HCR

2

<TARGET><BILL>HCR 2</BILL><SUBJECT>HCR
2</SUBJECT><COMM>HHSS30</COMM></TARGET>

Fiscal Note

State of Alaska
2017 Legislative Session

Bill Version: HCR 2
Fiscal Note Number:
() Publish Date:

Identifier:
Title: RESPOND TO ADVERSE CHILDHOOD EXPERIENCES
Sponsor: TARR
Requester: House H&SS

Department:
Appropriation:
Allocation:
OMB Component Number: 0

Expenditures/Revenues
Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2018 Appropriation Requested	Included in Governor's FY2018 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2018**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Fund Source (Operating Only)

None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Positions

Full-time							
Part-time							
Temporary							

Change in Revenues

None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimated SUPPLEMENTAL (FY2017) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2018) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS
Does the bill direct, or will the bill result in, regulation changes adopted by your agency?
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Initial Version.

Prepared By: Representative Spohnholz, House Health and Social Services Committee
Phone: (907)465-4940
Date: 03/22/2017

March 15, 2016

Representative Geran Tarr
State Capital Room 409
Juneau, Alaska 99801

Dear Representative Tarr,

It is with great pleasure to provide this letter of support for House Concurrent Resolution 21 – Adverse Childhood Experiences (ACEs). NAMI, the National Alliance on Mental Illness, is the nation's largest grassroots mental health organization dedicated to building better lives for the millions of Americans affected by mental illness. As a local affiliate, NAMI Juneau provides vital education, advocacy, and support programs related to mental illness in the Juneau community.

We know that children who experience adversities (ACEs) such as abuse, neglect, and other traumas are more likely to perform poorly in school, abuse substances, have poor mental and physical health later in life, and end up incarcerated, among other issues. These levels of toxic trauma and stress are not only driving addiction and mental health conditions but damaging brain development and leading to poor quality of life. Realizing these connections is important to improve efforts towards prevention and early intervention.

As noted in House Concurrent Resolution 21, Alaska is the first in ACEs. Local data shows that two-thirds of adults surveyed report traumatic childhood experiences at rates higher than other states. Not only is this costing youth their ability to learn and make healthy choices, these adversities have a significant cost both socially and economically. The Alaska Mental Health Board and the Alcoholism and Drug Abuse Advisory Board estimate the direct and indirect cost of adverse childhood experiences is costing us, as a state, approximately $774,000,000 per year.

This resolution encourages early intervention and investment in children and families to ensure less trauma and greater resilience. We encourage the Governor and our State Legislators to work together towards making Alaska a trauma-informed state.

Sincerely,

Crystal Bourland
Executive Director

NAMI Juneau (Ph) 907-463-4251 | (Fax) 907-500-9914 | www.namijuneau.org
9000 Glacier Hwy, Suite 201 | Juneau, AK 99801

Rainforest PEDIATRIC CARE JOY M. NEYHART, D.O., F.A.A.P.

March 30, 2016

Representative Geran Tarr
Alaska State Capitol
Juneau, Alaksa 99801-1182

Dear Representative Tarr:

My name is Joy Neyhart and I am writing to support House Concurrent Resolution 21 which calls for legislative action to address the public health epidemic of adverse childhood experiences. I have been practicing primary care pediatrics in an independent medical practice here in Juneau since 2000. Approximately 35 to 40 percent of the families for whom I provide medical care are insured by Alaska Medicaid. I also currently volunteer my time and professional knowledge by serving on the Maternal Infant Mortality/Child Death review committee for the State of Alaska, and am scheduled to begin service on the Alaska State Medical Board. I have also served a term on the Medicaid Medical Care Advisory Committee for Alaska.

As a pediatrician who has been providing medical care in Juneau for almost 16 years, I am on one of the front lines for screening families for childhood trauma. In the past, screening for adverse childhood events in the parents of my patients had not always been a part of every clinic or hospital encounter I have with the families I serve. I am now improving that area of my practice. Simply asking young parents "What happened to you as a child?" rather than assuming, even if not articulating as a question, "What is wrong with you?" in most encounters immediately begins to build trust and allow us to move together toward healing and preventing their infants and children from experiencing the trauma they did.

Unfortunately, while I am now becoming better able to identify families who have been affected by childhood trauma, the community of Juneau, and the state of Alaska does not have near enough resources that target early child development such as the Parents As Teachers program, substance abuse identification and treatment programs, especially for pregnant women, and affordable counseling services to address healing and prevention of trauma in subsequent generations of Alaska's children.

Although I am not intimately familiar with the implementation of programs such as Parents as Teachers, I am qualified to critically review the data available regarding the effectiveness of these and other programs and to endorse them as important tools for decreasing adverse childhood events for Alaska's children.

There is abundant evidence that children who live through adverse experiences become adults whose medical care and social services costs are far greater than those of adults who did not experience traumatic events as children. These references are readily available on the State of Alaska website on the Division of Health and Social Services page.

3268 HOSPITAL DRIVE, SUITE E JUNEAU, ALASKA 99801 TELEPHONE (907) 463-1210 FAX (907) 463-1213

Rainforest PEDIATRIC CARE JOY M. NEYHART, D.O., F.A.A.P.

In this time of budget crisis for Alaska, we cannot afford for our government to not respond positively to this Concurrent Resolution when the future cost decreases in healthcare and other social services would be significant and have a longlasting positive impact on our state. Beyond the cost savings, a further evidenced-based benefit would be a larger proportion of Alaskan citizens able to become productive contributors to Alaska's economy. Addressing identification of adverse childhood experiences and working toward prevention will lead to decreases in the incidence of Fetal Alcohol Spectrum Disorders as well as lower infant and child mortality.

Please do not hesitate to contact me for further information or support.

Respectfully submitted,

Joy M. Neyhart, D.O., F.A.A.P.
American Board of Pediatrics Diplomte

3268 HOSPITAL DRIVE, SUITE E JUNEAU, ALASKA 99801 TELEPHONE (907) 463-1210 FAX (907) 463-1213

Bernice Nisbett

From:	Raymond Pastorino <pastorino@gci.net>
Sent:	Monday, February 22, 2016 11:22 AM
To:	Bernice Nisbett
Subject:	Support Resolution NO. 21

Representative Tarr, I am asking you to urge Governor Walker to join with the Alaska State Legislature to respond to the public and behavioral health epidemic of adverse childhood experiences by establishing a statewide policy and providing programs to address this epidemic. ACEs research supports prevention as a way of addressing this critical issue. Children who have experienced adverse experiences, such as abuse, neglect, and other traumas are more likely as adults to use Medicaid and government food programs, abuse substances and smoke, drop out of high school, become depressed and suicidal, to become obese or have other chronic health issues, experience homelessness, etc. The cost to the State for adverse childhood experiences is estimated to be approximately $774,000,000 annually, according to the Alaska Mental Health Board and the Advisory Board on Alcoholism and Drug Abuse. Prevention is the only intelligent solution. Thank you, Representative Tarr, for your consideration and your commitment to making Alaska a better home for our children.

Barbara Pastorino - 4935 Wren Drive, Juneau.

Bernice Nisbett

From: Pete Peschang <ppeschang@crnative.org>
Sent: Tuesday, March 29, 2016 8:17 AM
To: Bernice Nisbett
Subject: Support for HCR21

To Whom It May Concern:

Copper River Native Association is an Alaska Native Tribal Health Organization that provides a variety of health services to residents of the Copper River Basin. We wish to lend our support for HCR21. We recognize and understand the impact of adverse child experiences on the people we serve and believe this bill serves the best interest of those we serve and all of Alaska.

Sincerely,

Pete Peschang

Behavioral Health Director

Sam Trivette
7870 Glacier Hwy.
Juneau, AK. 99801
[907] 789-0732 or 789-5116
samtriv@gci.net

March 9, 2016

Representative Geran Tarr
Alaska House of Representatives
State Capitol, Rm. 409
Juneau, AK 99801-1182

RE: HCR 21

Dear Rep. Tarr:

Thank you for your work and your collaboration with other Alaskans to get one of the co-authors of the Adverse Childhood Experiences Study [ACES] to Juneau, to present seminars and community work sessions. His knowledge and experience with these issues were invaluable.

I have been a member of the Juneau Suicide Prevention Coalition for over 8 years. The coalition has received accolades for its innovative work with suicide prevention. We have an astounding group of expert volunteers that are always looking to improve services to Alaskans. Several years ago, we became aware of ACES and its impact on greatly increasing the risk of suicide when individuals have experienced ACES. That is a large part of one of the grants the Coalition has, and JSPC has been working diligently to educate more and more Alaskans.

If we hope to break the cycle of abuse and neglect, we will need to enlist the help of medical professionals, counselors, school, religious leaders, and other leaders in our communities. The costs to society are huge and we simply cannot afford ignore the impact of ACES.

Accordingly, I strongly support this resolution. You have done an excellent job in laying forth the research that supports the need to begin to slow down and reverse ACES in Alaskan communities.

Very sincerely

Sam Trivette

HCR 21

SEALASKA HERITAGE

February 15, 2016

Patrick M. Anderson, Trustee
Senior Research Fellow on Childhood Trauma

House Committee Health & Social Services
The Honorable Paul Seaton, Chair
State Capitol, Room 102
Juneau, AK 99801-1182

Re: HCR21

Dear Representative Seaton and Members:

I am writing in full support of House Concurrent Resolution 21, titled "Urging Governor Bill Walker to join with the Alaska State Legislature to respond to the public and behavioral health epidemic of adverse childhood experiences by establishing a statewide policy and providing programs to address this epidemic." As the originator of a small group of Adverse Childhood Experience (ACE) experts who joined together to draft HCR21, it is my belief that the conversation intended through this resolution is timely for a variety of reasons. But before addressing those reasons, let me reveal other states with various degrees of focused attention on the negative impacts of ACE's.

The ACE Study was conducted at Kaiser Permanente in Sand Diego during the 1990's. Dr. Vincent Felitti and Dr. Robert Anda were the co-Principal Investigators of the study, which was funded by the Centers for Disease Control

The Washington State Legislature adopted Chapter 70.305 RCW in 2011. It's stated purpose is "...identify the primary causes of adverse childhood experiences in communities and to mobilize broad public and private support to prevent harm to young children and reduce the accumulated harm of adverse experiences throughout childhood." In 2014, the California Assemble adopted Assembly Concurrent Resolution 155 in which "...the Legislature urges the Governor to reduce children's exposure to adverse childhood experiences, address the impacts of those experiences, and invest in preventive health care and mental health and wellness interventions."

Other states have pending proposals to address ACE's. In Vermont, a physician legislator proposed the first ACE's health care screening bill, "H. 762, The Adverse Childhood Experience Questionnaire." While it has not been adopted yet, it is fostering discussion around the issue. Montana's legislature adopted Senate Joint Resolution 30 in 2011, authorizing a study about the impact of ACE's and with an additional purpose for identifying promising practices to prevent

and intervene. Senate Bill No. 298 was subsequently introduced in Montana under the title."AN ACT RELATING TO PREVENTION AND REDUCTION OF ADVERSE CHILDHOOD EXPERIENCES; REQUIRING CONSIDERATION OF ADVERSE CHILDHOOD EXPERIENCES IN STATE PREVENTION EFFORTS; REQUIRING FUNDING OF ONE OR MORE PILOT PROJECTS; PROVIDING DEFINITIONS; AMENDING SECTIONS 2-15-225 AND 52-7-101, MCA; AND PROVIDING AN EFFECTIVE DATE." And while Massachusetts has not addressed ACE's with a blanket resolution, it has enacted a safe and supportive schools law requiring education institutions to address the impact of ACE's.

My support assumes that the Committee has information in its possession about the ACE Study, and I will not restate that history. I discovered the study in 2008, and have since been a passionate advocate for seeking state policy to address the deleterious health and behavioral consequences of ACE's. As the former Chief Executive of 2 Alaska Native health organizations, I observed first hand the severe consequences of unaddressed childhood inflicted trauma. Hardly any aspect of life in Alaska is untouched by this trauma. To build support for HCR21, Sealaska Heritage Institute brought Dr. Vincent Felitti to Juneau to discuss the Study during the week of February 8, 2016.

As a member of the American Indian/Alaska Native Task Force on Suicide Prevention, I became aware of the impact having a high ACE score has on suicide attempts. 6% of the original population studied had 5 or more ACE's, and account for a huge percentage of attempted suicides in the United States. Individuals with 6 or more ACE's have, according to Dr. Vincent Felitti, the originator and co-Principal Investigator of the ACE Study as he stated in his public lecture in Juneau on February 9, 2016, about a 20 year shorter life span than one who has no ACE's. Other behavioral issues are abundant in the highly traumatized ACE population at rates often thousands of percent higher than in the general population without this trauma. Behaviors such as alcohol and drug abuse; smoking; domestic violence; promiscuity and the spread of venereal disease; dropout, discipline and violence rates in public schools; poor parenting with its impacts on the child support system; and many others. Such behaviors contribute to the high rates of incarceration in Alaska. A policy discussion on how to address negative ACE outcomes is appropriate and should be facilitated by enactment of this resolution.

Education policy has benefitted from a more complete understanding of the impact of ACE's on students. Jim Sporleder, former Principal at Lincoln High School in Walla Walla, WA, completely overhauled their school discipline policy with outstanding results. Out of school suspensions were reduced by greater than 85% and rates of graduation increased as a result. The San Francisco School board adopted Resolution No. 1312-10A4 in 2014 to address school discipline by using a trauma informed approach. Massachusetts is a leader in helping traumatized children learn through innovative processes, and published "Helping Traumatized Children Learn" in 2005. I introduced this concept to Anchorage School Board Chair Jeannie Mackie and Superintendent Jim Browder in 2012.

Health care policy can benefit significantly from a consideration of the negative health impact of childhood trauma. Many of the negative behaviors seen in considerable volumes among high ACE individual have a cumulative impact on health deterioration and chronic disease. Heart attacks. Chronic Obstructive Pulmonary Disease, auto immune diseases, cancers and a host of other disease are assisted by a compromised immune system. Unrelenting childhood derived stress can create considerable fear and anxiety leading to a constant state of neurobiological activation that eventually suppresses the immune system.

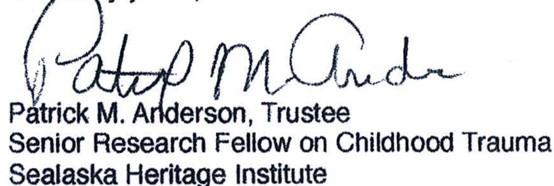
Juvenile Justice and Corrections policy will also benefit substantially from a trauma informed approach. President John Adams, while commenting on Blackstone's commentary, stated "It is more important that innocence should be protected, than it is, that guilt be punished; for guilt and crimes are so frequent in this world, that all of them cannot be punished...." Our Alaska approach of longer sentences and greater prosecution has led to a huge corrections budget. Yet research from other jurisdictions reveals the payback for a trauma informed approach to juvenile justice and education in reducing crime in Alaska. And research has demonstrated the wisdom of addressing childhood trauma within prisons. Although the literature is small, reductions in violence and recidivism from the teaching of Vipassana mediation in 3 prisons found promising results and lowered incident rates. If healing protocols involving mediation and other mind interventions work in prisons, they should work in earlier interventions as well.

As Alaska addresses its current fiscal challenges, we have a choice. We can choose to address the epidemic of childhood trauma and reduce the cost burden to our state in the long run, or ignore it and continue to increase the costs and suffering of our citizens. I think of it this way. One of the 10 ACE's studied was having a parent in prison. The likelihood that having a parent in prison is accompanied by 2 or more additional ACE's is greater than 50%. Our prosecution and sentencing policies have burdened many more children in Alaska with an ACE, accompanied by the likelihood of many more. Our current prosecution and sentencing policies are not only increasing our cost for prisons, but many other costs as well, in schools, local governments, college, the workplace and for healthcare. ACE's are ubiquitous in Alaska.

I encourage the Health & Social Services Committee to report HCR21 from committee unanimously with a favorable recommendation for passing. On February 10, 2016, Dr. Rosita Worl, Dr. Vincent Felitti and I met with Governor Walker, Lt. Governor Mallott, State Medical Jay Butler, MD and Corrections Commissioner Dean Williams and asked for their support for HCR21. Governor Walker committed to looking at the resolution and making a decision about support.

Thank you for considering HCR21 and reading this letter of support. If there is any additional information I can provide for you or the committee, I stand ready.

Gratefully yours,



Patrick M. Anderson, Trustee
Senior Research Fellow on Childhood Trauma
Sealaska Heritage Institute

cc. Dr. Rosita Worl
Representative Geran Tarr
Representative Neal Foster
Governor Bill Walker
Commissioner Dean Williams
Dr. Jay Butler

Sunshine Community Health Center

HC 89 Box 8190, Mile 4.4 Talkeetna Spur Rd, Talkeetna, AK 99676
Willow Clinic: PO Box 1049, 24091 Long Lake Road, Willow, AK 99688
Telephone: 907-733-2273 Fax: 907-733-1735 E-Mail: SCHC@sunshineclinic.org

March 15, 2016

Dear Governor Bill Walker,

Child abuse and neglect in Alaska are a chronic and devastating problem. To overcome the high rates of trauma experienced by our children and youth, prevention efforts need to be deployed at multiple levels.

Unfortunately, the trauma and sustained toxic stress associated with child abuse, neglect and a list of other adverse childhood experiences (ACEs) such as incarceration of a parent and drug and alcohol abuse have been shown to undermine a child's healthy development. Such factors damage the developing brain and adversely impact a child's learning and behavior, making academic achievement more difficult. Moreover, such factors increase susceptibility to physical and mental illness and put children at higher risk for involvement in delinquent and/or criminal activities. When children do not have equal opportunity for healthy growth and development, we are putting the future society of Alaska at risk.

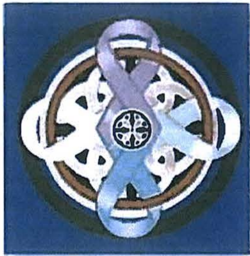
The long-term effects of ACEs in Alaska are costly. High ACE scores are linked to social, emotional and cognitive impairment; adoption of health-risk behaviors; chronic medical diseases; disability and social problems; and early death. More than 65 percent of Alaskans have experienced adverse childhood experiences in their lifetimes. Additionally, Alaska has some of the highest adverse trauma rates among the five other states surveyed by the Behavioral Risk Factor Surveillance Systems survey (Washington, Louisiana, Tennessee, Arkansas, and New Mexico).

Preventing childhood trauma and supporting those who have experienced childhood trauma will save the State of Alaska significant costs across the board including spending on health care, Medicaid, incarceration and juvenile justice systems. According to a recent report by the Centers for Disease Control and Prevention, the average lifetime cost per victim of nonfatal child maltreatment is over $48,000 per child. There are thousands of reports of child maltreatment every year in Alaska, meaning we are spending tens of millions of dollars every year for costs related to child abuse.

Sunshine Community Health Center supports HCR21 as one component of a statewide prevention system needed to help reduce traumatic experiences among our children, but also as an investment in our state's infrastructure and future.

Sincerely,

Shelis Jorgensen, DNP, ANP
Medical Director



South Peninsula Haven House Shelter

3776 Lake St. Homer, AK 99603
office 907-235-7712 **24/7 crisis line** 907-235-8943
fax 907-235-2733 **web** www.havenhousealaska.org

March 25, 2016

Dear Representative Geran Tarr,

I am writing to you in my position as the Director of Prevention at South Peninsula Haven House in Homer where we see on a daily basis the consequences of child abuse and neglect in Alaska, most devastatingly in the faces of children who come through our Child Advocacy Center, where investigations of abuse happen in a child friendly way. We also see the consequences manifest in a very different way: in the faces of the adult women we serve in our shelter. So many of the women seeking safety from abusive adult relationships were first abused as children, caught in a cycle of trauma that they are likely to pass on to their children.

Unfortunately, the trauma and sustained toxic stress associated with child abuse, neglect and a list of other adverse childhood experiences (ACEs) such as incarceration of a parent and drug and alcohol abuse have been shown to undermine a child's healthy development. Such factors damage the developing brain and adversely impact a child's learning and behavior, making academic achievement more difficult. Moreover, such factors increase susceptibility to physical and mental illness and put children at higher risk for involvement in delinquent and/or criminal activities. When children do not have equal opportunity for healthy growth and development, we are putting the future society of Alaska at risk.

The long-term effects of ACEs in Alaska are costly, not just on the people who experience them. High ACE scores are linked to social, emotional and cognitive impairment; adoption of health-risk behaviors; chronic medical diseases; disability and social problems; and early death. This reality diminishes Alaskans' opportunities to live fulfilled and healthy lives, and puts a heavy burden on our society, psychologically and financially.

Preventing childhood trauma and supporting those who have experienced childhood trauma will save the State of Alaska significant costs across the board including spending on health care, Medicaid, incarceration and juvenile justice systems. According to a recent report by the Centers for Disease Control and Prevention, the average lifetime cost per victim of nonfatal child maltreatment is over $48,000 per child. There are thousands of reports of child maltreatment every year in Alaska, meaning we are spending tens of millions of dollars every year for costs related to child abuse.

South Peninsula Haven House supports HCR21 as one component of a statewide prevention system needed to help reduce traumatic experiences among our children, but also as an investment in our state's infrastructure and future. We bear the responsibility to keep our children safe and give every Alaskan the chance to live a healthy, safe life, not to mention to think sustainably about our financial future. Making a commitment to reduce childhood trauma could do both.

Sincerely,

Rachel Romberg
Director of Prevention

BEST BEGINNINGS
Alaska's Early Childhood Investment

March 31, 2013

Dear Rep Tarr,

I'm writing in support of HCR 21, urging Governor Walker and the Legislature to establish statewide policies and provide programs to address the public and behavioral health epidemic of adverse childhood experiences.

April is Child Abuse Prevention Month and is a perfect time to take up this resolution and actions.

In the first few years of life, a baby's brain makes 700 synapses or neural connections every second, a phenomenal exuberance of activity. Neural connections are formed through the interaction of genes and a baby's environment and experiences, especially "serve and return" interaction with adults. These are the connections that build brain architecture – the foundation upon which all later learning, behavior, and health depend.

Significant adversity impairs development in the first three years of life – and the more adversity a child faces, the greater the odds of a developmental delay. There is a 90-100% chance of developmental delays when children experience six to seven risk factors. We learned recently that young children in Alaska have acquired half of their accumulated adverse childhood experiences by the age of 3.

Clearly, it is more effective and less costly to positively influence the architecture of a young child's developing brain than to try to make up for inadequate learning opportunities, poor health, and negative behaviors later in life.

As is stated in the resolution, we strongly promote early investment and intervention in early childhood years as important strategies to achieve a lasting foundation for a more prosperous and sustainable state.

Best Beginnings supports HCR 21 as one component of a statewide prevention system needed to help reduce traumatic experiences among our children.

Sincerely,

Abbe Hensley

Abbe Hensley, Executive Director

3350 Commercial Drive, Suite 104A • Anchorage, Alaska 99501
t. 907.297.3300 • f. 907.297.3304 • BestBeginningsAlaska.org

Best Beginnings is a public-private partnership that mobilizes people and resources
to ensure all Alaska children begin school ready to succeed.

First Lady Donna Walker
Honorary Chair

Ginger Baim, *Chair*
Ivy Spohnholz, *Vice Chair*
Lisa Wimmer, *Treasurer*
Melanie Bahnke, *Secretary*
Ramona Reeves, *Past Chair*
Susan Anderson
Elsie Boudreau
Com. Valerie Davidson
Com. Michael Hanley
Carley Lawrence
Sherry Modrow
Tlisa Northcutt
Marcus Wilson
Julie Woodworth

2/15/2016

Representative Geran Tarr
State Capitol Room 409
Juneau, Alaska 99801

Dear Representative Tarr,

It is with great pleasure to provide this letter of support for the House Concurrent Resolution #21 – Adverse Childhood Experiences. Alaska Children's Trust (ACT) is the lead statewide organization focused on the prevention of child abuse and neglect.

One of our greatest assets is our children. We know that children who experience adversities (ACES) like abuse, neglect and other traumas are more likely to have poor school performance, abuse substances, and end up incarcerated, among other issues. We also know that the best way to help children deal with trauma are resilience factors including good relationships with competent care givers, social and emotional health, and social connections. By understanding this relationship, we can begin to act in a trauma-informed way.

Local data shows that more than two-thirds of adults surveyed report experience adverse childhood experiences at a rate higher than other states. These adversities have a significant cost to our state both economically and socially. This resolution encourages early intervention and investment in children and families to ensure less trauma and greater resilience.

We encourage the Governor and our State Legislators to work towards making Alaska a trauma-informed state by ensuring decisions take into account the principles of early childhood brain development and how trauma impacts that development.

Sincerely,

Trevor Storrs
Executive Director

Alaska Association for Infant & Early Childhood Mental Health

April 1, 2016

This letter is to support House Current Resolution 21 introduced by Representative Geran Tarr that urges Governor Walker to establish policy and programs to address the public and behavioral health epidemic of adverse childhood experiences (ACEs). The Alaska Infant and Early Childhood Association is a non-profit organization whose mission is to support the social and emotional well-being of children between the ages of 0-5 and their families. Our main focus is centered on educating the general public about infant mental health as well as building capacity in the workforce to be able to provide appropriate services to this specific group of children.

The infant mental health professionals who work in this field witness the effects of ACE's on infants and very young children. To catch up and to keep pace with the science of child development, we must ensure that Alaska creates a continuum of strategies and programs to prevent mental health problems, to promote social and emotional well-being, and to treat mental health disorders beginning in pregnancy and continuing on throughout the early years of life and beyond. Contrary to common belief, mental health problems can occur in children under the age of 5 years. Mental health problems for infants and young children might be reflected in physical symptoms, delayed development, inconsolable crying, sleep problems, aggressive or impulsive behavior, and paralyzing fears. Over time, untreated symptoms of mental health problems can "take root" in young children and accumulate to seriously affect their ability to learn and functions. Because infants and young children develop in the context of close, consistent relationships, their own emotional well-being is directly tied to the emotional functioning of their caregivers and families. Untreated parental depression, substance abuse, domestic violence, and trauma disrupt parenting and can affect the mental health of children.

Research demonstrates that early prevention and treatment strategies are more beneficial and cost-effective than attempting to treat emotional difficulties and their effects on learning and health after they become more serious. Therefore it is imperative that Alaska's state policy decisions acknowledge and take into account the importance of the early years offer a unique window of opportunity to prevent the intergenerational transmission of the effects of ACE's and heal the effect of ACE's on the caregivers of infants and toddlers.

Sincerely,
Alaska Infant and Early Childhood Mental Health
Board of Directors

alaska.aimh@gmail.com • PO Box 81728 Fairbanks, Alaska 99708

Bernice Nisbett

To: Joyanne Bloom
Subject: RE: HCR21 - ACEs Letter of Support

From: Joyanne Bloom [mailto:joyanneb@gmail.com]
Sent: Thursday, March 10, 2016 6:41 AM
To: Bernice Nisbett <Bernice.Nisbett@akleg.gov>
Subject: Re: HCR21 - ACEs Letter of Support

I support HCR 21 and urge its passage. As a teacher in an adult education program in Southeast, I work with people who are trying to get a GED or improve their skills to get a job. Many were not successful in school and many have learning disabilities and/or battle with mental illness. When they share their stories, my students appear to be dealt three or four or five Advance Childhood Experiences, ACES. They continue, even as adults to come to school hungry, to have high absenteeism and to have difficulty concentrating. Some are with us because they are court ordered and are trying to stay out of incarceration. Others are threatened with loosing their welfare checks if they don't attend our classes. I believe that the great majority, maybe even 90% of our students, are struggling due to ACES. Many of those ACES could have been avoided if we had prevention measures in place. Now I fear, the cycle will continue if we don't act now. HCR21 is an important start.

Joyanne Bloom

Joyanne Bloom
The Learning Connection
SERRC Alaska's Education Resource Center

(907) 586-5718

--
Joyanne Bloom
883 Basin Road
Juneau, Alaska 99801

(907) 723-3604

Deborah Bock, MSW. LCSW
2053 Eastridge Dr.
Anchorage, AK 99501
bockdebbie@gmail.com
(907) 345-6611

March 28, 2016

RE: Support for HCR 21, Adverse Childhood Experiences

Dear Representative Tarr,

I want to thank you for introducing HCR 21 and to urge the Governor and the legislature to support it.

Cutting edge scientific research in brain science is demonstrating that it is possible to disrupt intergenerational cycles of violence, addiction, and disease.

We have the opportunity to be leaders in the new movement of trauma-informed services.

We must grab the gold ring that hangs in front of us!

Yours truly,

Deborah Bock
Deborah Bock, MSW, LCSW

Linda Chamberlain PhD MPH
35342 Howling Husky Circle
Homer, AK 99603

RE: Letter of support for HRC 21

To Whom It May Concern:

I am writing this letter, as an Alaskan resident and scientist that specializes in the effects of trauma across the lifespan, to support HRC 21. I have worked in the field of domestic violence and childhood trauma for more than 25 years, specializing in the ravages of early childhood trauma on brain development and learning. The State of Alaska has an urgent opportunity to improve the well-being of Alaskans, prevent the intergenerational transmission of trauma and save an extraordinary amount of money.

If we want to reduce government spending for social services and do something that can truly turn the tide of substance abuse, suicide, mental illness, violence and loss of productivity in our state, then the passage of HRC 21 is a crucial step. Adverse Childhood Experiences (ACEs) are predictive of all these problems and much more. The connection between ACEs and health across the lifespan is so strong that it demonstrates something that is rarely found in public health research—a dose response relationship. Like going up a staircase, as the number of adverse experiences increases, the likelihood of behavioral problems, asthma, learning problems, aggression and a long list of poor outcomes for children also increases. The list becomes even longer for adults and includes many of our most persistent and costly problems. In one generation, Washington State was able to demonstrate a reduction in the prevalence of ACEs and its consequences when communities worked together to address ACEs with collaborative leadership, universal education and collective action.

Alaska is poised to move forward and build on the momentum that has begun in many communities. Please support this bill to validate that the State of Alaska is committed to this work.

Respectfully,

Linda Chamberlain PhD MPH

Bernice Nisbett

To: Rep. Geran Tarr
Subject: RE: I support HCR21

From: Daniella DeLozier [mailto:danielladelozier@gmail.com]
Sent: Wednesday, March 30, 2016 8:34 AM
To: Rep. Geran Tarr <Rep.Geran.Tarr@akleg.gov>
Subject: I support HCR21

March 30th, 2016

Dear Representative Geran Tarr,

Child abuse and neglect in Alaska are a chronic and devastating problem. To overcome the high rates of trauma experienced by our children and youth, prevention efforts need to be deployed at multiple levels.

Unfortunately, the trauma and sustained toxic stress associated with child abuse, neglect and a list of other adverse childhood experiences (ACEs) such as incarceration of a parent and drug and alcohol abuse have been shown to undermine a child's healthy development. Such factors damage the developing brain and adversely impact a child's learning and behavior, making academic achievement more difficult. Moreover, such factors increase susceptibility to physical and mental illness and put children at higher risk for involvement in delinquent and/or criminal activities. When children do not have equal opportunity for healthy growth and development, we are putting the future society of Alaska at risk.

The long-term effects of ACEs in Alaska are costly. High ACE scores are linked to social, emotional and cognitive impairment; adoption of health-risk behaviors; chronic medical diseases; disability and social problems; and early death. More than 65 percent of Alaskans have experienced adverse childhood experiences in their lifetimes. Additionally, Alaska has some of the highest adverse trauma rates among the five other states surveyed by the Behavioral Risk Factor Surveillance Systems survey (Washington, Louisiana, Tennessee, Arkansas, and New Mexico).

Preventing childhood trauma and supporting those who have experienced childhood trauma will save the State of Alaska significant costs across the board including spending on health care, Medicaid, incarceration and juvenile justice systems. According to a recent report by the Centers for Disease Control and Prevention, the average lifetime cost per victim of nonfatal child maltreatment is over $48,000 per child. There are thousands of reports of child maltreatment every year in Alaska, meaning we are spending tens of millions of dollars every year for costs related to child abuse.

I support HCR21 as one component of a statewide prevention system needed to help reduce traumatic experiences among our children, but also as an investment in our state's infrastructure and future.

Sincerely,

Daniella DeLozier

2601 Darby Circle

Anchorage, AK 99508

March 16, 2016

Donald E. Roberts Jr.
264 Lilly Drive
Apt C2
Kodiak, AK 99615

Alaska House Health and Social Services Committee
Alaska House Finance Committee

RE: Support for HCR 21 – Respond to Adverse Childhood Experiences

Members of the Alaska House Health and Social Services and Finance Committees, my name is Don Roberts, I have lived in Alaska Since May of 1997. I offer my unequivocal support for HCR 21 which "urges Governor Walker to establish policy and programs to address the public and behavioral health epidemic of adverse childhood experiences (ACES)".

You've heard that "an ounce of prevention is worth a pound of cure"? Acknowledging and addressing adverse childhood experiences is that "ounce of prevention." And while prevention is not always possible, being able to resolve these experiences early is far more effective than waiting, or worse, doing nothing.

Without delving too far into my personal life my childhood was rife with such experiences: domestic violence, racial violence, parental separation, family sickness (my mother had Multiple Sclerosis and had gran mal seizures – something I had to experience and help my mother with as my parents were separated) and childhood poverty. Now at the age of 58 I am dealing with a number of health issues, many of which could have been prevented (or assuaged had the resources been available to me) and I would not be languishing in poverty.

As the ACES studies have been around since the late 1980s I think it's time for Alaska to catch up to other states and makes use of the research and resources available so that other people will not live in perpetual ill-health and poverty.

Thank you.

Donald E. Roberts Jr.

Dear Governor Walker,

I am writing a letter in support of HCR21. I am a member of Jesuit Volunteer Corps NW/Americorps, and I am serving for a year in Juneau at the Zach Gordon Youth Center. My primary responsibility as a full-time volunteer at the Zach Gordon Youth Center is to build relationships with youth, many of whom who have experienced or are currently experiencing childhood trauma.

The youth who frequent the center are brilliant human beings with ample potential, but they are vulnerable to developing dire physical, emotional, and mental health issues on account of Adverse Childhood Experiences (ACEs). Many of the youth I work with already exhibit the negative effects of trauma through behavioral issues, depression and anxiety, and unhealthy habits like drug and alcohol use.

I am concerned that Juneau, and the state of Alaska, lacks adequate policies and programs to address and prevent childhood trauma. Studies suggest that Alaskans experience Adverse Childhood Experiences at a higher frequency than the national average. Widespread instances of childhood trauma are detrimental to individuals and the community as a whole. The government ought to recognize ACEs and develop comprehensive programs to prevent childhood trauma and provide healing for individuals who have experienced childhood trauma. Not only will programs addressing ACEs build stronger and healthier communities, they will save the state millions of dollars annually in health care costs, corrections, and substance abuse.

Thank you for your consideration,
Alexandra Douglas

Bernice Nisbett

To: Rep. Geran Tarr
Subject: RE: Support HCR 21 to help our children

From: Anne Fuller [mailto:fernleafgt@yahoo.com]
Sent: Sunday, March 06, 2016 9:01 PM
To: Rep. Geran Tarr <Rep.Geran.Tarr@akleg.gov>
Cc: Rep. Sam Kito <Rep.Sam.Kito.III@akleg.gov>; Rep. Cathy Munoz <Rep.Cathy.Munoz@akleg.gov>; Sen. Dennis Egan <Sen.Dennis.Egan@akleg.gov>
Subject: Support HCR 21 to help our children

Ms. Tarr,
Thank you for introducing the HCR 21 in the legislature this year.
We should consider the research that shows trauma is a root cause of problems that cost so much (from addiction, violence, chronic illnesses).

Building a society which reduces adversity for youngsters is exactly what we need to be doing. Leaving our vulnerable ones to self-medicate, to flee, or to fight is not teaching them ways of living in harmony with other people and with nature.

We know that the statistics for domestic violence, child abuse, suicide and more in Alaska are horrifying. We know that past institutions, individuals, and policies have hurt children. Yes, understanding that schools in the past have damaged students means we need to also understand how schools now can heal students. This resolution is a way to address the issue and create statewide solutions.

Anne Fuller
7943 N Douglas Hwy
Juneau, AK 99801

Bernice Nisbett

From:	Gayle Trivette <gayletriv@gci.net>
Sent:	Friday, March 04, 2016 10:29 AM
To:	Bernice Nisbett
Subject:	HCR 21

I am writing to voice my support for HCR 21. Research has shown irrefutably that Adverse Childhood Experiences contribute to a host of problems that are not only costly to the affected individuals but to society. http://dhss.alaska.gov/abada/ace-ak/Documents/ACEsEconomicCosts-AK.pdf

In order to be good stewards of Alaska's financial and human resources, it is critical that the recommendations of HCR 21 be followed.

Thank you for your service to Alaska.
Gayle Trivette
7870 Glacier Hwy
Juneau, AK 99801

3/4/16

Representative Geran Tarr
State Capital Room 409
Juneau, Alaska 99801

Dear Representative Tarr,

Thank you for your work on House Concurrent Resolution 21 regarding Adverse Childhood Experiences (ACEs). The Juneau Suicide Prevention Coalition is pleased to add our support. We are a coalition of nearly 100 Juneau residents. We are survivors, statisticians, volunteers, board members, frontline youth care providers, clinicians, counselors, educators, doctors, and concerned citizens. We see firsthand the impact of childhood trauma, neglect, and abuse and are focusing our efforts on breaking the link between childhood trauma and suicide.

Nationally, Alaska is first in some wonderful things—wilderness, scenery, natural resources, mountains, and miles of coastline. Our fisheries remain the envy of much of the world. Hike a mountain in Alaska and the mountains go back and back and back. The sun sets and rises seamlessly. The salmon run our clean, gleaming streams.

As noted in House Concurrent Resolution 21, we are also first in ACEs. Two-thirds of our citizenry report traumatic childhood experiences at rates higher than other surveyed states. In 2009 Alaska had the highest ACEs scores in sexual abuse, family member incarceration, substance abuse, and divorce. Alaska scored a very close second in every other category. When looked at in this light, our fish are often better set up for success than our most valuable resource—our children.

A person with four or more ACEs is 12.2 times more likely to commit suicide, 10.3 times more likely to use injection drugs, and 7.4 times more likely to be an alcoholic. We score highest in four categories. We know that these levels of toxic trauma and stress are not only driving addiction but damaging brain development, and impacting our youth's ability to learn and make healthy choices. The Alaska Mental Health Board and the Alcoholism and Drug Abuse Advisory Board estimate this is costing us, as a state, approximately $774,000,000 a year.

The Juneau Suicide Prevention Coalition encourages our state legislators and Governor to work closely with each other to create more trauma-informed schools, increase risk screening in primary care, support early-childhood and parenting programs, as well as develop programs that address the high cost and impact of ACEs on Alaska's youth and communities.

Sincerely,

Gareth Hummel
Suicide Prevention Specialist
On behalf of
The Juneau Suicide Prevention Coalition

Rep. Geran Tarr

From:	Karen White <kwhite@bartletthospital.org>
Sent:	Monday, March 07, 2016 9:30 AM
To:	Rep. Geran Tarr
Subject:	HCR 21

Dear Rep. Tarr,

I am writing in support of HCR 21 which calls for action to address public health epidemic of adverse childhood experiences. According to the research, the impact of adverse traumatic events during childhood have lifelong consequences. They impact the mental and physical health of children subjected to these events throughout their lives and into the next generation. Focus on this healthcare issue will ultimately reduce healthcare expenses and enrich the lives of Alaskans for generations.

Sincerely,

Karen White, BSN, RNC-OB

OB Director

Bartlett Regional Hospital

3260 Hospital Dr.

Juneau, AK 99801

907-796-8657

kwhite@bartletthospital.org

THE STATE
of ALASKA
GOVERNOR BILL WALKER

Department of Health and Social Services

ALASKA MENTAL HEALTH BOARD
ADVISORY BOARD ON ALCOHOLISM
AND DRUG ABUSE

431 North Franklin Street, Suite 200
Juneau, Alaska 99801
Main: 907.465.8920
Fax: 907.465.4410

March 29, 2016

Representative Paul Seaton, Chairman
House Health and Social Services Committee
State Capitol Room 102
Juneau, Alaska 99801

Re: HCR 21 – Adverse Childhood Experiences

Dear Representative Seaton,

The Alaska Mental Health Board and the Advisory Board on Alcoholism and Drug Abuse support House Concurrent Resolution 21 in response to the impact of adverse childhood experiences (ACEs) in Alaska. The Boards have been instrumental in educating Alaskans about ACEs through use of specific data regarding the childhood experiences of Alaskans of all ages and the impact adverse events have throughout a lifetime, and we appreciate the work of Representative Tarr and your community to expand the knowledge base on ACEs in Alaska.

More than two-thirds of Alaskan adults experienced ACEs prior to their eighteenth birthday. The neural networks being "wired" in the developing brains of children and youth are especially susceptible to traumatic events. Research is showing that ACEs can affect the normal development of children and that these are the mechanisms behind the poor outcomes associated with childhood trauma. From poor school and work performance to substance abuse and mental illness to poor physical health outcomes, the link to ACEs has been shown in Alaskan and other states' populations as well. Hundreds of millions of Alaska's dollars in state and private funds are spent each year as a result of traumatic events experienced during childhood. Even modest reductions in childhood trauma would have immediate and long-term benefits to our state financially and socially

All over Alaska, communities are addressing ACEs in big and small ways. HCR 21 recognizes and supports the need continued research and evidence-based efforts to prevent and mitigate the impact of ACEs. Thank you for your time and consideration.

Sincerely,

J. Kate Burkhart
Executive Director

cc: Representative Geran Tarr

April 1, 2016

Dear Representative Geran Tarr,

Child abuse and neglect in Alaska are a chronic and devastating problem. To overcome the high rates of trauma experienced by our children and youth, prevention efforts need to be deployed at multiple levels.

Trauma and sustained toxic stress associated with child abuse, neglect and a list of other adverse childhood experiences (ACEs) such as incarceration of a parent and drug and alcohol abuse have been shown to undermine a child's healthy development. Such factors damage the developing brain and adversely impact a child's learning and behavior, making academic achievement more difficult. Moreover, such factors increase susceptibility to physical and mental illness and put children at higher risk for involvement in delinquent and/or criminal activities. When children do not have equal opportunity for healthy growth and development, we are putting the future society of Alaska at risk.

The long-term effects of ACEs in Alaska are costly. Preventing childhood trauma and supporting those who have experienced childhood trauma will save the State of Alaska significant costs across the board including spending on health care, Medicaid, incarceration and juvenile justice systems. According to a recent report by the Centers for Disease Control and Prevention, the average lifetime cost per victim of nonfatal child maltreatment is over $48,000 per child. There are thousands of reports of child maltreatment every year in Alaska, meaning we are spending tens of millions of dollars every year for costs related to child abuse.

I support HCR21 as one component of a statewide prevention system needed to help reduce traumatic experiences among our children, but also as an investment in our state's infrastructure and future.

Sincerely,

Linda M Lekness
Sprout Family Service, Board Member
Homer, AK

Bernice Nisbett

To: Rep. Geran Tarr
Subject: RE: HCR 21 Adverse Childhood Experiences

-----Original Message-----
From: Liz Downing [mailto:eadowning@gmail.com]
Sent: Monday, March 28, 2016 12:38 PM
To: Rep. Geran Tarr <Rep.Geran.Tarr@akleg.gov>
Cc: Rep. Paul Seaton <Rep.Paul.Seaton@akleg.gov>
Subject: HCR 21 Adverse Childhood Experiences

It is my profound hope that the Alaska Legislature and Governor Walker support HCR21 recognizing the impact Adverse Childhood Experiences have on our children and adults. The financial toll is staggering - the human potential loss is beyond belief. By creating policies and directing our programs to strategize and educate health care providers, educators, and the general public we can positively impact the occurrence of ACEs and improve the quality of life for Alaskans.

Thank you,

Liz Downing
Homer, AK

March 13, 2016

Dear Representative Geran Tarr,

My name is Matt Hirschfeld MD/PhD, and I've been a pediatrician in Alaska for over 10 years. By writing this letter, I'm showing my support for HCR 21.

HCR 21 urges Governor Walker to establish policy and programs to address the public and behavioral health epidemic of adverse childhood experiences (ACEs). Adverse childhood experiences (ACEs) are traumatic experiences that occur during childhood and have a lasting, negative effect on a child's developing brain and body. The long-term effects of ACEs in Alaska are costly. High ACE score are linked to social, emotional and cognitive impairment; adoption of health-risk behaviors; disease; disability and social problems; and early death. More than 75% of Alaskans have experienced adverse childhood experiences. Alaska has some of the highest ACE rates among the five other states surveyed (Washington, Louisiana, Tennessee, Arkansas, and New Mexico).

Preventing ACEs and supporting those who have experienced childhood trauma will save the State of Alaska significant health care costs. According to a recent report by the Centers for Disease Control and Prevention, the average lifetime cost per victim of nonfatal child maltreatment is over $48,000 per child. There are thousands of reports of child maltreatment every year in Alaska, meaning we are spending tens of millions of dollars every year for costs related to child abuse. Alaska also spends millions of dollars annually on corrections, substance abuse, chronic health conditions, and other issues related to ACEs. For example, 40% of current Medicaid use can be attributed to ACEs. A recent report by the Advisory Board on Alcoholism and Drug Abuse found that with a modest reduction in the ACEs scores of Alaskans who use Medicaid, we could see annual savings of $39 million in Medicaid spending.

Left unacknowledged and untreated, ACEs can lead to poor health and risky behaviors during adulthood. This includes, but is not limited to, physical, emotional, and sexual abuse; physical and emotional neglect; and household dysfunction, such as domestic violence, separation or divorce, and substance abuse, untreated mental illness, or incarceration of a household member

In short, supporting HCR 21 is a vital step to reducing ACEs in Alaska, and I wholeheartedly endorse the resolution. Please don't hesitate to contact me with any questions or clarifications regarding this letter.

Sincerely,

Matt Hirschfeld, MD/PhD

April 1, 2016

Representative Geran Tarr
State Capital Room 409
Juneau, Alaska 99801

Dear Representative Tarr,

Thank you for your work on House Concurrent Resolution 21 regarding Adverse Childhood Experiences (ACEs). AK Child & Family is more than pleased to add our support. Without exception, the children we treat on a daily basis have all experienced trauma in their young lives. Daily we see the effects of these adverse experiences while we find ways to help these children cope with their life stories and become resilient.

As you know, at least two-thirds of Alaskans have had traumatic childhood experiences at rates higher than other surveyed states. In 2009, Alaska had the highest ACEs scores in sexual abuse, family member incarceration, substance abuse, and divorce. Alaska scored a very close second in every other category.

AK Child & Family is striving to become the first organization in Alaska to become a Sanctuary Certified organization. This special certification is being sought because we recognize the effects of childhood trauma on our youth, their parents and their parent's parents. While intergenerational trauma is not unique to our state, we know that the uniqueness of our history drives these high ACEs scores. We recognize that we are not only working with children and families with high ACEs scores but we also have a workforce with high ACEs scores. Sanctuary brings to our organization a way to directly deal with past trauma in the lives of our children, their parents, and our staff.

AK Child & Family encourages our state legislators and Governor to work closely with each other to create more trauma-informed schools, increase risk screening in primary care, support early-childhood and parenting programs, as well as develop programs that address the high cost and impact of ACEs on Alaska's youth and communities.

We applaud you in recognizing the pervasive nature of adverse childhood experiences and doing something about it

Sincerely,

Denis McCarville
President and CEO
AK Child & Family

4600 Abbott Road
Anchorage, Alaska 99507

www.akchild.org
PHONE 907.346.2101
FAX 907.348.9230

Bernice Nisbett

From: LPNAKA@aol.com
Sent: Wednesday, March 02, 2016 12:44 PM
To: Bernice Nisbett
Cc: Garethh@jys.org

Subject: House Concurrent Resolution No 21

Representative Geran Tarr 03/02/2016

My name is Dr. Peter Nakamura. I have been a residence of Juneau Alaska since 1991. Prior to that date, I Provided and directed health services to our Native American People in the States of Arizona, New Mexico, Oregon, Washington, and Idaho as well as in Anchorage, Bethel, and in the rural communities of the Yukon Kuskokwim and Bristol Bay regions of Alaska. I moved to Juneau in 1991 to serve ten years as the Public Health Director for the State of Alaska under the governorship of our two major political parties. I retired in 2001 and presently participate as a citizen volunteer member of the Juneau Suicide Prevention Coalition. I share my professional resume only to demonstrate that my concern for House Concurrent Resolution No 21 is sincere and based on experiences related to the issues it addresses.

To address significant issues negatively impacting on the lives of our Alaskan people, especially our young children, it is imperative that a statewide policy including programs to address these issues be established and readily accessible to those affected. Adverse childhood experiences have been proven to be a major precursor to the many economic and personal tragedies experienced by our citizens.

The responsible control and hopefully reduction or elimination of these negative life issues requires the identification, monitoring, prevention, and direct intervention by State sponsored Programs involving our State and local leadership, citizens, and professional staff, as well as those endangered with or contributing to adverse childhood experiences.

Solving the problem first starts with a commitment to address the issue but also requires a commitment to develop and support a comprehensive program addressing the issue of "adverse childhood experiences".

Thank you for your involvement and efforts on resolution no 21.

Peter Nakamura

Adverse Childhood Experiences (ACE)

The crisis that happens when we do not invest in early childhood and Pre-Kindergarten

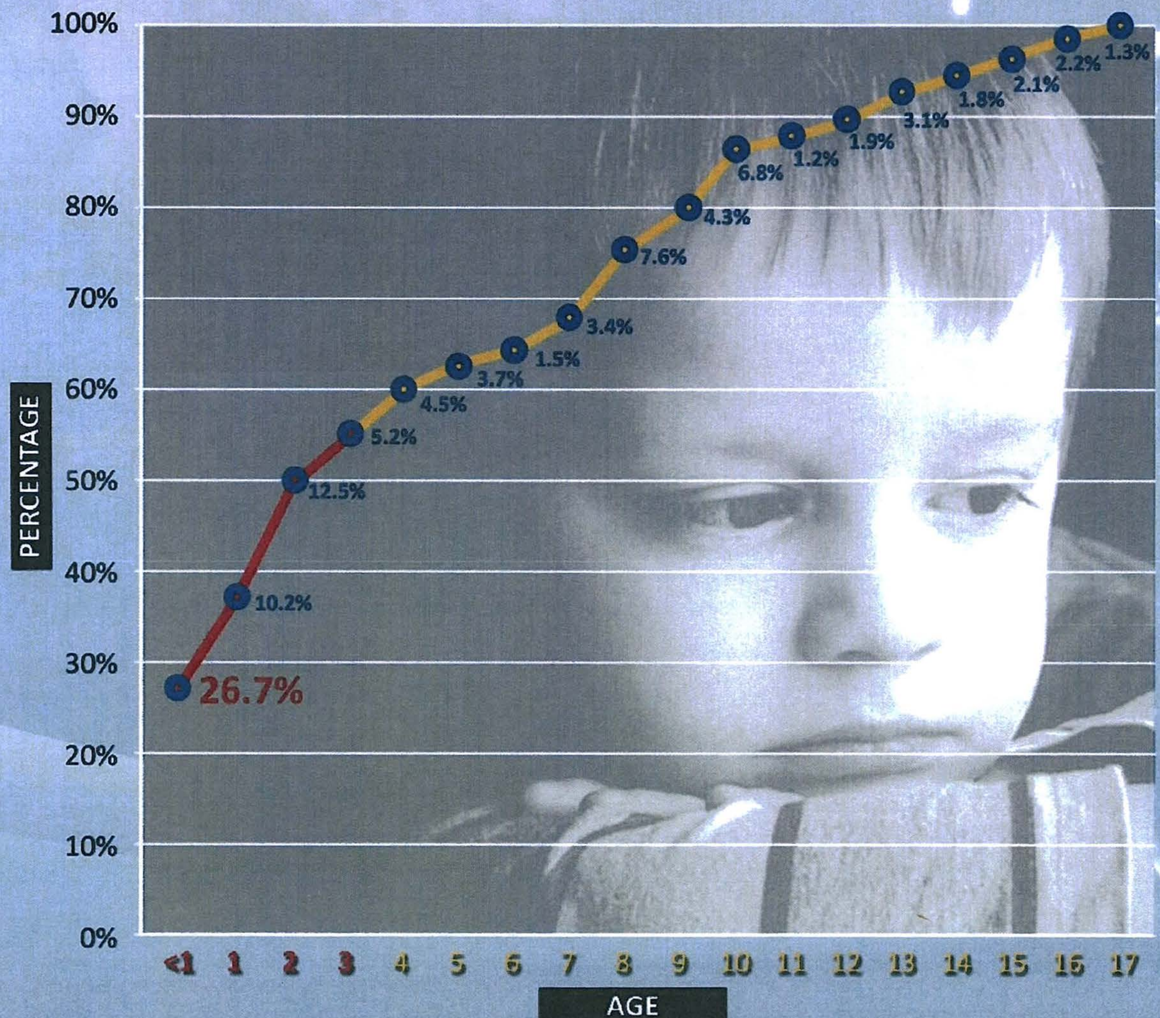
Tamar Ben-Yosef, Executive Director
All Alaska Pediatric Partnership
907.903-6770 | Tamar@a2p2.org
PO Box 230567 | Anchorage, AK 99523

ACEs are traumatic events that can happen in a child's life. These events cause the child high levels of stress that, if not buffered by a strong, supportive adult relationship in the early years of brain development, can permanently damage the young child's developing brain and lead to a long list of negative physical and mental health outcomes in adulthood.

An adult relationship can be with a parent, grandparent, caregiver, teacher or any competent and caring adult who maintains regular contact with the child. Funding early intervention provides the largest possible return on investment.

Young Alaskans have acquired HALF of their accumulated ACEs by the age of 3

The Percentage of the Full Dosage of ACEs accumulated in the 50 States
Child and youth populations by age group



FAMILY VIOLENCE PREVENTION FUND
HEALTH ALERT
STRENGTHENING THE HEALTH CARE SYSTEM'S RESPONSE TO DOMESTIC VIOLENCE
Volume 8, No. 1 Summer 2001

Reverse Alchemy in Childhood: Turning Gold into Lead

By Vincent J. Felitti, MD

The Adverse Childhood Experiences (ACE) Study

The Adverse Childhood Experiences Study is a major piece of medical research that compares current adult health to childhood experiences decades earlier. The findings are important medically, socially, and economically. They provide a remarkable insight into how we become what we are as individuals and as a nation. The ACE Study reveals a powerful relationship between our emotional experiences as children and our adult emotional health, physical health, and mortality. Moreover, the time factors in the Study make it clear that time does not heal some of the adverse experiences we found so common in the childhoods of a population of middle-aged, middle class Americans. One doesn't 'just get over' some things.

With the increasing attention to examining the effects of witnessing domestic violence on children and the many complicated issues it presents for health care providers, domestic violence advocates, and policy makers, this issue of Health Alert is dedicated to discussing this critical issue. We begin by highlighting the groundbreaking Adverse Childhood Experiences (ACE) Study with this article by Vincent Felitti, MD, which shows a clear link between exposure to abuse or household dysfunction, including witnessing violence against mothers and multiple risk factors for several of the leading causes of death in adults, and calls us to engage in early screening and intervention in families for the sake of mothers and children. Betsy McAlister Groves, MSW, LICSW, then offers us insight for how these findings are important and cautions us on the complicated issues faced when responding to domestic violence in homes with children. We have included excerpts from the "Children: The Hidden Victims of Domestic Violence" plenary session from the 2000 National Conference on Health Care and Domestic Violence that also add valuable insight to this discussion.

–Peter Sawires, FVPF

How does one perform reverse alchemy, going from a normal newborn with almost unlimited potential to a diseased, depressed adult? How does one turn gold into lead? The ACE Study was triggered by observations we made in the mid 1980s in an obesity program at Kaiser Permanente's San Diego Department of Preventive Medicine. This program had a high dropout rate, and the first of many counterintuitive findings was that the great majority of these dropouts actually were successfully losing weight. Detailed life interviews of almost 200 such individuals revealed that childhood abuse was remarkably common and antedated the onset of their obesity. Many patients spoke openly of an association between the two. The counterintuitive aspect was that for many people obesity was not their problem; it was their protective solution to problems that previously had never been discussed with anyone. An early insight was the memorable remark of a woman who was raped at twenty-three and gained 105 pounds in the year subsequent: "Overweight is overlooked and that's the way I need to be." The contrast was striking between this statement and her desire to lose weight.

Continued on page 2

Reverse Alchemy in Childhood...

Continued from previous page

Similarly, two men who were guards at the State Penitentiary became anxious after each losing over one hundred pounds. They made it clear that they felt much safer going to work looking big as a refrigerator rather than normal size. Overall, we found the simultaneous presence of opposing forces to be common; many of our weight program patients were driving with one foot on the brakes and one on the gas, wanting to lose weight but fearful of change.

In 1990 in Atlanta, I presented information about the frequent relationship of obesity and abusive childhood experiences to a largely skeptical audience at the North American Association for the Study of Obesity. Unexpectedly, this led to contacts with researchers at the Centers for Disease Control and Prevention who recognized the importance of what had been reported. They proposed a large epidemiological study to provide definitive evidence of our clinical observations. This was the beginning of the Adverse Childhood Experiences Study that was carried out in the Department of Preventive Medicine where we had been carrying out detailed biomedical, psychological, and social (biopsychosocial) evaluations of over 50,000 adult Kaiser Health Plan members each year. It was relatively easy to ask 30,000 adults coming through the Department if they would be interested in helping us understand how childhood events might affect adult health status. Seventy-one percent agreed to, understanding the information they provided about their childhoods would never be in their medical records.

The ACE Study compared the current adult health status of these many thousands of participants to seven categories of adverse childhood experience that we frequently identified in the weight program. Three categories were of personal abuse: recurrent physical abuse, recurrent emotional abuse, and sexual abuse. Four were categories of household dysfunction: growing up in a household with an alcoholic or a drug user; where someone was imprisoned; where someone was chronically depressed, mentally ill, or suicidal; and where the mother was treated violently. In addition, we decided to follow this large cohort for at least five years into the future to compare childhood experiences against adult pharmacy utilization, doctor office visits, Emergency Department use, hospitalization, and death. For purposes of analyzing the huge mass of information we gathered, an ACE Score was constructed. An individual exposed to none of these categories had an ACE Score of zero; an individual exposed to any four had an ACE Score of four, etc.

Because the average participant was 57 years old, we actually measured the effect of these childhood experiences on adult health status a half-century later. The retrospective and prospective components of the Study were designed with great skill by Robert Anda MD, my co-principal investigator at CDC. Here I will only touch upon some highlights of our findings; details may be sought in the anchor article of a series of publications deriving from the ACE Study. The initial article was published in May 1998 in the *American Journal of Preventive Medicine*, v.14:245-258; full text is at their web site: http://www.meddevel.com/site.mash?left=/library.exe&m1=4&m2=1&right=/library.exe&action=search_form&search.mode=simple&site=AJPM&jcode=AMEPRE

Adverse Childhood Experiences are Common and Dramatically Affect Adult Health

Our first finding was that adverse childhood experiences are vastly more common than acknowledged. Of equal importance was our observation that they had a powerful correlation to adult health a half century later. It is this combination that makes them so important. Slightly more than half of our middle class American population experienced one or more of the categories we studied. One in four were exposed to two categories of abusive experience, one in sixteen to four categories. Given an exposure to one category, there is 80% chance likelihood of exposure to another. All this, of course, is well shielded by social taboos against obtaining this information. Furthermore, one may miss the forest for the trees if one studies these issues individually. They do not occur in isolation; for instance, a child does not grow up with an alcoholic or domestic violence in an otherwise ideal household.

The Family Violence Prevention Fund (FVPF) is a national non-profit organization focusing on domestic violence prevention,education and public policy reform. Founded in 1980,the FUND has developed pioneering stategies to address the problem of domestic violence in the justice, health care, child welfare, workplace and communication fields.

HEALTH ALERT PROJECT COORDINATORS
Fran Navarro and Peter Sawires

DESIGN AND LAYOUT
ZesTop

NATIONAL HEALTH INITIATIVE ON DOMESTIC VIOLENCE STAFF

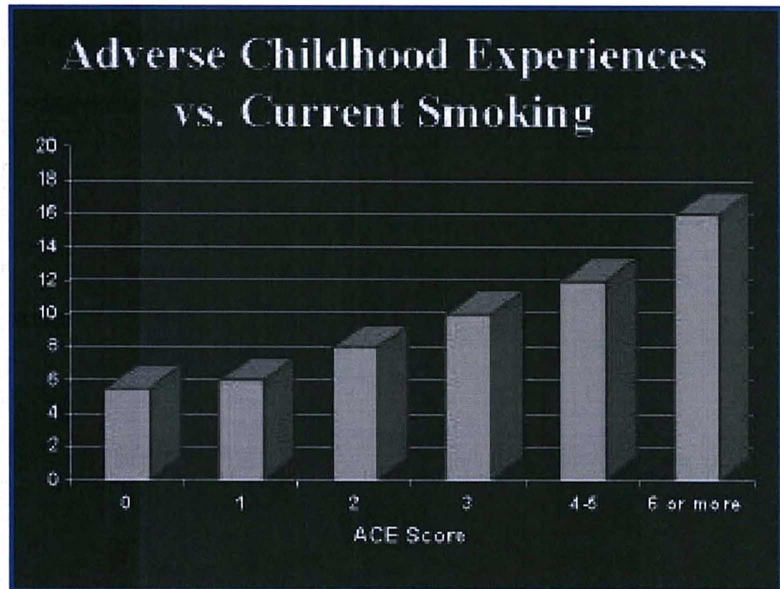
Debbie Lee Director of Health

Lisa James, Anna Marjavi, Fran Navarro,
Erika Rodriguez, Peter Sawires,
Rebecca Whiteman and Parry Wu

This publication was funded by the U.S. Department of Health & Human Services and the Conrad N. Hilton Foundation.

How will these childhood experiences play out decades later in a doctor's office?

Smoking is a useful starting example to illustrate what we found; moreover, it provides us with a minimally threatening topic. In California there are now profound social pressures against smoking; persisting in the face of these is often attributed to 'addiction'. Did you know that current smoking has a high degree of association with what happened decades ago in childhood? Here is a graphic illustration of how the ACE Score has a graded, dose-response effect on the probability of current smoking. The higher the ACE Score, the greater the likelihood of current smoking. This graded, dose-response effect is present for all the associations we found, although I will only present three. All the relationships have a p value of .001 or less.



Lest one doubt the significance of this, we found that chronic obstructive pulmonary disease (COPD, emphysema) has a strong relationship to the ACE Score. A person with a mid-range ACE Score of four is 390% more likely to have COPD than is a person with an ACE Score of zero. What does this do to the conventional concept of smoking that attributes addiction to characteristics that are intrinsic within nicotine? We instead found 'addiction' attributable to characteristics that are intrinsic in early life experiences. If early emotional stresses predict COPD, is COPD properly understood as a psychosomatic condition? Are certain common chronic diseases the result of attempts at self-treatment of concealed problems?

When we looked at self-defined current depression, we found that an individual with an ACE Score of four or more was 460% more likely to be suffering from depression than an individual with an ACE Score of zero. Should one doubt the reliability of this, we found that there was a 1,220% increase in the history of attempted suicide between these two groups. At higher ACE Scores, the prevalence of attempted suicide increases twenty-thirty fold. Using the analytic technique of population attributable risk, we found that about 80% of attempted suicides could be attributed to adverse childhood experiences.

Intravenous drug use is a major public health problem. In spite of massive efforts to curtail it, little progress has been made. We saw that iv drug use may properly be viewed as a personal solution to problems that are well concealed by social niceties and convention. For instance, a male child with an ACE Score of six has a 4,600% increase in the likelihood of later becoming an iv drug user. This relationship to adverse childhood experiences is powerful and graded at every step; it provides an exemplary dose-response curve. Since no one shoots heroin to get endocarditis or AIDS, might it be used for relief of profound anguish dating back to childhood experiences; might it be the best coping device an individual can find? If so, is this a public health problem or a personal solution? How often are public health problems personal solutions? Is drug abuse self-destructive or is it a desperate attempt at self-healing, albeit at a significant future cost? This is an important point because primary prevention is far more difficult than anticipated. Is this because incomplete understanding of the benefits of so-called health risk behaviors leads them to be viewed as irrational and having solely negative consequences? Does this leave us mouthing cautionary platitudes instead of understanding the cause of our intractable public health problems?

Beyond these three examples, we found many other measures of adult health to have a strong, graded relationship to what happened in childhood: hepatitis, heart disease, fractures, diabetes, obesity, alcoholism, occupational health, and job performance. These are detailed in the original and subsequent articles and will further be reported in publications of the yet-to-be-analyzed prospective arm of the ACE Study.

Early Intervention and Prevention Must be Engaged

What do these findings mean for medical practice and for society? Clearly, we have shown that adverse childhood experiences are both common and

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destructive. This combination makes them one of the most important, if not the most important, determinants of the health and well being of the nation. Unfortunately, these problems are painful to recognize and difficult to deal with. Most physicians would far rather deal with traditional organic disease. Certainly, it is easier to do so, but that approach also leads to treatment failures and the frustration of expensive diagnostic quandaries where everything is ruled out but nothing is ruled in.

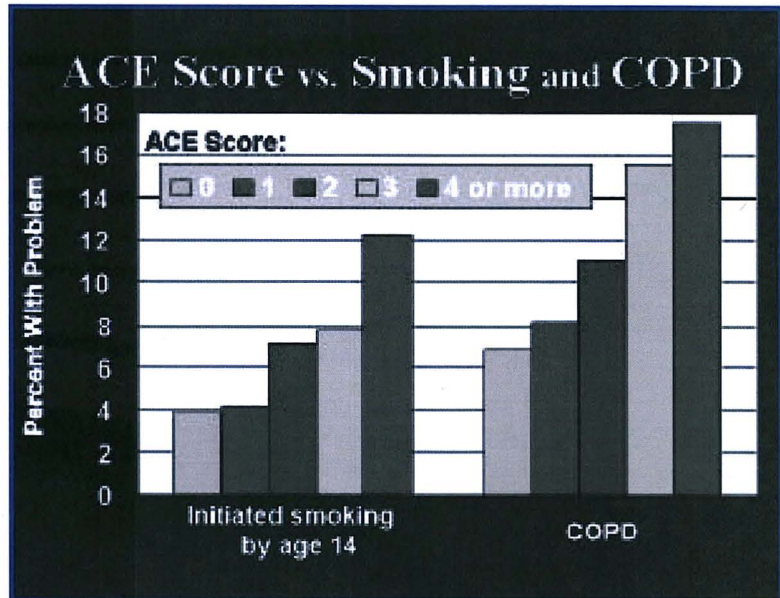
Our approach to many common adult chronic diseases reminds us of the relationship of smoke to fire. It is tempting initially to treat the smoke because that is the most visible aspect of the problem. What we have learned in the ACE Study represents the underlying fire. Fortunately, fire departments learned to distinguish cause from effect long ago; else, they would carry fans rather than water hoses to their work.

If the treatment implications of what we found in the ACE Study are far-reaching, the prevention aspects are positively daunting. The very nature of the material is such as to make one uncomfortable. Why would one want to leave the relative comfort of traditional organic disease and enter this area of threatening uncertainty that none of us have been trained to deal with? And yet, literally as I am writing these words, I am interrupted to consult on a 70 year old woman who is diabetic and hypertensive. The initial description given to me left out the fact that she is morbidly obese. Review of her chart shows her to be chronically depressed, never married, and, because we ask the question of 57,000 adults a year, to have been raped by her older brother six decades ago when she was ten. He also molested her sister who is said also to be leading a troubled life. We found that 22% of our Kaiser members were sexually abused as children. How does that affect a person later in life? That simple question is useful to ask patients, "How did that affect you later in life?"

What is this woman's diagnosis? Is she just another hypertensive, diabetic old woman or is there more to the practice of medicine? Here is the way we conceptualized her problems:

Childhood sexual abuse
Chronic depression
Morbid obesity
Diabetes mellitus
Hypertension
Hyperlipidemia
Coronary artery disease
Macular degeneration
Psoriasis

This is not a comfortable diagnostic formulation because it points out that our attention is focused on tertiary consequences, far downstream. It reveals that the primary issues are well protected by social con-



vention and taboo. It points out that we have limited ourselves to the smallest part of the problem, that part where we are comfortable as mere prescribers of medication. Which diagnostic choice shall we make? Who shall make it? And, if not now, when?

Selected articles published from the ACE study include:

Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. Felitti, VJ, Anda, RF, Nordenberg, D, et al. *American Journal of Preventive Medicine* 1998 May; Vol 14 (4): 245-258

Adverse childhood experiences and smoking during adolescence and adulthood. Anda RF; Croft JB; Felitti VJ; et al. *JAMA* 1999 Nov 3; Vol 282 (17): 1652-1658

Unintended pregnancy among adult women exposed to abuse or household dysfunction during their childhood. Dietz PM; Spitz AM; Anda RF; et al. *JAMA* 1999 Oct 13; Vol 282 (14): 1359-1364

Adverse childhood experiences and sexually transmitted diseases in men and women: a retrospective study. Hillis SD; Anda RF; Felitti VJ; Nordenberg D; Marchbanks PA *Pediatrics* 2000 Jul; Vol 106 (1): E11

Vincent J. Felitti, MD is an internist, formerly doing infectious disease work, who created and ran for its first 25 years the Department of Preventive Medicine at Kaiser Permanente in San Diego.

Commentary

ACE Study Offers Important Insights That Must be Approached Cautiously

Betsy McAlister Groves, MSW, LICSW

The Adverse Childhood Experiences (ACE) Study, authored by Vincent Felitti, Robert Anda, Dale Nordenberg, et. al. is important research, both because of the large cohort that was studied (drawn from a non-clinical sample of 30,000 members of the Kaiser Health Plan) and for its findings of a strong relationship between risk factors established in childhood and medical problems in later life. Felitti et al. also demonstrate the synergistic effect of these risk factors. Exposure to one adverse experience carries modest risk for adult health problems; exposure to four or more experiences carries a two-four-fold increase in smoking and poor self-rated health, and eight-twelve times the risk of alcoholism, depression and drug abuse. In addition, these risk factors often cluster in individuals: if a person had exposure to one experience, there is an 80% chance of exposure to another risk factor.

Of particular interest to those of us who work with families affected by domestic violence is the inclusion of exposure to violence against mother as one of the seven adverse experiences investigated. The study yields important data about the prevalence of childhood exposure to domestic violence and about the association of exposure to domestic violence with other risk factors for children. As we know, a child's exposure to domestic violence is highly correlated with direct physical abuse of the child, another factor included in Dr. Felitti's study. In his study, 12.5% of respondents indicated childhood exposure to domestic violence and 10.8% indicated a history of child abuse. This finding is an important addition to existing studies of childhood exposure to domestic violence, indicating that more than 10% of the adult population has grown up in homes in which women were the victims of physically assaultive behavior. The study also underscores the longer-term consequences of exposure to domestic violence and adult health and well-being. It reminds us that there are both direct and indirect victims of domestic violence: children suffer as the hidden victims of violence against women. It also reinforces what many advocates and survivors know all too well: that children's exposure to violence reverberates into adult life.

Implications for the Field

The ACE study suggests several priorities for policy and practice. First, we should re-double our efforts at primary prevention of violence against women. The benefits of preventing domestic violence are obvious for women and for the future health and well-being of their children. Efforts to provide education to teenagers about healthy relationships, to raise awareness of the issue, to engage communities in addressing violence against women, to hold perpetrators accountable for the violence are of paramount importance and should be a priority in funding. Indeed, Felitti's study helps to frame the challenge of prevention in public health and mental health terms that broaden the base of professionals who should engage in prevention efforts.

Second, we must develop strategies for early identification of and support for children who are exposed to domestic violence. As with any of the adverse child experiences cited in Felitti's study, early identification has the potential to be early intervention, thereby decreasing the risk of adverse health outcomes in adult life. Health care systems are an important setting for such screening and response. Almost all children see health providers and young children and their parents have frequent intersection with health care systems. Screening and intervention protocols for partner violence are used in adult medicine and obstetrics/gynecology practice. However, there is no standard for screening and almost no funding for services in pediatric settings. The results of the ACE study make a strong case for the importance of screening and responding to children in pediatric practices. Implementing strategies for identifying children and families affected by domestic violence are a priority, but they should be done with careful thought of the potential consequences of identification such as the quandary

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that providers may face about mandatory reporting of identified children to child protection services.

We Must Move Forward Cautiously

As with most research, there are certain cautions to consider before translating this study's findings into policy or practice. In his first publication of the results, Fellitti reminds us that these results show correlation, not causation.[i] It is tempting to assume from this study that exposure to adverse childhood experiences directly causes health problems in later life. However, there are many intervening events and variables that mediate childhood exposure and later health problems in adults. Understanding more about the intervening variables is an important goal of continued research.

It is also important to consider that children are affected in a range of ways by exposure to adverse experiences, including domestic violence. There are factors in their genes, their temperaments and their environments that affect their ability to withstand stressful experiences. Both research and clinical experience demonstrate that not all children are doomed by growing up with domestic violence and that some children seem to withstand its effects better than others[ii]. The research agenda should focus on how and why some children are more resilient to adverse experiences.

A final caution should be reiterated about the use of the ACE study's findings about childhood exposure to domestic violence: in the zeal to protect children from the longer-term consequences of exposure adverse childhood experiences, we are tempted to enact policies that are punitive to women and in the long run, not helpful to children. For example, there have been tendencies to use studies that focus on childhood exposure to domestic violence to argue for increased penalties against mothers for "failure to protect" children. This has been particularly true with protective services policies, and is increasingly problematic for African Americans and other people of color who are over-represented in the system because of potential racial bias.[iii] A growing number of states have determined that exposure to domestic violence is grounds for removal of children from both their parents.[iv] In addition, some states are adding enhanced legal penalties for adults who commit assaults in front of a child. While these policies may be well intended, they have the troubling consequences of further punishing mothers, who are usually the direct victims of the violence, and they are not necessarily helpful to children. For example, children may be required to testify in court about what they witnessed in a domestic violence assault, or in cases of dual arrest, children may be separated from their mothers and unnecessarily placed in foster care further traumatizing the children. Additionally, with these policies in place many victims may be less willing to seek assistance for the violence, so that neither they nor their children receive much needed support and services.

"Implementing strategies for identifying children and families affected by domestic violence are a priority, but they should be done with careful thought of the potential consequences of identification"

In conclusion, the findings of the ACE study yield important confirmation of the prevalence of childhood exposure to domestic violence and to the association of this exposure with poor health and mental health outcomes for adults. The challenge for those who work with families affected by domestic violence is to renew our efforts to prevent violence against women and to advocate for implementation of policies that makes it easier to identify children who are at risk. At the same time, we must use caution in making certain that our practice and policy decisions do not ultimately create more harm than good.

Betsy McAlister Groves, MSW, LICSW, is the founding Director of the Child Witness to Violence Project at Boston Medical Center and Assistant Professor of Pediatrics at Boston University School of Medicine. She is the recipient of an Open Society Institute Fellowship and has lectured widely on children and violence. Publications include articles in the Journal of the American Medical Association, Pediatrics, Harvard Mental Health Letter and Topics in Early Childhood Special Education. She is a member of the Massachusetts Governor's Commission on Domestic Violence and has served as consultant to the Mass Department of Social Services, the Massachusetts Judicial Institute and Family Communications, Inc., producers of Mr. Rogers' Neighborhood.

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i Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Kiss MP, Marks JS. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine*, 14 (4), 245-258.

ii Edelson J.(2000). Is childhood exposure to adult domestic violence a form of child maltreatment? Paper delivered at the conference "Children and Domestic Violence", Washington DC, April 10, 2000.

iii Morton, T.D. (1999). The Increasing Colorization of America's Child Welfare System: The Overrepresentation of African-American Children. *Policy and Practice of Public Human Services* (formerly *Public Welfare*), 57(4), 23-30.

iv Sengupta S. (July 8, 2000). Tough Justice: Taking a child when one parent is battered. *New York Times*, p. A1 & A11.

Children: The Hidden Victims of Domestic Violence

Robert M. Reece, MD, Betsy McAlister Groves*, MSW, LICSW, Alicia Lieberman, PhD, Margaret McNamara, MD

Robert M. Reece, MD:

Dr. Vincent Felitti wrote in an editorial in *Pediatrics*, the journal of the American Academy of Pediatrics, "We are awash in a sea of violence in our society. There are over three million reported cases of child abuse in this country each year and up to 5,000 childhood fatalities resulting from child maltreatment. True statistics about domestic violence are a little harder to find because of a disparate reporting practice in the various reporting states, but a similar number is probable. It may even exceed that amount." This constitutes an epidemic in our society. We know that there are long and short-term effects secondary to family violence. We know that there are structural and functional changes to the brain itself. These come from the ravages of actual or threatened violence and increasingly we read scientific reports of similar changes in the brain from simply witnessing violence. We reviewed a paper just recently in the *Journal of the American Medical Association*, about home nurse visitation programs... This was a disturbing but also enlightening article in that it pointed out the fact that home health nurse visitation programs are not effective when there is domestic violence in the home... (Eckenrode, J., et al., "Preventing Child Abuse and Neglect With a Program of Nurse Home Visitation: The Limiting Effects of Domestic Violence," *JAMA*, 2000, Vol. 284, pages 1385 to 1391.)

The American Academy of Pediatrics has an official policy statement about domestic violence and the role of pediatricians in recognizing and intervening on behalf of abused women. It leads off by saying: "The abuse of women is a pediatric issue. The American Academy of Pediatrics and its membership recognizes the importance of improving the physician's ability to recognize partner violence as well as child abuse and other forms of family violence... The AAP recognizes that family and intimate partner violence is harmful to children." They go on to say that, "The AAP recommends that 1) Residency programs and continuing education program leaders incorporate education on family and intimate partner violence and its implications for child health into the curricula of pediatricians and pediatric emergency department physicians; 2) Pediatricians should attempt to recognize evidence of family or intimate partner violence in the office setting; 3) Pediatricians should intervene in a sensitive and skillful manner that maximizes the safety of women and children victims; and, 4) Pediatricians should support local and national multidisciplinary efforts to recognize, treat and prevent family and intimate partner violence." (Full policy available at http://www.aap.org/policy/re9748.html)

I would like to suggest that education of medical personnel should be one of the major emphases. We need to make this a central objective for the curricula in medical and nursing schools and in our residency training programs. Perhaps more important, we need to assure that those who are already in primary care practice are given the necessary education and training to perform this most important task.

Alicia F. Lieberman, PhD:

Children who were exposed to domestic violence have more than double the rate of psychiatric problems than other children. This is the case even after children no longer are exposed to ongoing violence... And a child being exposed to domestic violence is the major predictor for adults engaging in domestic violence...

It has been long believed that very young children do not understand violence or forget about violence. That is not the case... The way children express their problems with witnessing aggression varies with age, but even babies under one year of age respond to violence with excessive crying, failure to gain weight, difficulty being soothed, exaggerated startle responses, frozen posture, stiffness, sad and withdrawn facial expression and lack of interest in exploration... Toddlers and preschoolers show aggression to adults and peers, defiance, noncompliance... Toddlers who witness violence also often have a very interesting characteristic, which is that they become reckless and accident-prone... As you know, toddlers do have temper tantrums but the ones that witness violence are intractable and they go on and on and on and on... They have night terrors, difficulty going to sleep, intense separation anxiety, hypervigilance, multiple fears, emotional withdrawal, and on and on. School

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children and adolescents show all the same behaviors, but also early and excessive experimentation with sexuality and with illegal substances, anger at authorities, school failure and criminal behavior…

That leads us to the question of intervention. There is an unnecessary and regrettable gap between women's advocacy groups and children's advocacy groups… It is often overlooked that a very high percentage of battered women are also mothers and that their sense of self-esteem when they cannot relate to their children, when their children are having trouble at school, when their children are having intractable tantrums in the supermarket, their self-esteem, their sense of competence, their sense of being skillful suffers greatly. So our program helps the women become mothers with a higher sense of competence and a higher sense of understanding of what their children do. What we are finding is that many women who suffer domestic violence have also suffered abuse and neglect when they were growing up… As many as 70% fit criteria for post-traumatic stress disorder… So that we cannot just help the children. We have to be aware of the problems of the mothers.

I will give you a quick example of a child, a four-year-old who had intractable tantrums in which he would say, "Kill me, mom, kill me. I want to die…" One time the child jumped on a high shelf and threatened to fall down, the therapist took the child down and said, "I cannot let you jump. I don't want you to get hurt." The child started having a terrible intractable tantrum, which the therapist could not contain on her own. She said to the mother, "Let's hold him together. He really needs our help in knowing that we need him to be safe." And the child kept screaming, "Kill me, mom, kill me. You don't love me." And the mother would say, "I love you. You know I love you, don't you?" And the child would say, "No. You call me stupid. You don't love me." And the mother would be frozen, without knowing how to respond. The therapist said, "You know, you need to say to him really strongly, 'I love you, I won't let you get hurt.'" She kept repeating it as a mantra and as she kept repeating it the mother started to say it increasingly strongly. The child relaxed, cuddled up in her arms and fell asleep. The mother and the child were helped to rediscover their love for each other and the mother was helped to rediscover her competence in dealing with the child's fear and saying to the child "I do care about you."…

I want to get to the findings that we are getting when we look at about 70 mothers and children that we have treated this way, to tell you that the scores in cognitive tests for the children have gone up significantly, an average of 15 points. Their scores for social problems and emotional problems have gone down significantly, at the point of one statistical level. Equally exciting, the scores for maternal PTSD have gone down significantly, at the point of one level, so that in working with a mother/child relationship we can make a difference not only for the children but for the mothers as well. It seems to me that it is a model. As we work on the relationship between mother and child, let us work on the relationship between child advocacy groups and mother advocacy groups and really find a joint language to speak to both of them.

Margaret McNamara, MD:

I do not have to convince anyone in this room about why pediatricians should routinely screen. We also know that routine screening is a more efficient way of going about this since specific indicators are not reliable. Additionally, routine screening serves to educate patients that domestic violence is a serious health issue for them and their children and to let them know that we can provide resources for them or their friends or family if they ever need it. Finally, as Betsy and Alicia have very eloquently told us, children are so often the silent victims, for whom pediatric healthcare providers can provide appropriate assistance.

Margaret McNamara, MD, Alicia Lieberman, PhD, Betsy McAlister Groves, MSW, LICSW and Robert Reece, MD at the National Conference on Health Care and Domestic Violence

As healthcare professionals who deal with children in our practices, we have a number of advantages when it comes to screening. We have very frequent visits with the family. We also, as pediatric healthcare providers, are in a trusted and privileged position to hear about family matters. Most parents understand that the health and well-being of their child is integrally connected with the health and well-being of the family. We routinely screen about a number of sensitive issues and so routine screening about domestic violence, just as with those other sensitive issues, is easier.

The screening that we use as pediatric healthcare professionals can be similar to an adult setting. Of course we face a number of challenges in a pediatric setting when we respond to domestic violence. Let us discuss the issues that are unique to the pediatric experience. The first is who is the designated patient. Domestic violence is not the only area in which we ask about parental behavior and how it might influence the child. We routinely ask about tobacco exposure, substance abuse, and many of us ask about the presence of firearms in the household. Many important issues affecting children are not specifically limited to questions about the child.

The second issue, which is the presence of children or other family members or friends in the room

during screening, is a very difficult one and there is some difference of opinion in the literature in terms of how to deal with this. I would suggest that for the sake of the child, because we know the very profound effects that family violence has on the child growing up, that we are doing them a disservice not to screen, even with them in the room (excepting the perpetrator). More often than not, the child knows what is going on at home and if we simply decide not to ask about it, we send the message that we do not want to hear about it. Once children get to be about eleven or twelve years of age, I typically separate them from the parent during the physical exam anyway, for reasons of modesty and so that I can talk with them about other issues such as tobacco prevention. With these children I tend to not ask the parent directly and simply talk with the child about if they feel safe at home and how things go when people disagree at home. It takes the pressure off of the parent and the child if the child is in a situation where they might have allied themselves with one or the other of the parents.

Another major challenge is that there is a lack of resources available for providers if they uncover this kind of history in the home. This is a very difficult issue to tackle and I would simply suggest that if you do not ask and therefore do not find out about the incidence of this problem, we will never develop the resources that we need to help these children.

Robert Reece, MD:

I wanted to tell one little clinical experience that I had about ten years ago. It was sort of an epiphany for me because it brought home to me how important it is for a pediatrician to ask a mother about possible abuse in the family. It had to do with a little baby, four months old, who had been brought in at eighteen days of age with a what we call a hypoforengial perforation, which means just something had perforated the back of the throat. This baby was, for some unknown reason, returned to the parents and then came back at four months of age with a variety of skeletal fractures and other injuries. I talked with the mother and the father, both, and said, "Who takes care of the baby?" And they both said, "We do." I asked, "Is there anyone else who takes care of the baby? Is there a daycare provider, is there a babysitter or do you have one of the relatives watch the baby when you go out?" and so on. "No, we take care of the baby completely alone. Nobody else has ever had any contact with the baby but us." Well, that, in itself, was a little bit of a worry. Then I interviewed the mother alone and I said these injuries had to have been inflicted on the baby. They do not happen spontaneously or by accidents at four months of age and so either you or your partner has inflicted these on the baby. I just let the question sit there for oh, two minutes, with total silence in the room, and then I said, "Is he hitting you too?" And she broke down in a flood of tears, disclosed all that had gone on in this baby's life. He had been rough with the baby, more than rough – fractured several of the bones – and had also injured her on several occasions.

So that was ten years ago or twelve years ago and it demonstrated to me more graphically than anything that I could read or hear about that this is the appropriate question in some instances to ask. The outcome of that was that the partner was removed from the family and the mother and the baby continued to live together and there was a much different outcome for that family as a result of the discovery.

I want to thank the panelists but I also want to say that we can work together as pediatricians and as people invested in the domestic violence field. As a matter of fact, we have to work together because the best interests of the child lies with the best interests of the mother and the family and until we get to a common ground on this, we are going to be fighting an uphill battle.

**Full transcripts from this plenary and all the other plenary sessions at the National Conference on Health Care and Domestic Violence will be available in late July on-line at www.fvpf.org/health or by calling 1-888-Rx-ABUSE. Betsy McAlister Groves' comments will be published in a special issue of* Violence Against Women *this fall.*

Robert M. Reece, MD, is a Clinical Professor of Pediatrics at Tufts University School of Medicine and Director of the Institute for Professional Education at the Massachusetts Society for the Prevention of Cruelty to Children. Dr. Reece is also the Chairman of the Section on Child Abuse of the American Academy of Pediatrics. He is the editor of two books on child maltreatment, child abuse, medical diagnosis and management, including, The Treatment of Child Abuse. He was honored in 1997 as the outstanding professional in the field of child abuse.

Alicia F. Lieberman, PhD, is a Professor of Psychology, in the Department of Psychiatry at the University of California, San Francisco. She is Director of the Child Trauma Research Project and Senior Psychologist, Infant Program, at the San Francisco General Hospital. Dr. Lieberman is the author of The Emotional Life of the Toddler, and numerous articles on disorders of attachment, infant/parent psychotherapy and the role of cultural factors in early childhood mental health interventions.

Margaret McNamara, MD, is an Assistant Clinical Professor, Department of Pediatrics at the University of California, San Francisco, and she practices at the UCSF/Mt. Zion Medical Center, where she serves as Chief of Pediatrics. Dr. McNamara has lectured and published widely on many issues related to pediatric primary care, including the effects of domestic violence on children and firearm injury prevention. She is a Fellow of the American Academy of Pediatrics, Executive Medical Board Member at Mt. Zion Medical Center and Chairperson of the Executive and Advisory Committees of the Violence Prevention Project.

News and Notes

Intimate Partner Homicide and Pregnancy

Homicide Rates

A recent study by Isabelle L. Horon, DrPH and Diana Cheng MD published in the *Journal of the American Medical Association* (Vol. 285, No. 11) finds that pregnant or recently pregnant women are more likely to be the victims of homicide than to die from any other cause. The study, Enhanced Surveillance for Pregnancy-Associated Mortality, expands the definition for maternal death to include deaths "not traditionally considered to be related to pregnancy such as accidents, homicide, and suicide." The study compares the homicide rate of pregnant or recently pregnant women with that for women "aged 14 to 44 years who had not had a pregnancy in the year preceding death." It finds that the homicide rate is significantly higher for women in the first group. Overall, homicide accounted for 11.2 % of deaths for women who were not pregnant (when adjusted for race and maternal age) compared with 20.2% of deaths for pregnant or recently pregnant women.

Additionally, homicide is the leading cause of death during pregnancy (43.4%) and during the 43 to 365-day period following delivery or termination of pregnancy (23.3%). Homicide accounted for 3.6% of deaths occurring within the first 42 days. The study does not distinguish whether a homicide was perpetrated by an intimate partner or by a non-intimate partner.

Homicide Prevention

The study is accompanied by a powerful editorial by Victoria Frye, MPH that expands on these findings and uses them to explore ways to prevent homicides, specifically those perpetrated by intimate partners, by focussing on the role health care providers can play in preventing the murder of pregnant women by their partners.

The editorial echoes the study's call for further research to develop prevention strategies, and highlights the social risk factors for pregnancy-associated deaths, such as domestic violence. It notes that "homicide is the leading killer of young women, pregnant or not," and that "much of the violence that women experience during pregnancy is perpetrated by intimate partners and that, for some, intimate partner violence begins during pregnancy."

Seventy-two percent of reproductive age women receive reproductive care, yet only 17% of OB/GYNs screen for domestic violence at their first visit and only 10% thereafter. Because most pregnant women have a relationship with a health care provider and many of these women come into contact with the health care system before their death, these providers are in a unique position to prevent intimate partner homicide of women by routinely screening for domestic violence.

Screening in the Pediatric Setting

Screening for Postpartum Abuse of New Mothers

Another recent study by Sandra L. Martin, PhD et al. published in the *Journal of the American Medical Association* (Vol. 285, No. 12) found that most women who were abused after pregnancy were injured (77%), but that only 23% of those received medical treatment for their injuries. This study also found that both abused and nonabused women utilized well-baby care and that the numbers did not differ significantly by maternal patterns of abuse. These findings show that while an abused woman may not seek health care for herself, she may access the health care setting on behalf of her children. This provides an opportunity for pediatricians and other health care providers to screen women for domestic violence who may never otherwise access health care services.

Routine Screening for Domestic Violence in Pediatric Practice

This guidebook focuses on the importance of routine screening for family violence in the pediatric setting. The guidebook is thorough in scope, addressing the impact on the mother, the child and the pediatrician when screening for domestic violence. It offers advice on preparing to screen, how to screen, follow-up strategies, coding and documentation, as well as training for health care providers. Also included is a Pediatrician Quick Reference Guide for Routine Screening. For more information call Melissa Strauss at 617/243-6522.

Shelter from the Storm: Clinical Intervention with Young Children Affected by Domestic Violence

Shelter from the Storm is a curriculum for training child mental health clinicians who work with families and young children affected by domestic violence. The curriculum, produced by the Child Witness to Violence Project at Boston Medical Center, provides information and case examples that illustrate the complexities of working with families affected by domestic violence. It contains six flexible training modules:

- **Domestic violence: principles of empowerment-based practice.**
- **The impact of domestic violence on children.**
- **Assessment of children affected by domestic violence.**
- **Individual and group treatment of children affected by domestic violence.**
- **Domestic violence, children and the court.**
- **Caring for the caregiver**

For more information contact the project at 617/414-4244.

Brake the Cycle: Domestic Violence is Everyone's Business

Last October 15 riders commemorated Domestic Violence Awareness month by participating in the Brake the Cycle of Violence bike tour in Northern California. Riders represented the California Clinic Collaborative on Domestic Violence, a project of the FVPF funded by the California Endowment, and succeeded in not only raising awareness, but also in raising over $14,000 that went directly to their clinic's domestic violence programs. Participants, from beginners to more experienced riders, cycled an average of 40 miles per day on the three-day tour in the California wine country of Sonoma Valley. This year's ride, taking place September 22 -24, will be supported by Towanda Tours, a San Francisco based bike tour company specializing in tours to raise money for nonprofit efforts. If you are interested in more information about this year's ride, or organizing a fundraising bike tour for your organization, contact Donna at 415/695-2726 or donnaluna@mindspring.com or visit their website at www.TowandaTours.com.

Breaking the Cycle of Domestic Violence, a resource for healthcare providers

Although the reporting guidelines and some resources listed are specific to Kansas, this video, developed by the Kansas Medical Society Alliance, with its accompanying resource manual contains the basic information needed to screen, document, and refer victims for additional assistance. The video is available from Fanlight Productions at 800/937-4113; Kansas residents can contact Becky Collier at the KMSA at 316/838-1410.

Available from the Health Resource Center 888-Rx-ABUSE, www.fvpf.org/health

Teen Dating Violence

This new packet for health care providers offers both informational and practical tools to improve their outreach to battered teens in the clinical setting. The packet includes: fact sheets on teen dating violence; a clinical overview of the problem; adolescent safety plan; resource sheet for health care providers and teens; bibliography; and information on barriers of adolescent disclosure including dynamics of battered pregnant teens and battered gay/lesbian/transgendered and queer youth.

Violence Against Women with Disabilities

Available Fall 2001

This packet will provide health care providers with a starting point in recognizing and addressing the specific concerns of women with disabilities who are also the victims of domestic violence. The packet will include a fact sheet, ideas for safety planning, a resource list and bibliography.

Voices of Survivors

This video, developed by Christina Nicolaidis, MD, MPH addresses the dynamics of domestic violence, prevalence of the issue, and the need for provider screening. The video is distinctive in that it addresses these issues from victims' perspective. It offers specific step by step instructions on how to screen for domestic violence, give support to victims, assess for safety, and give effective referrals. In addition, it describes the hidden costs and hidden physical and mental health issues that could be addressed sooner if screening were to occur. Running time: 31 minutes, cost: $10.00. Available at www.fvpf.org/store or 415/252-8900.

Health Cares About Domestic Violence Day

Wednesday, October 10th, 2001

Help the health care system identify and prevent domestic violence. Join health care professionals and domestic violence advocates by taking part in the Family Violence Prevention Fund's third annual Health Cares About Domestic Violence Day on October 10th, 2001.

GET INVOLVED!

To learn more about this event and what you can do, visit the Family Violence Prevention Fund's website: **www.fvpf.org/health** for on-line resources, free materials and up-to date information about national involvement on the issue, or if you don't have access to the web, call the National Health Resource Center on Domestic Violence toll-free: **(888) Rx-ABUSE**

WE HAVE RESOURCES TO HELP GET YOU STARTED:

- National guidelines on how to screen for domestic violence.
- Simple steps health care providers can take to improve their response to domestic violence.
- Free patient & provider educational materials.
- Organizing ideas for October 10th activities and more!

www.fvpf.org/health

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CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Injury Prevention & Control : Division of Violence Prevention

The Adverse Childhood Experiences (ACE) Study is one of the largest investigations ever conducted to assess associations between childhood maltreatment and later-life health and well-being. The study is a collaboration between the Centers for Disease Control and Prevention and Kaiser Permanente's Health Appraisal Clinic in San Diego.

More than 17,000 Health Maintenance Organization (HMO) members undergoing a comprehensive physical examination chose to provide detailed information about their childhood experience of abuse, neglect, and family dysfunction. To date, more than 50 scientific articles have been published and more than100 conference and workshop presentations have been made.

The ACE Study findings suggest that certain experiences are major risk factors for the leading causes of illness and death as well as poor quality of life in the United States. It is critical to understand how some of the worst health and social problems in our nation can arise as a consequence of adverse childhood experiences. Realizing these nnections is likely to improve efforts towards prevention and recovery.

Publications by

- Health Outcome
- Year

Data and Statistics

- Prevalence
- Participant Demographics

Learn About the ACE Study

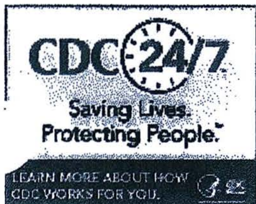
The initial phase of the ACE Study was conducted at Kaiser Permanente from 1995 to 1997. More than 17,000 participants completed a standardized physical examination. No further participants will be enrolled, but we are tracking the medical status of the baseline participants.

More >

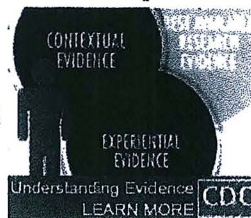
Featured Items

Podcast: Bad Memories (http://www2c.cdc.gov/podcasts/player.asp?f=4504243)

New Paper: Adverse Childhood Experiences reported by adults—Five States, 2009 (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5949a1.htm)



(http://www.cdc.gov/24-7/?s_cid=24-7_012)



(http://vetoviolence.cdc.gov/evidence/#%26panel1-1)

Page last reviewed: May 13, 2014

Page last updated: May 13, 2014

Content source: Centers for Disease Control and Prevention (http://www.cdc.gov/), National Center for Injury Prevention and Control (http://www.cdc.gov/injury/), Division of Violence Prevention (http://www.cdc.gov/ViolencePrevention/index.html)

Economic Costs of Adverse Childhood Experiences in Alaska

The Price of Not Intervening

Before Trauma Occurs

This document and other information related to Adverse Childhood Experiences in Alaska can be accessed at http://dhss.alaska.gov/abada/ace-ak/Pages/default.aspx

Prepared for the Alaska Mental Health Board and the Advisory Board on Alcoholism and Drug Abuse by Patrick Sidmore, MSW

Child Adversity and State Fiscal Health

In Alaska, Adverse Childhood Experiences (ACEs) have been a frequently discussed subject in the fields of behavioral health and child development over the past 5-10 years. This paper will take the discussion in a different direction in light of the recent survey of Alaskan adults - asking them about their own experiences with adverse childhood experiences or ACEs. Links to numerous poor health, economic and social outcomes have been found for adults who experienced ACEs.[i] Subsequent to the dozens of ACE studies from all over the U.S and around the world since the original data first became available, research in the fields of neuroscience and epigenetics have sharpened the picture of the mechanisms that lead from child trauma to negative outcomes, often years later.

As the funding of state government changes from a tax base linked almost entirely to resource extraction[ii] to one which is derived from broad-based taxes on citizens, the economic health of Alaska will be tied more than ever to its workforce. Since the building of the pipeline, Alaska has invested heavily in its people through social and health programs offered by the state. There is evidence that these investments have paid dividends which have been largely unrecognized due to the current budgeting and tax processes. In the past, the majority of successful government spending was not tied to increased state revenue because the tax base was reliant primarily on one or two industries. This is changing.

What follows is a unique way to look at the issues of child maltreatment and other adverse childhood experiences. Policymakers see the costs when a child is taken into custody but rarely connect the expenses incurred thirty years later. This discussion will explore those economic impacts to which a concentrated effort to reduce child trauma might lead, using the Alaska 2013 Behavioral Risk Factor Surveillance System[iii] (BRFSS) survey data. A model will be explored where a change in the ACE scores of Alaskan adults will be overlaid with outcome data to see if there would be a reduction in the number of adults who experience certain chronic health conditions. Added to that will be an analysis of costs that are currently associated with these chronic health issues and how these expenditures might have looked with a change in ACE scores.

The main focus of this analysis will be on the long term costs of ACEs – specifically the costs Alaska pays for adults who experienced ACEs. **It is important to remember that costs associated with child trauma, however, begin in childhood.** A recent report from the Centers for Disease Control and Prevention estimating lifetime costs of child maltreatment, an especially high level of adverse childhood experience, are seen below.

Key findings:[iv]

The estimated average lifetime cost per victim of nonfatal child maltreatment includes:

$32,648 in childhood health care costs

+ $7,728 in child welfare costs

+ $7,999 in special education costs

$48,375 Total Childhood Costs of Maltreatment

What Are The Recent Child Abuse Numbers in Alaska?

First-Time Child Abuse Victims in Alaska[v]
Average Annual Number 2009 - 2013
1705

Applying the **$48,375** cost estimate for childhood expenses to the average number of Alaskan children who had a substantiated report of harm over the past several years (1,705) the financial liability anticipated is large each year. It can be estimated that Alaska takes on the burden of approximately $82 million in current and projected costs each year on average.

Why Are Adverse Childhood Experiences So Important to Alaska?
The Intersection of Economics and Childhood Development

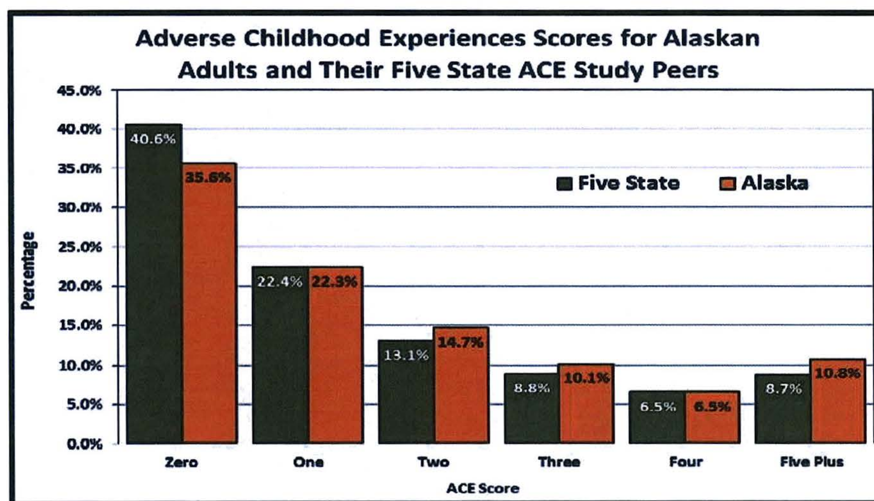
The fields of economics and business have discovered that child development has a profound impact on the economic health of a community. Groups and individuals like the Rand Corporation,[vi] The Federal Reserve Bank,[vii] the Upjohn Institute,[viii] and Nobel Laureate (Economics 2000) James Heckman[ix] from the University of Chicago have explored the importance of the earliest years of an individual's life to his or her later economic success. The idea that **"skills beget skills"** in child development leads to the very real cost benefit analysis that clearly demonstrates the need to get the early years of children's lives right. Alaskan professionals can and do repair damage caused to the developing brains of young children through their exposure to trauma - but it is costly.

In Alaska's state government there is, of course, considerable work being done with children who have been traumatized. The Office of Children's Services and the Divisions of Behavioral Health, Public Health and Juvenile Justice as well as the Department of Education and Early Development primarily do the work of helping to repair the damage caused by trauma. **Yet, is Alaska optimizing its chances to reduce social and economic costs when it comes to child maltreatment?**

The Alaskan ACE Study – What the Numbers Show

Alaska surveyed more than 4,000 adults in the 2013 Behavioral Risk Factor Surveillance System (BRFSS) to determine the extent of their ACEs experienced prior to age 18. The results, shown below in **Figure 1**, were compared to a sample of five states[x] which had been combined by the Centers for Disease Control and Prevention using a questionnaire identical to Alaska's study. The results of these states' statistically significant assessment of 23,000 residents represent one of the largest population bases of ACE questions asked of Americans (more than 20 million residents live in the five states sampled).

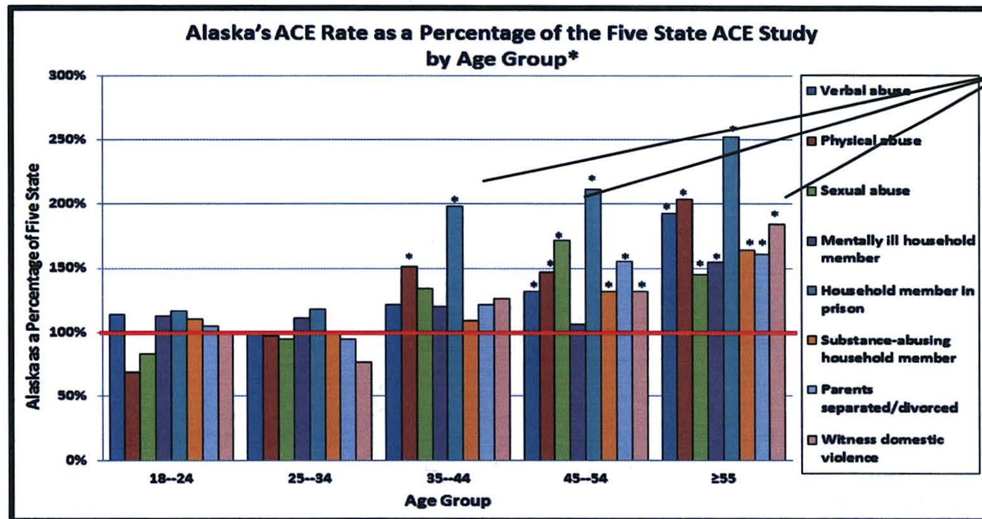
Figure 1[xi]



Alaska clearly has higher rates of ACEs than the average of the five states surveyed. As Alaska's Health and Social Services staff explored the data more fully, they uncovered an interesting finding. When comparing Alaska's ACE prevalence to the five states (Washington, Louisiana, Tennessee, Arkansas, and New Mexico) by age groups, it appears that the higher ACE scores in Alaska are held in the older generations. Below, **Figure 2** compares Alaska's rate for each ACE as a percentage of the five states' rate. For example if Alaska had exactly the same rate for an adverse experience it would register as 100% (red horizontal line).

What accounts for this leveling when compared to age cohorts in other states? Is it the flow of oil and the better jobs it created? Is it a result of immigration that has occurred since then? Can it be linked to significant spending on health and social programs? The answer probably includes all of these and others. These figures show that relative to peer groups in the five state sample, Alaska's younger adults are more in line with ACE levels elsewhere. The ACE research shows that these changes will have considerable health, social and economic benefits moving forward.

Figure 2[xii]



Alaska's older generations have higher rates of ACEs than their peers in the five states. The rates are similar for the younger generations.

Now is a pivotal time as Alaska confronts a budget crisis and moves to a broader based funding structure. The impact of investments provided from state coffers in preventing and mitigating the results of ACEs must not be lost as budgets are cut. ***To lose ground leads not only to increased future costs, but given the new reality, most likely decreased future revenues as well.*** Alaskans with high ACE scores make less money, are less likely to own their own homes and are more likely to be unable to work[xiii]. ACE awareness is even more important now.

There have been great strides in the past few years increasing Alaskans' knowledge of domestic violence, with primary prevention efforts taken to scale across the state.[xiv] Though there are agencies and groups working on the issue – **a comprehensive primary prevention effort to prevent child abuse and neglect doesn't exist in Alaska.** Could more be done to prevent ACEs?

Three Levels of Prevention[xv]

Public Health offers a model of prevention which is pertinent for a discussion of ACE prevention and mitigation.

In the field of Public Health, three levels of prevention are observed:

- **Primary Prevention -** aims to prevent disease or injury before it ever occurs.
- **Secondary Prevention -** aims to reduce the impact of a disease or injury that has already occurred.
- **Tertiary Prevention -** aims to soften the impact of an ongoing illness or injury that has lasting effects

The three tables joined below illustrate how the problem of ACEs in Alaska could be viewed. In this example, the data refer to the level of current smoking by Alaskan adults and their ACE scores.

An Example

Table 1 represents the estimated number of Alaskan adults who experience four levels of ACE scores. These figures were derived from using the 2013 Department of Labor and Workforce Developments' population estimate and the 2013 BRFSS ACE Survey percentages as reported by Alaskan adults. If impacts were made upon ACE rates at this level in the Alaskan population - **that would be an example of primary prevention**. Prevention at that level (moving people to lower ACE scores) would save the costs associated with child maltreatment cited above and pay dividends into adulthood by reducing the number of current smokers. As this table demonstrates – Alaskans with lower ACE scores tend to be current smokers at lower rates (See explanation of Table 2 below).

Table 1		Table 2	Table 3	
ACE Scores of 2013 Adult Alaska Population		Current Smoking	Current Smoking Estimate Adult Alaska Population	
Zero	194,275	14.4%	Zero	27,901
One	121,950	18.3%	One	22,298
Two - Three	135,398	24.1%	Two - Three	32,564
Four Plus	94,134	34.5%	Four Plus	32,481
Total	545,757	21.1%	Total	115,244

The black box above **(Table 2)** displays the results from the 2013 Alaskan ACE research demonstrating the percentage, by each ACE score level, of those who are currently smoking. For example, 14.4% of Alaskan adults with zero ACEs currently smoke and 34.5% of those with four or more ACEs do. Lowering these percentages for people with high ACE scores by providing trauma informed behavioral health treatment, for example, would teach Alaskans coping skills other than using nicotine to deal with stress. That would be an instance of **secondary prevention.**

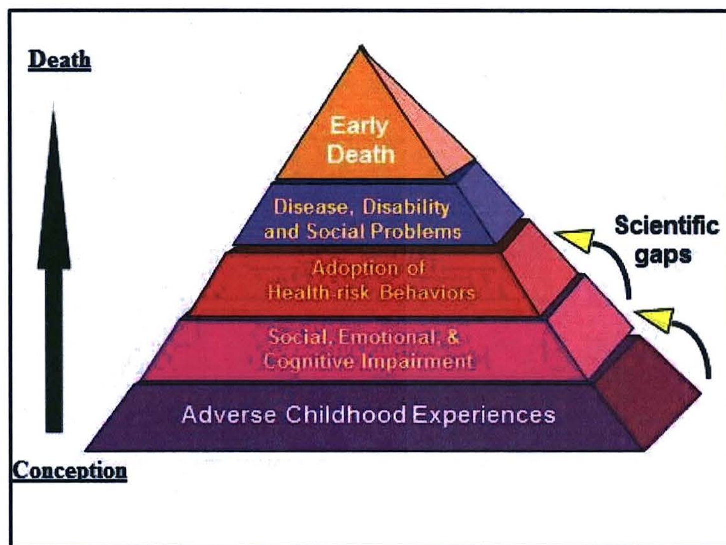
Table 3 represents the estimated current level of smokers in Alaska using the 2013 BRFSS survey results. It is derived from applying the percentages in the black box **(Table 2)** to the population based ACE estimates from **Table 1**. Working at this end of the continuum would, for example, include providing tobacco cessation programs to those Alaskans currently smoking. In terms of trauma and smoking reduction this is an example of **tertiary prevention,** as it is a way to mitigate somewhat the results of trauma (i.e. smoking). Primary, secondary and tertiary levels of prevention all have potential to improve the outcomes for Alaskans. Of course, primary prevention allows for fewer costs associated with "fixing" already damaging conditions or habits.

The Initial Paradigm

When the original ACEs studies were released, the researchers developed a graphic (**Figure 3**) to explain what they had been observing from their results. Five levels or tiers were observed throughout a person's life course if they experienced ACEs:

1. **ACEs occurred,** which led through an unknown mechanism to
2. **Social, emotional and cognitive impairments,** which led through an unknown mechanism to
3. **Adoption of high risk health behaviors ,**
4. **High rates of disease, disability and social problems, and**
5. **Early death**

Figure 3[xvi]



Subsequently, the researchers began to explore other fields of science doing complementary work. The synthesis of these fields with the ACE epidemiological work shed more light on this original paradigm.

Causation
Neurobiology & Epidemiology

Approximately eight years after the original ACE studies began to appear, the two original ACE researchers, Dr. Robert Anda and Dr. Vincent Felitti, with other scientists wrote a journal article[xvii] making the case that the links between ACEs and other health outcomes were more than correlations. In a well-reasoned argument they proposed that ACEs cause many of the outcomes linked with them. They made their case using both the original ACE epidemiology work, and new findings in neurobiology which had for years been exploring changes in the brain as a result of traumatic experiences in childhood. In this journal article, the authors cover nine points (**Figure 4**) establishing an argument for causation.

Figure 4

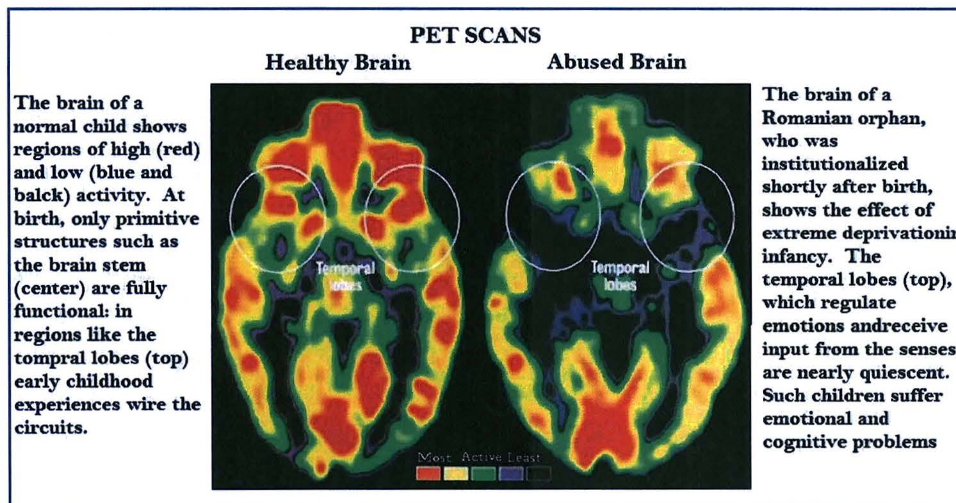
Sir Bradford Hill's - 9 criteria for establishing an argument for causation[xviii]

1. Demonstration of a strong association between causative agent and outcome
2. Consistency of findings across research sites and methods
3. Specificity
4. Temporal sequence
5. Biological gradient
6. Biological plausibility
7. Coherence
8. Experiential evidence
9. Analogous evidence

The understanding that ACEs lead to costly outcomes is key to achieving savings through ACE reduction efforts. The commentary, while dated (2005), if rewritten, could further expand on the neurobiological research cited and augment the case for causation, with research from the field of epigenetics.

The changes in the brain and gene expression (epigenetics)[xix] of individuals who experience emotional and physical trauma are the underlying basis for these arguments. Scientists can show the consequences of trauma on the brain through new technologies. Research studies show that there are structural changes which occur in a person's brain and body as a result of trauma. This material provides new opportunities to alter poor outcomes as a better understanding of the mechanisms of the impacts of trauma exposure are understood. The well-known graphic comparing brain scans of a Romanian orphan who was severely neglected compared with a normally developing child is shown in **Figure 5** below and illustrates the impacts of trauma.

Figure 5[xx]



Population Attributable Risk [xxi]

Population attributable risk is a well-established method in epidemiology of determining the percentage of an outcome which is linked back to a precursor – in this case - ACEs. **Table 4** below represents the calculations of population attributable risks associated with a number of economic, social and health outcomes as reported by Alaskan adults. For example, if all ACEs could be eliminate then it would be expected that 40% fewer Alaskan adults would be enrolled in Medicaid or there would be 32% percent fewer smokers. This table begins to hint at the potential savings available to Alaskans with a successful ACE prevention program in place.

The items in **Table 4** are from Alaska-specific research. Additional studies in various populations explored other health links to ACEs which were not studied in Alaska suggest population attributable risks which further bolster the argument for primary ACE prevention in Alaska and in other populations. For example, the population attributable risk for adolescent suicide attempts as a result of ACEs was 80% while in adults 68% in one study [xxii].

Eliminating all ACEs is not a realistic goal for a policy discussion. However, the research offers some guidelines which may be especially helpful in developing a coordinated approach to effective service arrays, prevention and intervention efforts.

Table 4

Health Behavior or Outcome	PAR%*
Frequent Mental Distress	**60.1%**
Chronic Obstructive Pulmonary Disease, Emphysema or Chronic Bronchitis	**46.1%**
Health Insurance: Medicaid	**40.6%**
Physical Health Not Good 14+ Days	**33.2%**
Current Smoker	**32.0%**
Current or Former Asthma	**30.6%**
General Health	**26.8%**
Non-Gestational Diabetes	**23.7%**
Activity Limitation 14+ Days	**23.7%**
Heavy Alcohol Consumption	**20.5%**
Ever Smoker	**19.3%**
Told Have Arthritis	**15.8%**
Insufficient Sleep	**15.5%**
Obesity	**14.3%**
Separated or Divorced	**13.2%**
Binge Drinking Risk Factor	**11.0%**
No Leisure Time Physical Activity	**10.2%**

A Caution for Individuals & Policy Makers

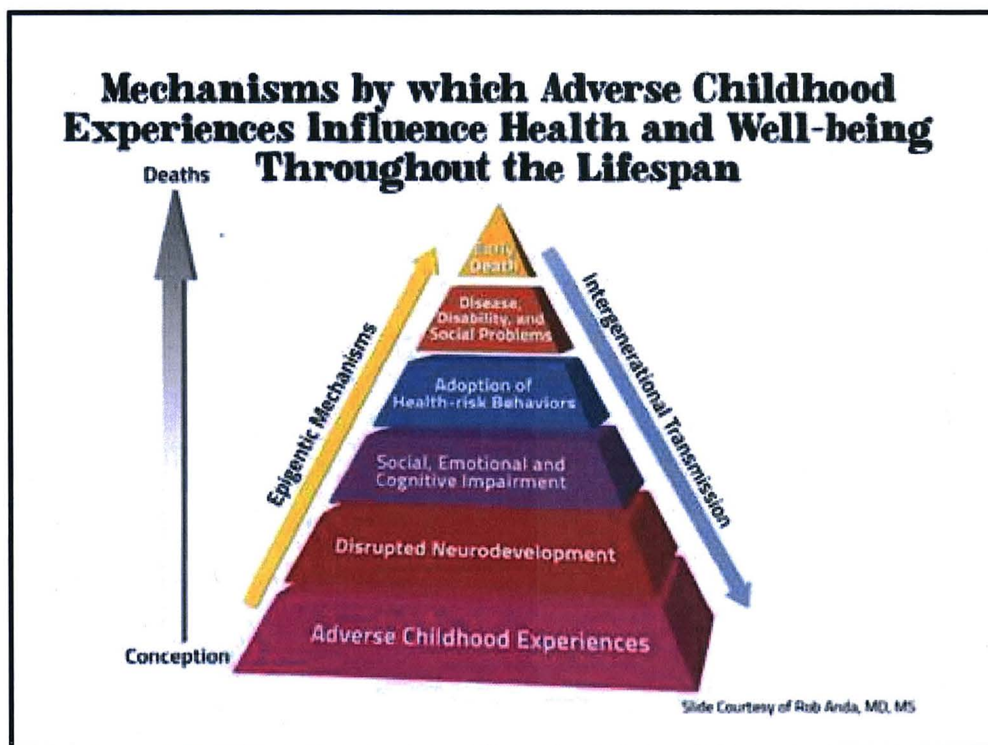
ACE research shows powerful relationships between exposure to ACEs and poor outcomes. These are important findings, but they do not predict specific outcomes for **individuals**. A person may be exposed to several ACEs and not experience the negative effects linked to ACEs. Conversely a person with no ACE exposure may develop some of the negative health outcomes associated with early trauma exposure. Because of unique biological or environmental conditions, some people are able to avoid poor outcomes (just like a person may develop lung cancer having never smoked or a person who smoked for 60 years does not develop lung cancer). Thus, ACEs research is most useful at the population level.

Policy makers must understand that while individual differences occur, these differences in outcomes should not be used to discount the overwhelming evidence and costs associated with ACEs. The strength of ACE study data is that it is **best suited** to inform how to effectively allocate resources. While individuals may vary in results - changing the ACEs for a population will pay dividends as shown below.

A New Paradigm

Recently, Dr. Rob Anda released a new ACE pyramid graphic (**Figure 6**). This representation of the ACE progression removes the "scientific gaps" seen in Figure 3 above. With the addition of research results from neurobiology and epigenetics, the mechanisms which lead from ACEs to poor health outcomes are better understood – and expanding rapidly. This graphic also brings into the discussion the idea of intergenerational transmission of ACEs. Some of the poor outcomes associated with ACEs, such as substance abuse and depression, can, if untreated, become ACEs for the next generation.

Figure 6



This new paradigm may lead in a different direction. Given what is known about the impact of trauma on developing brains and the physiological resources (**Figure 7**, below) needed to "rewire" them if damaged by toxic levels of stress, a different approach is warranted. James Heckman and others have shown that it is not just high levels of physiological resources which need to be used to fix trauma – it is also economic resources.[xxiii] **What would a primary prevention effort do for Alaskans, both economically and socially?** Alaska expends significant resources on corrections ($278 million in unrestricted general funds in 2016[xxiv]), substance abuse ($1.2 billion annually of public and private costs[xxv]), chronic health conditions (see below) and other issues related to ACEs.

Figure 7[xxvi]

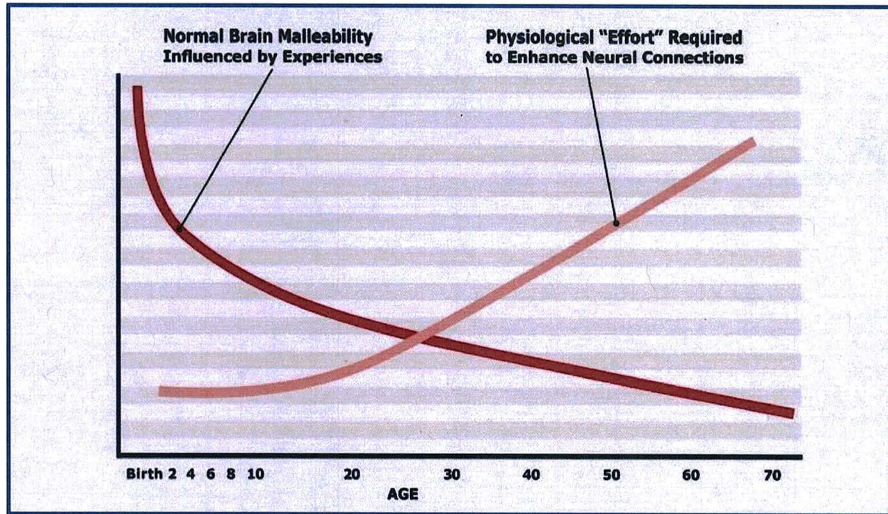


Figure 7 also gives insight into the time which is most productive to intervene if ACEs have occurred. Infants and young children require fewer physiological and economic resources to support their brains after trauma. Yet, they are the most susceptible to its effects. While intervening at any age can be effective, the younger the person is when treated after trauma the better the likelihood that the outcome will be positive with fewer resources needed.

Figure 8[xxvii]

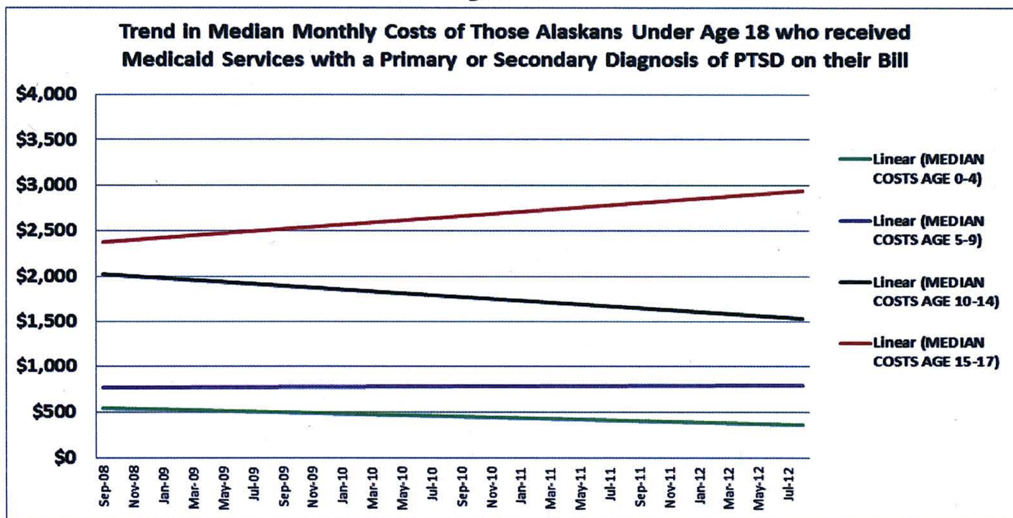


Figure 8 shows an analysis of Medicaid costs for children and youth with a PTSD diagnosis conducted by the Alaska Mental Health Board staff. It shows that treating younger children with this trauma condition is significantly cheaper than treating it later in life. Even waiting until adolescence has additional costs associated with it.

Establishing a Goal for Primary Prevention of ACEs in Alaska

Because many states (**Figure 9**) which have conducted the same ACE survey of their adult population that Alaska has, there is a rich data source from which to draw. Choosing a state or two that have a better rate of ACEs than Alaska seems a sensible place to start when developing a target for ACE prevention.

After examining the data, Vermont and Arkansas have ACE scores that are better than Alaska's. Since they have already achieved a lower level of ACE scores, it is plausible that another state can do the same.

Figure 9[xxviii]

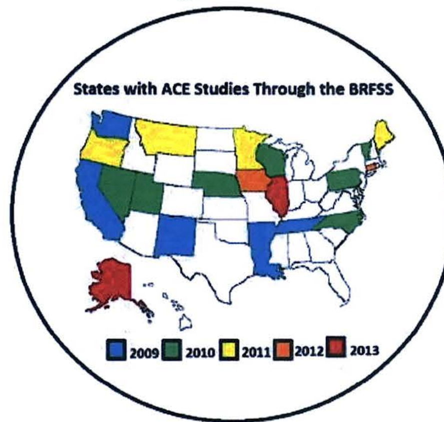
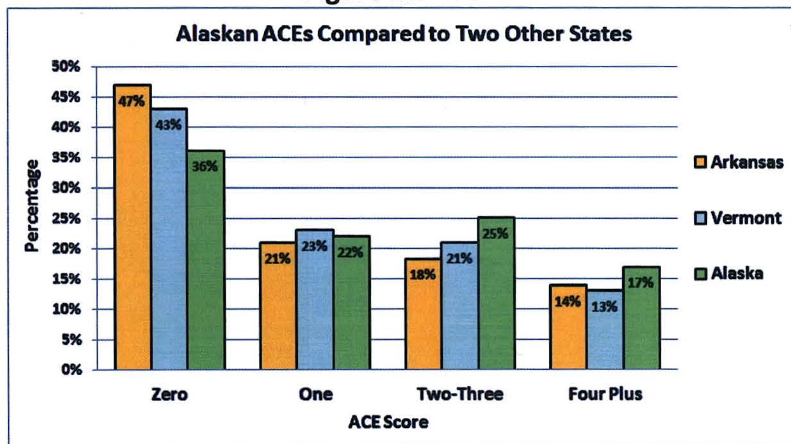


Figure 10 displays Alaska's rate of ACEs compared to Arkansas and Vermont, two states with relatively good ACE scores. The Zero ACE category is higher for the other two states. What would it take to get Alaska to the level of ACEs similar to Arkansas or Vermont?

Figure 10[xxix] [xxx]



To search the possibilities for ACE reduction the staff of the Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse explored several scenarios with population

based reductions in ACEs. A one ACE reduction for any Alaskan who had one was first examined, but proved too ambitious. Modeling a reduction of one ACE for half of the individuals at each level of ACE score was done. For example, if half the people with one ACE dropped to no ACEs while the other half remained at one and if half the Alaskans with two ACEs dropped to one ACE and the other half stayed at two, etc. (**Table 5**).

Table 5

ACE Score	2013 Adult Alaska Population	%	ACE Score Target Reduction	%
Zero	194,275	35.6%	255,250	46.8%
One	121,950	22.3%	101,002	18.5%
Two	80,053	14.7%	67,699	12.4%
Three	55,345	10.1%	45,382	8.3%
Four	35,419	6.5%	30,554	5.6%
Five	25,689	4.7%	20,428	3.7%
Six	15,166	2.8%	14,324	2.6%
Seven	13,482	2.5%	8,930	1.6%
Eight	4,378	0.8%	2,189	0.4%
	545,757	100.0%	545,757	100.0%

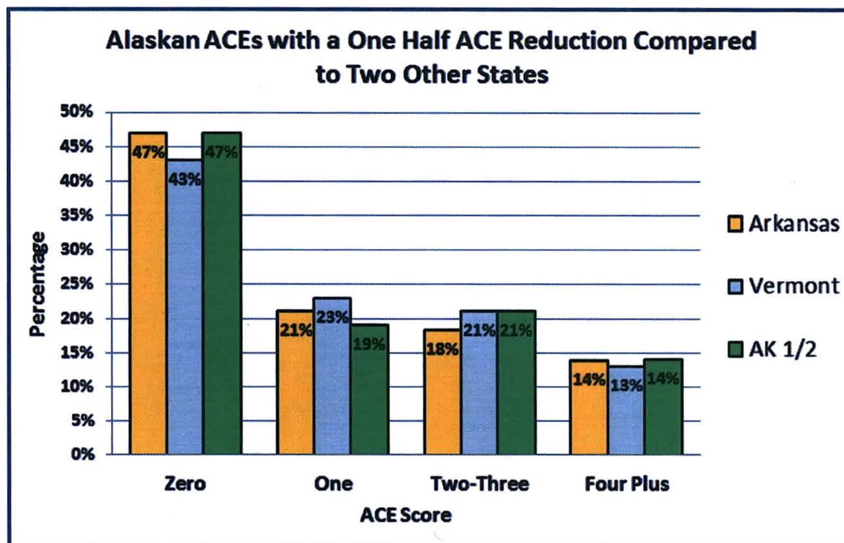
Table Six simplifies Table Five into a more manageable format and groups the higher ACE scores together. This allows for a simpler format and is in line with how most ACE data are presented across the many studies.

Table 6

ACE Scores of 2013 Adult Alaska Population			ACE Scores of 2013 Adult Alaska Population with Reduction	
Zero	194,275		Zero	255,250
One	121,950		One	101,002
Two - Three	135,398		Two - Three	113,081
Four Plus	94,134		Four Plus	76,425
Total	545,757		Total	545,757

The results of that analysis generated **Figure 11** below, which would move Alaska into the realm of the other two states.

Figure 11



The changes necessary to achieve the level of the other two states are ambitious, but Alaska has some momentum in this area already. When comparing Alaska's ACE scores to a five state average, Alaska's younger generations compare more favorably, whether this is due to in-migration, better services, or an improved economy based on oil wealth. Compared to their peers in other states Alaskan elders had much rougher childhoods.

Current Costs and Potential Savings

In **Table 7** below, categories of five costly health conditions and adult use of Medicaid are outlined in terms of their estimated annual costs to Alaska. These costs are incurred by both the public and private sectors. For each one of these categories, a population attributable risk was calculated using the 2013 BRFSS data as they related to adverse childhood experiences. Those rates are shown and in the final column those rates are applied to the estimated annual costs to determine the expenditures associated for those categories linked with ACEs, In simple terms, if all ACEs were eliminated nearly $800 million dollars of annual costs would be eliminated from Alaska's expense column for these six health measures.

Table 7*

Population Attributable Risk for ACEs			
Health Behavior or Outcome	**Estimated Annual Costs***	**Percentage of Population Attributable Risk****	**Estimated Annual Costs Linked to ACEs*****
Adult Medicaid (Age 20+)	$ 860,000,000	40.6%	$ 349,160,000
Current Smoker	$ 579,000,000	32.0%	$ 185,280,000
Non-Gestational Diabetes	$ 450,000,000	23.7%	$ 106,650,000
Binge Drinking	$ 545,000,000	11.0%	$ 59,950,000
Arthritis	$ 274,000,000	15.8%	$ 43,292,000
Obesity	$ 219,000,000	14.3%	$ 31,317,000
Total	**$ 2,927,000,000**		**$ 775,649,000**

Again, completely eliminating ACEs is an unrealistic goal. But what might a primary prevention effort with realistic goals be able to accomplish in Alaska? A change in rates of ACEs in Alaskan adults which moves the state to similar rates achieved in Arkansas and Vermont will be explored below.

* For the source of each health behavior or outcomes costs see the individual analysis of the individual items below.
** These population attributable risks were calculated for this report by the Alaska Department of Health and Social Services, Division of Public Health, Section of Chronic Disease Prevention and Health Promotion from the Alaska ACE data captured in the 2013 BRFSS
*** These cost were calculated by multiplying the two adjacent columns

Creating an ACEs Ledger

In order to answer the questions about how a reduction in ACEs in the past might have impacted Alaska today, an ACE Ledger was developed (**Table 8**). The **first column** describes several health outcomes linked to ACEs for which there is Alaska-specific annual costs data available. Additionally Alaskan adults were asked about these conditions in the 2013 BRFSS and their answers can be cross-tabbed with their ACEs scores.

The **second column** will show an estimated number of Alaskans who experience each condition based on the 2013 BRFSS and 2013 Census estimate of Alaskan adults. The **third column** will be filled out using cost estimates for Alaska of these specific health issues as calculated by various academic and government agencies.

The **fourth column** will be calculated by dividing column three by column two to estimate an annual per person cost of each health issue. The **fifth column** will be based on overlaying the reduction of one ACE for one half of the Alaskan adult population on top of the 2013 BRFSS results. This number will be the estimated number of fewer Alaskan who would be experiencing each health measure if ACE scores had been lower. Finally, an estimated saving will be calculated by multiplying columns 4 and 5 in **column six**.

This ledger below will be completed to demonstrate estimated cost savings with a realistic reduction in ACE scores.

Table 8

One	Two	Three	Four	Five	Six
Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	**Estimated Savings**
Medicaid	**0**	**$0**	**$0**	**0**	$0
Current Smoking	**0**	**$0**	**$0**	**0**	$0
Diabetes	**0**	**$0**	**$0**	**0**	$0
Binge Drinking	**0**	**$0**	**$0**	**0**	$0
Arthritis	**0**	**$0**	**$0**	**0**	$0
Obesity	**0**	**$0**	**$0**	**0**	$0

Alaskan Adults Who Use Medicaid

According to the Alaska Department of Health and Social Services $860 million was spent on Alaskan adults aged 20 or older in 2012 in the Medicaid program.[xxxi] These costs were spread over approximately 53,800 Alaskans. When dividing those two figures, an annual per person cost of nearly $16,000 is calculated. Because of the nature of the 2013 BRFSS survey (which does not survey people who are institutionalized and which is conducted in a way that makes surveying people in home and community based services more difficult), the survey results only estimated the adults using Medicaid at approximately 34,500. The following estimates will be based on these lower figures to keep them in the conservative range.

Tables 9, 10, and 11, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 9** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 10** is the percentage of the Alaskans who reported using Medicaid by ACE score. **Table 11** is calculated by multiplying Table 9 and Table 10's current estimates by goal estimates respectively.

Table 9			Table 10	Table 11	
ACE Score	Population		Adult Medicaid	Medicaid Recipients	
	Current Estimate	Goal Estimate		Current Estimate	Goal Estimate
Zero	194,275	255,250	3.8%	7,382	9,700
One	121,950	101,002	5.9%	7,195	5,959
Two-Three	135,398	113,081	8.0%	10,832	9,046
Four Plus	94,134	76,425	9.7%	9,131	7,413
Total	545,757	545,758		34,540	32,118

The resulting estimated reduction in the number of Alaskans who use Medicaid is 2,422 people if ACE scores were lower. This represents approximately a 7% reduction. Putting these calculations into the ACE Ledger below, the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas would be approximately $39 million.

Table 12

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	Estimated Savings
Medicaid	53,800	$860,000,000	$15,985	2,422	$38,715,670

Alaskan Adults who Currently Smoke

According to the State of Alaska publication Alaska Tobacco Facts 2012,[xxxii] $576 million was spent on Alaskans as a result of tobacco use. A choice was made to use the current smoking figure in this calculation because the 2013 BRFSS data show that not only are people with higher ACE scores at greater risk for ever smoking they are also less likely to have quit if they ever started. These costs were spread over approximately 115,200 Alaskans. When dividing those two figures, an annual per person cost of approximately $5,000 was calculated.

Tables 13, 14, and 15, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 13** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 14** is the percentage of the Alaskans who reported being current smokers by ACE score. **Table 15** is calculated by multiplying Table 13 and Table 14's current estimates by goal estimates respectively.

	Table 13		Table 14	Table 15	
ACE Score	Population		Current Smoking	Currently Smoke	
	Current Estimate	Goal Estimate		Current Estimate	Goal Estimate
Zero	194,275	255,250	14.4%	27,901	36,658
One	121,950	101,002	18.3%	22,298	18,468
Two-Three	135,398	113,081	24.1%	32,564	27,196
Four Plus	94,134	76,425	34.5%	32,481	26,371
Total	545,757	545,758		115,244	108,693

By changing the base rate of the ACEs in **Table 13** and leaving **Table 14** as it is - then **Table 15** is determined by multiplying Table 13 and Table 14. The results show a reduction of those currently smoking by 6,551 people

Adding these calculations into the ACE Ledger below (**Table 16**) the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas is approximately $33 million.

Table 16

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	**Estimated Savings**
Current Smoking	**115,244**	**$579,000,000**	**$5,024**	**6,551**	$32,912,224

In order to calculate a total using the first two measures there is a need to eliminate "double counting" of costs. For example, some of the costs associated with current smokers are accounted for by people who are on Medicaid and currently smoke. By leaving the Medicaid calculation intact and removing the people who are on Medicaid from those Alaskans who currently smoke a **net potential savings of $69,558,006** between these **two categories is calculated**, as seen in **Table 17** below.

Table 17

Issue	Total 2013 BRFSS	With Reduction of ACEs	Percentage Unduplicated	Number of Alaskans Unduplicated*	Total Costs of Unduplicated Alaskans**	Average Annual Costs***	Target Reduction Unduplicated*	**Estimated Savings***
Medicaid	**53,800**	**51,378**	**100.0%**	**51,378**	**$821,277,330**	**$15,985**	**2,422**	$38,715,670
Current Smoking	**115,244**	**108,693**	**93.7%**	**101,893**	**$511,910,432**	**$5,024**	**6,139**	$30,842,336

Unduplicated **$69,558,006**

*93.7% of people who reported currently smoking were not using Medicaid. These starred items were reduced by multiplying by the 93.7% figure in the "Percentage Unduplicated" column.

** Total costs of unduplicated Alaskans includes the reduction in ACES and the percentage unduplicated

*** Average annual per person costs remained the same for this analysis

Alaskan Adults Who Have Ever Been Diagnosed With Diabetes

According to an article in the journal Diabetes Care, *The Economic Costs of Diabetes in the U.S. 2012,*[xxxiii] the annual cost of Alaskans with diabetes is $450 million. Using the 2013 BRFSS an estimated 41,160 Alaskan adults had ever been diagnosed with diabetes. The average annual cost per person therefore is estimated at just under $11,000 ($450 Million/41,160).

Tables 18, 19, and 20, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 18** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 19** is the percentage of the Alaskans who reported being ever diagnosed with diabetes by ACE score. **Table 20** is calculated by multiplying Table 18 and Table 19's current estimates by goal estimates respectively.

Table 18			Table 19	Table 20	
	Population			Diabetes	
ACE Score	Current Estimate	Goal Estimate	Diabetes	Current Estimate	Goal Estimate
Zero	194,275	255,250	5.9%	11,522	15,139
One	121,950	101,002	6.7%	8,124	6,728
Two-Three	135,398	113,081	10.1%	13,725	11,506
Four Plus	94,134	76,425	8.3%	7,789	6,441
Total	545,757	545,758		41,160	39,814

By changing the base rate of the ACEs in **Table 18** and leaving **Table 19** as it is - then **Table 20** is determined by multiplying Table 18 and Table 19. The results show a reduction of those with diabetes by 1,346 Alaskans.

The ACE Ledger below (**Table 21**) displays the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas is approximately $14.7 million.

Table 21

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	Estimated Savings
Diabetes	41,160	$450,000,000	$10,933	1,346	$14,715,743

Again, there is a need to eliminate "multiple counting" of costs. For example, some of the costs associated with diabetes are accounted for by people who are on Medicaid and/or currently smoking. By leaving the Medicaid calculation intact and removing the people who are current smokers from those Alaskans who receive Medicaid and then again removing those people with diabetes who fall into either category a **net potential savings of $78,938,520** between these **three categories is calculated**, as seen in **Table 22** below.

Table 22

Issue	Total 2013 BRFSS	With Reduction of ACEs	Percentage Unduplicated	Number of Alaskans Unduplicated*	Total Costs of Unduplicated Alaskans**	Average Annual Costs***	Target Reduction Unduplicated*	**Estimated Savings***
Medicaid	**53,800**	**51,378**	**100.0%**	**51,378**	**$821,277,330**	**$15,985**	**2,422**	$38,715,670
Current Smoking	**115,244**	**108,693**	**93.7%**	**101,893**	**$511,910,432**	**$5,024**	**6,139**	$30,842,336
Diabetes	**41,160**	**39,814**	**63.7%**	**25,376**	**$277,435,808**	**$10,933**	**858**	$9,380,514

Unduplicated **$78,938,520**

*63.7% of people who reported diabetes were not currently smoking or using Medicaid. These starred items were reduced by multiplying by the figure in the respective "Percentage Unduplicated" column.

** Total costs of unduplicated Alaskans includes the reduction in ACES and the percentage unduplicated

*** Average annual per person costs remained the same for this analysis

Alaskan Adults who Binge Drink

In an article in The Journal of Preventative Medicine titled *State Costs of Excessive Alcohol Consumption.*[xxxiv] the annual cost of Alaskans who binge drink is $545 million. Using the 2013 BRFSS an estimated 98,152 Alaskan adults binge drink. The average annual cost per person is estimated at just over $5,500.

Tables 23, 24, and 25, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 23** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 24** is the percentage of the Alaskans who reported binge drinking by ACE score. **Table 25** is calculated by multiplying Table 23 and Table 24's current estimates by goal estimates respectively.

Table 23			Table 24	Table 25	
ACE Score	Population		Binge Drinking	Binge Drinking	
	Current Estimate	Goal Estimate		Current Estimate	Goal Estimate
Zero	194,275	255,250	16.0%	31,105	40,868
One	121,950	101,002	17.1%	20,880	17,294
Two-Three	135,398	113,081	19.6%	26,507	22,138
Four Plus	94,134	76,425	20.9%	19,659	15,961
Total	545,757	545,758		98,152	96,260

By changing the base rate of the ACEs in **Table 23** and leaving **Table 24** as it is - then **Table 25** is determined by multiplying Table 23 and Table 24. The results show a reduction of those binge drinking by 1,892 Alaskans.

The ACE Ledger below **(Table 26)** displays the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas is approximately $10.5 million.

Table 26

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	**Estimated Savings**
Binge Drinking	**98,150**	**$545,000,000**	**$5,553**	**1,892**	$10,505,796

In order to calculate a total using these four measures there is a need to eliminate "multiple counting" of costs. A **net potential savings of $85,291,152** between these **four categories** can be calculated, as seen in **Table 27** below.

Table 27

Issue	Total 2013 BRFSS	With Reduction of ACEs	Percentage Unduplicated	Number of Alaskans Unduplicated*	Total Costs of Unduplicated Alaskans**	Average Annual Costs***	Target Reduction Unduplicated*	**Estimated Savings***
Medicaid	**53,800**	**51,378**	**100.0%**	**51,378**	**$821,277,330**	**$15,985**	**2,422**	$38,715,670
Current Smoking	**115,244**	**108,693**	**93.7%**	**101,893**	**$511,910,432**	**$5,024**	**6,139**	$30,842,336
Diabetes	**41,160**	**39,814**	**63.7%**	**25,376**	**$277,435,808**	**$10,933**	**858**	$9,380,514
Binge Drinking	**98,152**	**96,260**	**60.5%**	**58,219**	**$323,290,107**	**$5,553**	**1,144**	$6,352,632

Unduplicated **$85,291,152**

*60.5% of people who reported binge drinking were not diabetic, currently smoking or using Medicaid. These starred items were reduced by multiplying by the figure in the respective "Percentage Unduplicated" column.

** Total costs of unduplicated Alaskans includes the reduction in ACES and the percentage unduplicated

*** Average annual per person costs remained the same for this analysis

Alaskan Adults Who Have Arthritis

According to **National and State Medical Expenditures and Lost Earnings Attributable to Arthritis and Other Rheumatic Conditions U.S. 2003**.[xxxv] the annual costs of arthritis in Alaska is an estimated $274.7 million. While the figure is clearly dated, it gives a conservative estimate of today's costs for this common malady. Using the 2013 BRFSS an estimated 132,136 Alaskan adults have arthritis. The average annual cost per person is estimated at $2,453.

Tables 28, 29, and 30, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 28** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 29** is the percentage of the Alaskans who reported having arthritis by ACE score. **Table 30** is calculated by multiplying Table 28 and Table 29's current estimates by goal estimates respectively.

Table 28			Table 29	Table 30	
ACE Score	Population		Arthritis	Arthritis	
	Current Estimate	Goal Estimate		Current Estimate	Goal Estimate
Zero	194,275	255,250	20.4%	39,610	52,041
One	121,950	101,002	22.4%	27,280	22,594
Two-Three	135,398	113,081	25.9%	35,122	29,333
Four Plus	94,134	76,425	32.0%	30,125	24,457
Total	545,757	545,758		132,136	128,425

By changing the base rate of the ACEs in **Table 28** and leaving **Table 29** as it is - then **Table 30** is determined by multiplying Table 28 and Table 29. The results show a reduction of those with arthritis by 3,711 Alaskans.

The ACE Ledger below (**Table 31**) displays the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas is approximately $9.1 million.

Table 31

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	Estimated Savings
Arthritis	132,136	$274,700,000	$2,453	3,711	$9,101,890

In order to calculate a total using these five measures there is a need to eliminate "multiple counting" of costs. A **net potential savings of $89,946,946** between these **five categories** can be calculated, as seen in **Table 32** below.

Table 32

Issue	Total 2013 BRFSS	With Reduction of ACEs	Percentage Unduplicated	Number of Alaskans Unduplicated*	Total Costs of Unduplicated Alaskans**	Average Annual Costs***	Target Reduction Unduplicated*	Estimated Savings*
Medicaid	53,800	51,378	100.0%	51,378	$821,277,330	$15,985	2,422	$38,715,670
Current Smoking	115,244	108,693	93.7%	101,893	$511,910,432	$5,024	6,139	$30,842,336
Diabetes	41,160	39,814	63.7%	25,376	$277,435,808	$10,933	858	$9,380,514
Binge Drinking	98,152	96,260	60.5%	58,219	$323,290,107	$5,553	1,144	$6,352,632
Arthritis	132,136	128,425	51.1%	65,674	$161,098,322	$2,453	1,898	$4,655,794

Unduplicated **$89,946,946**

*51.1% of people who reported having arthritis were not binge drinking, diabetic, currently smoking or using Medicaid. These starred items were reduced by multiplying by the figure in the respective "Percentage Unduplicated" column.

** Total costs of unduplicated Alaskans includes the reduction in ACES and the percentage unduplicated

*** Average annual per person costs remained the same for this analysis

Alaskan Adults who are Obese

The Institute for Social and Economic Research published a study in 2014 that estimated annual costs of adult obesity in Alaska were $219 million.[xxxvi] Using the 2013 BRFSS, an estimated 156,656 Alaskan adults are obese. The average annual cost per person is estimated at $1,398.

Tables 33, 34, and 35, below display the results of the 2013 BRFSS survey in combination with the 2013 Census estimates for Alaska. **Table 33** is the current estimated ACE levels for adults and the goal estimate of ACEs with successful primary prevention. **Table 34** is the percentage of the Alaskans who reported being obese by ACE score. **Table 35** is calculated by multiplying Table 33 and Table 34's current estimates by goal estimates respectively.

	Table 33		Table 34	Table 35	
ACE Score	Population		Obesity	Obesity	
	Current Estimate	Goal Estimate		Current Estimate	Goal Estimate
Zero	194,275	255,250	24.6%	47,818	62,826
One	121,950	101,002	26.9%	32,835	27,195
Two-Three	135,398	113,081	32.9%	44,521	37,183
Four Plus	94,134	76,425	33.4%	31,482	25,559
Total	545,757	545,758		156,656	152,763

By changing the base rate of the ACEs in **Table 33** and leaving **Table 34** as it is - then **Table 35** is determined by multiplying Table 33 and Table 34. The results show a reduction of those who are obese by 3,893 Alaskans.

The ACE Ledger below (**Table 36**) displays the annual savings which Alaska could realize if it had levels of ACE scores like Vermont or Arkansas is approximately $5.4 million.

Table 36

Issue	Number of Alaskans	Total Costs	Average Annual Costs	Target Reduction	Estimated Savings
Obesity	156,656	$219,000,000	$1,398	3,893	$5,442,288

In order to calculate a total using these six measures there is a need to eliminate "multiple counting" of costs. A **net potential savings of $91,936,300** between these **six categories** can be calculated, as seen in **Table 37** below.

Table 37

Issue	Total 2013 BRFSS	With Reduction of ACEs	Percentage Unduplicated	Number of Alaskans Unduplicated*	Total Costs of Unduplicated Alaskans**	Average Annual Costs***	Target Reduction Unduplicated*	**Estimated Savings***
Medicaid	**53,800**	**51,378**	**100.0%**	**51,378**	**$821,277,330**	**$15,985**	**2,422**	$38,715,670
Current Smoking	**115,244**	**108,693**	**93.7%**	**101,893**	**$511,910,432**	**$5,024**	**6,139**	$30,842,336
Diabetes	**41,160**	**39,814**	**63.7%**	**25,376**	**$277,435,808**	**$10,933**	**858**	$9,380,514
Binge Drinking	**98,152**	**96,260**	**60.5%**	**58,219**	**$323,290,107**	**$5,553**	**1,144**	$6,352,632
Arthritis	**132,136**	**128,425**	**51.1%**	**65,674**	**$161,098,322**	**$2,453**	**1,898**	$4,655,794
Obesity	**156,656**	**152,763**	**36.6%**	**55,845**	**$78,071,310**	**$1,398**	**1,423**	$1,989,354

Unduplicated **$91,936,300**

*36.6% of people who reported being obese were not arthritic, binge drinking, diabetic, currently smoking or using Medicaid. These starred items were reduced by multiplying by the figure in the respective "Percentage Unduplicated" column.

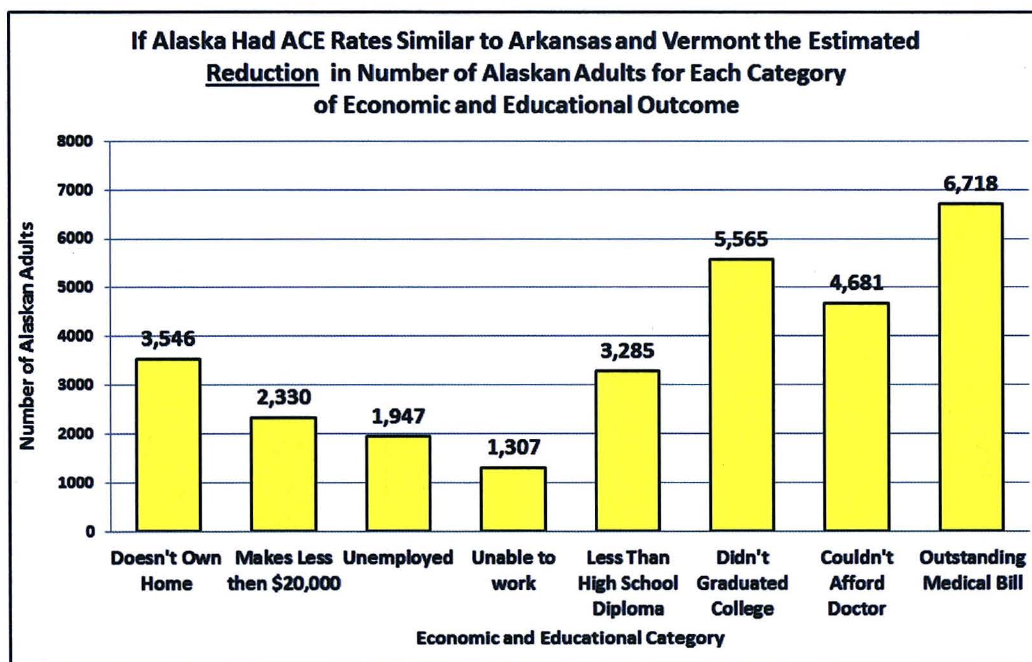
** Total costs of unduplicated Alaskans includes the reduction in ACES and the percentage unduplicated

*** Average annual per person costs remained the same for this analysis

ACEs are Costly

Whether it is the $82 million dollars estimated annual burden Alaskans take on each year for the costs during childhood of child abuse or the nearly $91 million Alaskans are paying now because Alaska's adults faced more adversity than some other Americans, ACEs are costly. These data demonstrate that a modest reduction of ACEs would have a profound impact on Alaska's government and private sector costs. While the six items explored in this document are high costs items, they don't begin to capture the many other poor outcomes associated with ACEs. **Cancer, suicide, heart disease, asthma, COPD** have all been linked to ACEs[xxxvii]. More potential areas for savings and increased economic contributions available, if ACEs are reduced, are outlined in **Figure 12** below.

Figure 12



The next steps are to explore those efforts around the state that prevent and mitigate the effects of ACEs and then take them to scale. There is solid evidence that various programs and ideas work[xxxviii]. Whether it be through faith-based organizations, community health efforts, government programs and services, or private employers – we can avoid many of the costs of social and economic issues Alaskans pay every day. **In times such as these - saving such as these - are hard to ignore.**

End Notes

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Adverse Childhood Experiences

Overcoming ACEs in Alaska

State of Alaska
Department of Health and Social Services
Governor, Bill Walker
Commissioner, Valerie Davidson

Advisory Board on Alcoholism and Drug Abuse

Alaska Mental Health Board

The high cost of childhood trauma

An opportunity for change

In the past two decades, we've learned two key things about Alaskans' health:

- Childhood trauma is far more common than previously realized; and
- The impact of this trauma affects individuals over a lifetime and societies over generations.

A keystone 1998 study asked middle class Americans how many traumas they had experienced as a child. Traumas included physical abuse, witnessing domestic violence and having a parent in jail. Researchers then developed an 'adverse childhood experiences' (ACE) score — the more traumas, the higher the ACE score.

Researchers compared scores to measures of adult health and well-being, and found strong links with poor health, social challenges and low earning power. If children experience trauma, this undermines their ability to learn and cope, which in turn undermines their health and ability to earn a living.

Stress from trauma shows up at the cellular level, follow-up studies found, and its influence can be passed on genetically from one generation to the next. This relates directly to many of the health and social problems we wrestle with in Alaska.

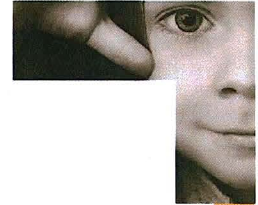
This information is incredibly important for Alaska, where rates of child abuse and domestic violence are so high. No nationwide ACE study has been done, but Alaska's first measured rates, in 2013, were higher than those of an earlier five-state study by the U.S. Centers for Disease Control and Prevention.

From low income to lung cancer, the likelihood of a host of problems rise along with trauma scores. Not surprisingly, so does Medicaid participation. The good news is that, if children have positive influences in their lives, they can overcome trauma. The catch phrase among those who support them and their families is, "Resilience trumps ACEs!"

Many of us — individuals, groups, communities, and government agencies — are already working to break the cycle of childhood trauma. We can use ACE data to guide our efforts to reduce human suffering, activate human potential, and save a significant amount of public money.

Together, we can meet this challenge and make Alaska communities even better places to grow up.

Alaskans can follow efforts across the state to prevent and mitigate the impact of ACEs on the "Overcoming ACEs in Alaska" website: dhss.alaska.gov/abada/ace-ak



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Adverse childhood experiences

What are ACEs?

In the late 1990s, the Centers for Disease Control and Prevention and Kaiser Permanente (a health care plan group provider network) asked more than 17,000 members of a Kaiser Health Maintenance Organization in San Diego whether they had experienced various kinds of trauma before age 18. The unexpected and striking results of this Adverse Childhood Experiences Study served as the basis for more than 80 peer-reviewed journal articles and statewide ACE studies.

The eight most commonly measured* traumas are in two general categories:

Table 1

Abuse	Household Dysfunction
1. Physical 2. Sexual 3. Emotional	4. Living with Someone with Mental Illness 5. Living with Someone with Substance Abuse 6. Separation or Divorce 7. Living with Someone who went to Jail or Prison 8. Witnessing Domestic Violence

**The original study also asked about physical and emotional neglect. Several states, including Alaska, did not include neglect data resulting a shorter survey.*

Researchers created a scoring method to determine the "dose" of each study participant's exposure to each type of "adverse childhood experiences," or ACEs.

A person who reported no exposure to any of the adverse experience categories would have an ACE score of zero. A person who reported exposure to all eight categories of trauma would have an ACE score of eight.

ACEs are common, linked with health outcomes

The researchers were surprised at the high number of ACEs reported by their middle-class subjects. Two thirds of adults studied had experienced at least one adverse childhood experience. (Table 2)

Researchers found striking correlations between childhood trauma and a wide range of long-term health and economic outcomes. The higher the ACEs score, the higher the incidence of disease, risky behaviors and negative social outcomes. It is clear that ACEs have a big impact on many of the difficult and entrenched health problems that Alaska faces.

Table 2

ACE Score	Prevalence
0	33%
1	26%
2	16%
3	10%
4 +	16%

These graphs are representative of many ACE studies exploring the relationships between the dose of childhood trauma and the likelihood of poor health / behavior outcomes, perhaps the most striking is the suicide link, (Fig. 1).

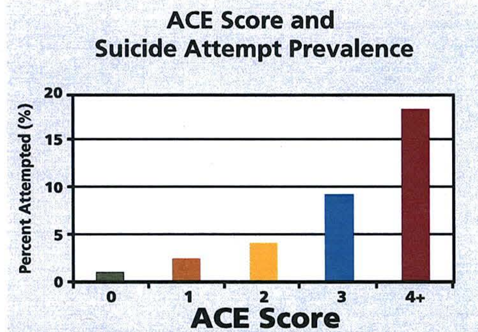
As the number of ACEs went up so did the likelihood that those surveyed had experienced poor social, economic or health outcome, (Fig. 2).

Researchers have also found links between ACEs and these health and social outcomes:

• Asthma • Depression • Drug abuse • Fetal death • Frequent headaches • Hallucinations • Health-related quality of life • Insufficient sleep • Intimate partner violence • Liver disease • Sexual assault • Teen pregnancy • Low yearly income • Medicaid participation • Home ownership • Separation and divorce

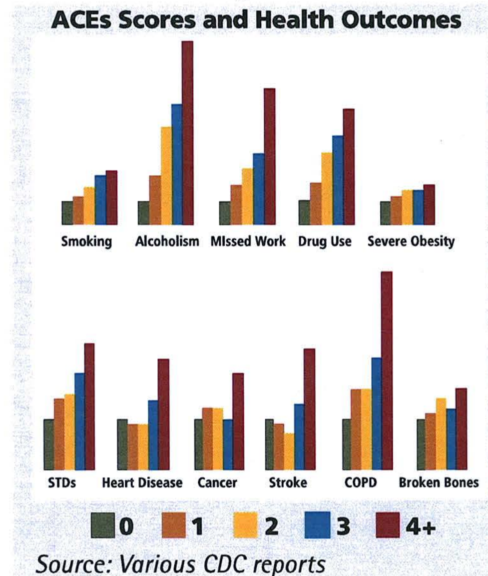
It is important to remember that the ACE studies and Alaska's ACE analyses are population-based studies and are not predictions of outcomes for individuals. Indeed, some of the people who are able to overcome ACEs can be our best teachers about resiliency in the face of adversity.

Fig. 1



Source: JAMA. 2001 Dec 26;286(24):3089-96.

Fig. 2



Source: Various CDC reports

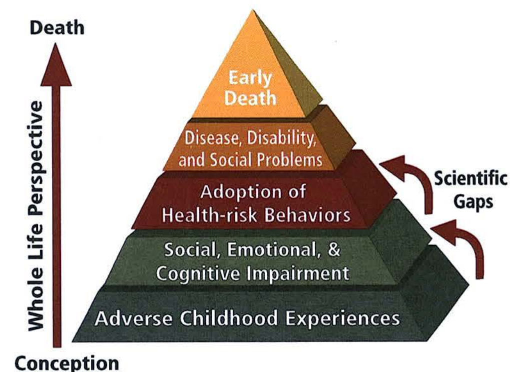
Stress and the developing brain

The initial ACE study was designed by researchers who were not sure what the mechanism for these poor outcomes was. It was clear that ACEs led to negative results (Fig. 3) but just how they did was unclear. Researchers developed the pyramid model, to the right, to explain what they were seeing. When the ACE researchers and brain researchers collaborated, a much clearer picture began to emerge.

The Center for the Developing Child at Harvard University reports that, "It's important to distinguish among three kinds of responses to stress: positive, tolerable, and toxic. As described below, these three terms refer to the stress response system's effects on the body, not to the stressful event or experience itself.

- Positive stress response is a normal and essential part of healthy development, characterized by brief increases in heart rate and mild elevations in hormone levels. Some situations that might trigger a positive stress response are the first day with a new caregiver or receiving an injected immunization.

Fig. 3



- Tolerable stress response activates the body's alert systems to a greater degree as a result of more severe, longer-lasting difficulties, such as the loss of a loved one, a natural disaster, or a frightening injury. If the activation is time-limited and buffered by relationships with adults who help the child adapt, the brain and other organs recover from what might otherwise be damaging effects.

- Toxic stress response can occur when a child experiences strong, frequent, and/or prolonged adversity — such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship — without adequate adult support. This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years.

Toxic stress affects the brain and the body and has implications for a child as he or she develops. The first steps in brain development are the most basic, and focus on survival. The next steps involve crucial social and intellectual building blocks such as bonding with parents, learning to talk, and learning to get along with others. Those are children's most important lessons in terms of building a foundation for success for the rest of their lives."

When young children feel safe and nurtured, they are calm. This frees their brains, at a neurological level, to develop these more advanced skills.

Children who experience early trauma — toxic stress — are often in a chronic state of crisis. Because they feel unsafe or threatened, their brains spend more time in basic, survival-oriented stages of development. They are too busy trying to cope, trying to feel OK, to focus on more complex learning. These children are often easily overwhelmed by minor stressors such as a change in their schedule or routine. They are used to trauma, expect it at every turn, and so are always ready to react. Small disruptions feel as if they are major. They have difficulty soothing or calming themselves without a reliable and consistent caregiver. This compromises their ability to learn. In seriously stressed children, researchers have observed:

- Less development of the upper brain;
- Smaller brain size; and
- Fewer brain connections.

This brain research is vital for Alaska schools. A child coming to school from a toxic home environment or having experienced toxic stress earlier in life may react quite differently than a child coming from a secure home. The ability to learn is impaired and the pathways in the brain may need to be rewired.

Many schools around Alaska are using this science to help all children be more ready to learn and grow when they are in school.

Generational impacts

The impacts of overwhelming stress on the brain's development naturally continue into adulthood. As Alaskans exposed to this degree of stress grow up, they may start using drugs as a way to cope with their damaged stress responses. This in turn could lead to prison. If they start families of their own, these become ACEs for another generation. These are examples of behavioral influence — positive or negative habits that parents pass on to their children by example. Positive habits children may pick up from their parents include reading and exercising. Negative habits include smoking and responding to challenges with violence.

Recent research has shown that childhood experiences also have a genetic influence. Physical changes in our genes, triggered by trauma, get passed to our offspring. A study of Swedes over three generations found connections between men going hungry during their youth and rates of cardiovascular disease and diabetes among their children and grandchildren. In some ways, we inherit the experiences of our parents and grandparents as well as their physical characteristics.

Fig. 4

Source: *The Alaska Mental Health Board / Advisory Board on Alcoholism and Drug Abuse*

Historical trauma

Epigenetics, the science that looks at how people's genes are affected by their environment, is beginning to show how historical traumas continue to affect the children of survivors in biological ways at the cellular level, as well as in behavioral ways. The good news coming from this emerging science is that **we can change our biology, and our lives, for the better.**

A 2013 article on epigenetics in Discover magazine used these analogies:

> "You might have inherited not just your grandmother's knobby knees, but also her predisposition toward depression caused by the neglect she suffered as a newborn.
>
> Or not. If your grandmother was adopted by nurturing parents, you might be enjoying the boost she received thanks to their love and support. The mechanisms of behavioral epigenetics underlie not only deficits and weaknesses but strengths and resiliencies, too. And for those unlucky enough to descend from miserable or withholding grandparents, emerging drug treatments could reset not just mood, but the epigenetic changes themselves. Like grandmother's vintage dress, you could wear it or have it altered. The genome has long been known as the blueprint of life, but the epigenome is life's Etch-A-Sketch: shake it hard enough, and you can wipe clean the family curse."

This is particularly important in Alaska, which has seen historical traumas such as rural outbreaks of disease that killed nearly entire communities. We also have groups of people born in Alaska or in other parts of the world who have experienced trauma from outside the home. Wars, racism, displacement from a homeland, and loss of culture have been shown to lead to poor health and economic outcomes. Alaskans have experienced all of these things.

Alaska ACE findings

Behavioral Risk Factor Surveillance Survey: ACEs questions

The Behavioral Risk Factor Surveillance Survey (BRFSS) is a public health phone survey of adults, developed by the U.S. Centers for Disease Control and Prevention (CDC), conducted in all states and territories nationwide. To better understand childhood trauma, the CDC developed a set of ACEs questions that states could add to their BRFS surveys starting in 2009. Alaska became the 20th state to do so this in 2013.

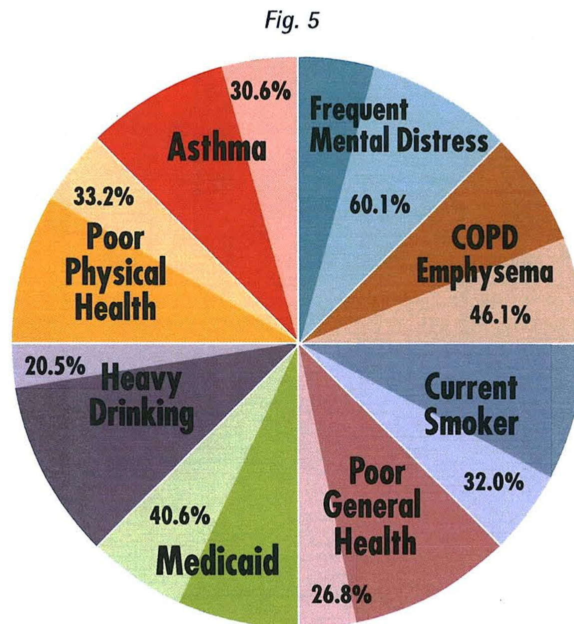
The Alaska Division of Public Health surveyed more than 4,000 Alaskans 18 years and older for 2013's BRFSS. The responses give us insight into the relationship between ACEs and chronic disease in Alaska, and how our ACE rates compare with other states.

Alaska population attributable risks

The graphic to the right shows the degree to which childhood trauma contributes to poor health in Alaska. The paler areas represent the proportion of each outcome which can be linked back to ACEs. For example, studies suggest that 32 percent of current smokers would not be smoking if we did away with all of the adverse childhood experiences we measured.

This linkage, known as population attributable risk, is basically how often something happens in a group of people that have been exposed to something, compared to how often it happens in a group without exposure. For example, how often does chronic obstructive pulmonary disease happen among Alaskans who had childhood trauma, compared to Alaskans who didn't? Looking at the high population attributable risks for these outcomes and ACEs, the potential savings in human and economic costs from reducing childhood trauma is astounding.

Fig. 5



Watch for details on costs associated with ACEs in information boxes throughout this report.

The CO$T

Comparison to other states

One of the best ways to gauge the results of the Alaska ACE survey is to compare them with other states. There are no national statistics on ACE scores available, however in 2009 the CDC released a study comparing ACE data from five states (Arkansas, Louisiana, Tennessee, New Mexico, Washington) that used the BRFSS ACE module. This analysis covered more than 23 million people (2010 Census), with direct surveys of more than 26,000 respondents.

Once Alaska added the ACE module to our 2013 risk factor survey, we could compare our data with the CDC's five-state study. Generally Alaska had higher ACE scores.

Table 2

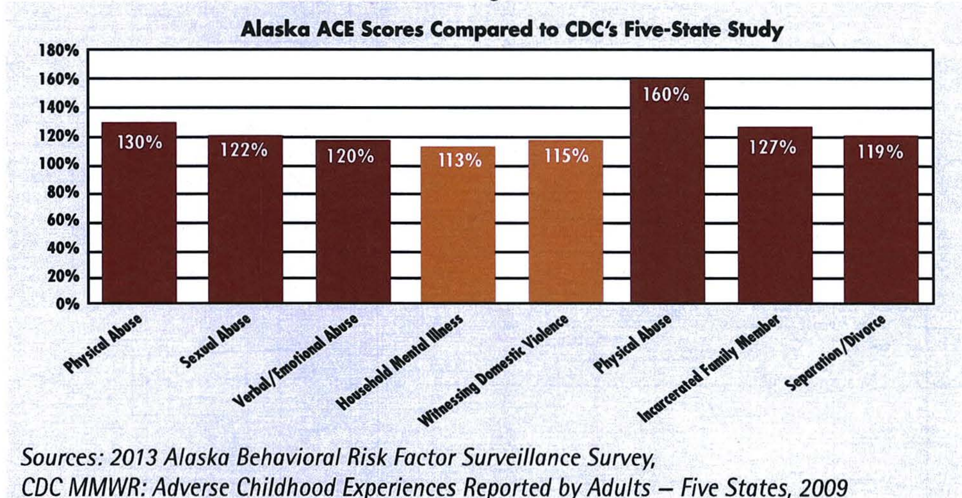
ACE Rates in Six States						
Adverse Childhood Experience	Alaska	Arkansas	Louisana	New Mexico	Tennessee	Washington
Year study released	2013	2009				
ABUSE						
Verbal/Emotional	31.0%	24.3%	21.1%	28.1%	19.2%	**34.9%**
Physical	19.1%	14.1%	10.5%	**19.5%**	12.9%	18.1%
Sexual	**14.8%**	10.9%	9.9%	12.9%	12.7%	13.5%
HOUSEHOLD DYSFUNCTION						
Mental Illness in the Home	21.9%	17.0%	16.6%	19.4%	17.1%	**24.3%**
Incarcerated Family Member	**11.5%**	5.5%	7.2%	7.1%	8.6%	6.6%
Substance Abuse in Home	**33.8%**	25.5%	26.6%	29.9%	28.3%	32.7%
Separation or Divorce	**31.7%**	23.3%	27.1%	24.4%	29.1%	26.0%
Witnessed Domestic Violence	18.7%	15.1%	14.5%	**18.9%**	17.1%	16.6%

Alaska's 2013 Behavioral Risk Factor Surveillance Survey ACEs data compared to the CDC's five-state study in 2009 using the same BRFSS module. Numbers in red indicate the highest percentage of the problem of the states reviewed.
Source: CDC Morbidity and Mortality Weekly Report, Vol. 59, No. 49 Dec. 10, 2010; Alaska BRFSS, 2014

The rates reported by Alaska adults for each category of adverse experiences were higher than the five-state study's average rates. In all but two of the categories, these higher rates were statistically significant given the two studies' sample sizes. The three categories of adverse experiences with significantly higher rates among adults in Alaska — incarcerated family member, household substance abuse and separation and divorce — were also found to be significantly higher in a sample of Alaska children when compared with a national rate.

Figure 6 shows that Alaska 2013 BRFSS ACE scores as a percentage of the mean ACE rates in the CDC's 2009 five-state study. A percentage of 100 percent would mean Alaska's rate was equal to the five-state average. Gold bars indicate the difference between Alaska's rate and the five-state average is not statistically significant.

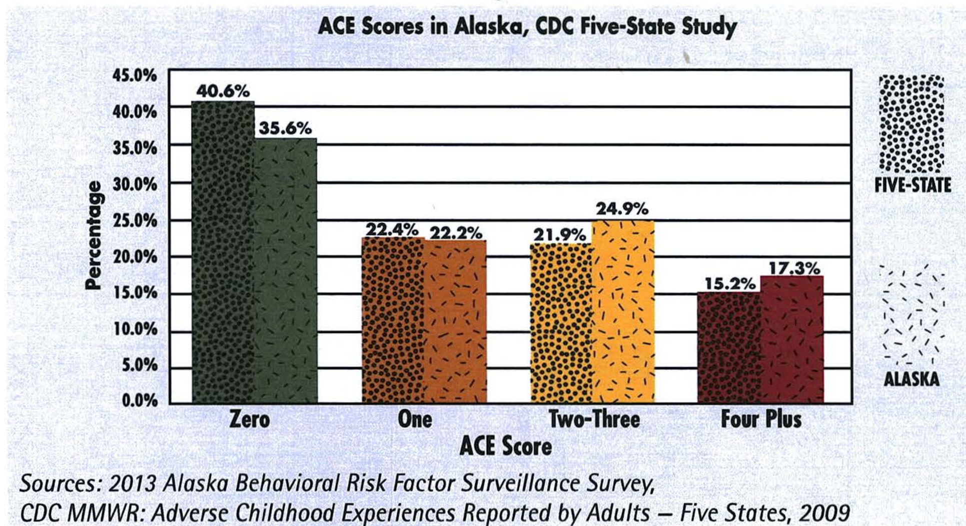
Fig. 6



Sources: 2013 Alaska Behavioral Risk Factor Surveillance Survey, CDC MMWR: Adverse Childhood Experiences Reported by Adults – Five States, 2009

While the rates in different categories are important for those Alaskans who work to prevent those traumas, the overall statewide ACE score or "dose" of ACEs sheds light on the general health outcome at a population level. (Again, individuals may have widely different outcomes depending on their unique personalities, experiences and the protective factors they have.) Alaska's ACE score results are higher than five-state averages.

Fig. 7



Sources: 2013 Alaska Behavioral Risk Factor Surveillance Survey, CDC MMWR: Adverse Childhood Experiences Reported by Adults – Five States, 2009

The Alaska Department of Labor and Workforce Development estimated that there were approximately 550,000 Alaskans aged 18 and older in 2013. What does the five-point difference between the five-state average of 40.6 percent of residents with an ACE score of zero to Alaska's 35.6 percent mean? If Alaska were to improve to the level of the five states, approximately **27,500 more adults would have zero ACEs.** If Alaska could reduce the percentage of people with four or more ACEs to the level of the five states, then **more than 11,500 Alaskans would have a lower ACE score**. Changing an ACE score for 11,500 people may not seem significant but evidence suggests it would have a great impact on many health, economic, and social outcomes.

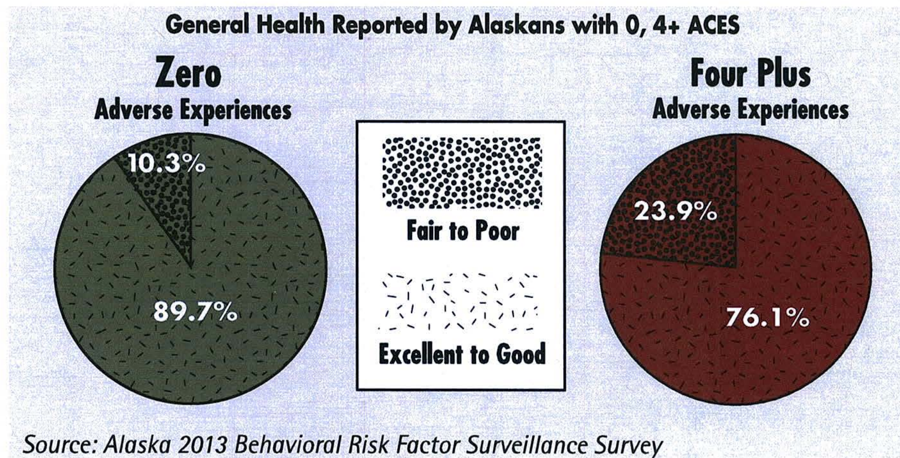
Health and economic costs for Alaska

Alaska's results are similar to those of other ACE studies have found. The more ACEs a person has, the more likely he or she is to experience poor health, both self-reported and measured.

Health outcomes

An analysis of Alaskans' general health shows that people with four or more ACEs reported that their general health was "fair to poor" at more than twice the rate compared to those with zero ACEs, (Fig. 8).

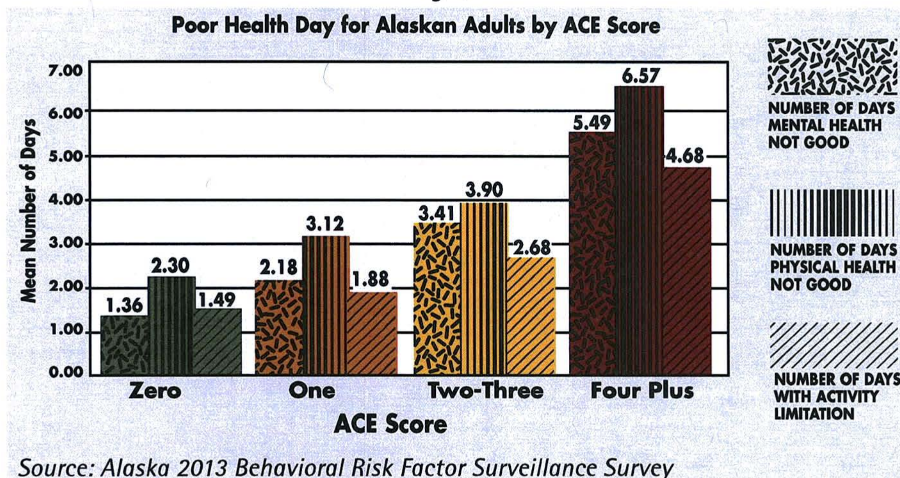
Fig. 8



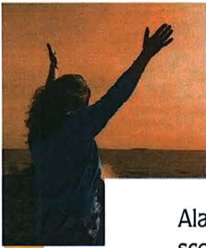
Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

Alaskans were asked the number of days of poor mental and physical health outcomes during the previous month they experienced. The average number of days in that month this led to limited activities was reported as well. The results are shown in Figure 9 and demonstrated that the more ACEs Alaskans had the higher average number of days impacted per month.

Fig. 9

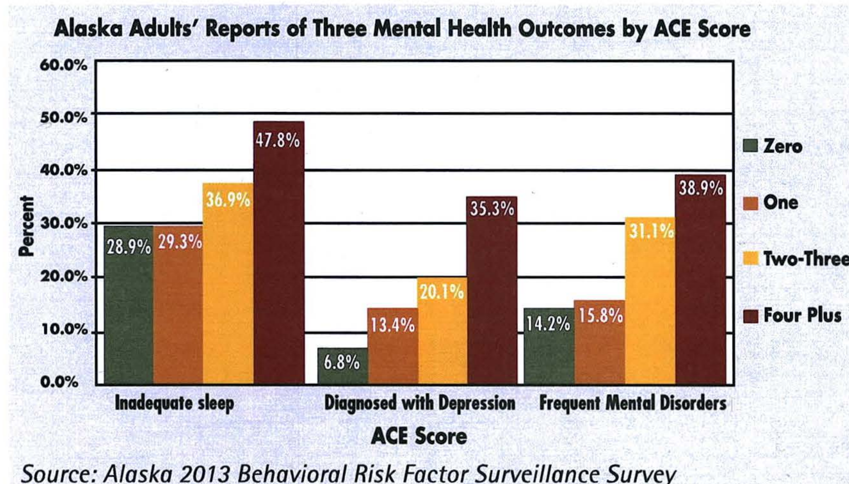


Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey



Alaskans reported increasing difficulty with sleep, depression and frequent mental distress as their ACE scores rose. Figure ten displays these results. For example Alaskans with four or more ACEs were more than 5 times more likely to report having ever been diagnosed with depression than their peers with zero ACEs.

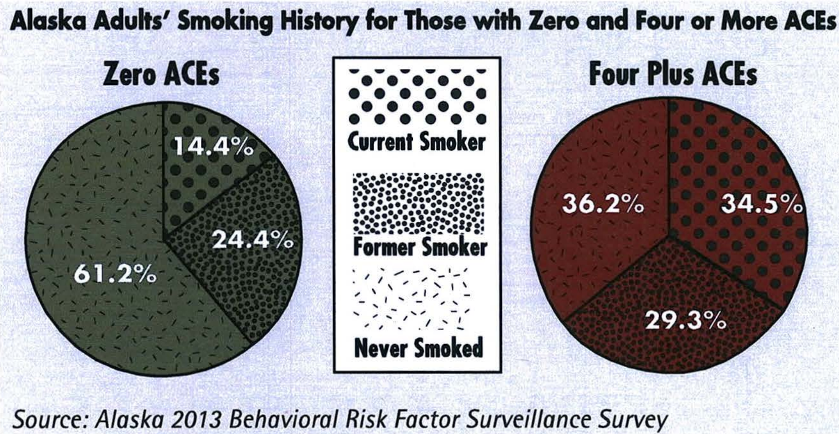
Fig. 10



Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

Smoking in Alaska costs $576 million annually. While rates are improving, it remains a large and costly health problem. The likelihood of being a current smoker is 240 percent higher for an Alaskan with four or more ACEs compared with zero ACEs. Additionally, Alaskans with zero ACEs are significantly less likely to have ever smoked in their lifetimes. (FIg. 11)

Fig. 11



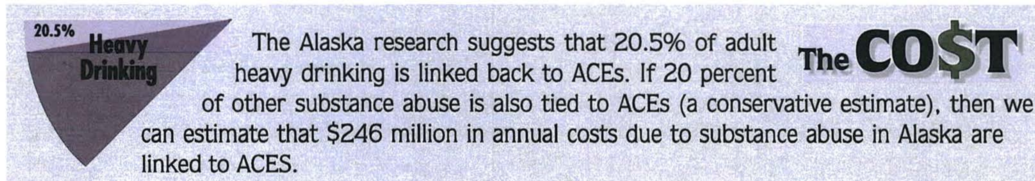
Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

Current Smoker 32.0%

The CO$T

The Alaska ACE research indicates that, of adult smokers in 2013, the smoking of 32 percent could be linked back to ACEs. If we reduced the estimated $576 million smoking cost for our state by 32 percent by eliminating ACEs, we could see a potential savings of $186 million.

Substance abuse in Alaska has been estimated to cost the state $1.2 billion dollars annually in direct and indirect costs. The original ACE research found multiple connections between ACEs and substance abuse, from intravenous drug use to alcoholism. The Alaska BRFSS asks questions about alcohol but not prescription or illicit drug abuse. Looking at the CDC research and other states' data, though, we can estimate that a significant amount of drug abuse in Alaska is linked to ACEs.

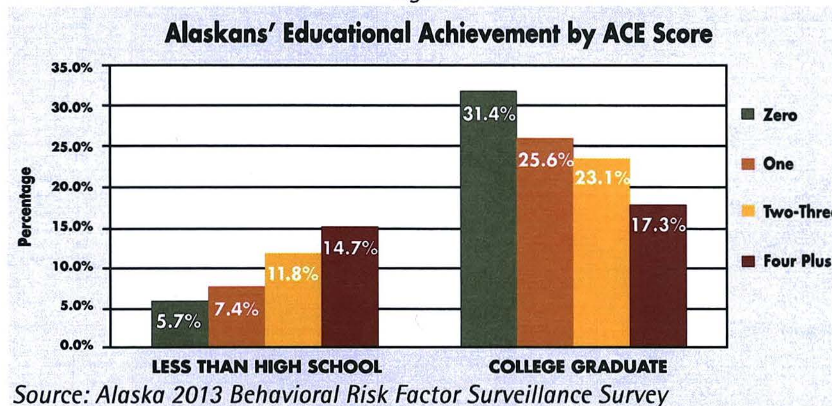


The Alaska research suggests that 20.5% of adult heavy drinking is linked back to ACEs. If 20 percent of other substance abuse is also tied to ACEs (a conservative estimate), then we can estimate that $246 million in annual costs due to substance abuse in Alaska are linked to ACES.

Economic and educational impacts

Childhood trauma can reduce Alaskans' ability to earn a good living. The impact starts early by undermining educational achievement. Alaskan adults with four or more ACEs are more than 250% less likely to have graduated from high school than those with zero ACEs. Graduation rates for college show that having zero ACEs almost doubles an Alaskan's chance of having a four year degree than those with four or more ACEs, (Fig. 12).

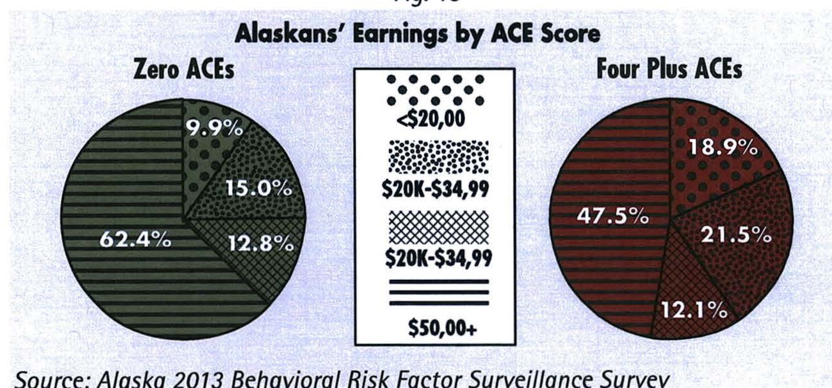
Fig. 12



Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

Figure 13 graphs the annual income reported by Alaskan adults with zero and four or more ACEs. Having a ACE free childhood is linked with higher annual income.

Fig. 13



Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

Health care access and Medicaid enrollment

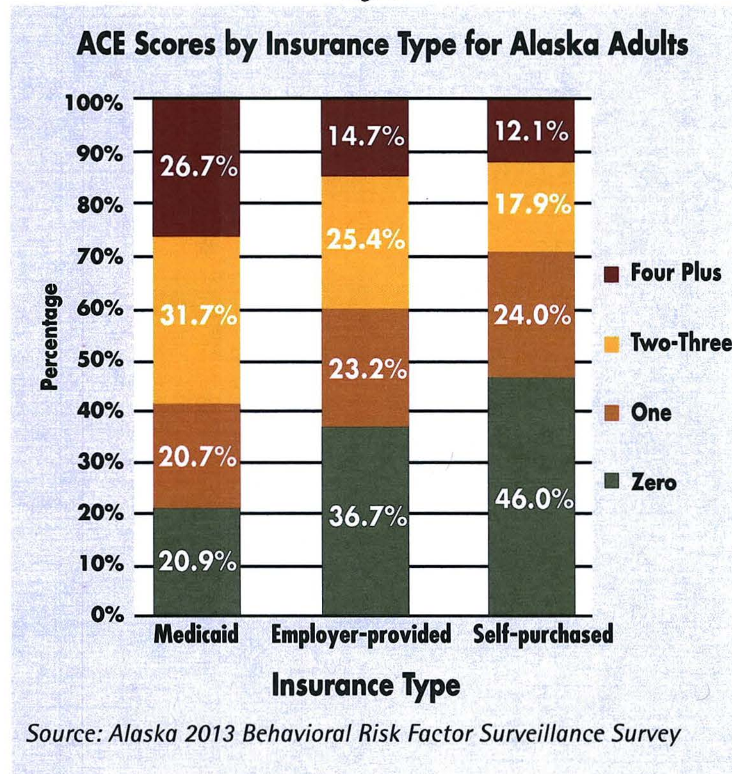
Medicaid eligibility for adults is related to financial hardship, poor health or a combination of both. As a result, it is not surprising that people using Medicaid as their health insurance have higher ACE scores than those in the private health insurance market, given what we have seen above when it comes to poor economic and health outcomes for Alaskans with higher ACE scores.

There has been considerable attention paid to the costs of Medicaid and ways to contain and improve this large system. Much of this discussion is related to care delivery and payment reforms. Bringing the prevention and mitigation of ACEs into the equation has the potential to pay large dividends.

In 2012, Alaska Medicaid spent $1.38 billion to provide care for 146,476 Alaskans' health care. Of these Alaskans served, 53,794 were adults age 20 or older at a cost of $860 million, or 62.1 percent of the total.

Alaskans who report Medicaid as their source of health insurance report significantly higher ACE scores than those who report employer provided or self-purchased health insurance (fig 14). Due to the poor health outcomes associated with high ACE scores this means that Medicaid has enrollees with significantly worse health prospects than other insurance types. This disparity leads to higher treatment costs and a higher burden on government resources.

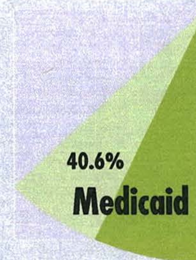
Fig. 14



Source: Alaska 2013 Behavioral Risk Factor Surveillance Survey

The CO$T

Alaska research suggests that 40.6% of the state's Adult Medicaid enrollment is linked back to ACEs. In 2012, that means that approximately $350 million of Adult Medicaid (age 20+) costs in Alaska could have been prevented by the elimination of ACEs.



Conclusion

Our brains can recover from trauma, but it is a challenging process. It is more cost-effective, in human and financial terms, for children to grow and develop in a healthy environment than to try to help them heal from toxic stress later. This means interrupting the ACE cycle. Fortunately, there are many opportunities to do so.

Alaska has many groups working on mitigating ACEs, trauma prevention, and community resilience & wellness. For more information on this and other resources, and updates on what is happening around the state, visit the **"Overcoming ACEs in Alaska"** website, dhss.alaska.gov/abada/ace-ak.

Building resilience and preventing ACEs

Across Alaska, people are working in large and small ways to prevent childhood trauma and ease the effects of damage already done. Here are a few examples (as of early 2015):

- Statewide, teachers and public health nurses provide teens with information on healthy relationship and life skills. They have partnered with the Alaska Departments of Health and Social Services and Education and Early Development, the Council on Domestic Violence and Sexual Assault, and the Alaska Network on Domestic Violence and Sexual Assault on a 7th, 8th and 9th grade, evidenced-based curriculum for the 7th-9th grade called "the Fourth R for Healthy Relationships."

- A statewide webinar series on trauma-informed schools was completed in January 2015. Hundreds of educators and school staff participated. The series will be offered again in 2015-16 and can be accessed online at no cost

- The Division of Public Health partnered with the Alaska Native Tribal Health Consortium and the Alaska Family Violence Prevention Project to develop a teen safety card, a gender-neutral resource developed for Alaska teens with guidance from Alaska teens. The card provides information about healthy and unhealthy relationships characteristics, what consent looks and sounds like, and where to get help if needed. Another safety card was designed specifically for women.

- The Division of Behavioral Health has promoted trauma informed care for several years. Efforts include development of "Trauma 101" and "Trauma 201" curriculum for behavioral helath providers, used around the state.

- Teens Acting Against Violence (TAAV) is a violence-prevention and youth-empowerment program at the Tundra Women's Coalition for teenagers living in Bethel. Participation is voluntary and open for any interested teens age 12–18.

- The Alaska Mental Health Board and Advisory Board on Alcoholism and Drug Abuse have coordinated the efforts of many organizations to gather Alaska specific ACE data. The Boards have focused since 2008 on community wellness and personal resilience.

- Donlin Gold – a corporation doing business in Alaska - has embraced community wellness as part of their mission. In 2013 it won the Workforce Association's National Employer of the Year Award. Donlin Gold has seen that a healthy workforce helps everyone.

- The Association of Alaska School Boards, through its Initiative for Community Engagement (ICE), has been working for nearly two decades with schools and communities to create healthier school and community climates to support youth resilience.

- The Council on Domestic Violence and Sexual Assault and Green Dot, etc., are developing an Alaska-specific teaching tool on how to intervene in potentially dangerous everyday situations — like calling a cab for someone who has been drinking, or offering the number for the local women's shelter to someone experiencing domestic violence. The Green Dot curriculum is being implemented in Anchorage, Bethel, Homer, Kenai and Prince of Wales.

- In Homer, teens lead ACE awareness sessions that focus on resilience-building strategies. They are working on training that emphasizes how to build resilience and will share this resource at a national conference in Oregon spring 2015.

- People in Kodiak and Kotzebue are focusing on how ACEs affect their communities and how to make positive changes for all their residents.

- The Mat-Su Borough held an ACEs Summit and has created a broad range of work groups to identify strategies to address ACEs as a way to improve the schools, reduce substance abuse, and improve the health of its residents.

- Yakutat decided the best way to prevent substance abuse is to tackle ACEs. They developed public service announcements to educate their community about the connection between ACEs, binge drinking, and alcohol abuse.

Next Steps

We've learned that many Alaskans have experienced ACEs. We now understand that when we break the cycle of trauma and toxic stress, our efforts pay off
in many ways.

From the highest level of political power in Alaska to homes where family members care for our youngest and most vulnerable citizens, we all have a role in making our communities places where adults can overcome a rough start and thrive, and where the next generation is raised in a healthier, more supportive environment.

Alaskans can follow efforts across the state to prevent and mitigate the impact of ACEs on the "Overcoming ACEs in Alaska" website: dhss.alaska.gov/abada/ace-ak

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Alaska Family Violence Prevention Project Clearinghouse, including material on "The Amazing Brain". http://dhss.alaska.gov/dph/Chronic/Pages/InjuryPrevention/akfvpp/clearinghouse.aspx

In this podcast, childhood trauma expert Dr. Robert Anda describes the Centers for Disease Control Adverse Childhood Experiences (ACE) Study. David Driscoll offers an Alaska perspective on childhood trauma; Elizabeth Ripley discusses what grantmakers are willing to fund; and Bill Hogan of the UAA College of Health opens the sessions and facilitates audience questions and answers. Recorded Oct. 23, 2012. http://greenandgold.uaa.alaska.edu/podcasts/index.php?id=724

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Notes

Advisory Board on Alcoholism and Drug Abuse

Alaska Mental Health Board

State of Alaska
Department of Health and Social Services
ABADA/AMHB

Governor, Bill Walker
Commissioner, Valerie Davidson

January 2015