

Introduction

This Spark explores how adolescent brain development impacts interactions between youth and adults. It introduces your team to the biological changes that occur in the brain during adolescence and helps health care professionals understand how brain development influences adolescent behaviors. This Spark will provide your team with strategies to be respectful to young people even during challenging interactions.

Objectives

By the end of this Spark training, participants will be able to:

- State primary attributes of adolescent brain development.
- Identify the ways that these attributes impact interactions between youth and adults in a clinical setting.
- Identify personal biases in adolescent care and interaction.

Supplies

Prepare these supplies prior to facilitating this Spark.

- Laptop with PowerPoint presentation
- Projector
- Speakers
- Video: give yourself time before the Spark to test the video and sound.
- Internet connection for video
- Copies of the *Adolescent Brain Development Spark Handout* for all participants
- Writing utensils for all participants

Additional Resources

- [TED Talk: The Mysterious Workings of the Adolescent Brain](#) is a 15-minute video explaining more about the neuroscience behind adolescent development and behavior.
- Johns Hopkins' Center for Adolescent Health has a comprehensive guide for all people working with teenagers called [The Teen Years Explained: A Guide to Healthy Adolescent Development](#).

Citation

If you plan to modify this resource, please cite or credit as: Adolescent Brain Development. Spark Training developed by the Adolescent Health Initiative at Michigan Medicine; August 2021; Ann Arbor, MI.

Facilitator's Note:

Before you begin, keep in mind that everyone participating in the Spark comes with their own unique intersecting identities that inform their experiences, and in this case, impact how they think about adolescent health. Consider how those identities shape your experience or may be shaping the experiences of the people moving through the Spark together.


For the most up to date version of this training, be sure to check AHI's website at www.adolescenthealthinitiative.org/Spark-trainings

Please direct any questions or inquires to the Adolescent Health Initiative at adolescenthealth@umich.edu.

Key of Icons


 = Slide change  = Estimated duration of topic  = Script for facilitator  = Note for facilitator

Intro/Hook  (5-10 minutes) 1 – TITLE SLIDE

 Today we are going to do a 15-minute mini-training, also called a Spark. We'll be looking at the basics of what research tells us about adolescent brain development, and how that plays out in a clinical setting. We'll also be thinking about what makes it challenging to be affirming to teens' needs.

 Introduce yourself/yourselfes.


 2 – CASE SCENARIO: SHAYLA

 To help us think about what this means in our day-to-day work, here's a scenario that may seem familiar.


You work at the front desk. 16-year-old Shayla is 10 minutes late for her appointment, and she comes up to the front desk to check in. She does not look up at you, but instead, she stands at the desk and appears to be texting. In an upbeat voice you say, "Hello! Do you have an appointment?" She continues to look at her phone, frowns, and keeps texting while you wait. Finally, she looks up and says, "What?"

We'll come back to this scenario in a few minutes, but for now, consider your gut response to this situation.

 3 – ADOLESCENCE IS A VITAL PHASE


 Adolescence is an essential stage of life, and its developmental characteristics are a natural part of the way the brain is changing. Yet, it can still be challenging to work with teens. Everyone has different perspectives on working with youth, regardless, understanding what's going on for them can help us be respectful and give them the care they need so they'll keep coming back to us.

Key Concepts  (3 minutes) 4 – BRAIN DEVELOPMENT


 So, what exactly is going on inside a teen's brain during this time of development? In the front of the brain is the prefrontal cortex, which is the part that controls complex decision-making, judgment, and understanding cause and effect. This part of the brain is not fully developed until about age 25. While the prefrontal cortex is developing, the limbic system, which is in the middle of

the brain, is highly active. That is the reward center and controls emotions. Contrary to popular belief, it's not hormones making teens more emotional, it's the highly active limbic system and the ongoing maturation of the frontal lobe.

5 – BRAIN DEVELOPMENT

 Further evidence of the changing adolescent brain can be shown through Functional MRI, which measures brain activity. The FMRI images in this slide show us how the brain's grey matter density changes from age 5 to age 20. This is a result of grey matter being “pruned” out, making brain connections more specialized and efficient.


6 – RELATING BRAIN DEVELOPMENT TO BEHAVIORS


 To understand these adolescent brain changes more and how it relates to teen behavior, we are going to watch a 5-minute video clip from the University of California on the teenage brain and then discuss the implications on the work we do with teens.

 This slide/video can be skipped if you need to save time.

The link is: <https://www.youtube.com/watch?v=P629TojpvDU>

7 – DISCUSSION


 What are some qualities of adolescents that you admire?

 Examples include: passionate, feel strongly about social justice, trying to learn as much as possible, want to experience everything


 What qualities could be seen as frustrating?

 Examples include: always on their phones, do things that don't make sense, don't listen

 How does this come up for you in your role?

 Examples include: give one word answers, show up late or don't show up at all, have an interest in their health

8 – DEVELOPMENTALLY APPROPRIATE BEHAVIORS

 As part of their development, many adolescents crave novelty and seek new experiences. The combination of these developmental characteristics can result in behaviors that can be really challenging for both adults and teens. Also, the need for peer acceptance is at its peak, and many teens seek excitement through risk behaviors. Sometimes they don't always have an accurate perception of the consequences of their behaviors (like using alcohol, drugs and having unprotected sex). Also, most teens are focused more on themselves and their needs than they are on others. These are all normal and developmentally appropriate when we consider the way the brain is changing.

9 – DEVELOPMENTALLY APPROPRIATE BEHAVIORS

It can be hard to remember that this process is normal for teens. When a toddler has a tantrum, our first reaction might be irritation, but usually our adult brain kicks in and reminds us that they are probably hungry or they just need a nap, and this behavior is normal for a child. Often, though, when we interact with teens and see challenging behaviors, we might feel frustrated. We forget the developmental explanation for these behaviors, such as a highly active limbic system and a developing prefrontal cortex.

10 – WHAT CAN WE DO?

Considering this, what can we do to adjust our behaviors or reactions to give teens the patience and respect that they need?

Possible answers: not jump to conclusions, be patient when things do not go according to plan

What are some of the ways we're trying to be respectful of the developmental needs of adolescents?

You may choose to have staff respond, or mention any of these that apply to your site:

- Because the right to confidentiality is an important need for adolescents, we've posted Adolescent Confidentiality Rights posters
- We've added new health education materials chosen by a teen advisory council
- We try to avoid using medical jargon to explain things
- We do risk assessment surveys with more teen patients, so providers can learn more about the needs of individual teen patients and address any risky behaviors
- Add any others you want to

It's up to us as adults to help teens through this stage of development, which is true patient-centered care.

Application (7 minutes)

11 – BEYOND GUT REACTIONS

Pass out worksheets – Case Scenarios: Challenging Adolescent Interactions

Let's look at some scenarios to think more specifically about how we can do this. First, we will revisit Shayla's scenario along the top of the worksheet together. She was late, and then was texting while the receptionist was asking her if she had an appointment.

What is your gut feeling about this?

This might make someone annoyed or mad.

Ask staff about what negative assumptions they may have, or just say:

💬 Sometimes, without consciously thinking about it, we create a quick story in our heads about why someone is behaving a certain way. In this case, we might think to ourselves, “I bet she’s texting a friend about something unimportant, and she’s rude to ignore me.”

Here’s where we need to rewrite the story and imagine other possible reasons Shayla is behaving as she is. One possibility is that she was late because she had to take a bus to get here, and the bus was running late. When she walked to the front desk, she frowned when she got a text from her mother saying that she needed to get home as soon as possible to watch her younger brother. Developmentally, she might be tuned in to her own needs more than the receptionist’s, so she is distracted by her text and doesn’t reply right away.

Now, this situation still might be frustrating – and the text could also really have been from a friend about something trivial – but it can help us give teens the benefit of the doubt, and not let our gut feeling control our reaction to the teen.

Turn to the people near you, and in groups of two or three, pick a scenario that applies most to the work you do. Instead of figuring out how to handle the situation, let’s focus on how we’re feeling and thinking.

Once you’ve picked your scenario, discuss these same questions we went through with Shayla across the top of the table.

💡 You may opt to do this as a group or 2-minute discussion in pairs.

💬 Would anyone like to share their group’s response to their scenario?

💡 Allow 1-2 pairs to share, if there is time.

🖥️ 12 – THANK YOU

💬 Hopefully today’s discussion has sparked some ideas on how we can all be more patient-centered with our teen patients and meet their developmental needs. To keep this conversation going over the next month, I will share Sparklers, or case scenarios, that relate to adolescent brain development. I’ll post the Sparklers around the office in places that you all can easily see them. When you see a Sparkler, take a moment to read the scenario and think through the questions listed on the page. Thank you for your participation!