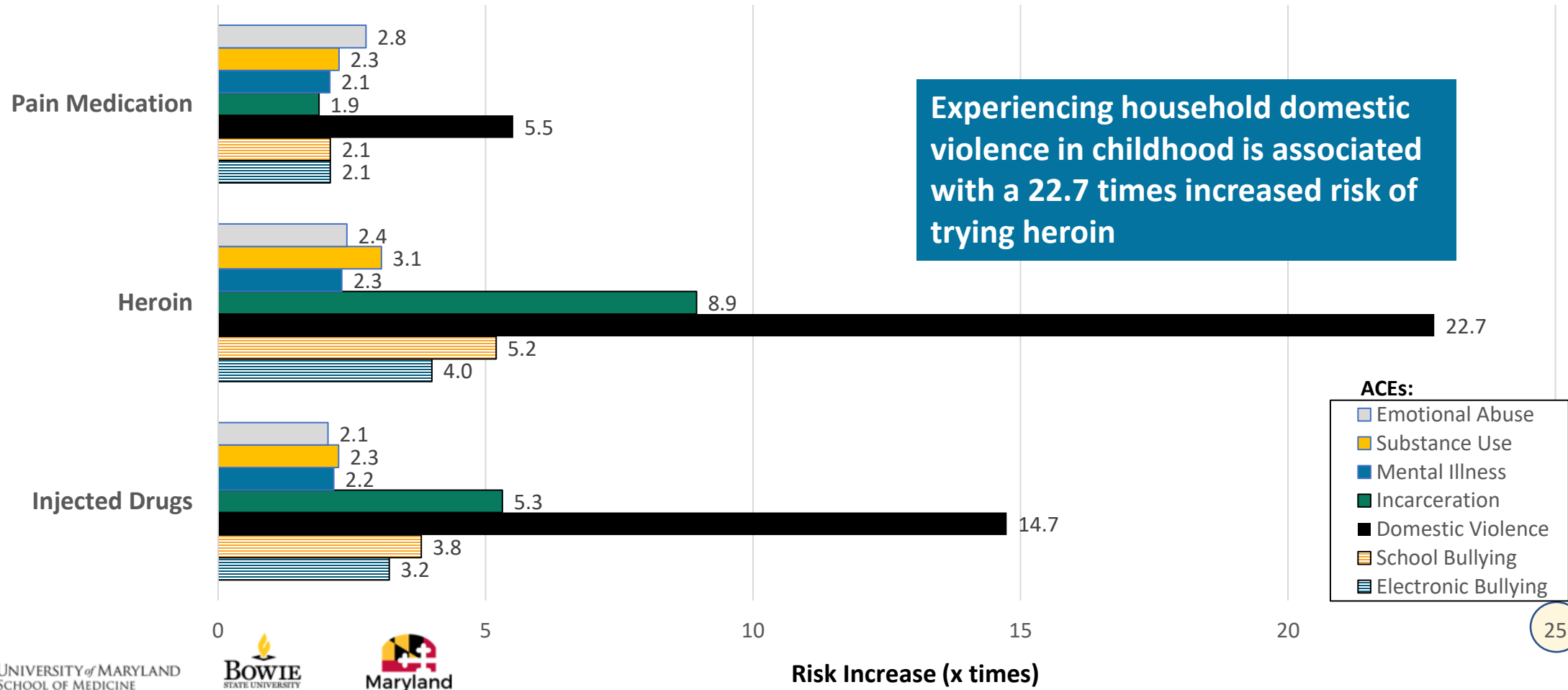
Heroin

3.3 times more likely to try injected drugs



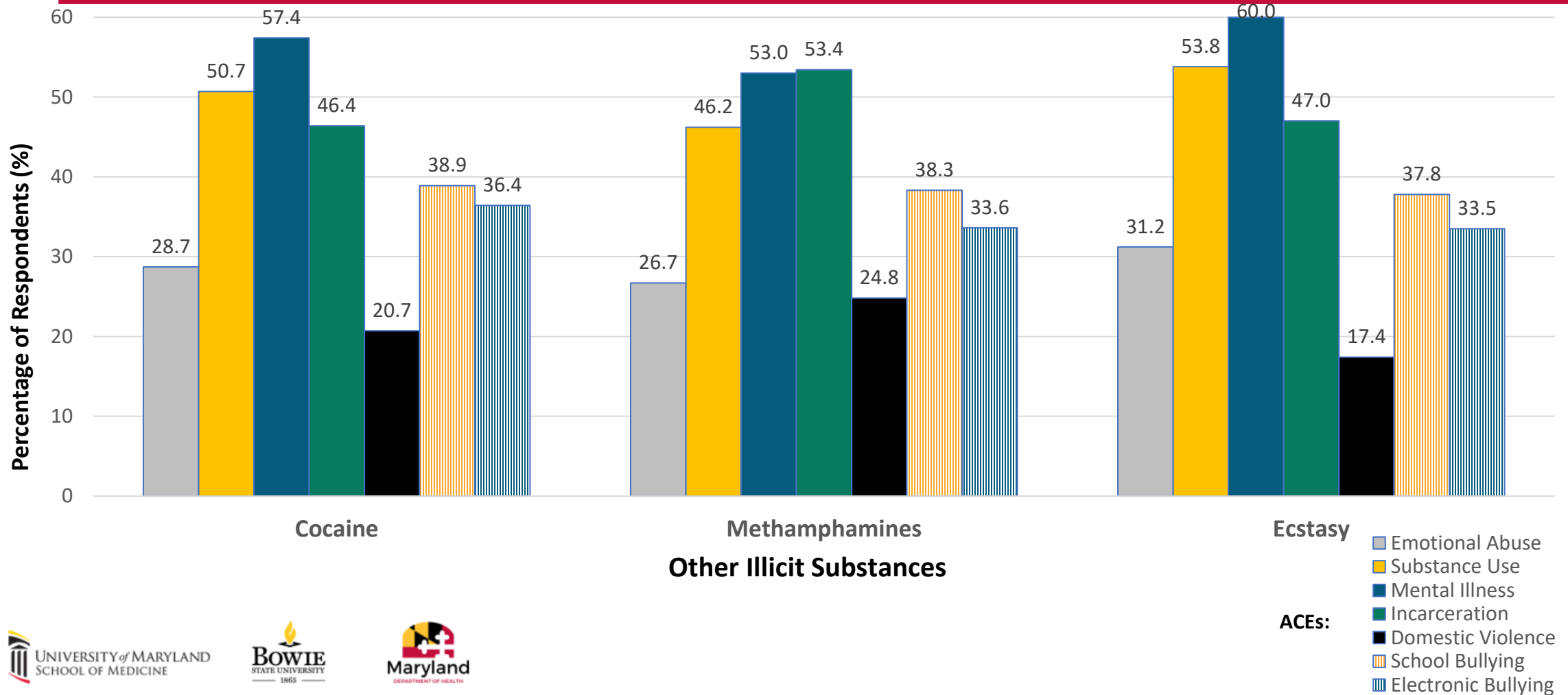
Injected Drugs

# ACEs Increase Risk of Opioid Use (ever)





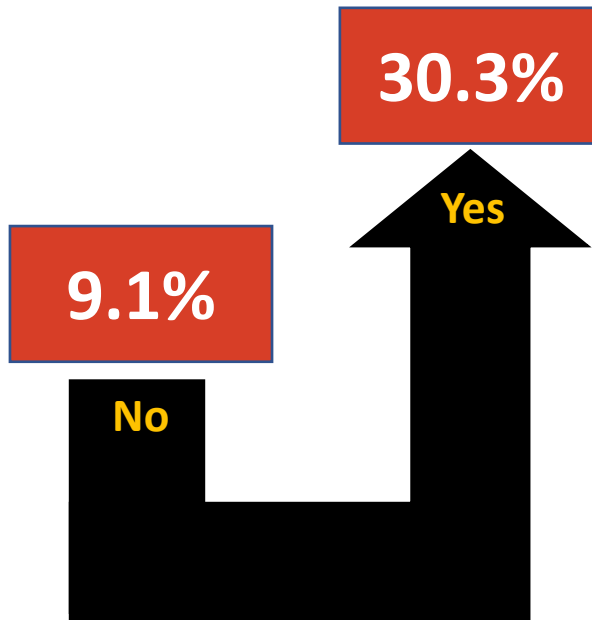
# Other Illicit Substance Use (ever) and ACEs



# 3+ ACEs and Other Illicit Substance Use (ever)

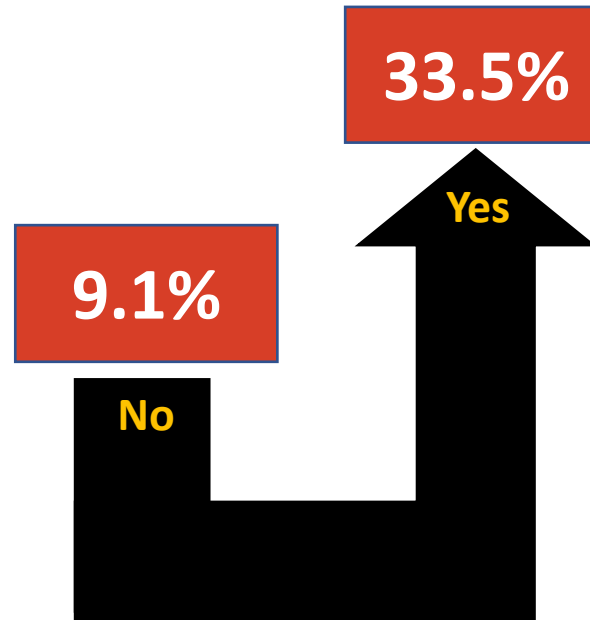
Individuals with 3+ ACEs are more likely to try other illicit substances

3.3 times more likely to try cocaine



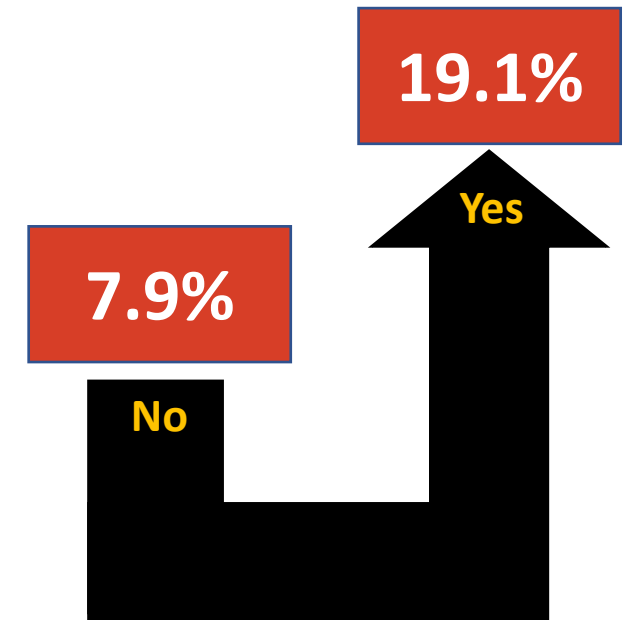
Cocaine

3.7 times more likely to try methamphetamines



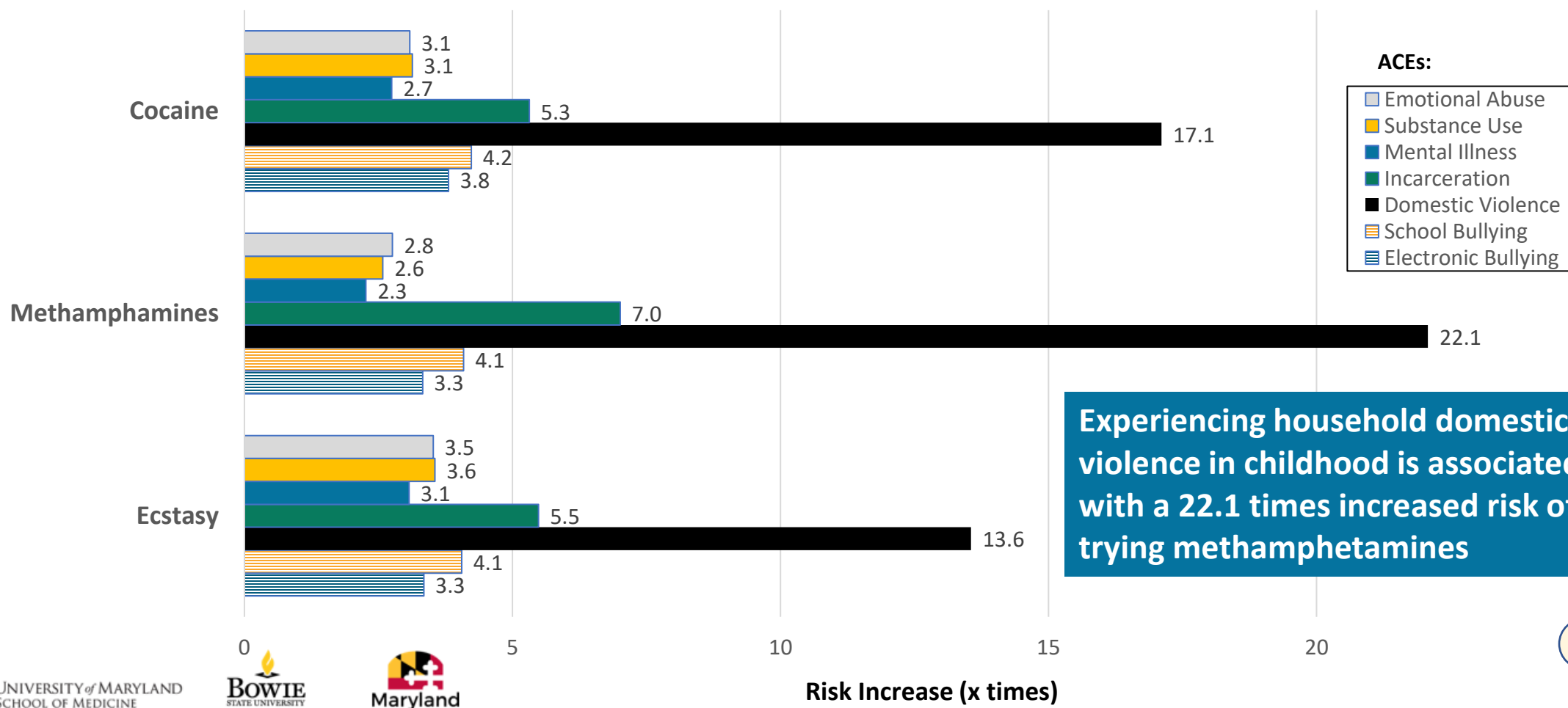
Methamphetamines

2.4 times more likely to try ecstasy



Ecstasy

# ACEs Increase Risk of Other Illicit Substance Use (ever)



Experiencing household domestic violence in childhood is associated with a 22.1 times increased risk of trying methamphetamines

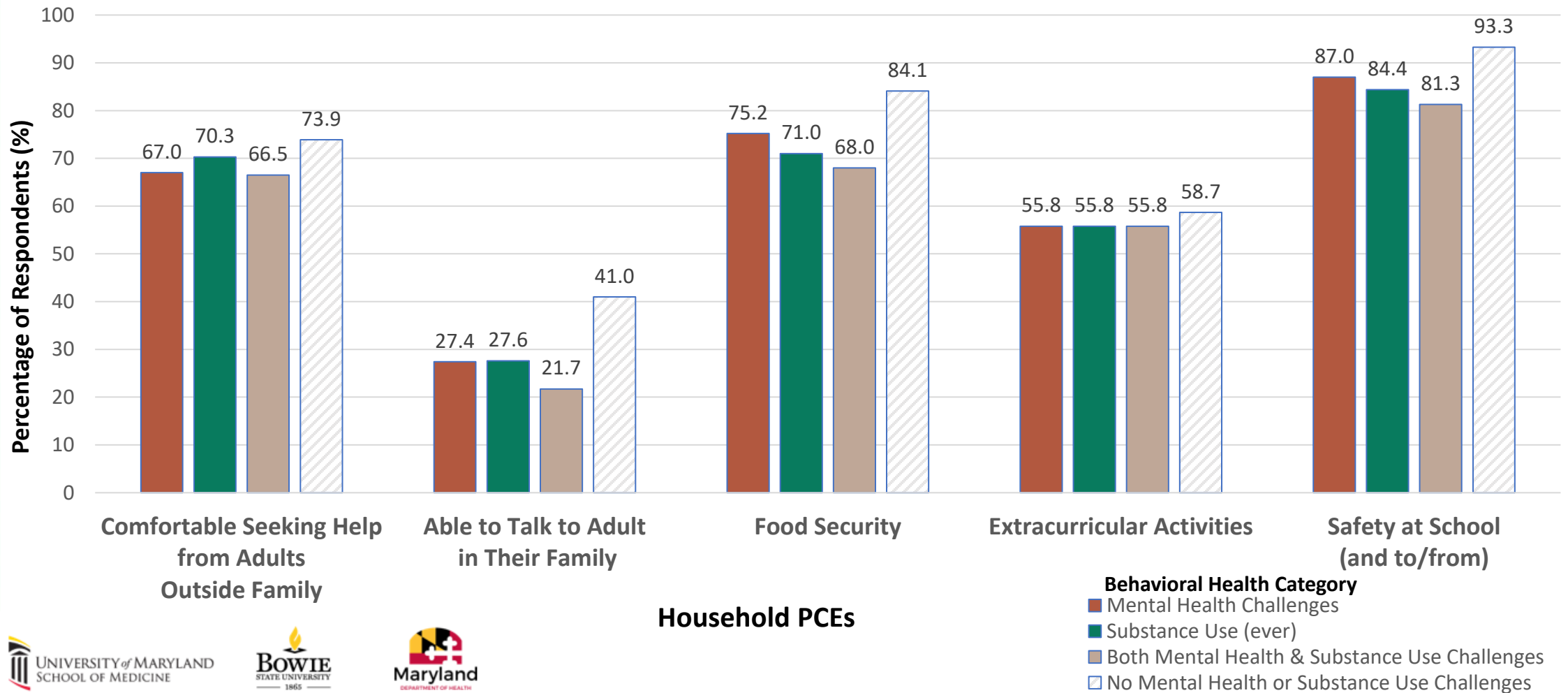


# Building Healing Behavioral Health Systems:

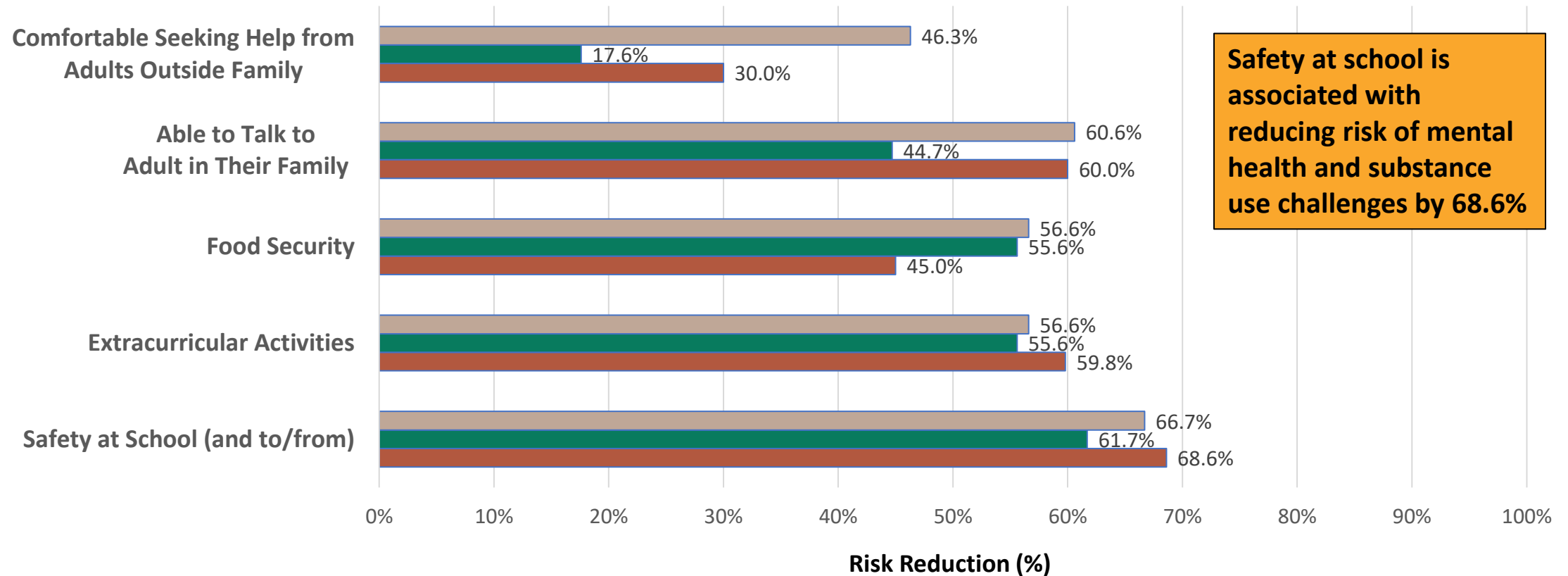
Positive Childhood Experiences (PCEs) among Individuals with Behavioral Health Challenges



# PCEs and Behavioral Health Challenges

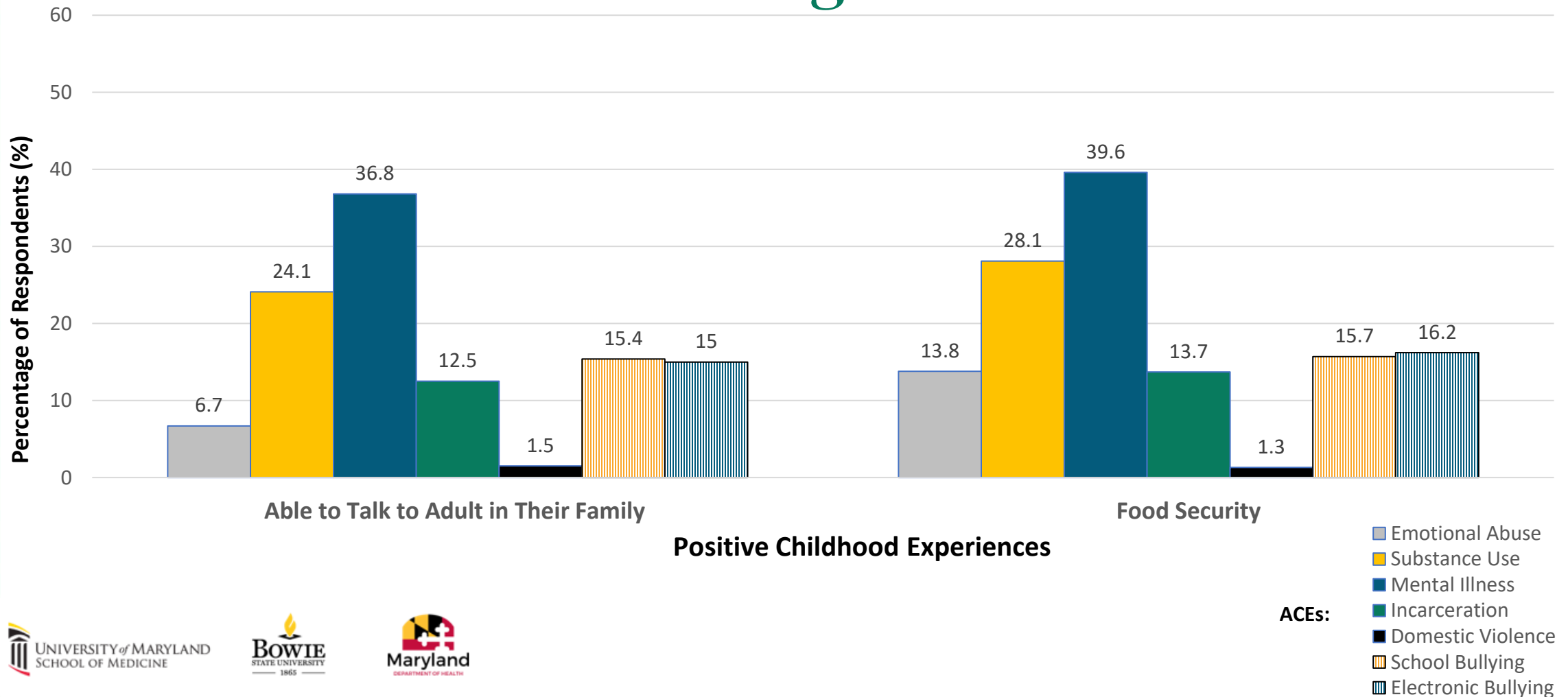


# PCEs Reduce Behavioral Health Risks

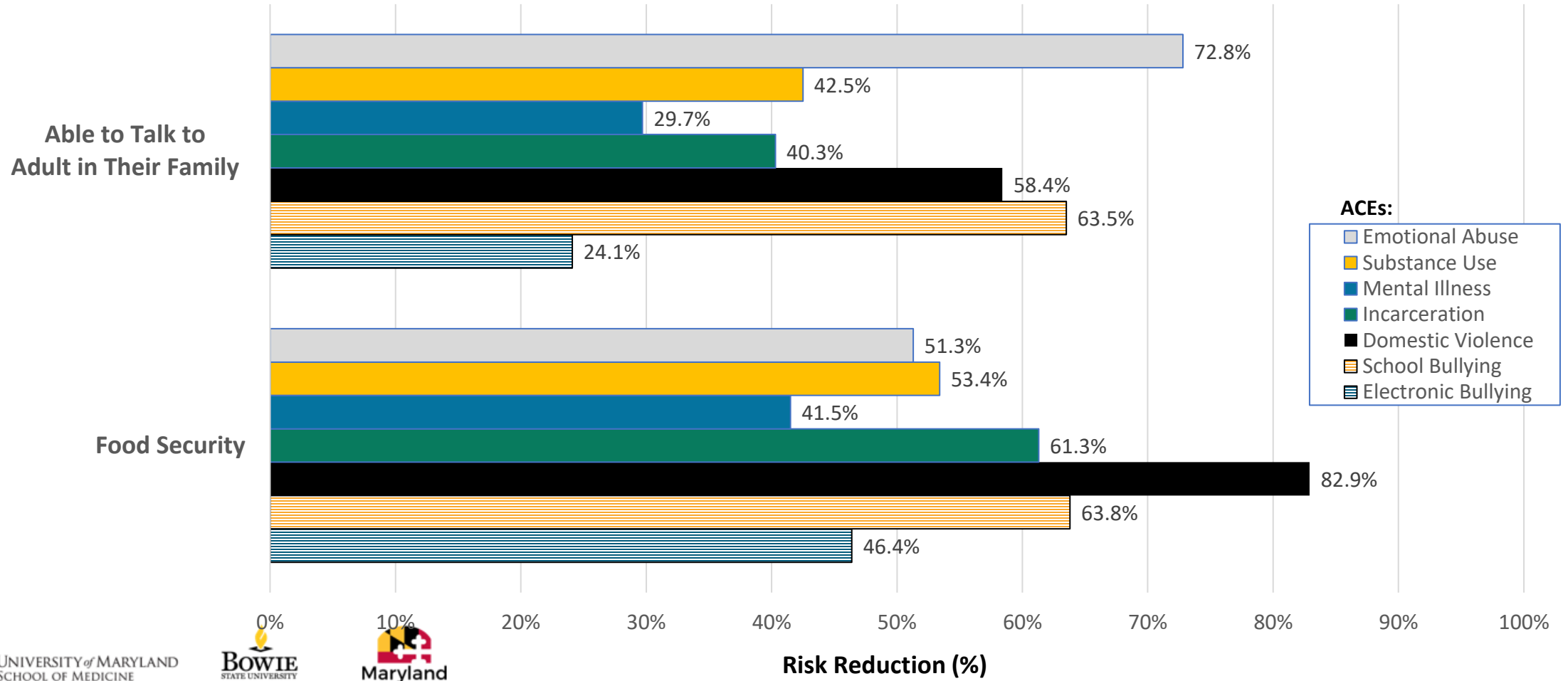


**Safety at school is associated with reducing risk of mental health and substance use challenges by 68.6%**

# Household PCEs and ACEs in individuals with Behavioral Health Challenges

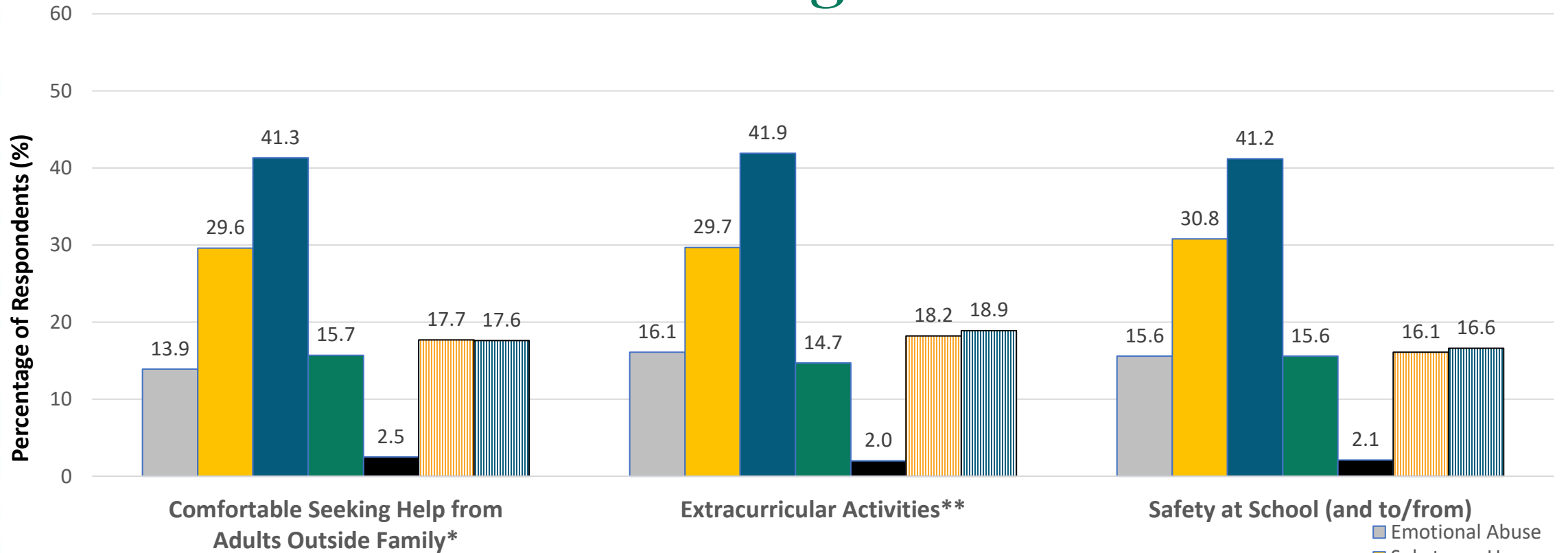


# PCEs Reduce Risk from Household ACEs for Individuals with Behavioral Health Challenges





# Community PCEs and ACEs in individuals with Behavioral Health Challenges



## Positive Childhood Experiences

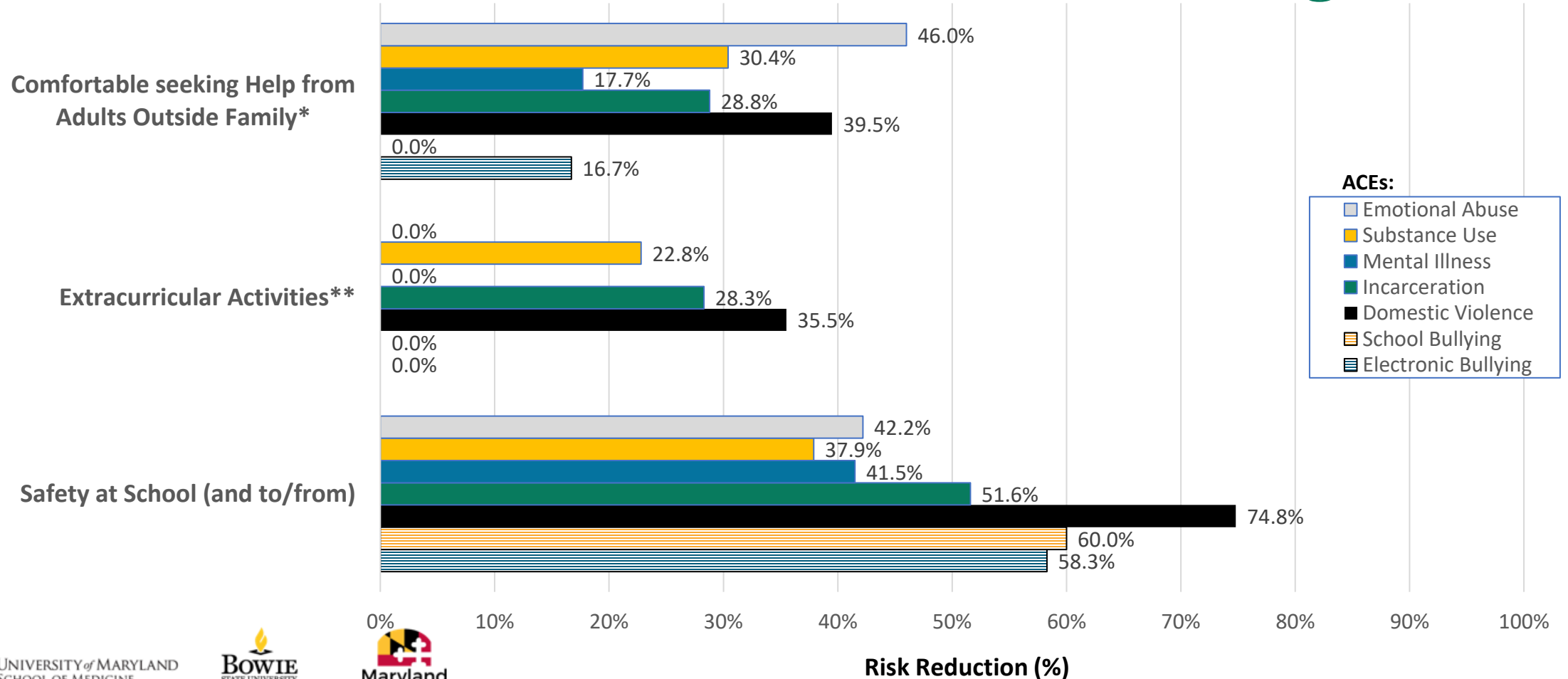
ACEs:

- Emotional Abuse
- Substance Use
- Mental Illness
- Incarceration
- Domestic Violence
- School Bullying
- Electronic Bullying

\* Comfortable Seeking Help from Adults Outside Family not statistically significant for bullied at school

\*\* Extracurricular activities not statistically significant for emotional abuse, household mental illness, school bullying or electronic bullying

# PCEs Reduce Risk from Community ACEs for Individuals with Behavioral Health Challenges



\* Comfortable Seeking Help from Adults Outside Family not statistically significant for bullied at school

\*\* Extracurricular Activities not statistically significant for emotional abuse, household mental illness, school bullying or electronic bullying



# Building Healing Behavioral Health Systems:

Summary of Behavioral Health Impact by ACE



# Summary of Behavioral Health Impact by ACE: Emotional Abuse



**12%**  
of students experienced  
**Emotional Abuse**

Students who have experienced emotional abuse are **4.7 times** more likely to experience **Mental Health Challenges**



**The Ability to Talk to a Member of Their Family** decreases the impact of emotional abuse for individuals with behavioral health challenges by

**73%**

# Summary of Behavioral Health Impact by ACE: Household Substance Use



Students with household substance use are **3.1 times** more likely to experience **Both Substance Use and Mental Health Challenges**

**25%** of students live with **Household Substance Use**



**Food Security** decreases the impact of household substance use for individuals with behavioral health challenges by

**53%**

# Summary of Behavioral Health Impact by ACE: Household Mental Illness



**34%**  
of students live with  
**Household Mental Illness**

Students with household mental illness are **3.4 times** more likely to experience **Mental Health Challenges** or **Both Substance Use and Mental Health Challenges**



They are also **4.6 times** more likely to **Make a Suicide Attempt**



**Both Safety At (to/from) School and Food Security** decrease the impact of household mental illness for individuals with behavioral health challenges by

**42%**

# Summary of Behavioral Health Impact by ACE: Household Incarceration



**15%**  
of students experience  
**Household Incarceration**

Students with household incarceration are **2.3 times** more likely to experience **Both Substance Use and Mental Health Challenges**



They are also **5-7 times** more likely to **Try Illicit Substances**



**Food Security** decreases the impact of household incarceration for individuals with behavioral health challenges by

**61%**

# Summary of Behavioral Health Impact by ACE: Household Domestic Violence



Students with household domestic violence are **5.4 times** more likely to experience **Mental Health Challenges** and **6.3 times** more likely to **Use Substances**



Although only **2%** of students experience **Household Domestic Violence** the impact on behavioral health is substantial

They are **22.7 times** more likely to **try heroin** and **22.1 times** more likely to **try methamphetamines**

**Food Security** decreases the impact of household domestic violence for individuals with behavioral health challenges by

**75%**



# Summary of Behavioral Health Impact by ACE: School and Electronic Bullying



**14%**  
of students experience  
**School Bullying**



**14%**  
of students experience  
**Electronic Bullying**

Students who experience bullying are **4 times** more likely to **Experience a Depressive Episode, Have Suicidal Ideations, or Plan a Suicide Attempt**



They are **4-5 times** more likely to **Try Heroin**



**The Ability to Talk to a Member of Their Family and Food Security** both decrease the impact of school bullying for individuals with behavioral health challenges by

**64%**



# Building Healing Behavioral Health Systems:

Summary of Behavioral Health Findings





# Building Healing Behavioral Health Systems:

Potential Action Steps



# Potential Action Steps: Behavioral Health Organizations

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- Facilitate behavioral health organization-level approaches to trauma informed care to mitigate the impact of ACEs on behavioral health.
- Develop a comprehensive approach to foster trauma informed organizational policies and practices in behavioral health. This would include activities such as:
  - Completing a Trauma Informed Organizational Assessment
  - Promoting screening for ACEs in high-risk groups and providing appropriate counseling and supports.

# Potential Action Steps: Screening and Referral

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- Implement appropriate screening and symptom assessment tools
  - Use screening tools that assess exposure to trauma as well as trauma symptoms.
  - Understanding symptoms will help facilitate appropriate treatment and referrals to behavioral health services.
- Discourage use of the ACEs questionnaire as a screening tool, because it does not collect:
  - information on the impact of ACE exposure on mental health symptoms, so it does not provide information on individuals' treatment needs.
  - the cumulative effect of a single ACE encountered repeatedly.

# Potential Action Steps: Professional Support and Development



- Build a trauma informed workforce that is trained to promote positive well-being for the entire workforce.
- Provide training and professional development for public behavioral health workforce clinicians and administrators around ACEs and PCEs.

# Potential Action Steps: Interventions

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- Target behavioral health interventions for individuals with Household Domestic Violence at the earliest ages, including:
  - Anger management and conflict resolution skills;
  - Promoting meeting basic needs, such as food security, as a prevention strategy to mitigate risk of being exposed to domestic violence.

# Potential Action Steps: Positive Childhood Experiences (PCEs)



- Disseminate what we know about PCEs to influence policies across systems to increase PCEs as a prevention strategy.
- Promote awareness on the impact of positive childhood experiences to mitigate ACEs.
- Develop resources for people providing direct services on how they can support families in creating opportunities for facilitating positive experiences.



# Potential Action Steps: Beyond Behavioral Health Systems



- Address community social problems that contribute to ACEs.
- Incorporate interventions across a broad array of service organizations including behavioral health, educational system, domestic violence, child and adult protective services, community outreach organizations, and more.
- Explore how to incorporate effective interventions with agencies where these domains are under their purview.

# Potential Action Steps: Data to Action Toolkit

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- Integrate this report into the Building Healing Behavioral Health Systems (BHBHS) Data-to-Action toolkit

<https://www.healingsystemsdata.org/>





Please contact us! :)

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