Today we will concentrate on Health and Development and how these issues impact family and child functioning. But before we begin, we have some paperwork to complete.

Refer to the Participant Guide, Module 1, page 2. Ask them to complete the Before and After Training Survey. The directions are written on the survey.

Emphasize that this is not a test with right and wrong answers and it is anonymous.

Ask the participants to please keep the survey in their participant guide because, as the name implies, we will be using it at the end of the day as well.

Before we start, I’d like to establish our working agreement and make sure we understand our goals for the day as well as give you a sense of what we are planning to cover and are prepared to offer. This includes setting or revising our plan for how we will work together, or ground rules.

Let me start with our goal and objectives for the day.
**State the goal.**

**Module 1: Goal**
Apply knowledge of Health and Development through your work with children, families and other service providers.

**State or summarize the objectives.**
- Understand how environmental factors such as childhood maltreatment can impact development.
- Understand the childhood and long-term health consequences of adverse childhood experiences.

**Summarize:**
- Implement the screening process for health and developmental issues.
- Work with medical and developmental specialists to obtain assessments/examinations, family-centered planning and provide for appropriate interventions.
- Work with medical and developmental specialists to establish continual support in these areas at the time of case transition.

**Ask:**
**Based on that overview, what are your goals and expectations of today’s work?**
- List responses on the flipchart and as participants respond, acknowledge what we are planning to cover and areas that we can try to address, as a group, although they may not be scripted or documented in our materials.
- Further acknowledge that some objectives may be covered in other modules of the series on Service Integration.
Finally, if the usual ground rules (e.g., cell phones off, let a person speak without interrupting, etc.) were not addressed, go over those now.

**TRAINER NOTE**

- **Ask** the participants if they are familiar with the Adverse Childhood Experiences Study completed by Kaiser Permanente and the Center for Disease Control.

- **If some of the participants are, give them an opportunity to explain what they know about the study.**

- **If necessary state that the Health Plan Kaiser Permanente conducted a study in a primary care setting to describe the relationship of childhood experiences to medical and public health problems. The original sample included over 17,000 patients in the San Diego Health Appraisal Clinic. The collected information included responses to a brief set of questions about childhood experiences and a more in-depth look at the person’s health status. Over 50 scientific studies have been completed using this data. For more information see www.cdc.gov/nccdphp/ACE.**

**ACTIVITY 1-1: Complete Profile**

**PURPOSE:** To better understand and have empathy for parents by understanding possible impact of their adverse childhood experiences.

**TIME:** 20 minutes

**DIRECTIONS:**

1. Ask the participants to work together at their tables.
2. Ask them to turn to Module 1, page 3 in the Participant Guide.
3. Each table will create a profile of a parent based on a person that one or more of them know very well.
4. Each table will answer all the questions on the “Create a Profile” sheet.
5. After they finish the profile, ask them to review the ACE questionnaire in the participant guide, page 4, based upon their profile.

**Process** the activity.

**Ask:**

*How did the backgrounds of the people you “profiled” compare with the questionnaire?*

*Do you think these types of childhood experiences are typical for the parents who you work with?*

**Summarize:**

The Adverse Childhood Experiences study, conducted by Kaiser Permanente Health Care and the Centers for Disease Control, is an epidemiologically sound longitudinal research study that has documented lifelong consequences of adverse childhood experiences. The American Psychological Association also published a paper in 2002 that showed several other research findings that are similar to those from the ACE research.

**Say:**

- These studies show the cumulative impact of adverse childhood experiences. The number of adverse childhood experiences and the likelihood of medical problems were directly related to the number of adverse childhood experiences for most conditions.

- Research has shown that a score of 4 and above puts a person in a high risk category for physical, mental and substance abuse issues. Let’s remember clearly that we are talking about RISK not causation, not predetermination—RISK. By Risk we mean that across a population there is a higher than average likelihood that someone with these experiences may develop serious health conditions.
**Slide 1-8: Medical Conditions**

*Say:*

Here are the associated medical conditions...no surprises here.

- Heart disease
- Cancer
- Chronic Bronchitis or emphysema
- History of Hepatitis/liver disease

**Slide 1-9: Medical Conditions, Cont.**

*Say:*

- Skeletal fractures
- Obesity
- Diabetes
- Sexually Transmitted Disease

*Summarize:*

- There is a direct, statistically significant relationship with several of the conditions and the numbers of adverse childhood experiences. Often individuals have more than one medical condition concurrently.

- Note that there are also other factors such as genetic predispositions that could lead to some of these conditions and may not be directly related to the adverse childhood experiences.

**Slide 1-10: ACE and Health Conditions**

*Ask:*

Why do you think that we see this pattern?

*Conduct a brief discussion.*

*Summarize:*

- Adolescents and adults with adverse childhood experiences are more likely to engage in behaviors that negatively impact health status.

- Also the emotional/behavioral disorders that individuals may develop place them at higher risk for stressful living and social problems.
Summarize:
- Smoking is directly related to later chronic obstructive pulmonary disease and lung cancer.
- People with a score of 4 are 260 times more likely to develop chronic obstructive pulmonary disease than people with a score of 0.

Summarize:
- Use of intravenous drugs puts a person at high risk for many conditions such as hepatitis, HIV/AIDS.
- A person with a score of 4 has a 240 times greater chance of using intravenous drugs than a person with a score of 0.

Summarize:
- The study showed powerful associations of adverse childhood experiences with both depression and self-reported suicide attempts.
- A person with a score of 4 was 460% more likely to have depression than someone with a score of 0.
- Findings show that there is a 1,220% increase in attempted suicide between those with a score of 0 and a score of 4.
- The ACE study states that between two-thirds and 80% of all attempted suicides could be attributed to adverse childhood experiences.

Let’s take a moment to watch a short video of a physician/researcher from the CDC talk about the implications of these findings.
Points to make after video:

- You just heard the CDC representative conclude that adverse childhood experiences are the number one public health problem in our nation.
- The researchers believe that adverse childhood experiences are the most important determinant of the health and well-being of the nation.
- They also believe that they are transgenerational.
- Remember that we are talking about risk.
- The ACE and materials are available at www.cavalcadeproductions.com or at 1-800-345-5530.
- There are many factors that impact whether risk will materialize into a specific condition.
  - The individual’s unique combination of DNA may make them more or less susceptible to a particular problem.
  - There may have been protective factors that helped the individual manage the situation.
- Many of the parents in the child welfare system have 4 or more adverse childhood experiences. Think for a minute about what may have made a big difference in their life. What protective factors may have been in place? Was it a grandmother who held, rocked, and comforted him/her? Was it the Sunday school teacher that spent extra time with them and told him/her that they are a wonderful person? Or maybe it was a Girls and Boys Club that offered a number of activities and introduced him/her to reading or sports.

Ask:

- What do you think were some of the protective factors in the life of the person in your profile?
- What may have been the risk factors?
- How do you see these factors impact their behavior today?
TRAINER NOTE: Discuss how ridiculous this picture is.

Summarize:
- When working with families it is important to pay attention to the parents’ history.
- Yes, people do die from smoke inhalation but fighting the smoke per se will not stop that.
- Treating the immediate issues is necessary, but understanding the possible impact of adverse childhood conditions and understanding and addressing the complex family circumstances is “fighting the fire.”

Created from comments by Dr. Felliti and sketched by Shawn Coughlin (2010).

Take a break.

ACTIVITY 1-2: Brain to Foot

PURPOSE: To recognize that we may not cognitively control our behavior

TIME: 3 MINUTES

DIRECTIONS:
1. Sit at the table. Get comfortable. Now lift your right foot off the floor and make clockwise circles. Everyone check each other to be sure you are making your circles in a clockwise direction.

2. Now, while doing this, draw the number ‘6’ in the air with your right hand.
   
   Ask:
   What happened to your foot? Why did you change the direction? Your foot is supposed to be going clockwise.

   
   Ask:
   What happened? Your foot seems to have a “mind of its own.” It changes direction even when you specifically try to control it.

4. Of course this is a simple little demonstration of your neurological system directing behavior rather than through your thought process.
**Summarize:**

- Child abuse and neglect is a source of chronic stress for children of all ages. However, when this occurs during early development (birth through age five) it has the most adverse impact on all aspects of development.

- The Florida data shows that over 50% of children coming into “out-of-home” services are age five and below. Your work brings you into the lives of many very young children.

- Also knowing about the impact of child abuse and neglect on the formation of the brain will help you better understand the older children who you work with since many of their health and behavioral issues are consistent with the developmental patterns reflected in the research.

- Helping families reduce or eliminate adverse childhood experiences can “break the cycle” and have a significant impact on the children’s outcomes.

- The child welfare intervention now may prevent these children from later developing health or behavioral disorders and/or coming back into the system as parents.

- We are going to watch a short video by the National Scientific Council. After the video we will spend a little more time talking about how living in a family with multiple risks may impact learning, mental health and physical health.
This is early “serve and return” phenomenon that happens in nurturing relationships. By “serve and return” we mean that the baby cries for assistance and someone responds; the child points to an object – say a stuffed bear on the shelf – and the caregiver says “Do you want the bear?” Or, the parent talks to the child from day one and when the child vocalizes the parent responds with a vocalization of their own.

**Discussion Questions**

1. **What key messages did you hear in this video?**
   
   *Prompt:* That negative experiences impact the circuitry of the brain, which may have a lifelong impact on the individual.

2. **What can we do as investigators and case managers to address these issues?**
   
   *Prompt:* We can try to get interventions for the family as soon as possible to reduce the stress on the parents and children. We should also try to get young children into the best early intervention programs available.

**TRANSITION**

Now we are going to have more discussion on how excessive stress disrupts brain development. This is our last segment on this subject.

We have focused on this area because we believe that understanding this aspect of development shapes our view of the children and families that we work with.

**TRAINER NOTE:** Review the three levels of stress focusing primarily on Toxic Stress.

**Summarize:**

- Throughout life, the extent to which stressful events have long-term adverse impact is based upon the individual’s response to the stress rather than the stress itself. We all react differently to “stressful events.” Some of you may think having people over for dinner is fun while others may enjoy it but feel very stressed about the occasion.
Ask the group to share what is particularly stressful to them.

Discuss differences briefly.

Summarize:

- As the video explained, **positive** stress is necessary for development. Through exposure to these moderate and short-term stressors the child learns to control and manage their response to stress.
  - Example: A child may experience some stress when climbing the playground slide for the first time. But with Mom right behind him as he climbs up, he knows that he can handle it and is thrilled with his accomplishment when he slides down to Dad’s waiting arms.

- **Tolerable** stress is a significant stressor, but is short-lived and the child is reassured by the care and support of a nurturing adult.
  - Example: A three-year-old is in a car accident where she is slightly injured. Her mother is also slightly injured, but is able to reassure the child that things will be alright. Grandma arrives at the hospital and comforts the child and explains that Mom is fine. The child is able to manage the stress with the help of her family.

- **Toxic** stress results from strong, frequent, or prolonged adverse situations that the infant/child has no control over and for which he/she does not have a caring supportive adult to help him/her cope. Severe or chronic/complex abuse may result in the atypical brain development. Less extreme abuse and neglect can also impact the development of the infant’s/child’s ability to respond to stress (physiological changes) and establishes a lower threshold for stressful events.
  - This lower threshold can result in increased risk for diseases associated with the physical responses to high stress including mental health problems, substance abuse and physical illness.
Say:
This slide shows the damage to neurological development from persistent childhood stress.

Summarize:
- The hormonal system produces cortisol in response to stress.
- Toxic stress, with long-term increases in cortisol levels, can change the functioning of a number of neural systems that in turn can impact specific gene expression. This can impair memory and the ability to regulate responses to stress.
- The impact on the physical development of the brain can have negative consequences for later physical health. This is due to the negative impact on the person’s lifelong response to stress and possible problems regulating emotion which in turn create a higher risk for physical disorders.
- Again, we must remember that what we are talking about is risk, not cause. It cannot be assumed that because a child experienced abuse and neglect they will develop a stress related illness.
- Some children’s genetic code creates an “easy temperament” with a physical constitution that can handle higher degrees of stress than other children.
- Or there may be other protective factors, such as a loving aunt and uncle, whose attention serves as a buffer for the stress.

Ask:
How does chronic stress impact physical health?

Summarize:
- Stress can impact gene expression.
- High levels of stress in early development can have a life long impact on an individual’s ability to regulate stress.
- High levels of stress can also reduce the effectiveness of the immune system.
**SLIDE 1-20: EARLY ENRICHMENT**

**Summarize:**
- Given the possible impact of abuse and neglect, early interventions are very important.
- This slide shows the impact of early enrichment on cognitive delays or impairments due to chronic stress.
- Early enrichment refers to programs and interventions provided to young pre-school children and their families to promote child development.
- Intervention with children especially young children must focus on the relationship interactions between the child and their caregiver.
- Although the impact shown on the slide is about cognition, it is important to remember that development is a process. Achieving competency at one level serves as a building block for the next.
- This “scaffolding” can be negatively impacted if the child is delayed in achieving a developmental level and can seriously impact subsequent development.
- Also, development is interrelated. For example, a delay in one area such as social and emotional development can impact speech development.
- It is important to remember that plasticity is a central feature of brain development and continues across the life span.
- Therefore, interventions can successfully help children and parents to modify behavior, and improve developmental outcomes.
- The earlier the better. Younger children’s brain functioning is much easier to modify than adolescents or adults.

**SLIDE 1-21: EARLY INTERVENTIONS IN FLORIDA**

**Summarize:**
Most communities have the following programs:
- Early Head Start
- Head Start
- Early Steps
- Healthy Start

**Ask:**
*What other early intervention programs are available in your community?*
**Summarize:**
- Chronic maltreatment that occurs during the ages of birth to five is linked with the most severe maladaptive outcomes and potential for later psychopathology.
- Chronic abuse and neglect is also referred to as Complex Childhood Trauma.
- Researchers have found that 80% of children who have experienced maltreatment show special health care needs and have emotional/behavioral and/or health issues. (Halfron, Mendonca, & Berkowitz, 1995).
- This is also true for children in unsubstantiated cases.
- We should not assume because there were no sufficient findings of abuse and neglect that the children live in an environment without multiple risk factors. (Lee et al, 2006 & Leslie et al, 2005).

**Say:**
- The amygdala and the hippocampus are involved in fear conditioning.
- The amygdala detects whether a stimulus, person or event is threatening.
- The hippocampus links the fear response to the situation in which it is occurring.
- Elevated stress hormones impact these organs and adversely impacts brain architecture.

www.developingchild.net  Working Paper Number 9

**Activity: 1-3 Brain Development**

**Purpose:** To illustrate how experiences, even once they are over, leave an impression on the brain and continue to impact functioning.

**Time:** 30 minutes
Say:

- As we have been discussing, as the little infant or toddler interacts with their parents, usually the primary caregiver, he learns to get his needs met. It is the interaction between the caregiver and the infant/toddler that lays the groundwork for the brain development.

- However, things may not always go as we would like. There are many risk factors that could negatively impact how the parent and child interact that may have adverse consequences.

Ask:

What are some of these possible adverse experiences?

Prompt response:

- Neglect
- Physical abuse
- Witnessing violence

Ask and record responses on the flip chart:

What might be contributing factors that make these adverse experiences more likely?

Prompt:

- Parent has a mental illness
- Child is a “difficult” baby and hard to soothe
- Parent has an intellectual disability
- Parent abuses substances
- Mother is a victim of domestic violence
- Parents do not understand the importance of being responsive to the baby.
- Parent is ill and can’t take care of the child.

Directions:

1. Have the slide with the brain on the screen so all can see it.
2. Place the poster of the brain where everyone at the tables can see it well.
3. Give the participants the materials. Have about three to four participants work the project. Divide people up if necessary.
4. Ask the group to pull out the profile of a person that they created for the ACE exercise this morning.

5. Explain the participants that they will be drawing a brain and then making a collage that shows the person’s experiences and illustrates how those experiences impacted the person’s development. They will present their collage to the larger group at the end of the activity.

6. Give them time to draw the brain images and create their collage.

7. Ask them to write down some notes about the person for whom they are creating the “brain”. They may want to use the same person portrayed in the morning in the ACE activity. What has happened in the interaction between the person and their family that could impact the brain development?

8. What are some protective factors that could have benefitted the person?

9. What were some of the risks such as adverse childhood experiences?

10. Go around the from table to table and ask the participants to share some of their creations. Ask them to please specify the protective and risk factors that they highlighted. The trainer will record the factors on a flip chart.

11. The trainer will review the information on the flip chart to close the activity.

12. Celebrate with the group how artistic they all are.

**Say:**

*Let’s talk for a few minutes about how these experiences and brain changes could possibly impact health.*

**Ask:**

*Let’s list some of the medical or developmental issues that might emerge as part of the childhood experiences. Choose a couple of examples from the activity to illustrate both positive and adverse consequences from experience and genetics.*
Record the responses on the flip chart.

Remind the participants of the findings from the ACE study. Many of those medical conditions started during childhood and adolescents.

- The child’s interaction with their world is heavily influenced by their relationship with their parents or primary care giver. From infancy through the pre-kindergarten developmental period, the relationship with the primary caregiver fundamentally impacts brain development and sets the stage for subsequent relationships. During this phase, this relationship is frequently described as attachment.

- As the child matures this attachment is still a key element in family relationships. The dynamics however shift as the child begins to explore the world through school and friends.

- When looking for “attachment” in school age children, the child welfare practitioner will be looking for the degree of connection that they see with the child and the other family members. To understand development it is important to have a basic understanding of attachment.

**Ask:**

Many of you are likely knowledgeable about attachment issues. Would anyone like to describe the concept of attachment for children birth through age four?

Write the responses on the flip chart. If possible, the trainer should tie the attachment comments back to those from the previous discussion.

For example, talk about the “serve and return” discussed earlier and how that interaction impacts attachment.
It is apparent that many of you are familiar with attachment. (It is likely that they will know some of the basic concepts). We will take the next few minutes to review attachment and its’ importance to development.

Attachment can be defined as a strong affectional bond between two people who take pleasure in their interactions and are comforted by each other’s presence in times of stress or uncertainty (Snaffer, 2002).

Attachment, as all other child development issues, is influenced by the parent’s characteristics, the child’s emotional and physiological make-up and the environment that surrounds them.

Therefore, when thinking about attachment issues it is important to remember that, while the primary caregiver has a vital role in the dynamic, the relationship can be affected by several variables.

In observations of typically developing families, attachment can be described as Secure Attachment, Insecure and avoidant attachment, and Insecure attachment characterized by ambivalence and resistance.

Attachment is created through relations with others. An attachment is person specific. A child’s attachment may be different for different parents and caregivers.

These bonds are persistent, not transitory and indicate a relationship across the developmental period.

The attachment has an emotional significance for the child and is a source of comfort and security.

Young children are biologically driven to have proximity and contact with the parent (usually the mother).

When the child wants to be close (proximity) to the mother, he experiences distress when this is prevented or when involuntary separation occurs.
Attachments are described based upon the characteristics of the affectional bond. Relationship issues are not considered a disorder unless issues are so severe that a Reactive Attachment Disorder diagnosis is given.

**Ask:**
When you are working with families, how do you observe attachment?

**Give some examples where you have seen what you think shows secure attachment.**

**Say:**
- Across the first three years of life, there are key age-related transitions in the developing attachment relationship(s).
- At first, babies show social responsiveness to people in general. Across the first six months of life, babies show increasing differences in their social responses and often by seven to nine months will show wariness/“stranger anxiety” with unfamiliar people. Specific attachment bonds develop across the first two years, and parent proximity and sensitive support to toddler’s exploration and emotional experience are critical.
- Typically by age three, with greater memory and language skills, children show greater tolerance for separation as well as increasing cooperation and empathy with their attachment figures.
- Long separations and disruptions in contact with their attachment figures can be especially detrimental during this important time.

**Say:**
- We will now discuss attachment patterns more closely.
- Secure Attachment is usually evident when the parent is sensitive, responsive and available to the child.
- The child feels that they are worthwhile. This is often referred to as having a secure base. The child learns that he is effective and he can signal when he has needs and that they will be met.
Because he knows that his parent will be there for him he is able to explore his world and come back to the parent when he needs to. With the help of the available parent he learns that he can regulate his emotions and “handle things”. He slowly becomes more and more independent.

**SLIDE 1-28: INSECURE WITH AVOIDANCE**

- **Insecure with Avoidance**
  - Parent’s Behaviors
  - Child’s Behaviors

**Say:**

- In situations where insecure/avoidant attachment are observed, the parent appears to be insensitive to the child’s cues, avoiding eye contact with the child, and rejecting in their tone of voice, words, and actions.
- In situations that are described as insecure and avoidant attachment the child welfare practitioner will notice that the child may not show any need for closeness.
- The child may feel that no one will be there for them so there is no point in reaching out to others. The child has been rejected in the past when he has asked for attention and assistance and appears to be “worn out from trying.”
- The infant/toddler basically gives up on having a close relationship. The child may eventually not be able to recognize his own need for love and interpersonal connections.

**SLIDE 1-29: INSECURE ATTACHMENT WITH AMBIVALENCE AND RESISTANCE**

- **Insecure Attachment with Ambivalence and Resistance**
  - Parent’s Behaviors
  - Child’s Behaviors

**Say:**

- Insecure attachment with ambivalence and resistance occurs often when the parent is inconsistent in their pattern of care. They are very unpredictable. One moment they are too close and intrusive, and then later push away the child when they seek them out.
- The child is bewildered and may take on the role of trying to engage the parent. He never knows when he will get his needs met and love given. The child becomes anxious, dependent and clingy.
SLIDE 1-30: ATTACHMENT ISSUES FOR CHILDREN IN WELFARE

Say:

- Children in children welfare systems, especially foster care will often show signs of insecure attachment. In the more severe cases they will avoid contact with the parent, avert the gaze from the parent, and show anger around the parent.

- Children’s attachments may be different with different parents.

- Young children’s behaviors, even with their parents, is very context specific. Children’s distress or dysregulation can result from many circumstances. Attachment characteristics should be determined only through multiple observations across time and settings.

- The child welfare practitioner’s role is to detect possible attachment problems but not to determine exactly what the issues are. That should be left up to a mental health/developmental specialist.

SLIDE 1-31: CONNECTEDNESS IN SCHOOL-AGE CHILDREN

Say:

- Attachment in older children is often referred to as connectedness.

- Children age five to 11 should show a positive sense of connections with family members and show that he knows that the parents are looking out for his emotional well-being. He may not agree with his parents all the time, but has the fundamental belief that he is cared for and protected.

- Adolescents should show reliance on their parents to help them with decision-making skills, and spend time with their parents. There should be a balance between the time the adolescent spends with friends and others and his parents. The parents should prioritize time with their adolescent and communicate frequently.

TRANSITION

We are going to take a few minutes to look at a video clip. In Kisha’s Song we see a little girl with her grandmother. Please watch the video and tell me what you observe about the attachment and “serve and return” that you see.
Ask:
*What are your thoughts about Kisha and her grandmother?*

*Do you think that it is likely that Kisha has a secure base with her grandmother?*

Say:
*The grandmother doesn’t look like she has a lot of money but what she is giving Kisha is priceless.*

Summarize:
- Development and family functioning result from a complex interaction of personal characteristics and the environment, and the dynamic of interactions between family members and the environment.
- Many children and probably their parents, have behaviors, challenges and attributes that resulted from their early experiences.
- Neurological development is a complicated process and is significantly impacted by toxic stress.
- The impact of toxic stress on the child is sometimes referred to as Complex Childhood Trauma.
- Early intervention, based on positive relationships and interactions, can lessen the immediate and lasting impact of stress on the young child.
- Secure attachments create the opportunity for appropriate child development.