



*Addressing Root Causes
of Opioid Addiction: An
Exploration of ACEs in
Appalachia and Opportunities to
Promote Resiliency*

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"Any strategy to address the opioid epidemic [should] recognize the role that trauma and ACEs play in addiction, and incorporate trauma-informed prevention and treatment."

Campaign for Trauma Informed Policy and Practice





Adverse Childhood Experiences (ACEs) are strongly predictive of future health problems throughout one's lifespan, including the development of opioid addiction and other substance use disorders.

2017 ACEs Study



Each ACE increases the likelihood of early illicit drug initiation by two-to-four fold.

Dube, et al., 2003

CDC-Kaiser ACE Study

- Original ACE Study conducted from 1995-1997

Abuse	Household Challenges	Neglect
Emotional abuse	Mother treated violently	Emotional neglect
Physical abuse	Household substance abuse	Physical neglect
Sexual abuse	Mental illness in household	
	Parental separation or divorce	
	Criminal household member	

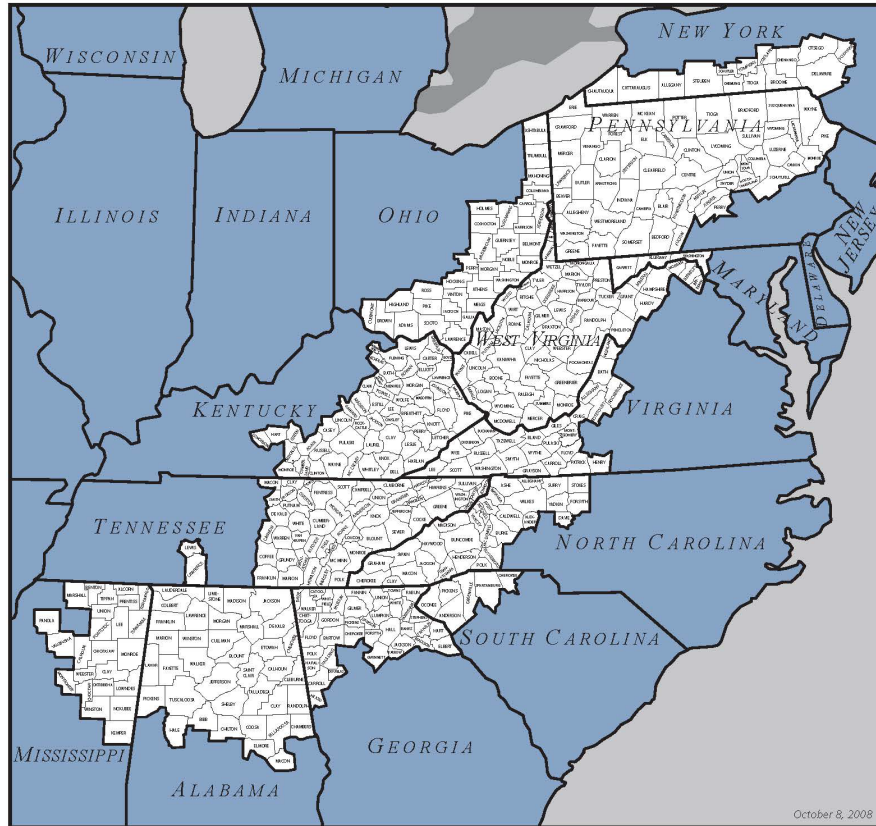
- Study population:
 - Over 17,000 HMO members from Southern California
 - Only 7.2% did not graduate high school
 - Almost half were 60 and older
 - Approximately 25% were non-white



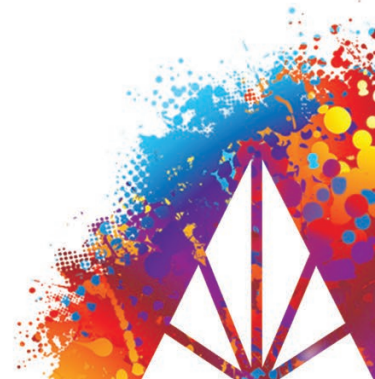
About Appalachia



APPALACHIAN REGION



- 205,000 – square miles
- Encompasses all of West Virginia and part of 12 other states



APPALACHIA'S POPULATION

Use *The Appalachian Region: A Data Overview from the 2012-2016 American Community Survey*—also known as the Chartbook—to discover more about Appalachia's population. Authored by the Population Reference Bureau with the Appalachian Regional Commission, the Chartbook features data on income, employment, education, and other indicators at the regional, subregional, state, and county levels, and examines data change over recent years to show trends. The Chartbook's population analysis compares data from 2016 and 2010 U.S. Census Bureau estimates.

EDUCATION IN APPALACHIA

Use *The Appalachian Region: A Data Overview from the 2012-2016 American Community Survey*—also known as the Chartbook—to discover more about education in Appalachia. Authored by the Population Reference Bureau with the Appalachian Regional Commission, the Chartbook features data on income, employment, education, and other indicators at the regional, subregional, state, and county levels, and examines data change over recent years to show trends.

INCOME & POVERTY IN APPALACHIA

Use *The Appalachian Region: A Data Overview from the 2012-2016 American Community Survey*—also known as the Chartbook—to discover more about income and poverty in Appalachia. Authored by the Population Reference Bureau with the Appalachian Regional Commission, the Chartbook features data on income, employment, education, and other indicators at the regional, subregional, state, and county levels, and examines data change over recent years to show trends.

POPULATION CHANGE

25.6 million people live in Appalachia's 420 counties. Since 2010, **Appalachia's** population has **grown 1%**; the **nation's** has **grown 4.5%**.

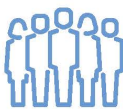


POPULATION CHANGE

While much of Appalachia's population has grown since 2010, **Southern Appalachia's** population has grown 4.7%.

MINORITY POPULATION

Minorities make up a small but growing share of Appalachia's population.



APPALACHIA 18.2%
Up from 16.4% in 2010

U.S. 38.7%
Up from 36.2% in 2010

MINORITY POPULATION

Among Appalachian populations, African Americans are the largest group. Latinos are the second largest.



African Americans 9.7%
Up from 9.2% in 2010

Hispanics 1.7%
Up from 1.5% in 2010

MEDIAN AGE

Appalachia's **median age** is **higher** than the nation's.



APPALACHIA 40.9 YEARS

Overdose mortality rates among 25 to 44 year olds are more than 70% higher in Appalachia

Walsh Center for Rural Health Analysis, 2017

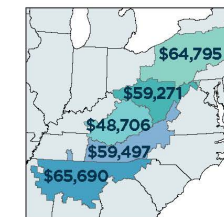
HOUSEHOLD INCOME

Appalachia's **household income** is **16.7%** below the U.S. average.

U.S. \$77,866

HOUSEHOLD INCOME BY SUBREGION

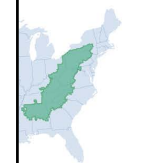
Within Appalachia, household income is highest in **Southern Appalachia** and lowest in **Central Appalachia**.



POVERTY RATE

Appalachia's **poverty rate** is **16.7%** below the U.S. average.

APPALACHIA 16.7%



POVERTY RATE BY AGE GROUP

23.6% of Appalachian children live below the poverty level, compared with **21.2%** of kids in the U.S.



9.4% of Appalachian adults age 65+ live below the poverty level. The U.S. rate is **9.3%**.



Find more data on this and other topics at www.arc.gov/chartbook



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Exploring ACEs in Appalachia

- We wanted to understand:
 - How children in Appalachia may experience ACEs differently
 - The Socioeconomic, cultural, and gender factors that increase likelihood of experiencing ACEs
 - Factors that mitigate the impact of ACEs and enhance resiliency






ACEs Expert Working Group

- Kathy Szafran, West Virginia
- Dr. Mike Brumage, West Virginia
- Dr. David Mathews, Kentucky
- Dr. Stephen Crane, North Carolina
- Jim McKay, West Virginia
- Dr. Scott Hambleton, Mississippi
- Dr. Larke Huang, SAMHSA
- Dr. Derek Ford, CDC





Stakeholder ThinkTanks

- Stakeholders sought from:
 - Behavioral health, hospitals and community health centers, schools, local government, social services, law enforcement, faith-based organizations, non-profit organizations, and other related fields
- 45 stakeholders participated in one of two ThinkTank sessions
 - 33 from central Appalachia
 - 12 from southern Appalachia



2045: ACEs Stakeholder Meeting

Double-Click to Add Description
Double-Click to Add Time

8 SAMHSA's Role
Double-Click to Add Description
Double-Click to Add Time

9 ACEs In Appalachia
Brainstorm around questions posed by CDC, ARC, and ORAU
3:25 - 3:35 pm

Step 1: Respond to the questions posed; Comment on others responses
Double-Click to Add Description

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10 ACEs in Appalachia (copy)
Double-Click to Add Description
Double-Click to Add Time

11 ACE Prevalence and Need to Address
Rate original and additional ACEs based on Prevalence and need to address

12 Resilience
Double-Click to Add Description
Double-Click to Add Time

ACEs In Appalachia: Respond to the questions posed; Comment

QUESTIONS	RESPONSES	COMMENTS
<p>1 Are children in Appalachia experiencing any of the 10 ACEs differently than children living elsewhere in the United States? How? 23 <i>Kristin.Mattson</i></p>	<p>2 I don't know if this is "different", but our children are living up hollers with their family and extended family. The impact of the ACEs are multi-generational and intimately experienced because of the close geographic location of these families. The trauma seems to be amplified. 0 <i>KariC_KY</i></p>	
<p>2 Are there ACEs NOT included in the original scale that are regularly experienced by children in Appalachia? 19 <i>Kristin.Mattson</i></p>	<p>3 Children report physical pain more I think as a symptom that is a response to the ACEs 0 <i>MichelleK_KY</i></p>	
<p>3 What gender differences have you observed when it comes to ACEs? 21 <i>Kristin.Mattson</i></p>	<p>4 Yes. It is not unusual for a newborn to have 4 ACEs: living in a home with substance use disorder, abuse and neglect , domestic violence and a parent incarcerated. 0 <i>AndreaD_WV</i></p>	
<p>4 What are the environmental factors (including physical, social, cultural) in your community that add to the likelihood of experiencing ACEs? 33 <i>Jennifer.Reynolds</i></p>	<p>5 I work with a lot of children who have had a parent die due to substance abuse (opiates) This is not exactly the same as just substance abuse. Also, often parent separation is not due to divorce but death and incarceration due to opioid use disorders. 0 <i>garyw_wv</i></p>	
<p>6 I think that they are experiencing 0</p>		
<p>Click here to add QUESTIONS</p>	<p>Click here to add RESPONSES</p>	<p>Select an item from the RESPONSES column to enable input</p>

Instructions Documents



Additions to the ACE Scale

- Death of an attachment figure
- Bullying (in-person, online)
- Food insecurity
- Homelessness/transience/displacement
- Witnessing overdose(s)
- Parental/caregiver unemployment
- Gang violence and shootings
- Repeated ruptures in attachment (divorces, cohabitating relationships)





Contributing Factors

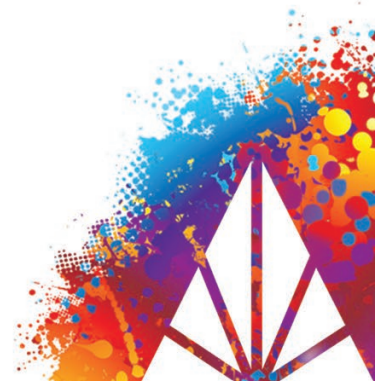
- Poverty and economic decline
- Hopelessness and increased stress
- Multigenerational experiences
- Cultural factors
 - Acceptability of violence (domestic violence, corporal punishment in schools)
 - Value of privacy
 - Influence of religion in the discipline of children
- Geographic isolation
- Lack of community resources – YMCA, transportation
- Poor caregiver health
- Lack of perceived value placed on education
- Stigma given to Appalachian children





Gender Differences

- Males:
 - More likely to present earlier with behavioral problems
 - Social/cultural expectation that males should resist showing emotion
- Females:
 - Experience later onset of behavioral responses
 - More often experienced sexual abuse
 - Behavioral responses often include self-harm or becoming involved in abusive relationships
 - More likely to receive counseling or care





Resiliency/Buffering Factors

- Strong, supportive family ties
- Sense of community, social engagement
- Religion (church, youth groups)
- Sports
- Outdoor and community activities/programs
- Supportive schools
- Counseling and support groups
- Appalachian tenacity, self-reliance





Resource Needs

- More trained behavioral health providers
- Transportation
- More school-based prevention and intervention programs
- Community education on ACEs
- Education and engagement of political representatives, the faith-based community, and other community leaders
- Home visiting programs focused on intergenerational work
- More substance abuse treatment options
- Catalog of available community resources





Expert Evaluation of Findings

- Four assessment activities
 - Rate the prevalence and severity of each of the additional ACEs
 - Rate the prevalence and impact of contributing factors
 - Rate the prevalence and impact of buffering factors
 - Prioritize the list of needs identified from greatest to least





Most Prevalent ACEs

- Parental/caregiver unemployment
- Repeated ruptures in attachment (divorces, cohabitating relationships)





Most Impactful ACEs

- Death of an attachment figure
- Witnessing overdose(s)
- Repeated ruptures in attachment (divorces, cohabitating relationships)



Most Prevalent and Impactful Contributing Factors

- Poverty and economic decline
- Cultural factors
 - Value of privacy
- Poor caregiver health
- Lack of perceived value placed on education
- Stigma given to Appalachian children





Most Impactful Buffering Factors

- Strong, supportive family ties

- Supportive schools

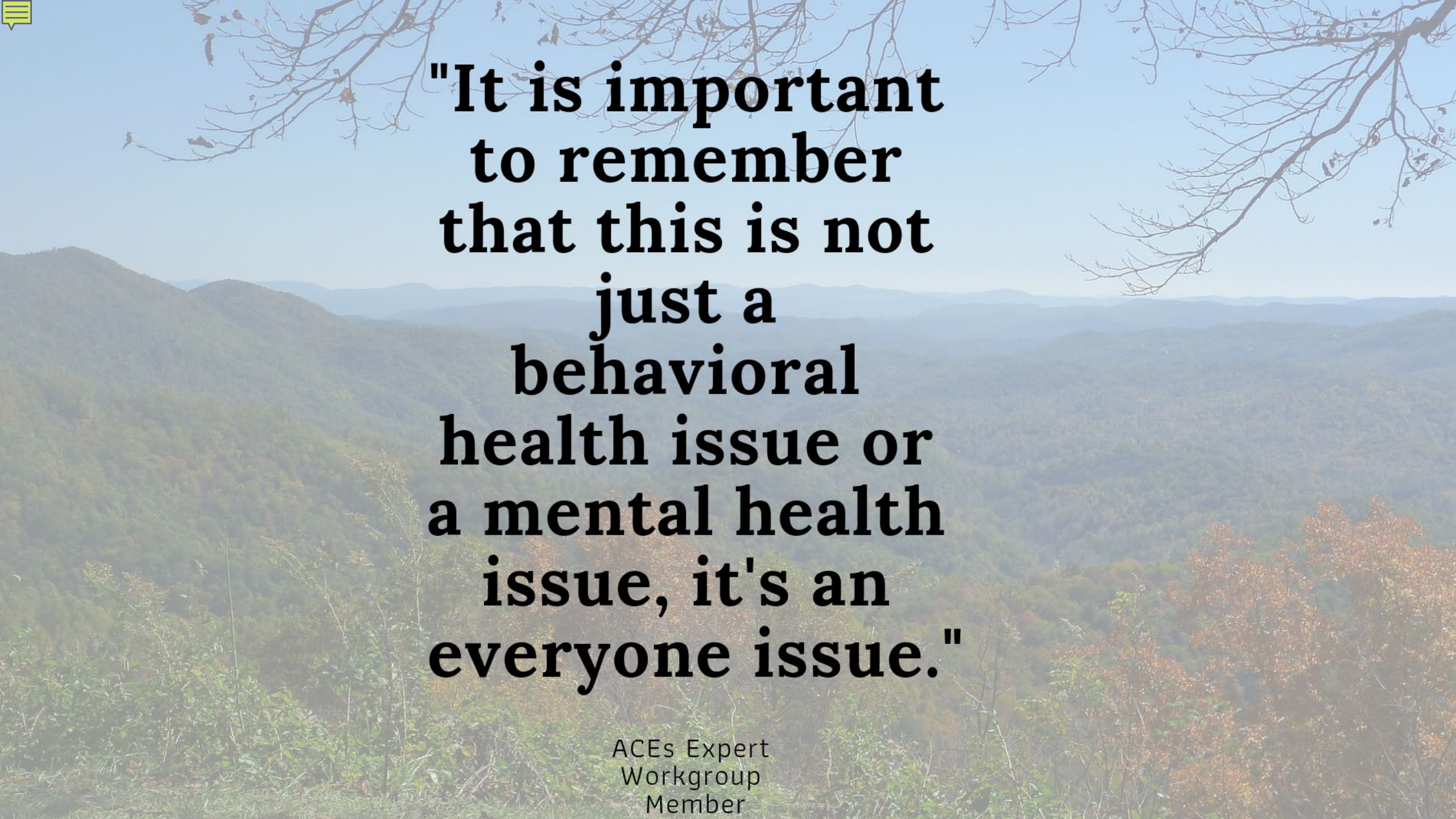




Resource Needs Prioritized

1. Improved multi-sector engagement (politicians, faith-based, law-enforcement, community leaders)
2. School-based intervention programs
3. Education and communication to “general public”
4. Home-based intervention programs
5. Catalogue of available resources
6. Trained behavioral health providers
7. Improved transportation
8. Substance abuse treatment programs





**"It is important
to remember
that this is not
just a
behavioral
health issue or
a mental health
issue, it's an
everyone issue."**

ACEs Expert
Workgroup
Member

Acknowledgements



- CDC's National Center for Injury Prevention and Control
- Appalachian Regional Commission
- The many experts and stakeholders that contributed to this project



For More Information:

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Questions?