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Q&A Summary
Adverse Childhood Experiences Part I: An Introduction
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optumhealtheducation.com/ACEs-I-2019

Care for adults
a. The original ACEs study was done with adults. I appreciate the importance of screening early in the life course, but adults seem to be left out of this conversation. Should adults be screened also? If so, who is leading this effort?
b. It would be beneficial to also screen adults, not only children. Is there an initiative to implement screening in this population also?
d. Is there a group or organization that works with adults?
Adults can and should also be screened for their ACEs, and there is work being done on this by the National Council for Behavioral Health through its initiative on trauma-informed primary care. It is working closely with medical practices around integrating a trauma-informed approach in adult primary care settings, mirroring the work being done in pediatric settings with a broader focus. There are also numerous efforts around the country to screen OB patients and monitor those with high ACE scores as their families enter into pediatric care, as well to screen parents for their ACEs along with their children in pediatric offices.

c. What is the best ACEs screening tool to use in an internist's office?
We would recommend the Centers for Disease Control and Prevention (CDC) website for information about ACEs screening in adult medicine settings. The original 1998 ACE study in adult primary care was conducted in partnership with the CDC and Kaiser.
See: https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Findex.html

e. How do we deal with effects of ACEs in adults/young adults?
f. What research is being done to decrease toxic stress in our adult/elder populations?
g. What can an adult do to help mediate/reverse physical health issues related to experiencing ACEs as a child?
From our research and clinical experience, many of the treatments for child and adult toxic stress are similar and involve psycho-education, the 6 domains of wellness (sleep, nutrition, exercise, healthy relationships, mindfulness and mental health) and referral to specialists (social worker, psychologist, psychiatrist, neurologist, etc.) as needed. For example, Mindfulness-Based Stress Reduction is a tool developed by Jon Kabat-Zinn that is being researched and used to help treat chronic diseases.

Effects of ACEs on prenatal and infant development
a. Can ACEs affect children in the womb? Or do you only consider them once children are born?
Yes. Maternal stress and ACEs can impact the fetus through transmission of various stress hormones, epigenetics and genetics. For example, researchers such as Rachel Yehuda and Joy DeGruy Leary are looking at intergenerational transmission.

b. Are there any studies that show increase in ACEs in children born from drug-addicted mothers or even fathers who are on drugs when they conceive? How does drug abuse when pregnant affect the children later in life?
c. Can you speak to how children are affected when they have been exposed to methamphetamine either *in utero* or in childhood?

There has been a lot of research around the effect of maternal drug use during pregnancy. Alcohol and nicotine have actually been found to have the most profound negative impacts. Research into the impact of cocaine, methamphetamine and heroin is a bit tricky because most mothers who use these substances are also drinking alcohol and smoking. While there are effects from these drugs, many studies suggest that the environment and stress may actually have the most deleterious brain effects. Having a drug-addicted mother or father is an ACE and therefore is associated with elevated risk for toxic stress and long-term health impacts.

d. How does breastfeeding affect bonding and behavior in the presence of ACEs?
e. Are you seeing breastfeeding as a protective factor in the setting of ACEs?
Breastfeeding, aside from providing the extra nutrients, also supports bonding and attachment between mother and baby (including oxytocin release). In this way, breastfeeding is particularly beneficial for mothers and infants impacted by ACEs.

Role of CPS/foster care
a. When will our Child Protective Services (CPS) system and laws catch up with this research and be more proactive in protecting children from ACEs besides physical abuse?
There are numerous organizations working on transforming child welfare systems to be more trauma-informed, including Alia Innovations and Trauma Transformed (trauma-informed care training for CPS workers).

b. I have a number of children in DCS custody who have been sent out of state to pediatric hospitals for prolonged institutionalization. Is this a type of ACE?
c. Is there any work being done with children in state care? Are there particular protocols available to help these children? Further, could this be considered an ACE?
While being sent out of state for care/institutionalization is not considered one of the core ACEs, if there is prolonged rupture of attachment between parent/caregiver and child leading to severe stress in the absence of another buffering adult, it could lead to toxic stress and therefore health risk.

ACEs in adopted children
a. Is adoption a factor in ACE scoring? What about abandonment syndrome?
b. Do you find that children who are adopted (especially international adoptions) have higher rates of ACEs?
c. Are there resources to manage traumas associated with adoption when there are good caregiver buffers?
Generally, if a child is adopted, there may be prior experience of ACEs that led to the child needing to be adopted (*in utero*, in early childhood, etc.). We are not aware of any published research that examines the prevalence of ACE scores in internally adopted children. However, there is research around the deleterious effects of neglect experienced by children in many international orphanages. In terms of resources, there are many, but to name a few: Dan Siegel's work including The Whole Brain Child, NCTSN, and finding a provider who specializes in trauma and reactive attachment disorder.

Parents and ACEs
a. Does a mother with an ACE score of 6 pass this toxic stress on to her child who has an ACE score of 0?
b. The question is regarding buffering from one healthier parent for her children when the other parent suffers from multiple ACEs. How much can the healthier parent prevent these toxic events from causing later damage?
A mother, despite resilience factors, might pass on toxic stress through stress hormones *in utero* and epigenetics. It's challenging to quantify at this point in the literature how much a parent without ACEs can prevent toxic stress in his or her child, given the impact of the household and environment that the child is experiencing. For example, if a child is living in a household with domestic abuse, having one of the parents able to comfort the child after an incident may be helpful but may not be enough to counter the magnitude of stress the child went through during the incident. There are so many variables, such as how long the incident lasted, how often it is happening, how old the child is, and what kind of comfort the other parent is providing/able to provide, that make this type of research difficult. So, taking this example one

step further, what may be the most buffering would be for the healthy parent to leave the abusive situation and remove the child from a situation where his or her stress response system was repeatedly activated.

Prevention of abuse

a. What about when the child is the abuser? When the child has mental illness and basically holds the rest of their family hostage with his or her behaviors?
b. How do you approach the parents if there are signs of direct abuse?
c. What is the best approach when a parent is resistant to change when they are the one abusing/neglecting the child, e.g., if they do not think they are doing anything wrong?
d. What exactly is a child abuse pediatrician?
e. Is there a pediatric listserv where those professionals can be found?

Child Abuse Pediatrics became an official pediatric subspecialty in 2007, with board certification starting in 2011. The American Academy of Pediatrics (AAP) has links to find your local child abuse pediatrician and tools to support approaching parents around abuse, neglect and ACEs. If you suspect that a child is being abused, you are a mandated reporter and should refer to your state's specific mandates. I have found that the best approach with parents is to be transparent about your concerns and mandates while also being understanding that the parents may have their own ACEs and stress such that you can support getting them help.

Special health care needs

a. Couldn't a possible diagnosis that a child has that could cause their death (childhood cancer, Crohn's disease, etc.) also be considered an ACE?
b. Has there been any research to correlate ACEs in childhood with subsequent inherited genetic defects in children?
c. Could frequent hospitalization in the special needs populations lead to a similar response as seen in ACEs?
d. How do intellectual disabilities impact the screening for ACEs?

Research is beginning to look at medical trauma as a possible ACE. Potentially anything that causes significant stress that cannot be completely buffered by a caregiver could cause dysregulation of the neuroendocrine and immune pathways.

ACEs screening and scores

a. How did you measure/assign the ACE score of the little girl?

The little girl was screened for ACEs using a de-identified item parent report on behalf of the child. Details about ACEs screening tools/protocols will be shared during Part 2 of this ACEs webinar series.

b. How do you determine when to utilize ACEs screening? Is it part of every well visit? What is being done within the medical field (and even psychiatric field) to utilize this tool routinely?

ACEs screening can be conducted as part of every well-child visit. The National Pediatric Practice Community is working to universalize ACEs screening among all pediatric medical providers in the US.

c. Can a patient lower his or her ACE score?

No, an ACE score is cumulative over the life course and can never go down – once someone has experienced an ACE, they can't "un-experience" it. However, there are many tools (sleep, exercise, nutrition, mindfulness, mental health therapy, healthy relationships) to potentially decrease the risk of subsequent health conditions.

d. What are your short-term goals for having medical professionals screen children for ACEs?

ACEs screening provides a point of systematic early identification and intervention, informs the provider's clinical judgment and provides additional information when taking the social history of the patient family.

e. How do you address the liability issues that can arise if this information is gathered?

If the provider suspects child abuse, they should follow their institution's mandated reporting guidelines and report the abuse. However, if the items on the ACEs screening tool are de-identified, then the provider only receives a score and doesn't know which items the child has experienced. This will be further discussed in the next webinar.

f. Are caregivers screened for ACEs in connection with children?
Sometimes. There are numerous efforts around the country to screen parents for their ACEs along with their child in pediatric offices as a form of prevention, especially when the screening takes place with an age 0–5 population.

g. Are there potential harms to the patient when asking about trauma? How can we ensure all practitioners are trauma-informed?
If screening is implemented sensitively and with a patient-centered lens that focuses on providing the best care possible, we have not found asking these questions in pediatric medical settings to be harmful. Evidence from the literature, as well as our research and experience, tells us that most caregivers appreciate ACEs screening, as it makes them feel cared for and signals that the provider's office is a safe space to discuss these topics. In one study, caregivers highlighted the importance of having a trusting relationship with their providers in order to feel comfortable reporting ACEs. Caregivers acknowledged that ACEs affected their child's health and that the provider could more effectively address their needs using this information.

h. Any data or thoughts on the ACE scores of children raised in high-stress homes that focus on pushing advanced education, activities, music, sports, etc., that seem excessive?
i. Discipline can be stressful for children; how could this contribute to ACEs?
It depends. If there is associated emotional abuse, physical abuse or neglect, for example, then the high-stress home or the harsh discipline could be an ACE.

Treatment of children exposed to toxic stress
a. Can play therapy help?
Yes.

b. How do you teach children and adults to self-love and nurture?
c. Are there specific online resilience-building resources primary care offices can use when they identify a patient with a high ACE score? For those who don't live in larger cities where referrals to places like UCSF is not a possibility?
Please visit Stress Health and the National Pediatric Practice Community on ACEs for medical providers who want to apply ACE screening. You can also look at the AAP's Trauma Guide and the NCTSN.

d. In your experience, are insurance companies stepping up to provide coverage for mental health interventions? If not, what work is being done to provide for the mental health portion of prevention/correction?
Advocacy is ongoing to support paying for these services. The AAP site listed above includes diagnoses to consider adding to your visit encounter that are covered by insurance.

e. How to get help to teens with ACEs?
f. What options are available for families that do not have an established behavioral health provider for their child, considering the very long waits to get in for a visit once a concern is identified and/or poor insurance/high out-of-pocket costs for already low-income families?
From our research and clinical experience, treatment for ACEs doesn't necessarily mean a referral is needed for intensive therapeutic intervention. There are other ways to regulate the stress response, including psycho-education and the 6 domains of wellness (sleep, nutrition, exercise, healthy relationships, mindfulness and mental health). The second webinar of this series will talk more about intervention supports and strategies.

g. How can you assist a patient with a high ACE score if he or she is past childhood? Considering that enabling parents is no longer an option, is referral to therapy the only option?
From our research and clinical experience, many of the treatments for child and adult toxic stress are similar and involve psycho-education, the 6 domains of wellness (sleep, nutrition, exercise, healthy relationships, mindfulness and mental health) and referral to specialists (social worker, psychologist,

psychiatrist, neurologist, etc.) as needed. For example, Mindfulness Based Stress Reduction is a tool developed by Jon Kabat-Zinn being that is researched and used to help treat chronic diseases.

h. How, in the context of a PCP visit, can we empower parents to be the buffer when they may be suffering from multiple ACEs and/or may be the cause of the child's ACEs?
Much of our work is either dyadic or focuses first on the parent for this reason. Put on your own oxygen mask first. If the parent isn't healthy, he or she cannot model healthy behavior or buffer for the child.

i. Based on the ACEs studies, it sounds like there is no "repair" of the damage done, but more treating the presenting symptoms and managing the environment. Is this correct?
The research is still young, but suggests that we can change and repair our nervous system (possibly through mindfulness, EMDR [eye movement desensitization and reprocessing], cognitive-behavioral therapy, etc.), endocrine system (through exercise, sleep, stress reduction therapies, etc.) and immune system (anti-inflammatory diets, probiotics, etc.), and that potentially this repair is mediated through neuroplasticity and epigenetic changes.

ACEs in girls/women
a. If women have larger amygdalae, did the girls in the study have more ACE toxic stress?
b. With girls being typically termed more emotional, do you feel girls and boys deal with trauma differently and does this help or harm the way they can cope with stressors?
There is research into gender differences in relation to dealing with stress. For example, Dr. Shelly Taylor has looked at this and coined the term "tend and befriend" as a female threat response. https://psycnet.apa.org/doiLanding?doi=10.1037%2F0033-295X.107.3.411

ACEs and ADHD symptoms
a. What was the medication you mentioned to decrease excessive adrenaline?
Guanfacine

b. Could you go back and talk a little more about the use of Klonopin in lieu of a stimulant?
c. Interested in hearing more about how a stimulant doesn't work with those with a diagnosis of attention-deficit/hyperactivity disorder (ADHD) if multiple ACEs are involved.
d. What can be done to get these kids off ADHD medications and treated appropriately?
These are all great questions, and I would recommend partnering with your local child psychiatry department to further explore.

For more information, this is the article that was referenced regarding the thought process behind why guanfacine might work better than a stimulant for children impacted by ACEs: Arnsten AF. Toward a new understanding of attention-deficit hyperactivity disorder pathophysiology. *CNS Drugs*. 2009; 23(suppl 1):33–41. https://link.springer.com/article/10.2165%2F00023210-200923000-00005.

Immigration
a. Please comment more about immigration trauma and its impact on youth behavior.
Given that one of the core ACEs is separation from a buffering parent/caregiver, the recent immigration crisis on the border, in which children were forcibly separated from their families and detained, could absolutely trigger the stress response and lead to adverse health outcomes, especially if the trauma is prolonged and there is not adequate buffering.

See this testimony from Dr. Nadine Burke Harris, which discusses the lasting physical and emotional harm to children under severe stress without the buffer of a loving parent or caregiver and urges legislators to take action.
https://www.youtube.com/watch?v=Z_KfxwXo1Oo&feature=youtu.be
The Center for Youth Wellness, the AAP and other organizations have been vocal about the detrimental effects of separating families and the health impacts of adversity and toxic stress on children. Read some of the coverage on Vox, NPR Austin Affiliate KUT and CNN.

Race-based trauma
a. Have there been any studies on race-based trauma for young children of color?
There have been studies that have looked at factors such as telomere erosion and allostatic load as a result of racial stress, but those studies have primarily been done with adults.

Intergenerational transmission of race-based trauma: *Post Traumatic Slavery Syndrome* by Joy DeGruy is a good place to start.

The RYSE Center is doing a lot of work in this area as well, particularly around the issue of racing ACEs, and looking at ACEs from the perspective of historical and racial trauma: https://www.acesconnection.com/blog/racing-aces-gathering-and-reflection-if-it-s-not-racially-just-it-s-not-trauma-informed.

Other stressors
a. I noticed that the death of a parent in a young child's life was not mentioned. Please comment on this.
b. Why is parental separation considered an ACE but not death of a parent?
c. What about loss of a sibling?
This raises a good general question about what additional ACEs should be included. The original ACE study by Felitti and Anda looked at 10 categories, but since then there has been continually emerging research about additional stress that leads to risk for poor health.

We at CYW consider death of a parent as parental separation.

Death of a sibling would definitely be a traumatic experience and may cause toxic stress; however, I am not aware of any studies that have specifically looked at this. Please let us know if there are any so that we can add them to the growing list!

ACEs research
a. What about the impact of increasingly global and technology-oriented societies with the associated increase in alienation on the individual level. Is this discussed in research related to ACEs anywhere?
Yes. One of the issues is that this work involves so many disciplines. There are researchers trying to use technology to increase connection and treat diseases. There are other researchers in a wide variety of fields – health care, psychology, neuroscience, drug addiction, etc. – who are looking at the negative impacts of technology and its impact on decreasing social connection and integration.

Here are some more links to explore:
https://pediatrics.aappublications.org/content/140/Supplement_2/S57
https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316
https://www.annualreviews.org/doi/10.1146/annurev-psych-122216-011902

b. Are there data or studies that have looked at the ability to change trajectory and decrease disease burden and medical expense at the population health level?
Yes, the population health and epidemiology literature in public health specifically examine changing trajectories in health and disease prevalence at the population level. Behavioral Risk Factor Surveillance System (BRFSS) and KidsData.org would be good places to start for large data sets.

Training for providers
a. Are children and youth service agencies educated about ACEs screening and how to use the tools?
ACEs Connection Network would be a good resource for those interested in connecting with others working in the children/youth service agency sectors.

b. How is this training getting to school nurses who may be able to identify issues?
There is a lot of work around trauma-informed schools being done (https://www.turnaroundusa.org/ and https://safesupportivelearning.ed.gov/trauma-sensitive-schools-training-package), but given that school nurses are medical providers, they can connect with the National Pediatric Practice Community on Adverse Childhood Experiences (NPPC) to learn more about screening in schools and implementing screening in school-based health centers.

Other questions
a. What was the acronym CTRP @ UCSF?
CTRP stands for Child Trauma Research Program, an initiative of UCSF's Department of Psychiatry, and is focused on providing family-centered therapeutic interventions for children ages 0–5 who experience traumatic events.

b. Can ACEs have a health consequence at any age?
ACEs are adversities/traumatic events experienced before the age of 18, so an adult cannot experience "ACEs." However, the long-term health impact of these early adversities is generally seen later in adulthood.

c. What is the full reference for Traub 2017?
Traub F, Boynton-Jarrett R. Modifiable resilience factors to childhood adversity for clinical pediatric practice. *Pediatrics*. 2017;
139(5):e20162569. http://pediatrics.aappublications.org/content/139/5/e20162569

Additional references
The National Pediatric Practice Community on Adverse Childhood Experiences (NPPC)
The NPPC is a network of pioneering pediatric-serving medical practitioners supporting each other in expanding knowledge, building capacity, accessing resources, and shaping the field of ACEs and toxic stress. To learn more about and join this community of practice, please visit nppcaces.org.

Stress Health
The Stress Health public education campaign aims to educate, engage and activate parents and caregivers to demand access to early intervention and trauma informed care. The goal of the campaign is to help parents recognize the powerful force they can be in preventing and reversing the impacts of toxic stress in their children. Learn more at stresshealth.org.

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