



Building Healing Systems:

Trauma-Informed/Healing-Centered Organizational Transformation

Adverse and Positive Childhood Experiences
and Behavioral Health
among Maryland Adults
July, 2025

Behavioral Health Administration & Universities Partnership



UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

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

The following data is available due to the efforts of:

- The Maryland Department of Health: Prevention and Health Promotion Administration Center for Chronic Disease Prevention and Control.
- The Maryland adults who participated in the surveys used in this project.

Contents

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Building Healing Behavioral Health Systems:

Adverse Childhood Experiences Background

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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)

Source:

https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Ffastfact.html

Jallah & Harding (2022)

What are Adverse Childhood Experiences?

ACE Survey

Kaiser-Permanente^a

Personal ACEs

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect

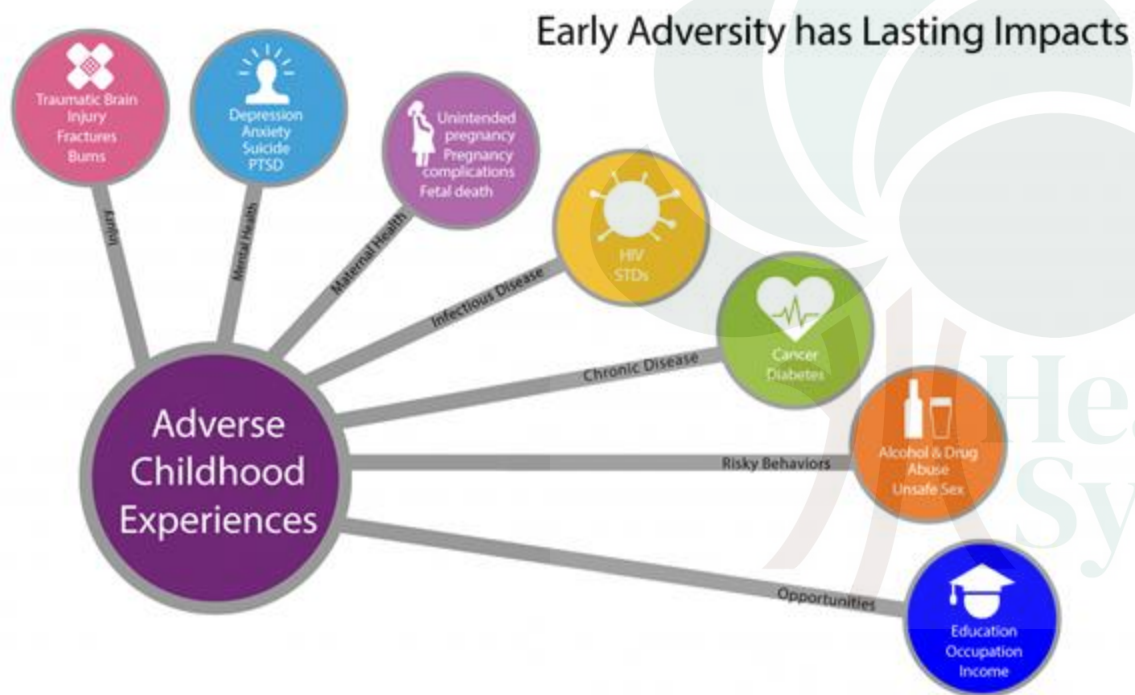
Household ACEs

6. Parental Separation or Divorce
7. Household Domestic Violence
8. Household Substance Abuse
9. Household Mental Illness
10. Household Incarceration

^aFelitti, 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.

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)

Source:

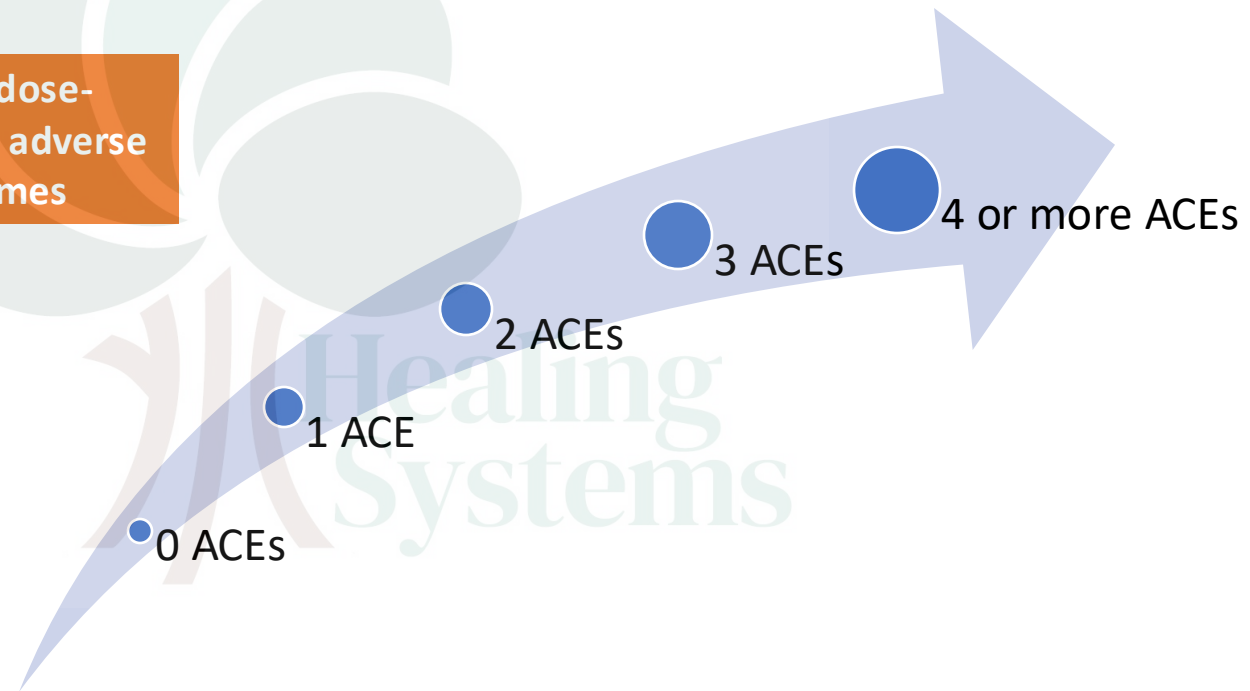
https://www.cdc.gov/violenceprevention/aces/resources.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Ffacestudy%2Fresources.html

Jallah & Harding (2022)

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



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.

Jallah & Harding (2022)

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

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample. *JAMA Pediatrics* published online 2019 Sep 9.
Positive Childhood Experiences source: <https://www.childandadolescent.org/positive-childhood-experiences/>

Impact of Positive Childhood Experiences

- PCEs can counteract the impact of ACEs
- Research comparing adults with high numbers of PCEs to those who reported low or no PCEs. Adults reporting more PCEs:
 - had 72 percent lower levels of adult depression and/or poor mental health
 - were 3.5 times more likely to get the social and emotional support they need as an adult (Bethell, et al, 2019)
- When parents share ideas and talk about things that matter with their child, the child had a 1,200 percent greater chance of flourishing compared to those who did not have this type of communication (Bethell, Gombojav & Whitaker, 2019).

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample. *JAMA Pediatrics* published online 2019 Sep 9.

Bethell, C. D., Gombojav, N., & Whitaker, R. C. (2019). Family resilience and connection promote flourishing among US children, even amid adversity. *Health Affairs*, 38(5), 729-737.

Positive Childhood Experiences source: <https://www.childandadolescent.org/positive-childhood-experiences/>

Impact of Positive Childhood Experiences

- PCEs can come from the family; however, some children live in homes where they don't feel emotionally safe. PCEs involving friends and communities can counterbalance the effect of ACEs, even if household PCEs are not available.

Household PCEs

- Being able to talk openly to a family member or as a family about feelings and feel heard, accepted and supported.
- Belief that family stood by them during difficult times.
- Feeling safe and protected by an adult in the home.

Community PCEs

- Feeling supported by friends.
- Having a sense of belonging and connection with a larger group who has “got your back” (e.g. school, church, clubs, neighborhood, etc.).
- Enjoyment of participation in community traditions.
- Relationship with at least one non-parent adult who takes genuine interest in you.

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample. *JAMA Pediatrics* published online 2019 Sep 9.
Positive Childhood Experiences source: <https://www.childandadolescent.org/positive-childhood-experiences/>



Building Healing Behavioral Health Systems:

Key Take Aways

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Key Take Aways



- **More Maryland adults with behavioral health challenges experience all ACEs than students without behavioral health challenges.**
- **Having three or more ACEs is associated with increased behavioral health risks** including mental health challenges (3.3.times), substance use (2.0 times), and both mental health and substance use challenges (6.2 times). 3+ ACEs are associated with increased risk for
 - Mental health indicators (2.6-3.2 times)
 - Current alcohol or marijuana use (1.7-3.2 times)

Key Take Aways

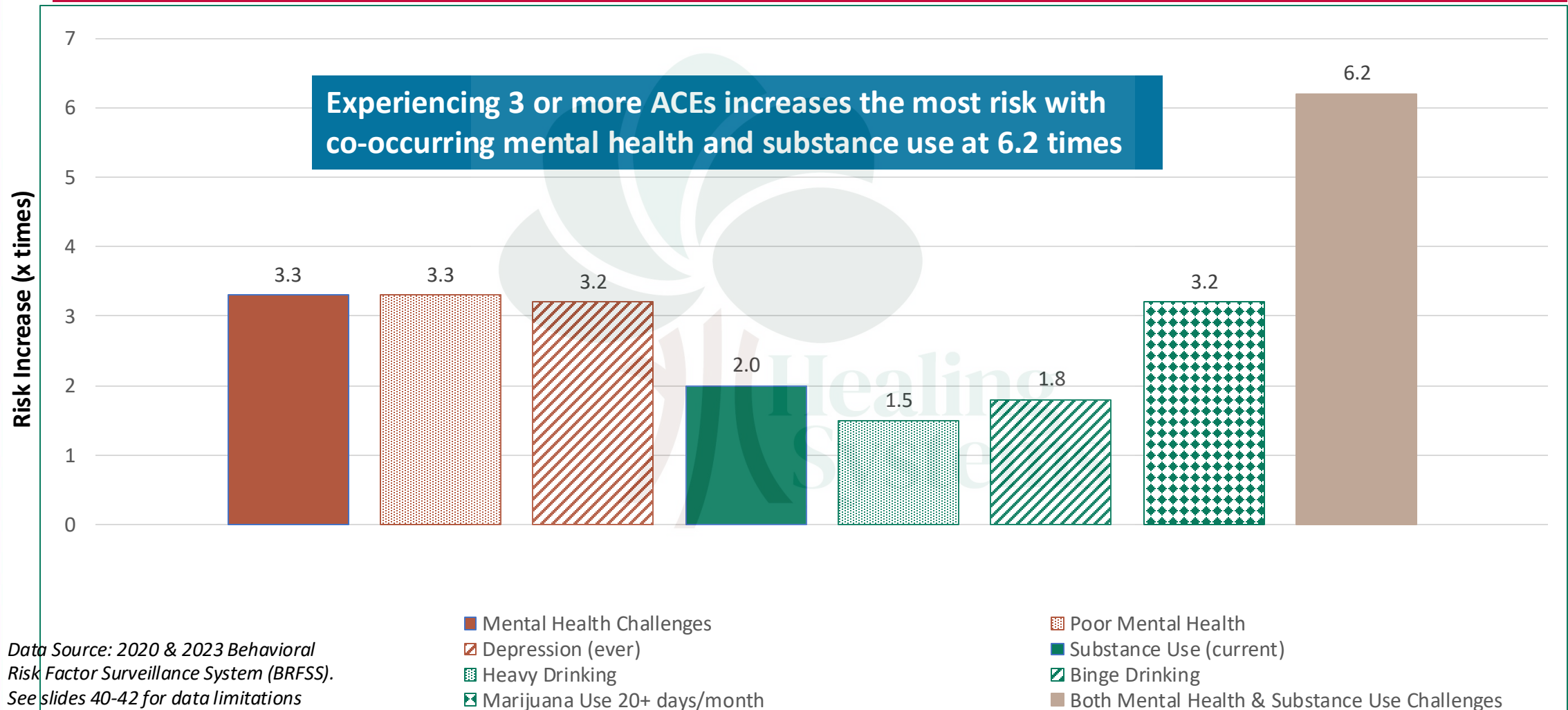


Specific ACEs are associated with increased risk for:

- **Mental Health Challenges (1.4 – 5.5 times)**
 - Increased risk for Mental Health Challenges are most associated with Household Mental Illness (3.5-5.5 times) and Sexual Abuse (2.6-3.2 times)
- **Heavy Drinking, Binge Drinking or near daily Marijuana use (1.4-2.8 times)**
 - Increased risk for Heavy Drinking, Binge Drinking, and daily or near daily Marijuana Use are most associated with Household Incarceration (1.7-2.8 times)

Three or More ACEs and increased risks with Behavioral Health

Odds ratios of adults who report 3+ adverse childhood experiences (ACEs) and behavioral health challenges





Building Healing Behavioral Health Systems:

Focused Data Study #5: Adverse and Positive Childhood Experiences and Behavioral Health among Maryland Adults

Study Focus and Questions

Focused Data Studies

- 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 Publicly available aggregated data comparing Maryland and Nationwide prevalence for youths and adults
 - Study 2 Maryland high school students and behavioral health (YRBS/YTS)
 - Study 3 Maryland middle school students and behavioral health (YRBS/YTS)
 - Study 4 Gender and LGBTQ in Maryland students and behavioral health (YRBS/YTS)
 - **Study 5 (this report) Maryland adults and behavioral health (BRFSS)**
 - Study 6 Maryland adults and physical health indicators (BRFSS)

Focused Data Study #5: Study Focus

Study Focus: The prevalence of Adverse Childhood Experiences (ACEs) and their relationship to behavioral health variables among adult respondents to the Behavioral Health Risk Surveillance Survey (BRFSS) administered in 2020 and 2023. *

**Most Variables are available in both years. Data from 2020 and 2023 will be combined for all variables that appear in both years. For items that only appear in a single year, results will be based on responses from that survey year.*

Focused Data Study #5: Study Questions

Question #1: What is the prevalence of ACEs among Maryland adults responding to the 2020 and 2023 BRFSS survey

Detail: A total of 8 Adverse Childhood Experiences (ACEs) based on the Kaiser Permanente Constructs will be used for this focused analytic study. These include 3 personally experienced ACEs (Physical Abuse, Verbal Abuse, and Sexual Abuse) and 5 household related ACEs (Household Mental Illness, Household Incarceration, Household Separation or Divorce, Domestic Violence, and Household Alcohol or Drug Use).

See Focused Data Study Methods Section Below (Slides 22-41) for details on how variables were defined

Focused Data Study #5: Study Questions

Question #2: How do reports of ACEs relate to a range of behavioral health indicators

Mental Health
Mental Health Quality of Life
Depression Diagnosis

Substance Use
Heavy Drinking
Binge Drinking
Heavy Marijuana Use

Detail: See Focused Data Study Methods Section below (slides 22-41) for more details about specific variables/indicators and how they were defined



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Focused Data Study Methods

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Methods: Data Source

- 2020 and 2023 Behavioral Risk Factor Surveillance Survey (BRFSS) combined dataset.
 - Individual years analyzed for variables not collected in both years.
- Maryland collaborates with the Centers for Disease Control and Prevention (CDC) to collect behavioral risk data from Maryland adults.
- Data received from the Maryland Department of Health's Prevention and Health Promotion Administration in the Center for Chronic Disease Prevention and Control

Methods: Sample

- These analyses include a random telephone sample of Maryland adults to best understand the impact of each ACE across behavioral health indicators for individuals with behavioral health challenges compared to those without.
- Analyses were conducted using statistical weighting methods to reflect known proportions of the population based on age, sex, categories of ethnicity, geographic regions within states, marital status, education level, home ownership, and type of phone ownership. (CDC, 2025)
- All findings reported in this analysis are statistically significant unless otherwise stated.

Methods: Defining Concepts in the Data

- This analysis aims to understand the relationship of ACEs with Mental Health and Substance Use Indicators.
- Several BRFSS questions were assessed for each area of analysis: ACEs, Mental Health and Substance Use
- Operational definitions for each area were developed

Methods: Identifying Individuals with Behavioral Health Challenges

Mental Health
Mental Health Quality of Life
Depression Diagnosis

Substance Use
Heavy Drinking
Binge Drinking
Marijuana Use Daily or Near Daily Use (20+ days)

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS). See slides 40-42 for data limitations

Methods: Defining Behavioral Health

Mental Health Challenges: Individuals meeting any of the criteria below

Category	Question	Response
Mental Health Quality of Life	Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?	14 or more days
Depression Ever	Has a doctor, nurse, or other health professional ever told you that you had any of the following: a depressive disorder (including depression, major depression, dysthymia, or minor depression)?	“Yes”

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Methods: Defining Behavioral Health

Substance Use Challenges: Individuals meeting any of the criteria below

Category	Question	Response
Heavy Drinking	During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?	Average drinks per week: Males 14 or more Females 7 or more (CDC, 2020)
	One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?	
Binge Drinking	Considering all types of alcoholic beverages, how many times during the past 30 days did you have [5 for Males, 4 for Females] or more drinks on an occasion	Males 5 or more times Females 4 or more times (Kanny, Naimi, Liu & Brewer, 2020)

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: Defining Behavioral Health

Substance Use Challenges: Individuals meeting any of the criteria below

Category	Question	Response
Marijuana Daily or Near Daily Use (Marijuana DND)	During the past 30 days, how many times did you use marijuana?	20 or more days (Johnson, et al., 2021)

Note: 2023 BRFSS includes questions on illicit substance use but limited sample size prohibits analysis with ACE data.

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Methods: ACEs available for Analysis

ACE Surveys^a

Personal ACEs

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect

Household ACEs

6. Parental Separation or Divorce
7. Household Domestic Violence
8. Household Substance Abuse
9. Household Mental Illness
10. Household Incarceration

Indicates Items NOT Available for Analysis in the Maryland BRFSS data

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

^aFelitti, 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.

Methods: Identifying Personal 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 BRFSS when the following conditions are met:

Personal ACEs	Now, looking back before you were 18 years of age---	BRFSS Options	ACE counted if
<ul style="list-style-type: none">• Emotional Abuse	<ul style="list-style-type: none">• How often did a parent or adult in your home ever swear at you, insult you, or put you down? Was it -	Never Once More than Once	Once or More than once
<ul style="list-style-type: none">• Physical Abuse	<ul style="list-style-type: none">• Not including spanking, (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Was it --	Never Once More than Once	Once or More than once

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: Identifying Personal ACEs

Personal ACE	Now, looking back before you were 18 years of age---	BRFSS Options	ACE counted if
<ul style="list-style-type: none"> Sexual Abuse 	<ul style="list-style-type: none"> How often did anyone at least 5 years older than you or an adult, ever touch you sexually? Was it – 	Never Once More than Once	Once or More than once OR
	<ul style="list-style-type: none"> How often did anyone at least 5 years older than you or an adult, try to make you touch them sexually? Was it – 	Never Once More than Once	Once or More than once OR
	<ul style="list-style-type: none"> How often did anyone at least 5 years older than you or an adult, force you to have sex? Was it -- 	Never Once More than Once	Once or More than once

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).

See slides 40-42 for data limitations

Methods: Identifying Personal ACEs

Personal ACEs	Personal ACEs Includes	Personal ACE Counted if
Individuals experienced any of the three Personal ACEs	<ol style="list-style-type: none">1. Emotional Abuse2. Physical Abuse3. Sexual Abuse	<p>Personal ACE = "YES" if ANY Personal ACE = "YES"</p> <p>Personal ACE = "NO" if ALL Personal ACEs = "NO"</p> <p>Personal ACE = Missing if ANY Personal ACE = Missing</p>

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: Identifying Household ACEs

Household ACE	Now, looking back before you were 18 years of age---	BRFSS Options	ACE counted if
<ul style="list-style-type: none"> Parental Separation or Divorce 	<ul style="list-style-type: none"> Were your parents separated or divorced? 	Yes No Parents not married	Yes
<ul style="list-style-type: none"> Household Domestic Violence 	<ul style="list-style-type: none"> How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up? Was it -- 	Never Once More than Once	Once or More than once
<ul style="list-style-type: none"> Household Substance Abuse 	<ul style="list-style-type: none"> Did you live with anyone who was a problem drinker or alcoholic? Did you live with anyone who used illegal street drugs or who abused prescription medications? 	Yes No Yes No	Yes OR Yes

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: Identifying Household ACEs

Household ACE	Now, looking back before you were 18 years of age---	BRFSS Options	ACE counted if
<ul style="list-style-type: none">Household Mental Illness	<ul style="list-style-type: none">Did you live with anyone who was depressed, mentally ill, or suicidal?	Yes No	Yes
<ul style="list-style-type: none">Household Incarceration	<ul style="list-style-type: none">Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?	Yes No	Yes

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: Identifying Household ACEs

Household ACEs	Household ACEs Includes	Household ACE Counted if
Individuals experienced any of the five Household ACEs	<ol style="list-style-type: none">1. Parental Separation or Divorce2. Household Domestic Violence3. Household Substance Abuse4. Household Mental Illness5. Household Incarceration	<p>Household ACE = “YES” if ANY Household ACE = “YES”</p> <p>Household ACE = “NO” if ALL Household ACEs = “NO”</p> <p>Household ACE = Missing if ANY Household ACE = Missing</p>

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

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 BRFSS

1. Having an adult in the household who tried hard to make sure your basic needs were met.

Indicates Items Available for Analysis in the Maryland BRFSS data

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Bethell, C., Jones, J., Gombojav, N., Linkenbach, J., & Sege, R. (2019). Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample. *JAMA Pediatrics* published online 2019 Sep 9.
Positive Childhood Experiences source: <https://www.childandadolescent.org/positive-childhood-experiences/>

Methods: Identifying PCEs in the BRFSS

- PCEs are counted when the following conditions are met:

PCEs	Now, looking back before you were 18 years of age---	BRFSS Options	PCE counted if
<ul style="list-style-type: none">Safe and Protected	<ul style="list-style-type: none">For how much of your childhood was there an adult in your household who made you feel safe and protected? Would you say --	Never A little of the time Some of the time Most of the time All of the time	Most of the time OR All of the time
<ul style="list-style-type: none">Basic Needs Met	<ul style="list-style-type: none">For how much of your childhood was there an adult in your household who tried hard to make sure your basic needs were met? Would you say --	Never A little of the time Some of the time Most of the time All of the time	Most of the time OR All of the time

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Methods: ACE Count Threshold for Adverse Health Outcomes

- 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 BRFSS only collects 8 of these items.
- This analysis uses an ACE count of 3 or more ACEs as a threshold for increased poor outcomes in adulthood.

Methods: Limitations

Measurement of Risk

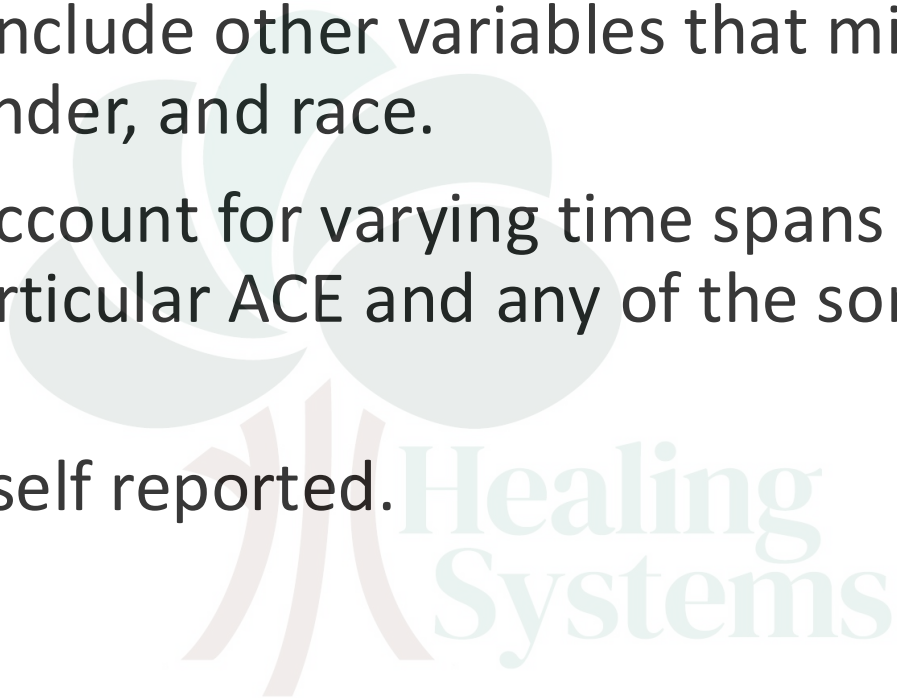
- This analysis measures behavioral health risks associated with ACEs using an odds ratio:
How many times more or less likely individuals are to have a specified ACE and behavioral health indicator?
- These risks are **not causal, they are associations.**
 - **SAY:** There is a relationship between having experienced an ACE and experiencing mental health challenges
 - **NOT:** Experiencing an ACE causes mental health challenges

Methods: Limitations

- Because the BRFSS only collects 8 of the traditional 10 ACEs, this analysis uses 3 or more as a threshold for high ACEs instead of 4 or more traditionally used.
- The BRFSS does not ask questions regarding neglect, a factor which likely contributes to behavioral health outcomes.
 - A 2024 systematic review and meta-analysis found that individuals with psychiatric disorders reported experiencing high rates of childhood neglect^a: (35-47% of individuals)
- The BRFSS only asks about depressive diagnoses, and this analysis does not include illicit substance use, therefore the number of individuals with behavioral health challenges is likely underreported.

Methods: Limitations

- Analyses did not include other variables that might be important including, age, gender, and race.
- Analyses do not account for varying time spans between experiencing a particular ACE and any of the somatic health indicators.
- All outcomes are self reported.





Building Healing Behavioral Health Systems:

Demographic Characteristics

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Percentage of adults responding to survey by age, gender, sexual orientation, race, and ethnicity

Demographic Characteristic	%
Age Range	
18-25 Years	12.0%
26-34 years	17.0%
35-64 years	48.9%
65 years or older	22.0%
Gender	
Male	47.6%
Female	52.4%
Transgender*	1.3%
I don't know*	0.5%
Sexual Orientation*	
Heterosexual / Straight	88.0%
Lesbian, Gay or Bisexual	6.9%
Other	2.9%
Don't know / Unsure	2.2%

Demographic Characteristic	%
Race	
Black or African American	29.6%
White	48.7%
Asian	6.9%
American Indian / Alaskan Native	0.5%
Native Hawaiian / Pacific Islander	0.2%
Other	0.9%
Spanish, Hispanic / Latinx	11.0%

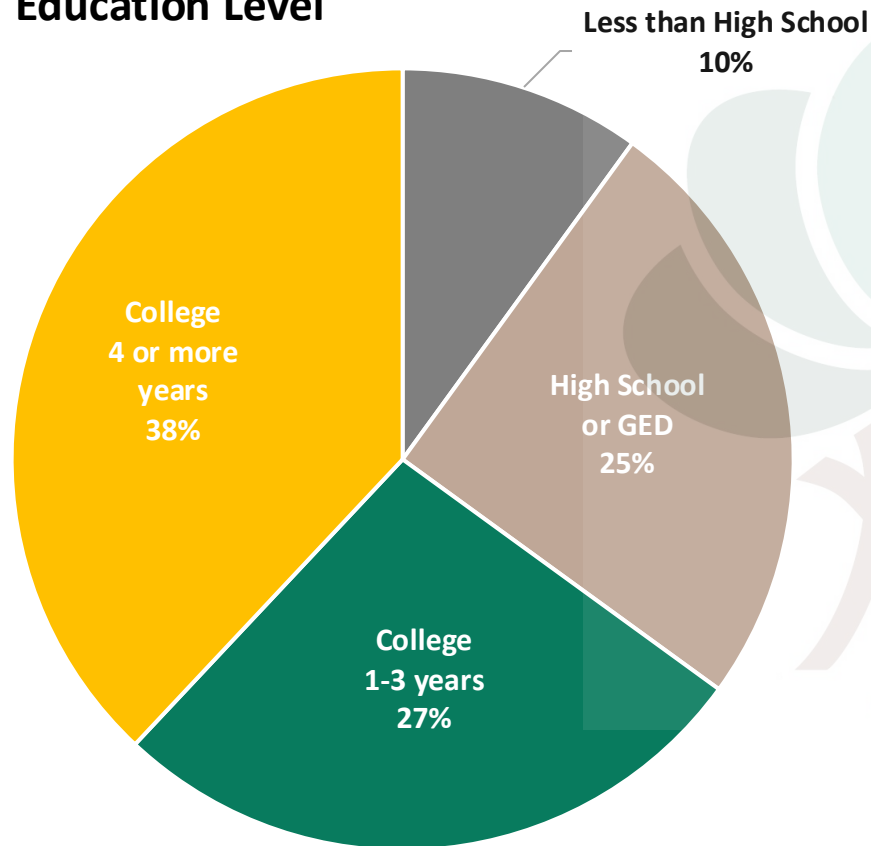
Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

* Note: Sexual orientation and transgender status only asked in 2023 questionnaire

Education and Income

Percentage of adults by education level and household income

Education Level



Household Income	%
Less than \$10,000	3.2%
\$10,000 to < \$15,000	2.2%
\$15,000 to < \$20,000	4.2%
\$20,000 to < \$25,000	5.7%
\$25,000 to < \$35,000	9.0%
\$35,000 to < \$50,000	10.1%
\$50,000 to < \$75,000	14.3%
\$75,000 or more	51.2%

Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

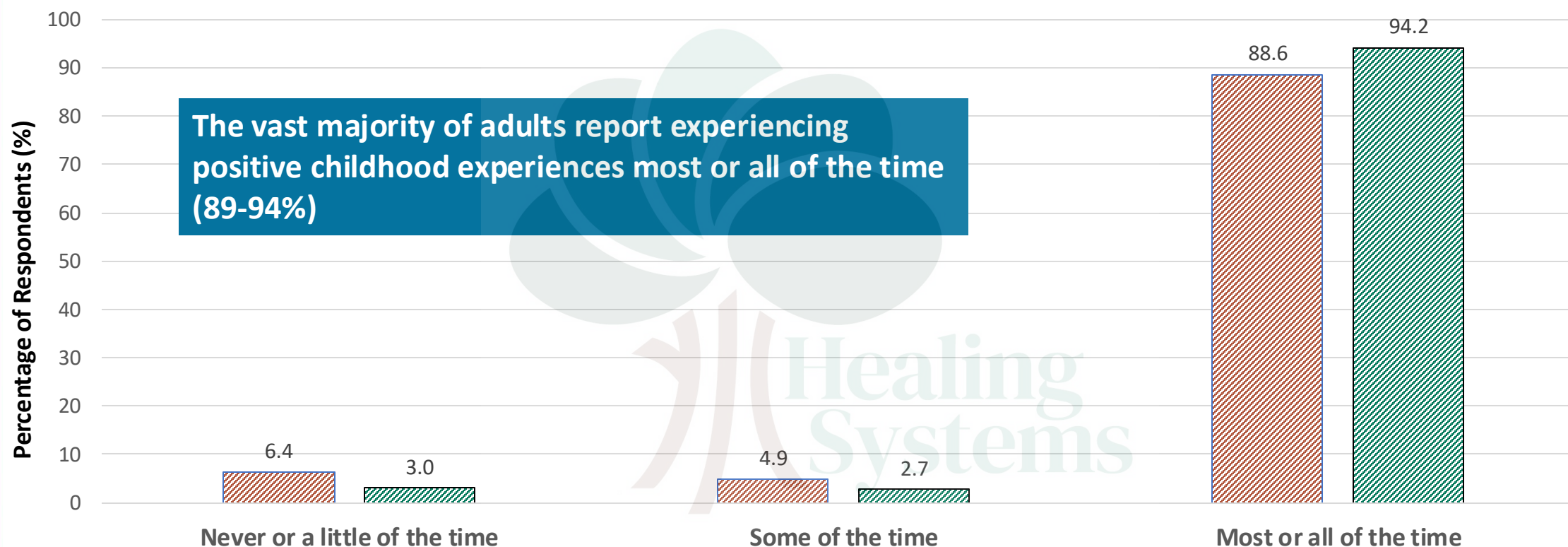


Building Healing Behavioral Health Systems:

Positive Childhood Experiences

Positive Childhood Experiences

Percentage of adults who report positive childhood experiences



Data Source: 2023 Behavioral Risk Factor Surveillance System (BRFSS).

See slides 40-42 for data limitations

- Did an adult make you feel safe and protected?
- Did an adult make sure your basic needs were met?



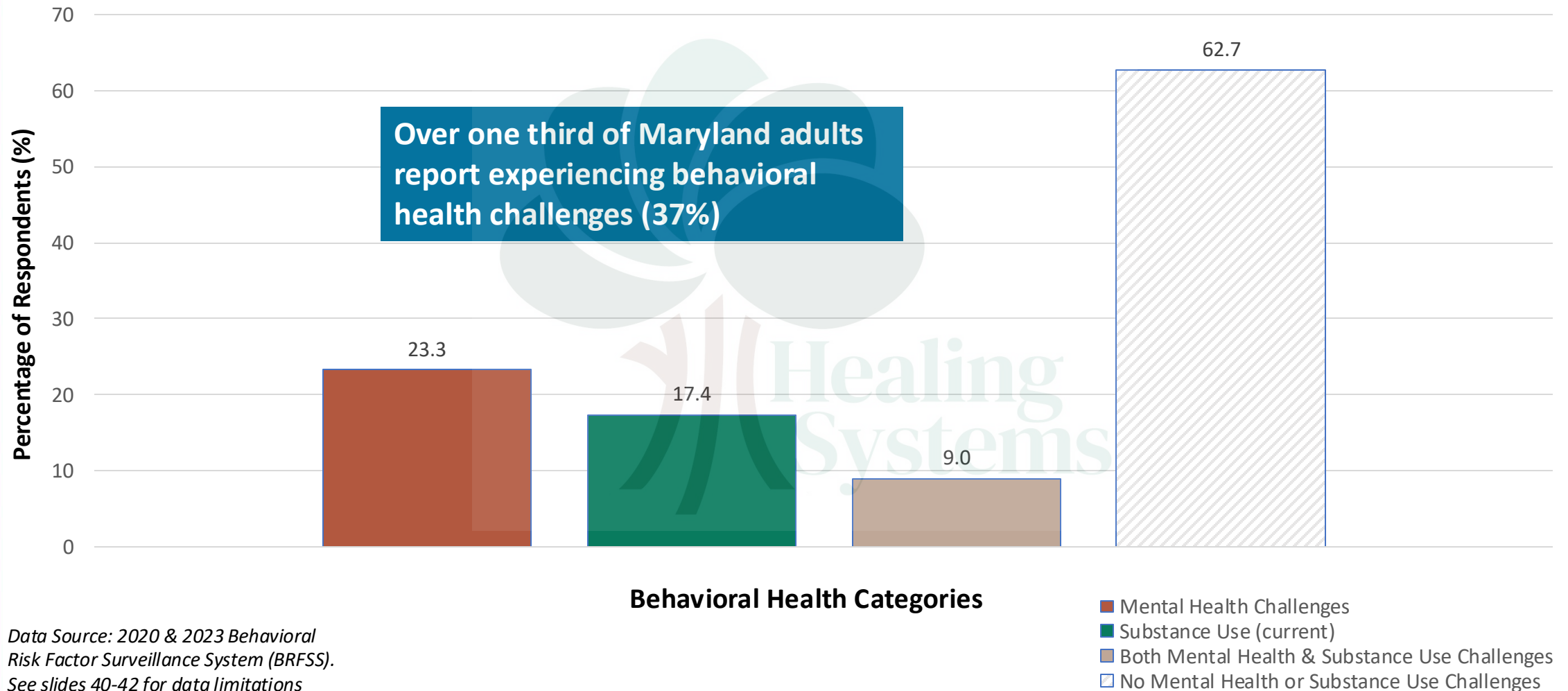
Building Healing Behavioral Health Systems:

Behavioral Health Categories and
Adverse Childhood Experiences

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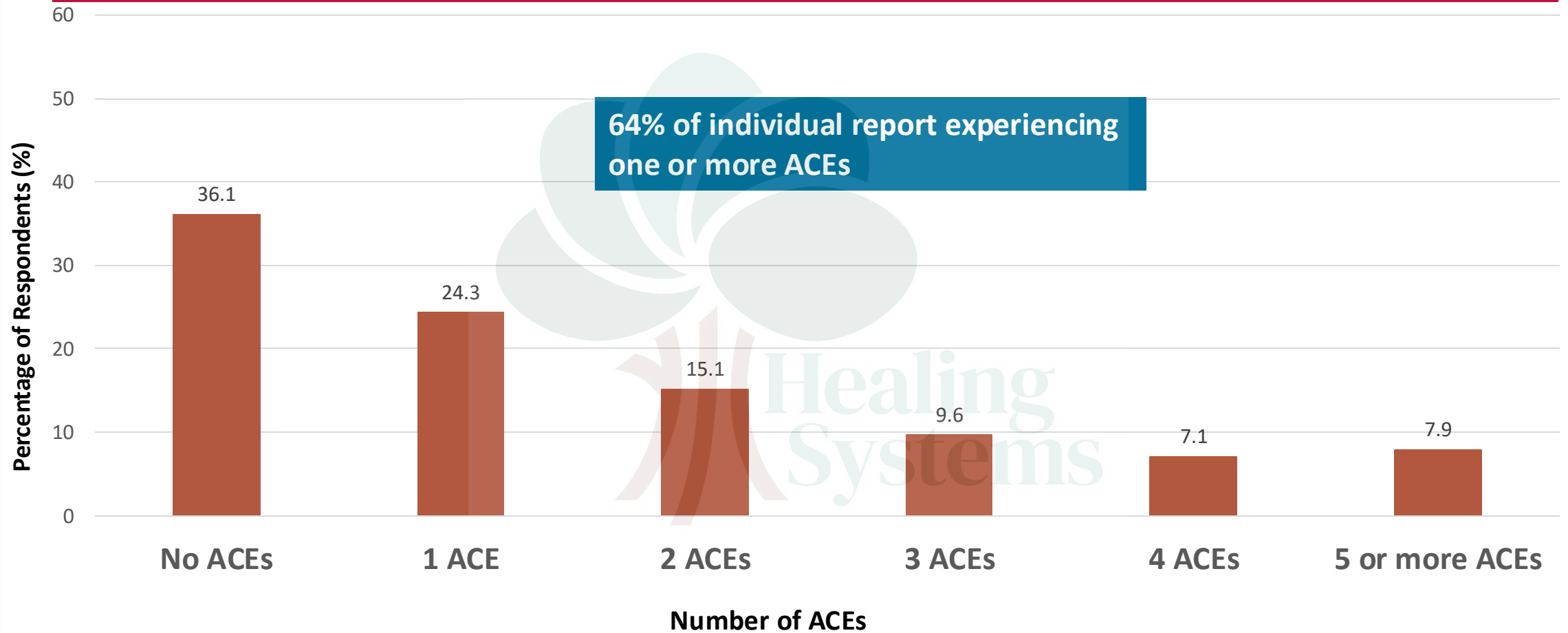
Behavioral Health and Maryland Adults

Percentage of adults who report behavioral health challenges



ACE Counts among Maryland Adults

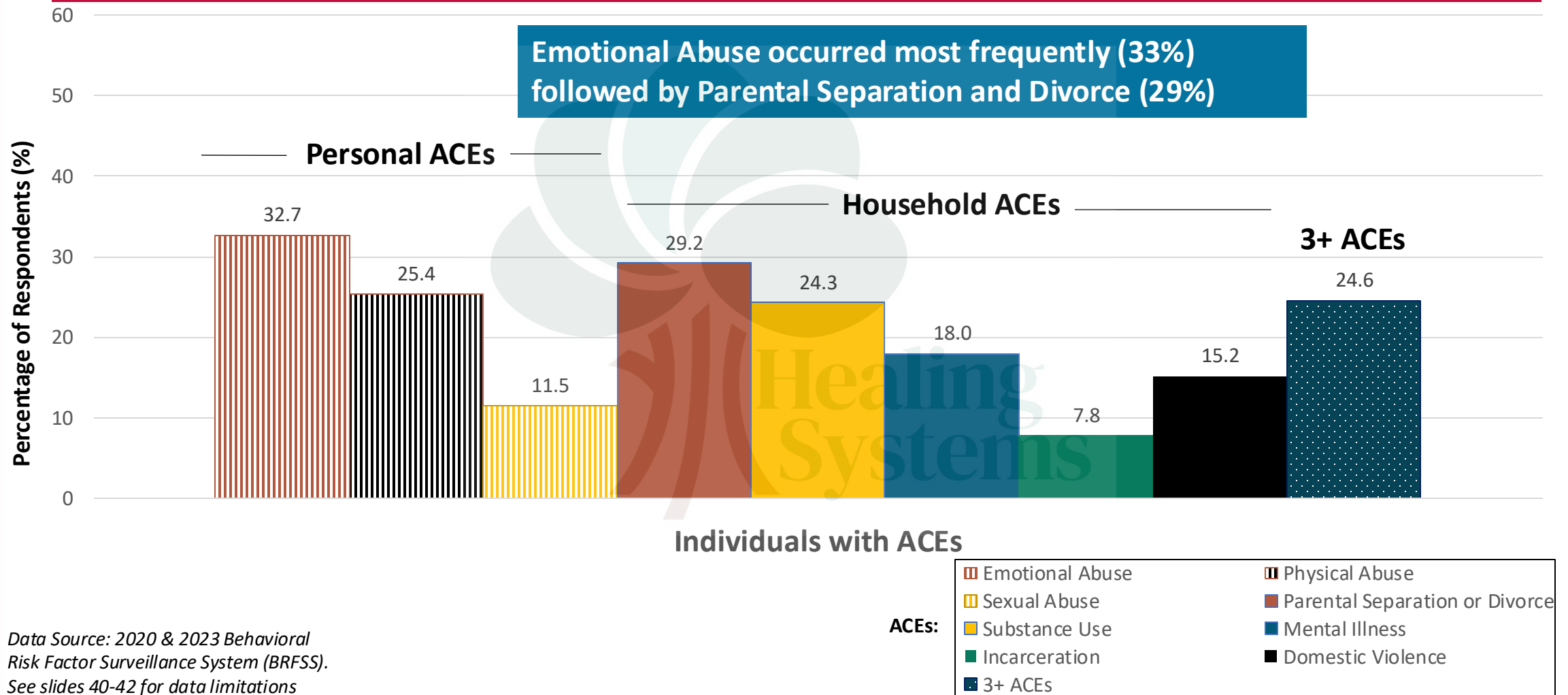
Percentage of adults who report adverse childhood experiences (ACEs)



Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

ACEs among Maryland Adults

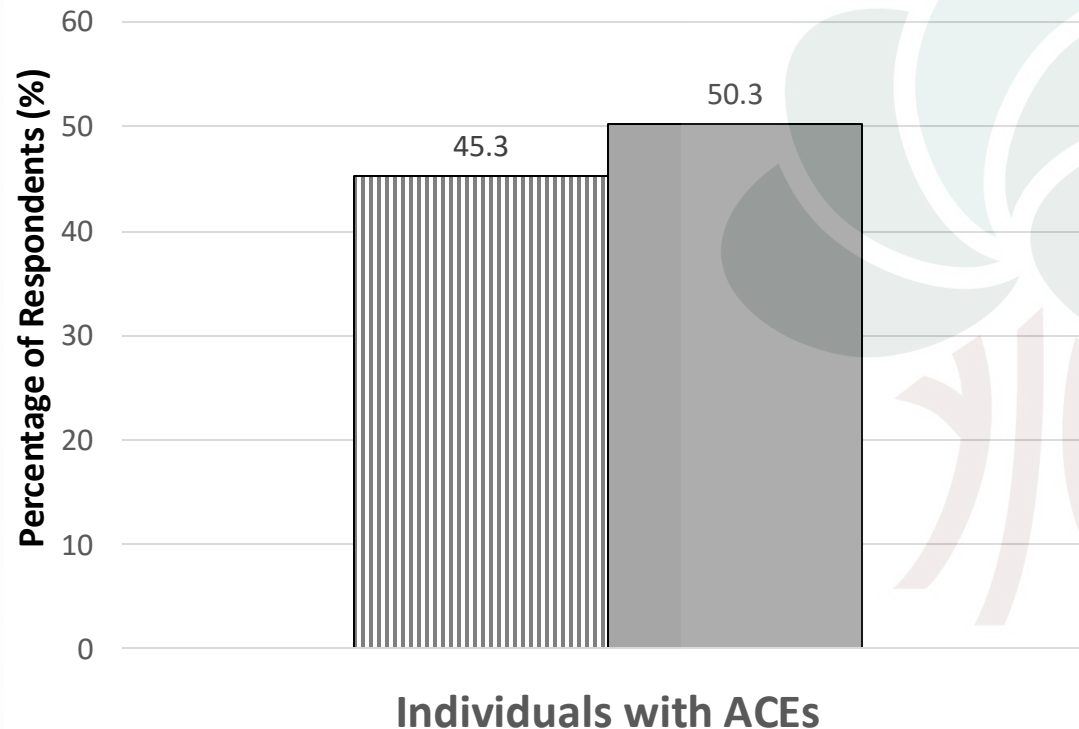
Percentage of adults who report adverse childhood experiences (ACEs)



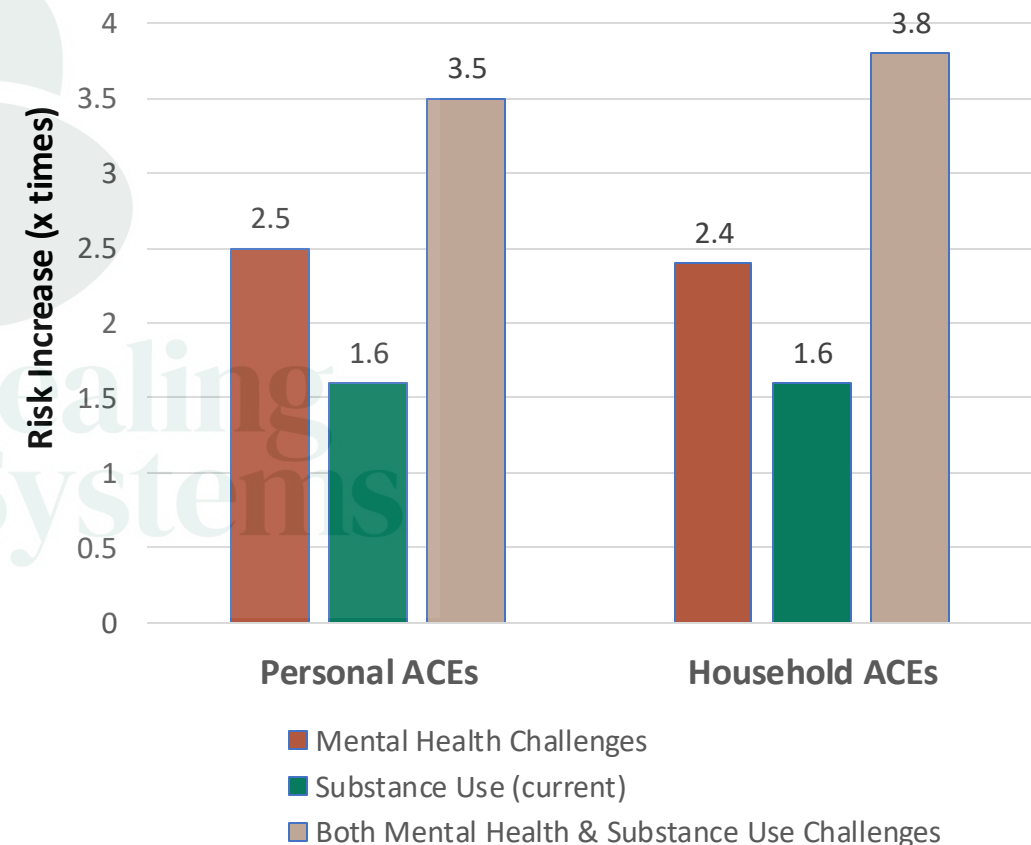
Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Personal and Household ACEs and Behavioral Health

Percentage of individuals with Personal and Household ACEs



Increased risk with Behavioral Health and Personal and Household ACEs (*odds ratio*)

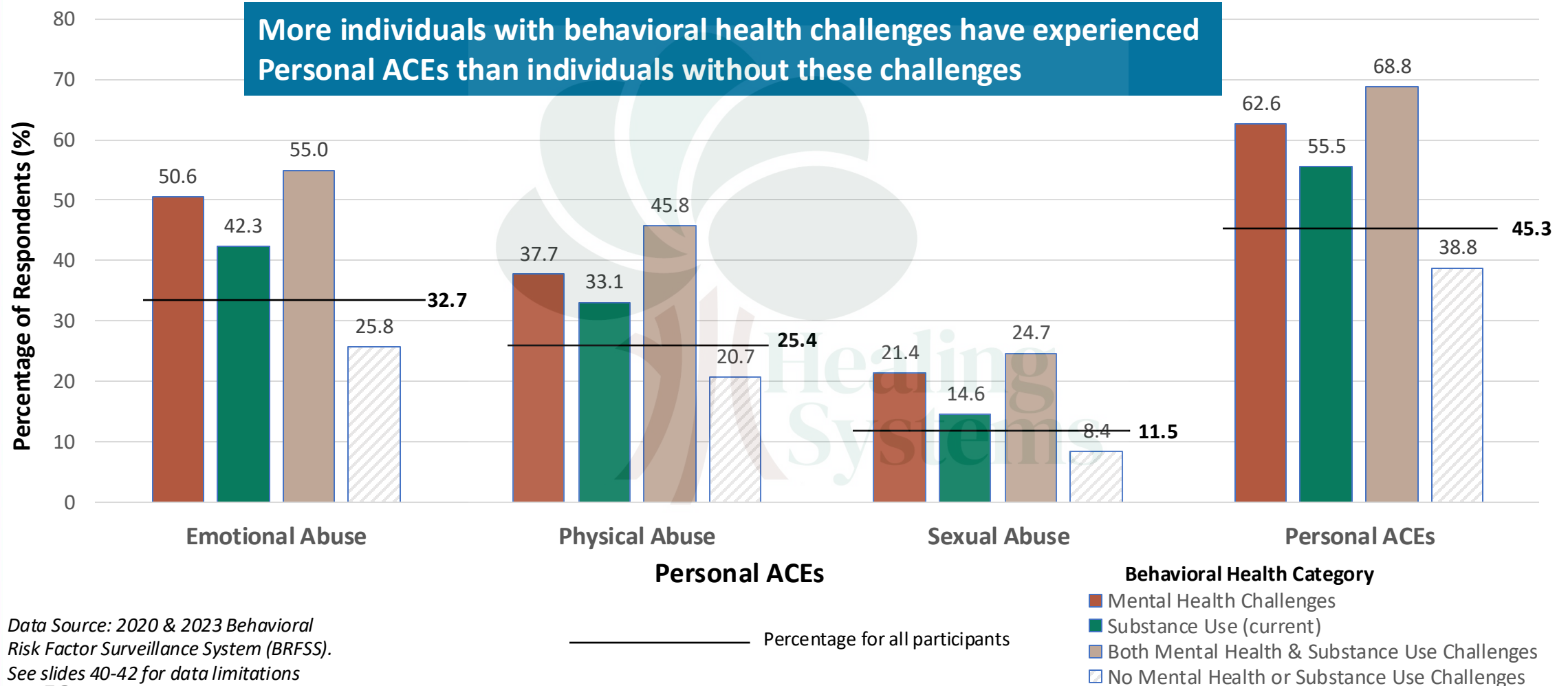


Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

▨ Personal ACEs
■ Household ACEs

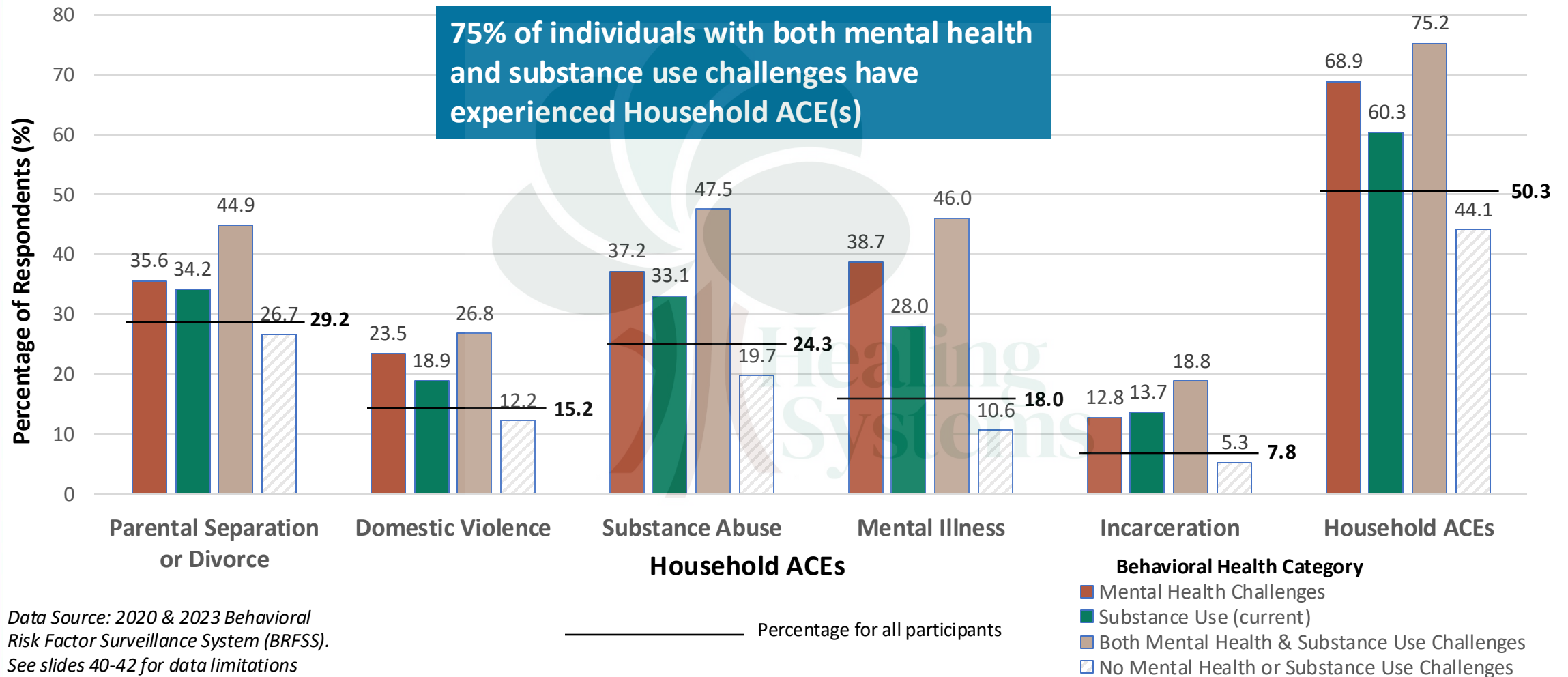
Personal ACEs and Behavioral Health

Percentage of adults who report personal adverse childhood experiences (ACEs) by type of behavioral health challenge



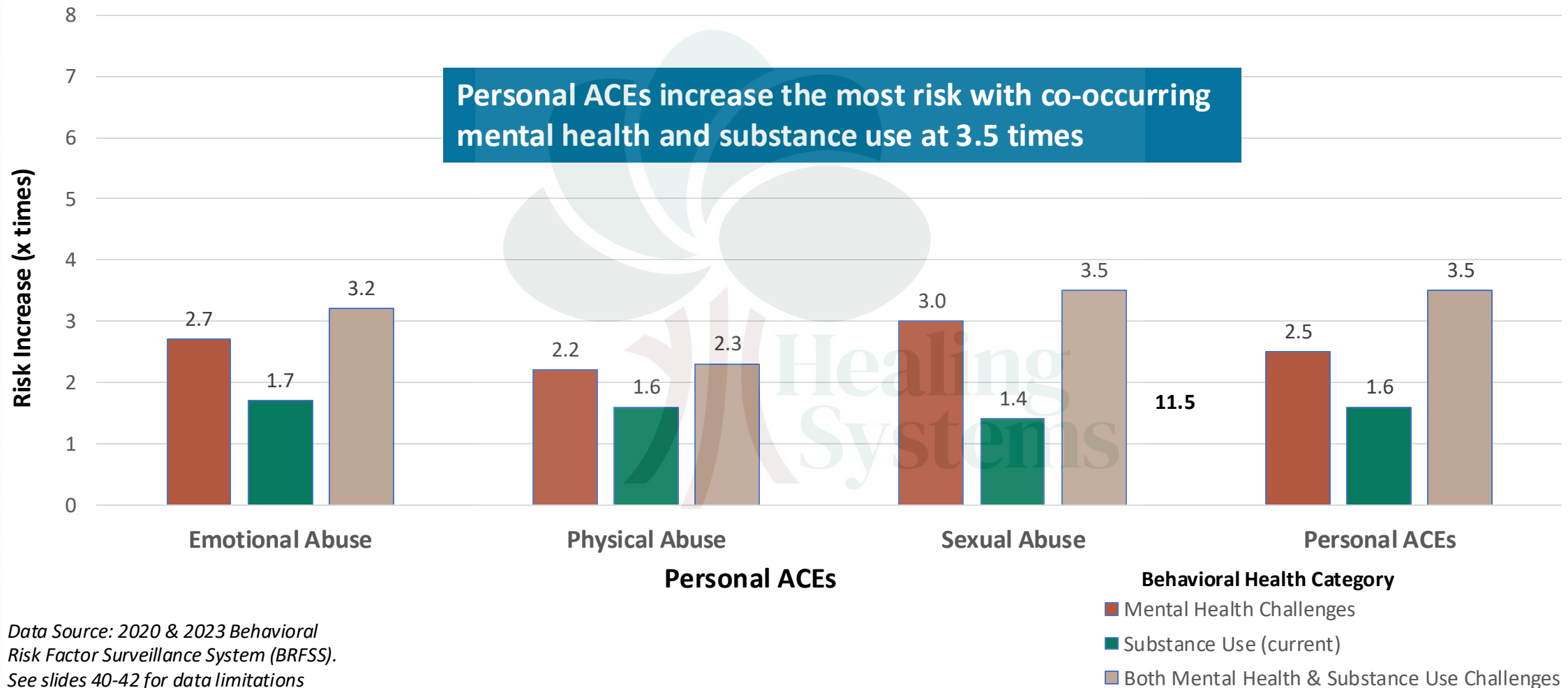
Household ACEs and Behavioral Health

Percentage of adults who report household adverse childhood experiences (ACEs) by type of behavioral health challenge



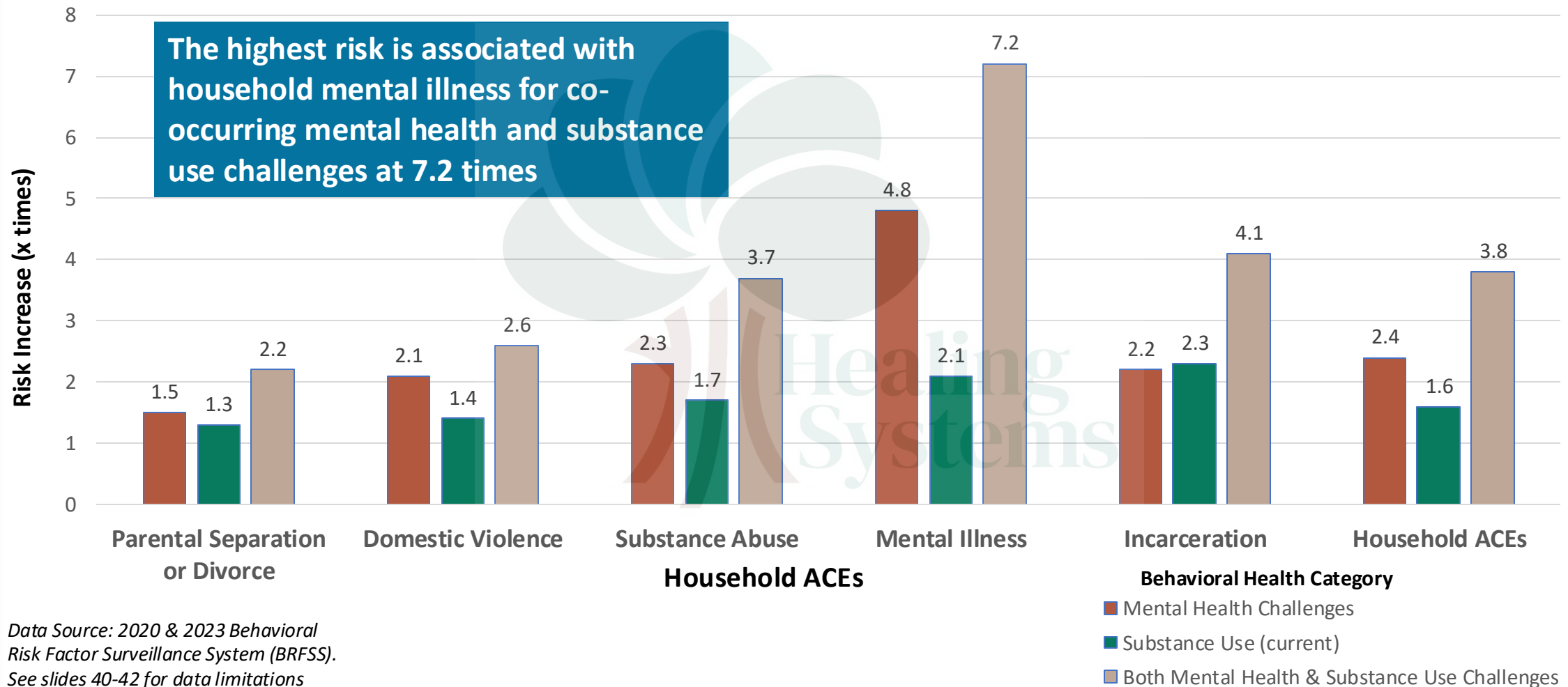
Personal ACEs Increase Risk of Behavioral Health Challenges

Odds ratios of adults who report personal adverse childhood experiences (ACEs) and behavioral health challenges



Household ACEs Increase Risk of Behavioral Health Challenges

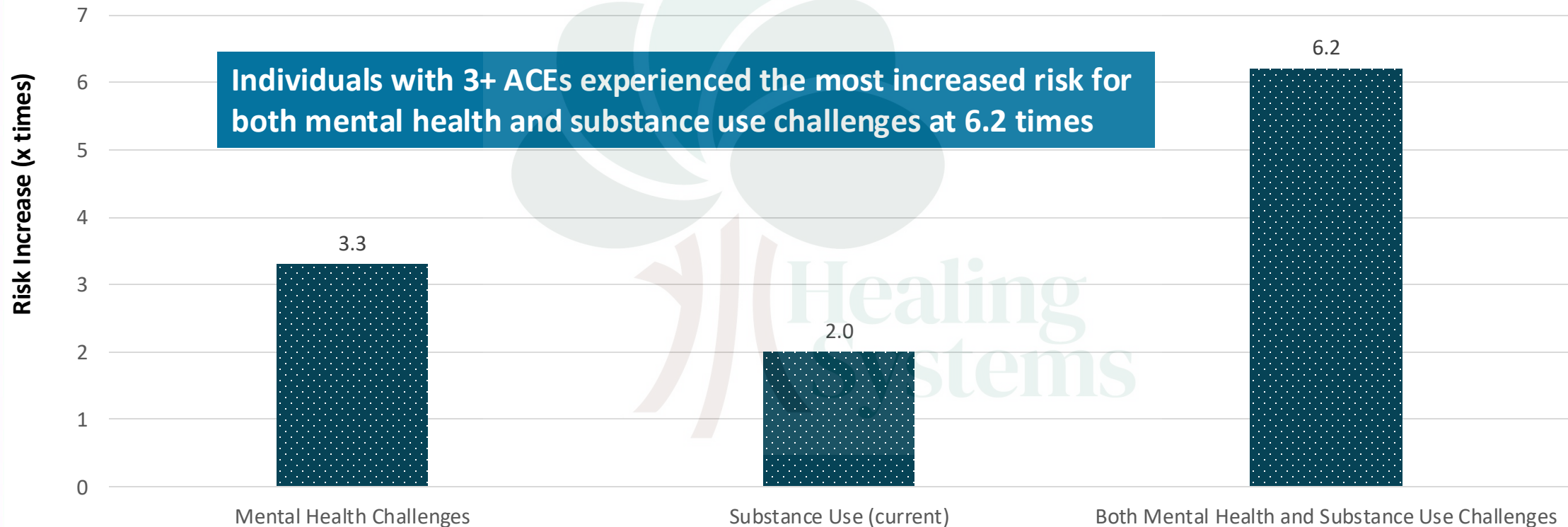
Odds ratios of adults who report household adverse childhood experiences (ACEs) and behavioral health challenges



3+ ACEs and Behavioral Health Risks

Odds ratios of adults who report three or more adverse childhood experiences (ACEs) and behavioral health challenges

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



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations



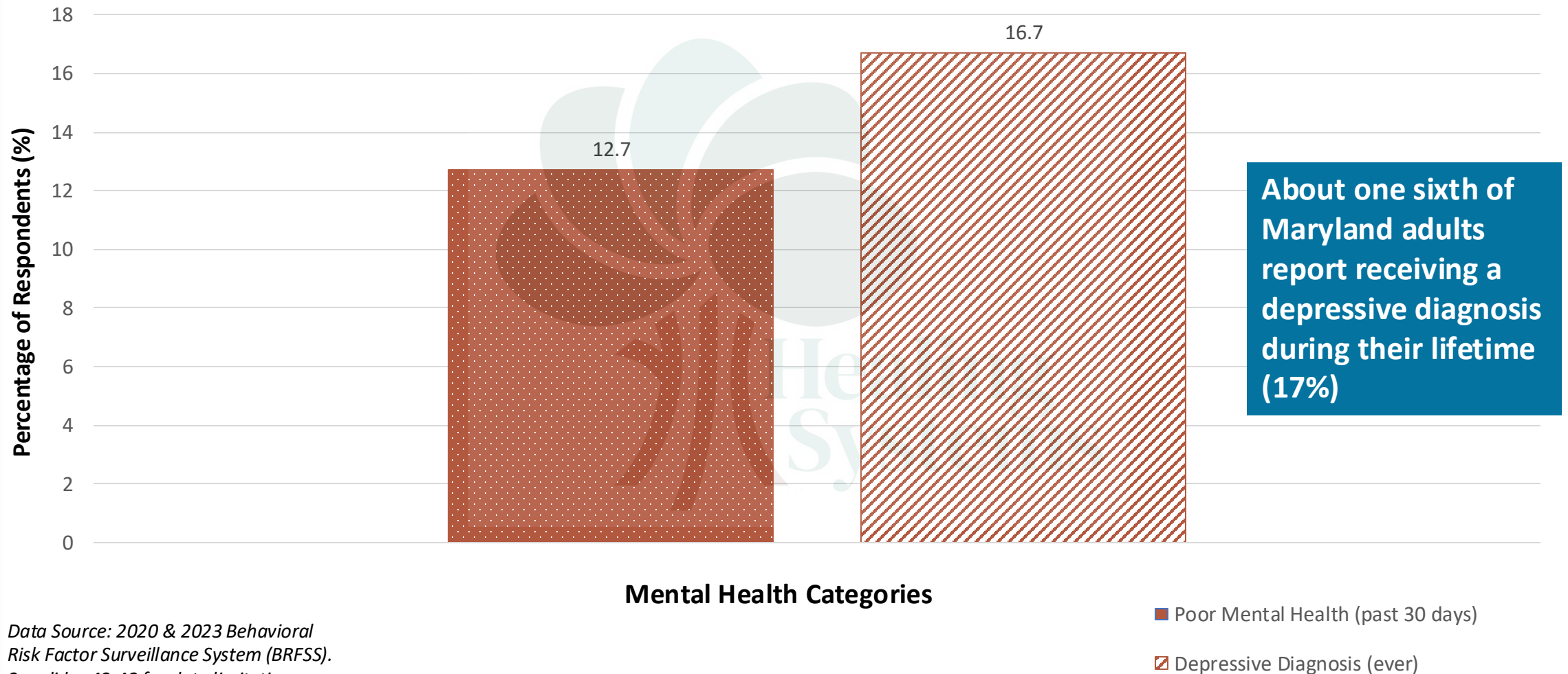
Building Healing Behavioral Health Systems:

Mental Health Indicators and
Adverse Childhood Experiences

Healing
Systems

Mental Health Challenges and Maryland Adults

Percentage of adults who report Poor Mental Health or Depression

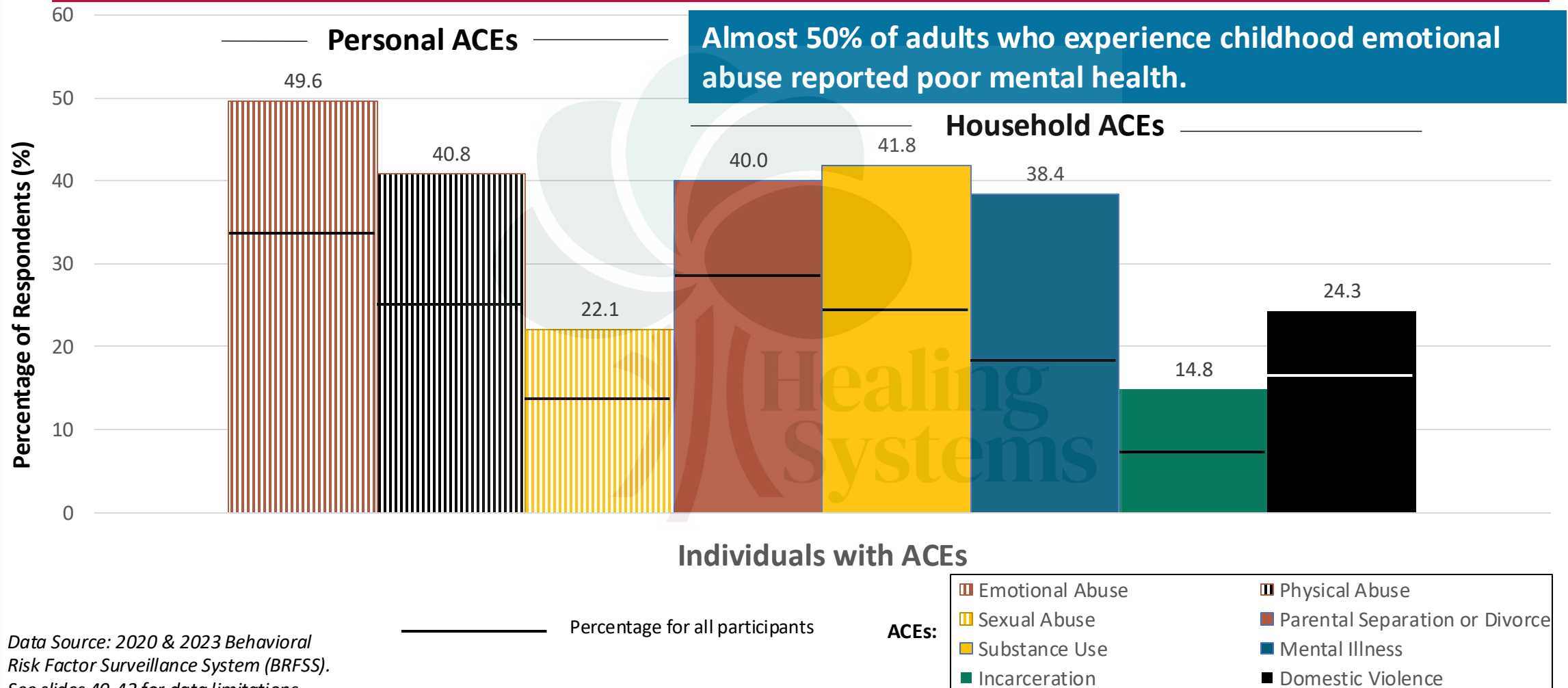


Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Poor Mental Health and ACEs

13% of all adults reported Poor Mental Health

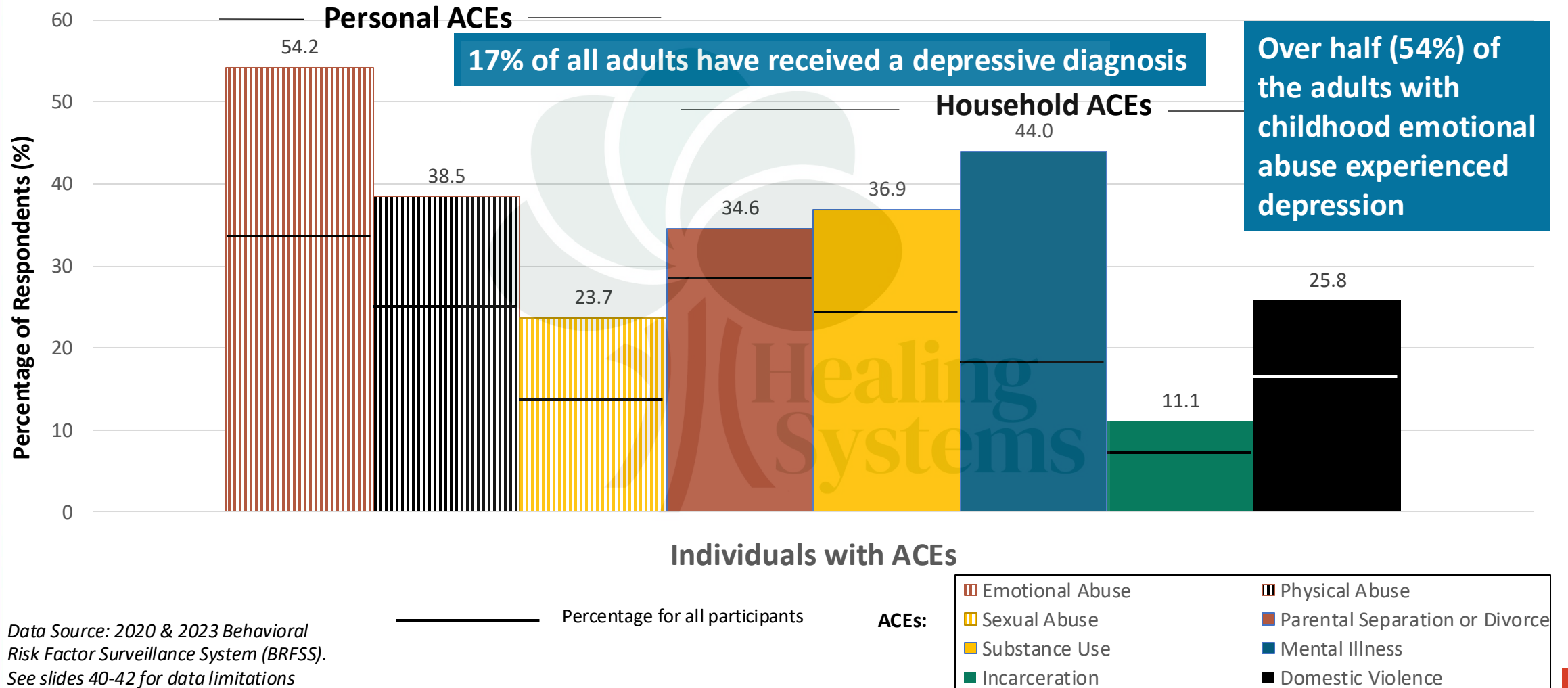
Percentage of adults who report poor mental health within the past 30 days by adverse childhood experiences (ACEs)



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

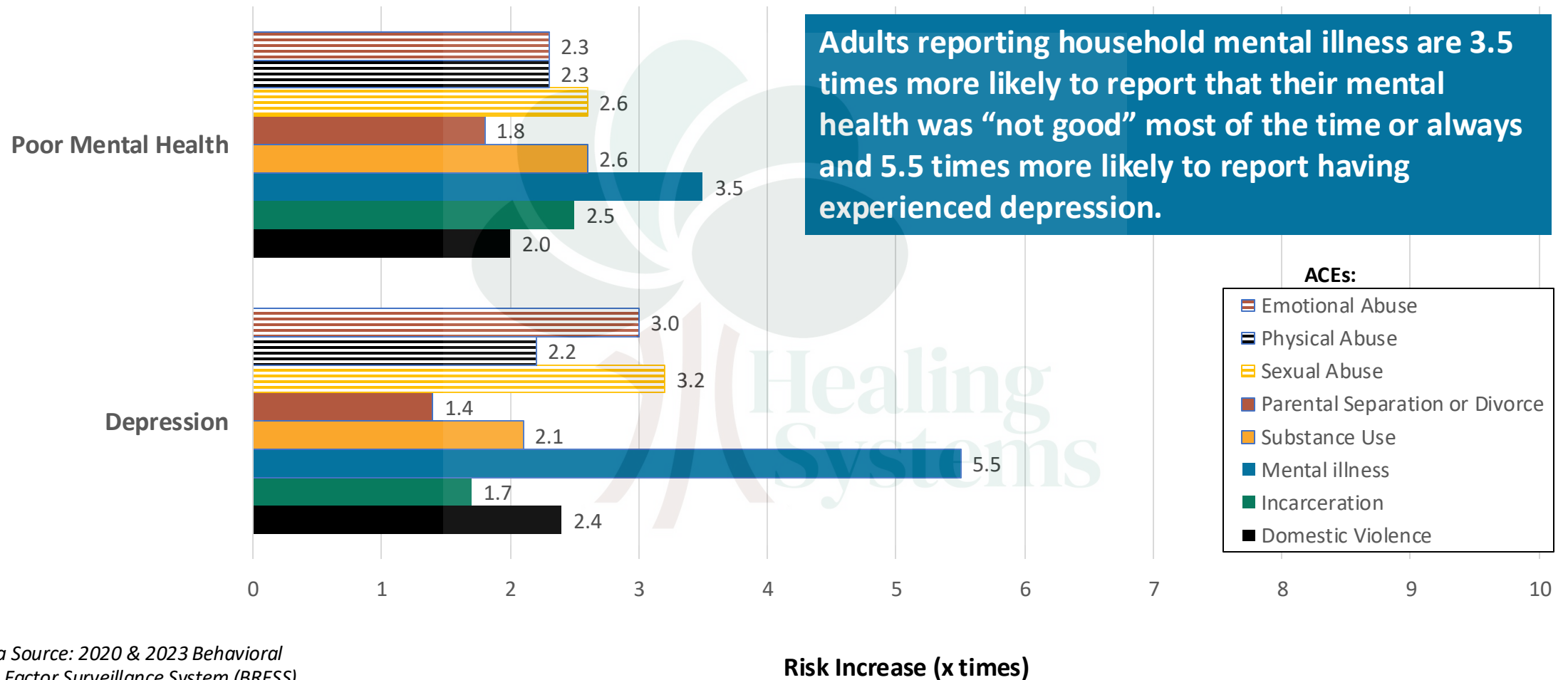
Depression and ACEs

Percentage of adults who report ever having received depressive disorder diagnosis by adverse childhood experiences (ACEs)



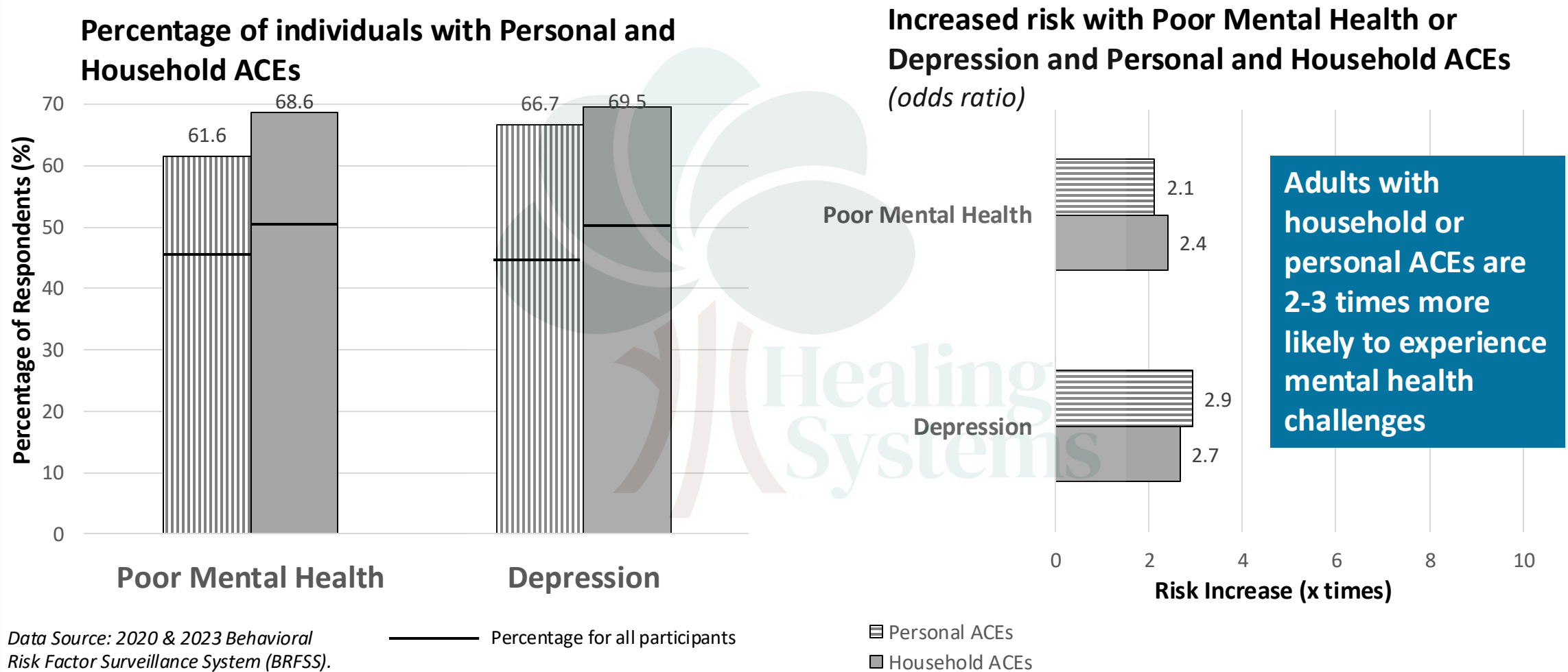
ACEs Increase Mental Health Risks

Odds ratios of adults who report poor mental health in the past 30 days or ever having a depressive disorder diagnosis by ACE



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

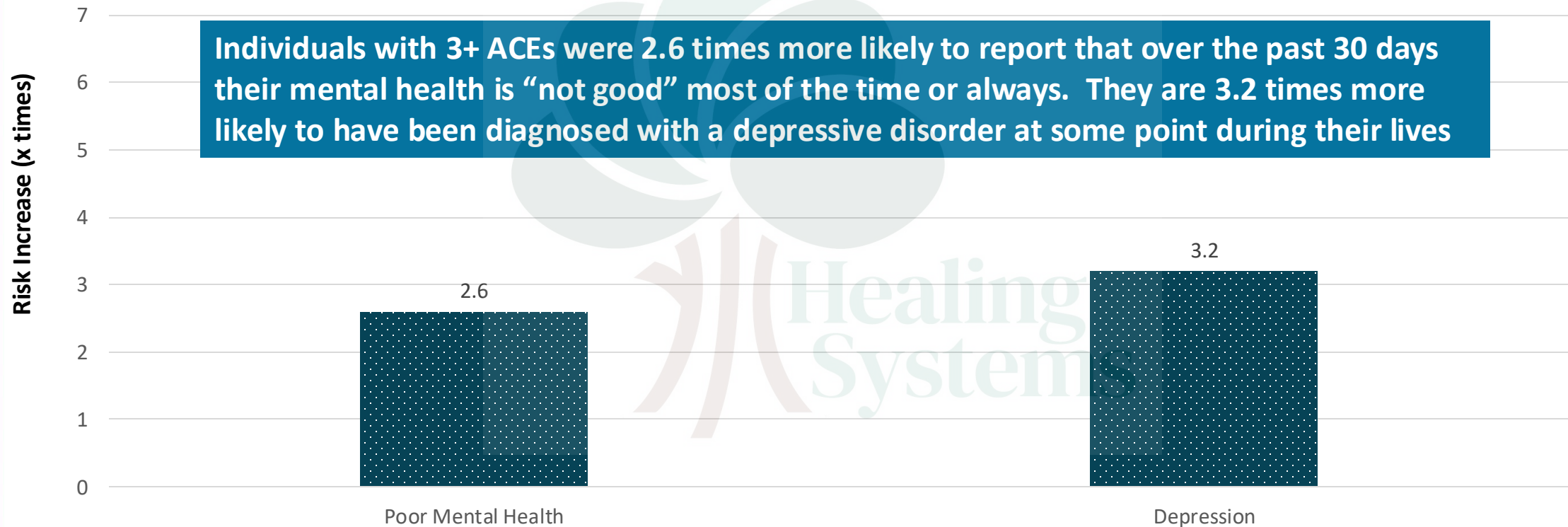
Personal and Household ACEs and Mental Health



3+ ACEs and Poor Mental Health or Depression

Odds ratios of adults who report three or more adverse childhood experiences (ACEs) and poor mental health or depression

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



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations



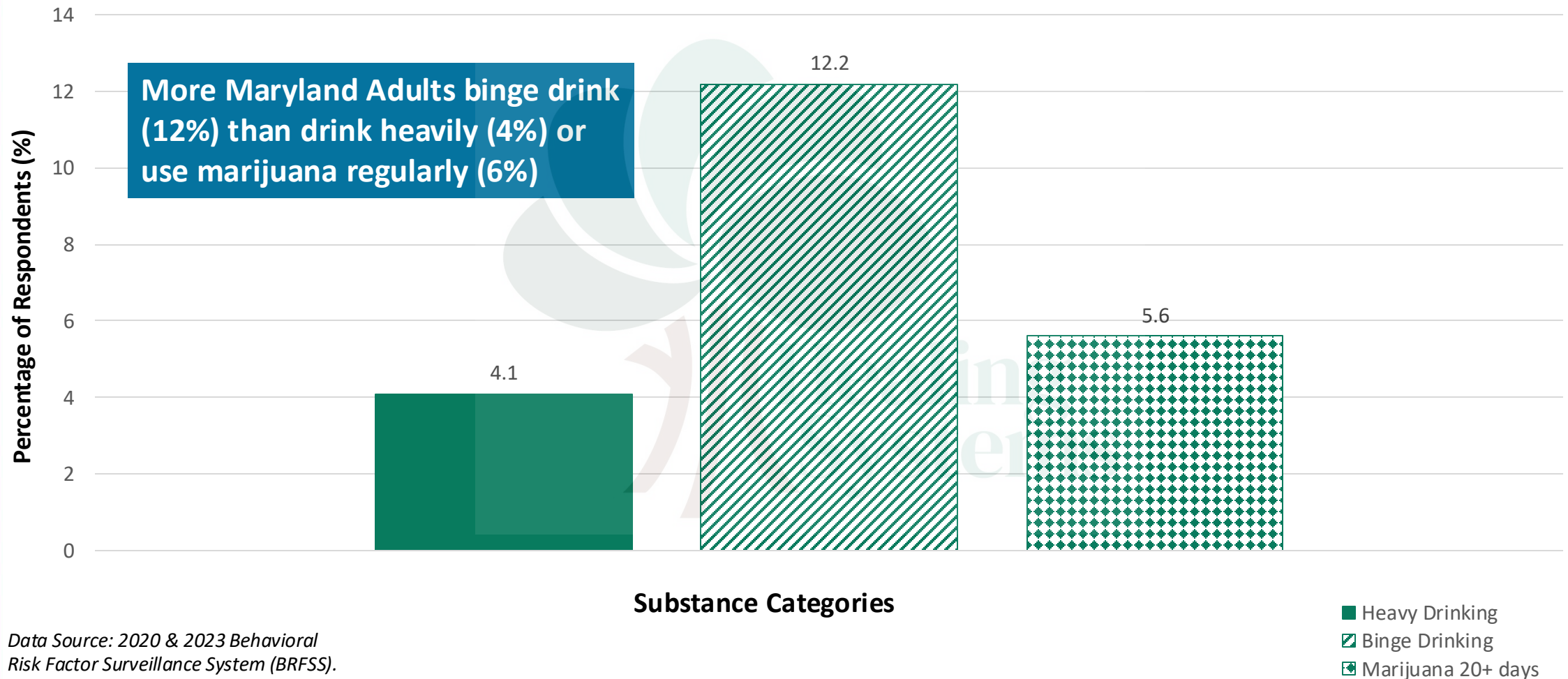
Building Healing Behavioral Health Systems:

Substance Use and

Adverse Childhood Experiences

Substance Use Challenges and Maryland Adults

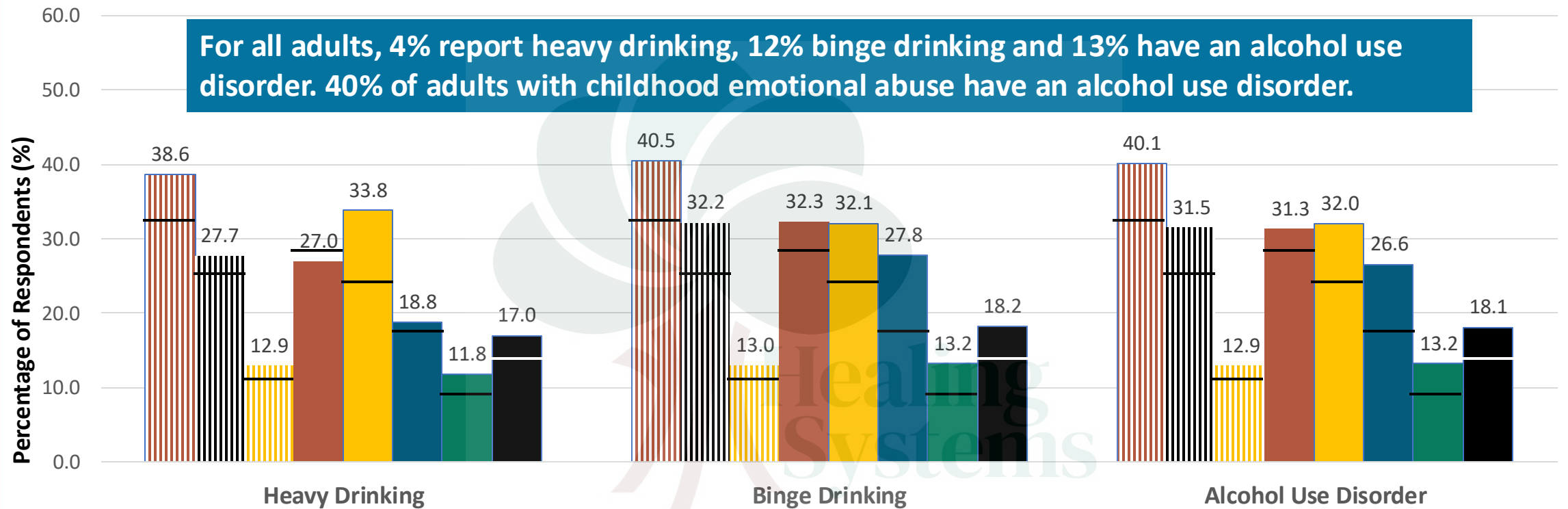
Percentage of adults who report Substance Use Challenges with Alcohol or Marijuana within the past 30 days



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Alcohol Use Challenges and ACEs

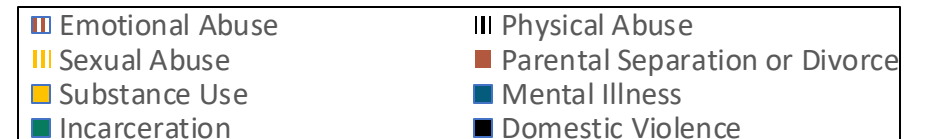
Percentage of adults who report alcohol use challenges within the past 30 days by adverse childhood experiences (ACEs)



Alcohol Use Indicators

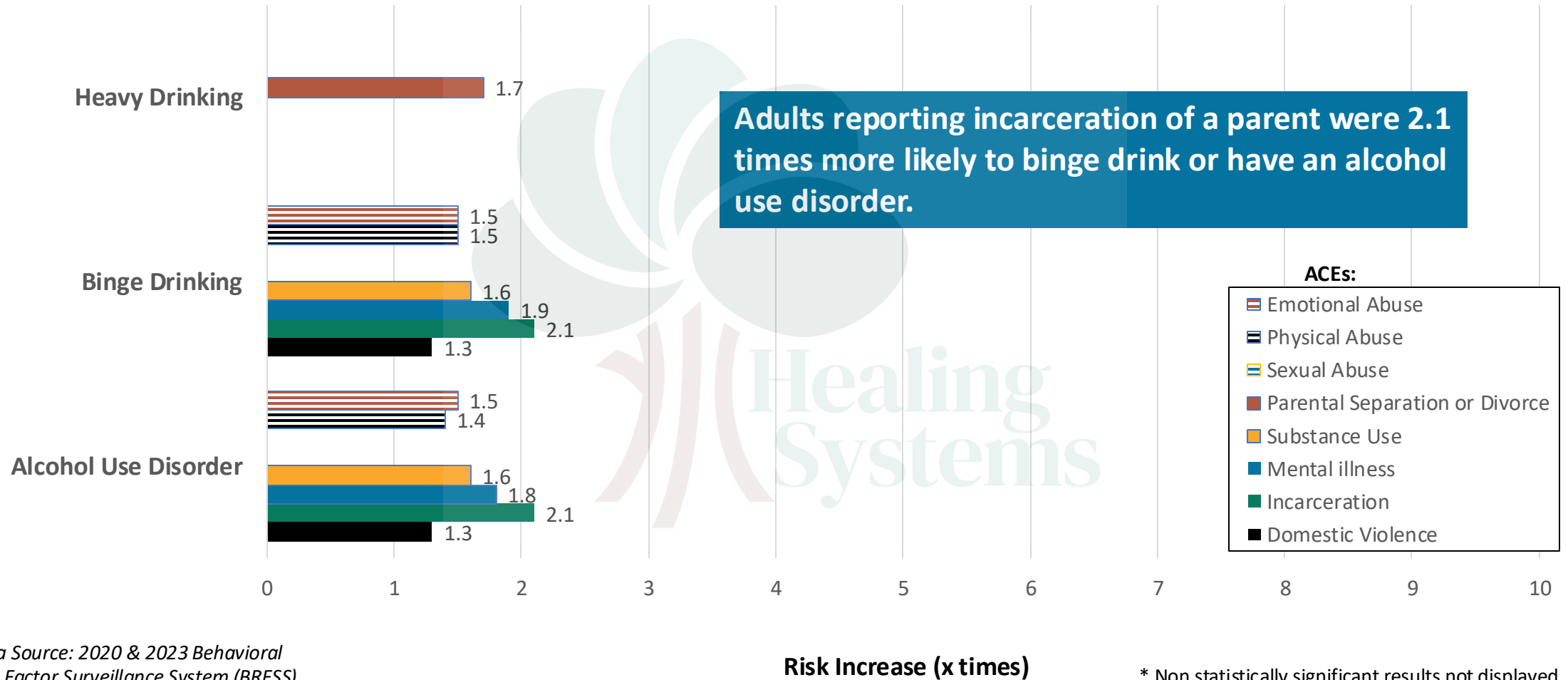
Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

ACEs:



ACEs Increase risk of Alcohol Use Challenges

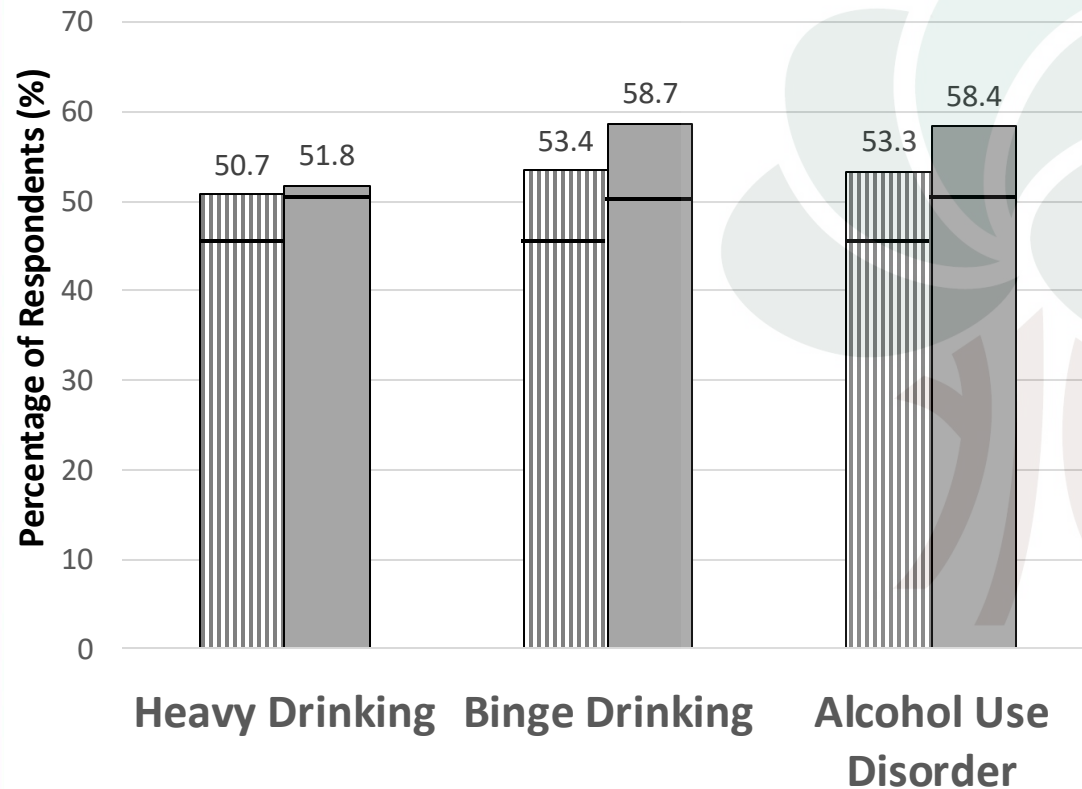
Odds ratios of adults who report alcohol use challenges in the past 30 days by ACE



Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Personal and Household ACEs and Alcohol Use Challenges

Percentage of individuals with Personal and Household ACEs

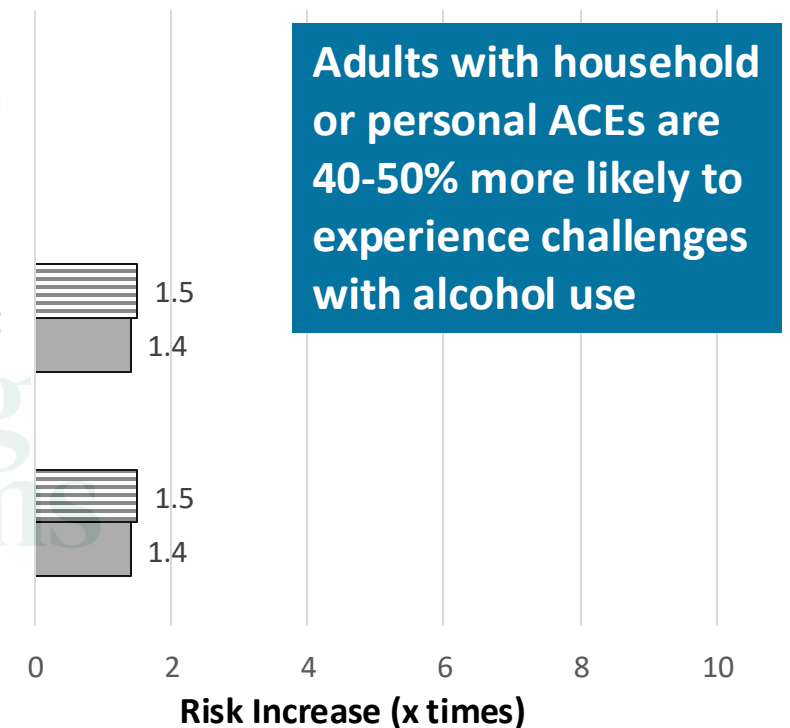


Increased risk with Alcohol Use Challenges and Personal and Household ACEs (odds ratio)

Heavy Drinking*

Binge Drinking

Alcohol Use Disorder



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS). See slides 40-42 for data limitations

— Percentage for all participants

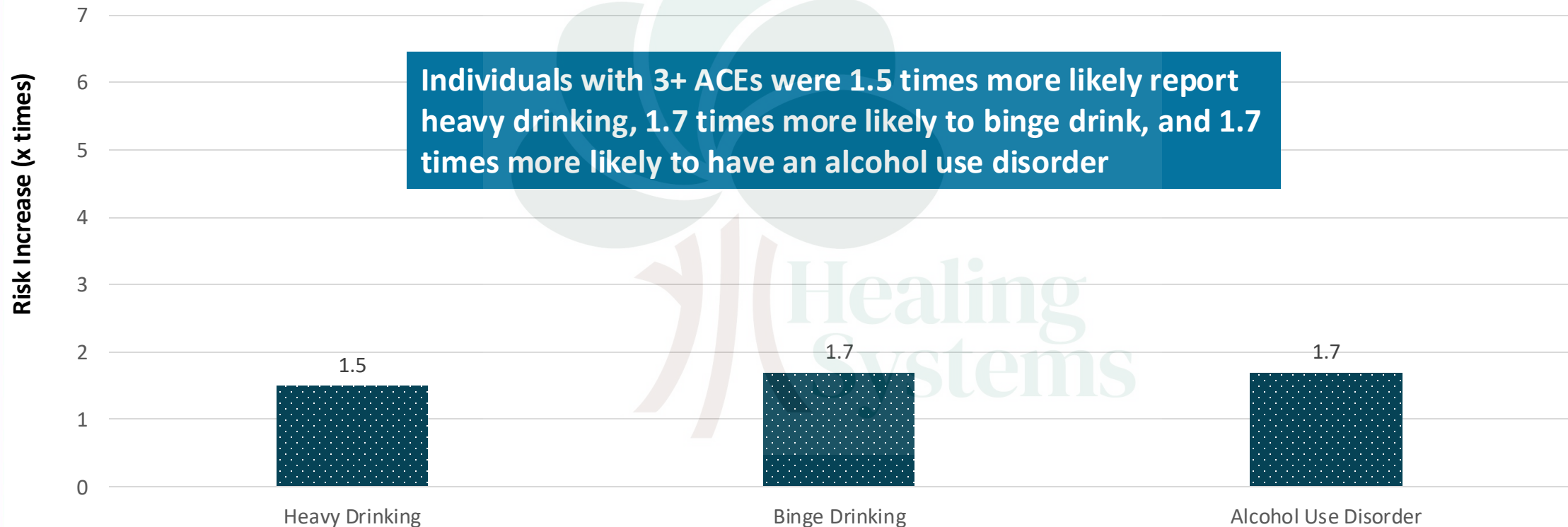
▨ Personal ACEs
■ Household ACEs

* Risk for Heavy Drinking not statistically significant

3+ ACEs and Alcohol Use Challenges

Odds ratios of adults who report three or more adverse childhood experiences (ACEs) and alcohol use challenges

Individuals with 3+ ACEs are more likely to experience alcohol use challenges

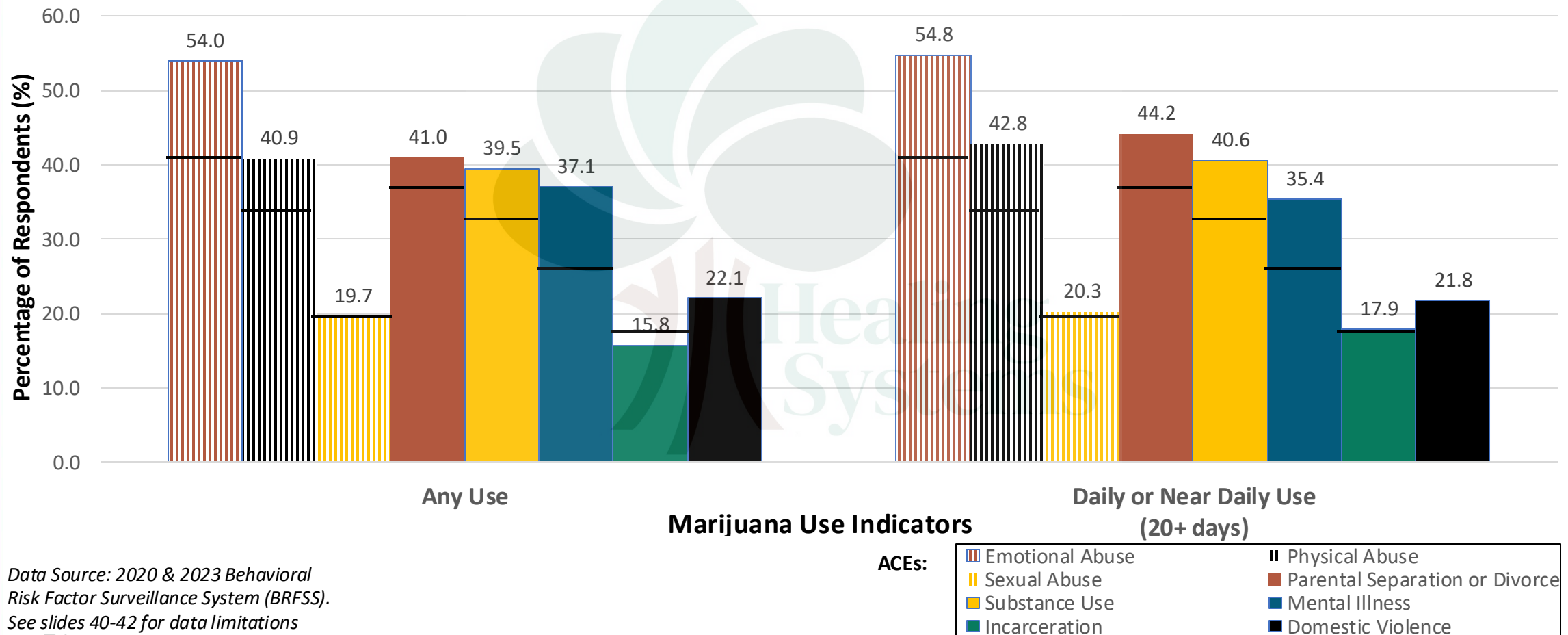


Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Marijuana Use and ACEs

Percentage of adults who report using marijuana within the past 30 days by adverse childhood experiences (ACEs)

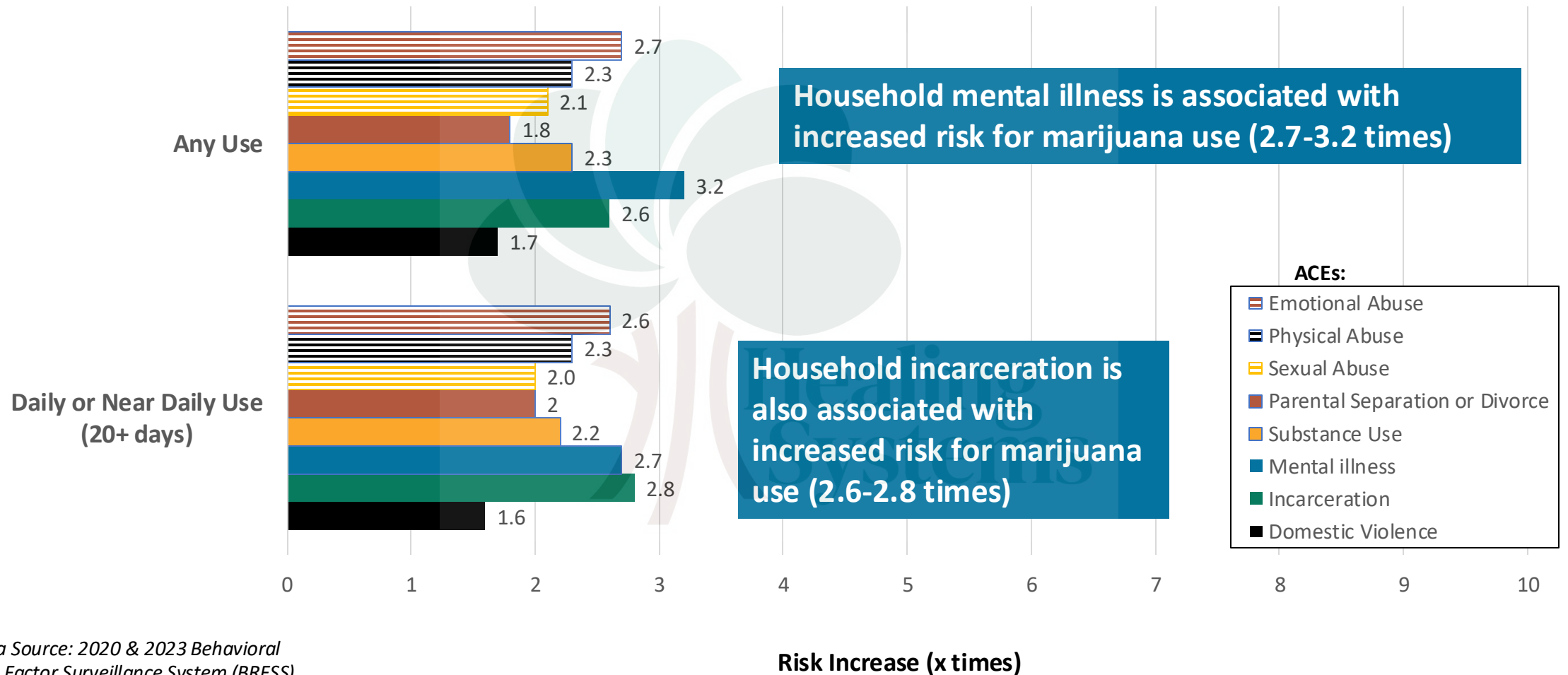
For all adults, 11% report marijuana use with 6% using daily or near daily



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

ACEs Increase risk of Marijuana Use

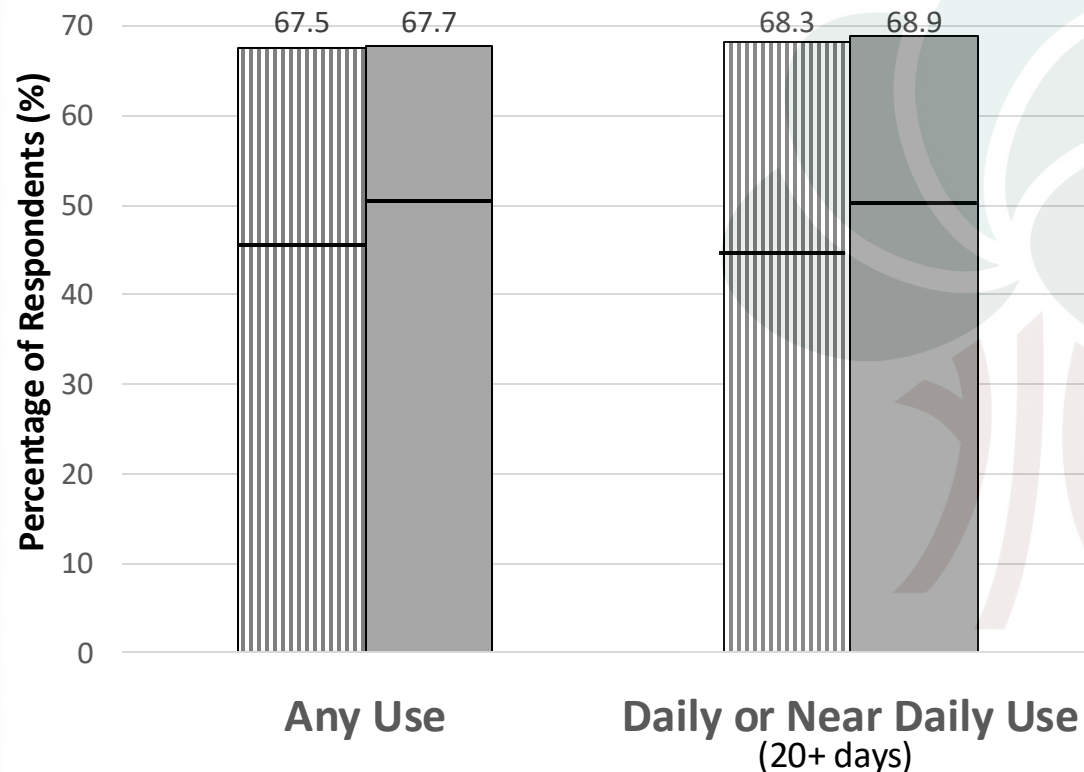
Odds ratios of adults who report marijuana use in the past 30 days by ACE



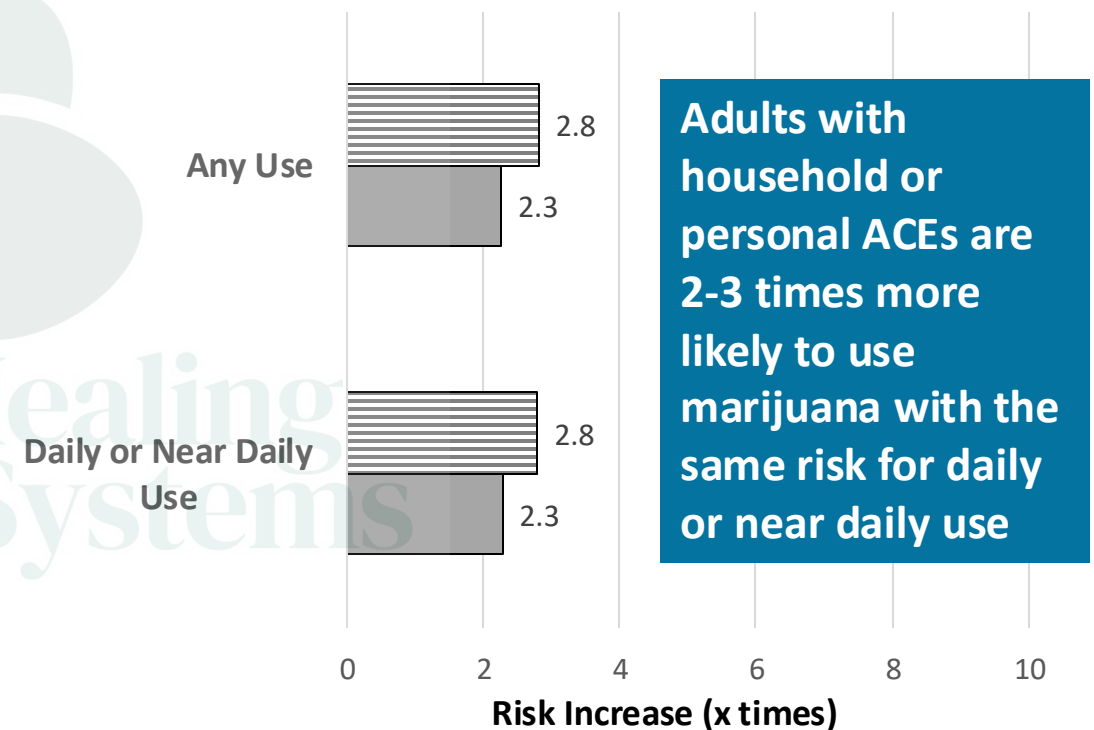
Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

Personal and Household ACEs and Marijuana Use

Percentage of individuals with Personal and Household ACEs



Increased risk with Marijuana Use and Personal and Household ACEs (*odds ratio*)



Adults with household or personal ACEs are 2-3 times more likely to use marijuana with the same risk for daily or near daily use

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations

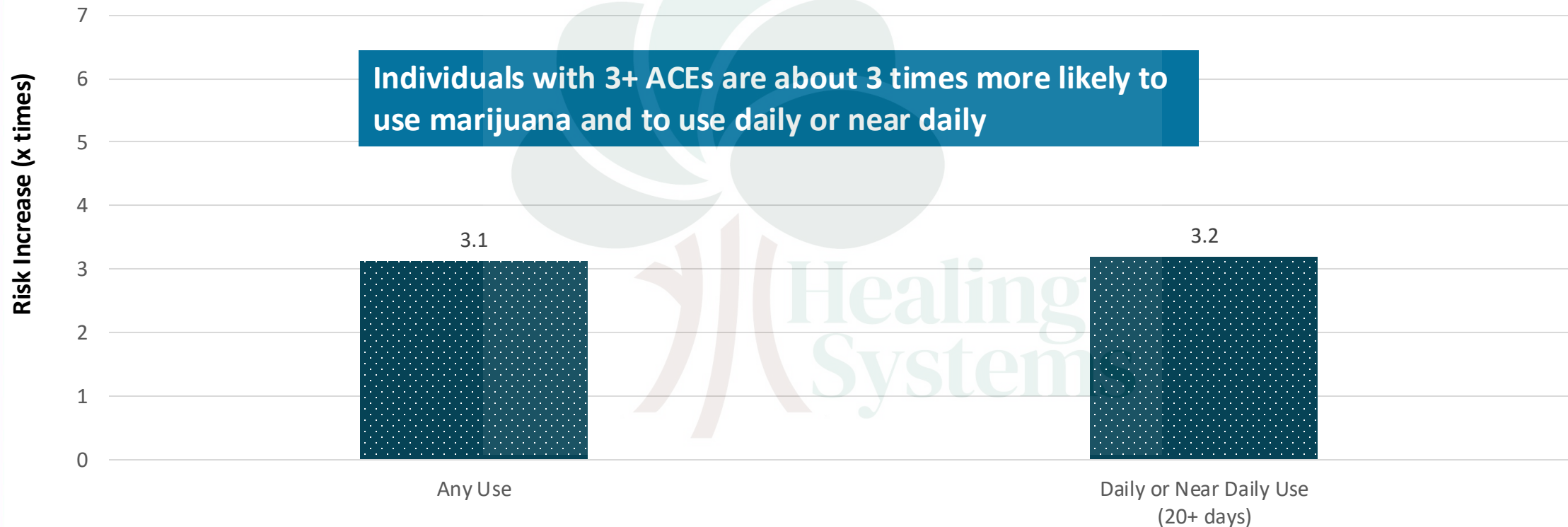
Percentage for all participants

Personal ACEs
Household ACEs

3+ ACEs and Marijuana Use

Odds ratios of adults who report three or more adverse childhood experiences (ACEs) and marijuana use

Individuals with 3+ ACEs are more likely to use marijuana



Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations



Building Healing Behavioral Health Systems:

Summary of Behavioral Health Impact by ACE

Healing
Systems

Summary of Behavioral Health Impact by ACE:

Personal ACEs



45% of adults
experienced one
or more childhood
Personal ACE

Individuals who have experienced childhood sexual
abuse are **3.5 times**
more likely to experience **Both Mental Health and
Substance Use Challenges**



They are also
2.9 times
more likely to have ever
been diagnosed with a
Depressive Disorder

Personal ACEs:

Emotional Abuse, Physical Abuse, Sexual Abuse

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Emotional Abuse



33%
of adults experienced
childhood
Emotional Abuse

Individuals who have experienced emotional abuse
are **3.2 times**
more likely to report **Both Mental Health and
Substance Use Challenges**



They are **5.5 times**
more likely to have ever
been diagnosed with a
Depressive Disorder

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE:

Physical Abuse



25%
of adults
experienced childhood
Physical Abuse

Individuals who have experienced childhood physical abuse are **2.3 times** more likely to report **Both Mental Health and Substance Use Challenges**



They are also **2.3 times** more likely to **Use Marijuana** daily or near daily (20+ days/month)

Data Source: 2020 & 2023 Behavioral Risk Factor Surveillance System (BRFSS). See slides 40-42 for data limitations

Summary of Behavioral Health Impact by ACE: Sexual Abuse



12%
of adults
experienced childhood
Sexual Abuse

Individuals who have experienced childhood sexual abuse are **3.5 times** more likely to experience **Both Mental Health and Substance Use Challenges**



They are **3.2 times** more likely to have ever been diagnosed with a **Depressive Disorder**

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Household ACEs



50% of adults
experienced one
or more childhood
Household ACE

Individuals who have experienced household mental
illness are **7.2 times**
more likely to experience **Both Mental Health and
Substance Use Challenges**



They are **5.5 times**
more likely to have ever
been diagnosed with a
Depressive Disorder

Household ACEs:

Parental Separation or Divorce, Substance Use,
Mental Illness, Incarceration, Domestic Violence

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Parental Separation or Divorce



29%
of adults experienced
childhood **Parental
Separation or Divorce**

Individuals who have experienced parental separation or divorce during childhood are **2.2 times** more likely to experience **Both Mental Health and Substance Use Challenges**



They are **1.8 times** more likely to report **Poor Mental Health**

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Household Substance Use



24%
of adults experienced
childhood **Household
Substance Use**

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Individuals who have experienced household
substance use during childhood are **3.7 times**
more likely to experience
Both Substance Use and Mental Health Challenges



They are also
2.6 times
more likely to report
Poor Mental Health

Summary of Behavioral Health Impact by ACE: Household Mental Illness



18%

of adults experienced
childhood **Household
Mental Illness**

Individuals who have experienced household mental illness during childhood are **7.2 times** more likely to experience **Both Substance Use and Mental Health Challenges**



They are also
5.5 times
more likely to have ever
been diagnosed with a
Depressive Disorder

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Household Incarceration



8% of adults
experienced childhood
**Household
Incarceration**

Individuals who experienced incarceration of a household member during childhood are **4 times** more likely to experience
Both Substance Use and Mental Health Challenges



They are also
2.8 times
more likely to use
**Marijuana Daily or
Near Daily**
(20+ days/month)

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*

Summary of Behavioral Health Impact by ACE: Household Domestic Violence



15%

of adults experienced
childhood

Household Domestic Violence

Individuals who experienced household domestic violence during childhood are **2.6 times** more likely to experience **Both Mental Health and Substance Use Challenges**



They are **2.4 times** more likely to have ever been diagnosed with a **Depressive Disorder**

*Data Source: 2020 & 2023 Behavioral
Risk Factor Surveillance System (BRFSS).
See slides 40-42 for data limitations*



Building Healing Behavioral Health Systems:

Summary of Behavioral Health Findings

Healing
Systems

Summary of Findings

- More adults with behavioral health challenges experience all ACEs than students without behavioral health challenges
- Almost all relationships across ACEs and behavioral health indicators were statistically significant, showing a strong relationship between ACEs and behavioral health in Maryland adults.
- Personal and Household ACEs are associated with a 3.5-3.8 times increased risk with both mental health and substance use challenges
- The vast majority of Maryland Adults experienced at least one positive childhood experiences most or all of the time (89-95%)

Summary of findings: 3 or more ACEs

- Increased risk of adverse behavioral health outcomes for
 - Mental Health Challenges at 3.3 times
 - Substance use (current) at 2.0 times
 - Both Mental Health and Substance Use Challenges at 6.2 times
- Increased risk of adverse mental health and substance use outcomes by up to 3.2 times.
- Increased risk for depression and daily or near daily marijuana use (both at 3.2 times)

Summary of findings:

Mental Health Indicators and ACEs

- Personal and Household ACEs are associated with a 2.1-2.9 times increased risk of mental health challenges.
- More individuals with Emotional Abuse reported experiencing poor mental health or depression (50-54%) than any other ACE,
- Specific ACEs are associated with increasing risk for mental health challenges by up to 5.5 times
- Household mental illness was most highly associated with poor mental health (3.5 times) and diagnosis for a depressive disorder (5.5 times) followed by Sexual Abuse (2.6-3.3 times)

Summary of findings:

Current Substance Use and ACEs

- Personal and Household ACEs are associated with a 1.4-3.2 times increased risk of substance use challenges.
- More individuals with Emotional Abuse (39-55%) reported experiencing all current substance use indicators than any other ACE.
- Specific ACEs are associated with increasing risk for current alcohol or marijuana use by up to 3.2 times
- Household incarceration was most associated with binge drinking (2.1 times) and daily or near daily marijuana use 2.8 times



Building Healing Behavioral Health Systems:

Potential Action Steps

Healing
Systems

Potential Action Steps: Behavioral Health Organizations



- 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
 - Promote screening for ACEs in high-risk groups and provide appropriate counseling and supports.

Potential Action Steps: Screening and Referral

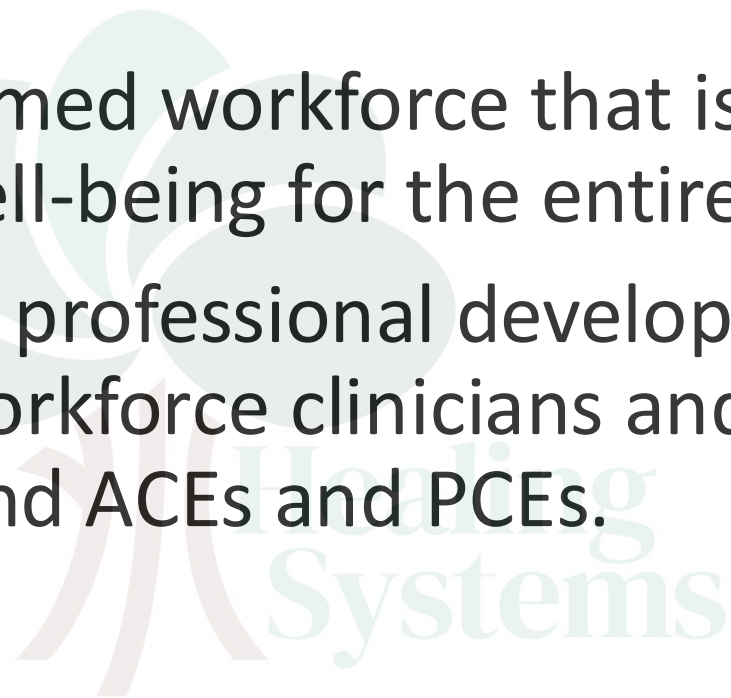


- Implement appropriate screening and symptom assessment tools
 - Use screening tools that assess exposure to trauma as well as trauma symptoms.
 - Understanding symptoms will help facilitate appropriate treatment and referrals to behavioral health services.
- Discourage use of the ACEs questionnaire 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: 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



- Integrate this report into the Building Healing Systems (BHS) Data-to-Action toolkit

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





Please contact us! :)

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