# An Introduction to the Autism Case Training (ACT): A Case-Based Curriculum

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Included opinions are those of the authors and do not necessarily represent the official position of the Centers for Disease Control & Prevention.

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#### **Disclosure**

We have nothing to disclose



## **Today's Objectives**

- Describe the Autism Case Training (ACT) curriculum
- Provide examples of how the flexibility of the Autism Case Training makes it easy to incorporate into interdisciplinary training programs



#### **CURRICULUM BACKGROUND**





#### From Vision to Collaboration





#### From Vision to Collaboration

 This graphic shows that multiple Universities nationwide collaborated to create the curriculum.



#### **Timeline**

07-09/2009

Teams Draft
Cases

20/2009

External and Peer Review

12/200

Case Revisions

2-5/2010

Clearance

5-9/201

Pilot Testing and Analysis

10/2010-2/2011

Pilot Test Revisions

HHS Clearance

2-6/2011

Pre/Post Test

Evaluation

7/2011-present
Preparation for

production



#### From Vision to Collaboration

 This graphic shows the progress in curriculum creation and review over several years.





## CDC's Learn the Signs. Act Early.





## CDC's Learn the Signs. Act Early.

 This graphic shows an array of FREE materials available from the program.



## CONTENT

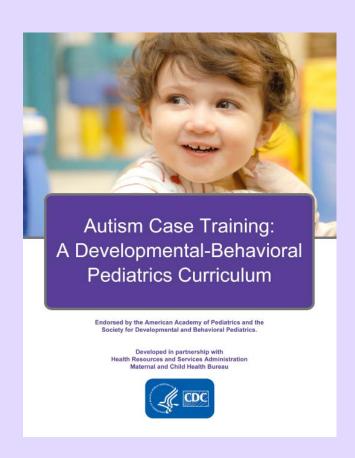




#### 7 cases

- Written by 23 authors
- Reviewed by 17 expert DB pediatricians
- Featuring:
  - -27 videos, 33 handouts
- Updated for DSM-5,
   M-CHAT R/F

## Overview





#### **Curriculum Modules**

Early Identification and Screening

Early Warning Signs of Autism

Screening for Autism

Diagnosis

Communicating
Concerns: Screening
and Diagnosis Results

Making an Autism
Diagnosis

Caring for Children with ASD

Early Intervention and Education

Treatment for ASDs

Autism-Specific
Anticipatory Guidance





#### **Curriculum Modules**

 This graphic shows the 7 different modules covering 3 topic areas.



#### At a Glance

	Autism Screening and Diagnosis	CAM approach	Genetics Family history	Referral	Early Intervention/ IFSP	Pre-school/ IEP	Family concerns	Medication	Behavior, Sleep, Eating Disorders
Early Warning Signs of Autism			X	X			X		
Screening for Autism	X			X			X		
Communicating Abnormal Results	X		X	X			X		
Making an Autism Diagnosis	X						X		X
Early Intervention and Education	X				X		X		
Treatments for Autism		X		X		X	X	Χ	X
Anticipatory Guidance				X			Χ	X	X



#### Curriculum Modules At a Glance

 This graphic shows in which of the different modules select specific content may be found.

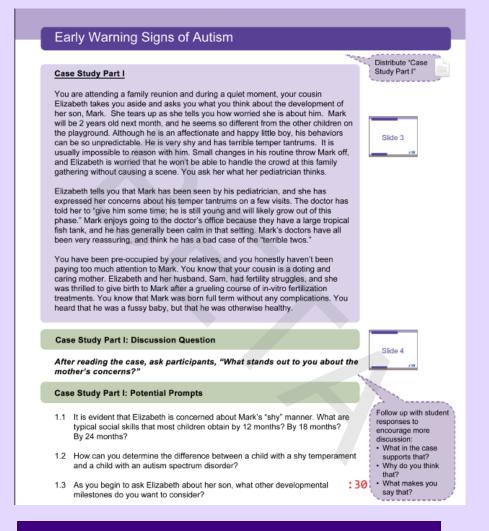


#### **Curriculum Formats**

- 1. Classroom-based Curriculum
  - Instruction downloadable from website
  - Includes facilitator guides, customizable slide presentations, videos, and handouts
- 2. Online course completed independently
  - Incorporates videos, handouts, as well as quizzes



## Sample from Facilitator Guide





## Sample from Facilitator Guide

 This graphic shows a sample of a guide for module facilitators.



#### **Facilitator Guide Icons**

This case does not take place in a clinical setting. This unique setting and the role of the physician in addressing family medical concerns may provide an interesting line of discussion.



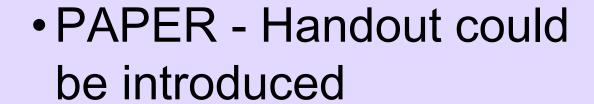
Distribute "Case Study Part II"  CALL-OUT - Step-by-step teaching instructions

:30

•:30 – Helps if have only 30 minutes to teach

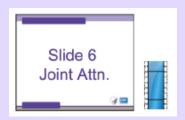
#### **Facilitator Guide Icons**







 SLIDE - Optional slide presentation



FILMSTRIP – Slide with a video

## **Discussion Questions**

Case Study Part I: Discussion Question

After reading the case, ask participants, "What stands out to you about the mother's concerns?"

Designed to spur discussion based on learners



## **Potential Prompts**

#### Case Study Part I: Potential Prompts

- 1.1 It is evident that Elizabeth is concerned about Mark's "shy" manner. What are typical social skills that most children obtain by 12 months? By 18 months? By 24 months?
- 1.2 How can you determine the difference between a child with a shy temperament and a child with an autism spectrum disorder?
  - Provides questions for learners to prompt discussion

# Supporting Information for Potential Prompts

#### **Supporting Information for Potential Prompts**

- 1.1 It is evident that Elizabeth is concerned about Mark's "shy" manner. What are typical social skills that most children obtain by 12 months? By 18 months? By 24 months?
  - 12 months: point and respond to name
  - 18 months: joint attention (expresses an enjoyment in sharing an object or event with another person by looking back and forth between object and caregiver)
  - 24 months: imitation, excitement/interest in other children, desire for attention



# Supporting Information for Potential Prompts

 This graphic shows an example of information and possible "answers" to the prompting questions for learners.



## Video Library





## Video Library

- This graphic shows an example from the extensive video library which supports the cases.
- The videos are included in the slide presentations and online cases.
- Additional videos are available.





#### Video Selection Grid

	Early Warning Signs of ASD	Screening for ASD	Communicating Concerns: Screening and Diagnosis Results	Making an ASD Diagnosis	Early Intervention & Education	Treatment for ASD	ASD-apecific Anticipatory Guidance
Observation: Boy Drawing Bunny	•						
Observation: Difficulty With Transitions: Joseph, 4 yrs. 4 mos.	•					0	
Observation: Dumping and Sorting, 2 yrs.							
Observation: Echcialia							
Observation: Eye Contact: Leighdionne, 2 yrs. 9 mos.	•				0	0	
Observation: los Cream Sequence	•						
Observation: Imitation: James, 3 yrs. and Alex, 2 yrs.	•	0					
Observation: Inability to Locate Body Parts: Sajid, 3 yrs. 1 mo.	•				0	0	
Observation: Inappropriate Play: Evan, 17 mos.	•				0	0	
Observation: Joint Attention: Noeliah, 15 mos.	•						
Observation: Lack of Response To Name: Evan, 18 mos.	•				0	0	
Observation: Looking at Book with Morr: Katelyn, 14 mos.	•						
Observation: Nathan & Ben: 1 yr. 7 mos.					0		
Observation: Pointing to Body Parts	•						
Observation: Reading Sequence	•						
Observation: Response To Name: Kyle, 12 mos.	•						
Observation: Shyness: Aidfa, 3 yrs. 2 mos.							
Observation: Speech Milestones at 2 yrs.	•						
Observation: Temper Tantrum: Harrison, 3 yrs. 6 mos.	•						
Observation: Typical Play: Kyle, 13 mos.	•						

Autism Case Training: A Developmental-Behavioral Pediatrics Curriculum

Observation: Typical Play: Richard, 2 yrs.



#### Video Selection Grid

Key: Most relevant case for video Supplementary information about case in video							
	Early Warning Signs of ASD	Screening for ASD	Communicating Concerns: Screening and Diagnosis Results	Making an ASD Diagnosis	Early Intervention & Education	Treetment for ASD	ASD-specific Anticipatory Guidance
Interview: Comments on Getting Diagnosis: Caryn, Morn of Rilley		•	0	0	0		
Interview: Comments on Getting Diagnosis: Lynda and David, Parents of Wynston		•	0	0			
Interview: Mom of Gabriel, Nathan, & Ben			0	0	0		
Interview: Search for a Diagnosis and the importance of Early intervention: Morn of Ryan, Maren, & Liam		•	0	0	0		
Communicating Concerns: Screening and Diagnosis Results, Part I			•	0			
Communicating Concerns: Screening and Diagnosis Results, Part IIA			•	0			
Communicating Concerns: Screening and Diagnosis Results, Part IIB			•	0			
Interview: Comments on Getting Diagnosis: Requel and Anthony, Parents of Sal, Ethan, & Evan		0	•	0			
Observation: ABA: Stephon, 2 yrs. 6 mos.					•	0	
Observation: ABA: Wells, 2 yrs. 8 mos.					•	0	
Observation: Fun with Bouncing Ball (Physical Therapy): Gabriel, 3 yrs. 7 mos.					•	0	
Observation: Working on Expressive Language: Leighdionne, 2 yrs. 9 mos.					•	0	
Observation: Working with PECS: Antonio, 3 yrs. 1 mo.					•	0	
Observation: Early Intervention: Feeding					0	0	•
Interview: Sleep Disorders: Caryn, Morn of Riley						0	•
Observation: Feeding Problems							•
Observation: Special Food Preparation					0		•

Autism Case Training: A Developmental-Behavioral Pediatrics Curriculum







## Video Library

 This graphic illustrates the Video Selection grid available to help find appropriate supporting content.



#### **Handouts**

#### Your Child at 18 Months (11/2 Yrs)

Child's Name

How your child plays, learns, speaks, and acts offers important clues about your child's development. Developmental milestones are things most children can do by a certain age.

Check the milestones your child has reached by the end of 18 months. Take this with you and talk with your child's doctor at every visit about the milestones your child has reached and what to expect next.

#### What Most Children Do at this Age:

#### Social/Emotional

- Likes to hand things to others as play
- May have temper tantrums
- May be afraid of strangers
- Shows affection to familiar people
- Plays simple pretend, such as feeding a doll May cling to caregivers in new situations
- Points to show others something interesting
- Explores alone but with parent close by

#### Language/Communication

- Says several single words
- Says and shakes head "no"
- Points to show someone what he wants

#### Cognitive (learning, thinking, problem-solving)

- Knows what ordinary things are for; for example, telephone, brush, spoon
- Points to get the attention of others
- Shows interest in a doll or stuffed animal by pretending to feed
- Points to one body part
- Scribbles on his own
- Can follow 1-step verbal commands without any gestures; for example, sits when you say "sit down"

#### Movement/Physical Development

- Walks alone
- May walk up steps and run
- Pulls toys while walking
- Can help undress herself
- □ Drinks from a cup
- Eats with a spoon

- Doesn't point to show things to others
- □ Can't walk
- Doesn't know what familiar things are for
- Doesn't copy others
- Doesn't gain new words
- Doesn't have at least 6 words
- Doesn't notice or mind when a caregiver leaves or returns
- Loses skills he once had

Tell your child's doctor or nurse if you notice any of these signs of possible developmental delay for this age, and talk with someone in your community who is familiar with services for young children in your area, such as your state's public early intervention program. For more information, go to www.cdc.gov/concerned or call 1-800-CDC-INFO.

The American Academy of Pediatrics recommends that children be screened for general development and autism at the 18-month visit. Ask your child's doctor about your child's developmental screening.

Adapted from CARING FOR YOUR BABY AND YOUNG CHILD: BIRTH TO AGE 5. Fifth Edition, edited by Steven Shelov and Tanya Remer Altmann @ 1991, 1993, 1998, 2004, 2009 by the American Academy of Pediatrics and BRIGHT FUTURES: GUIDELINES FOR HEALTH SUPERVISION OF INFANTS, CHILDREN, AND ADDIESCENTS, Third Edition, edited by Joseph Hagan, Jr., Judith S. Shaw, and Paula M. Duncan, 2008, Elk Grove Village, IL: American Academy of Pediatrics. This milestone checklist is not a substitute for a standardized, validated developmental screening tool

www.cdc.gov/actearly 1-800-CDC-INFO









#### **Handouts**

 This graphic shows an example of one of the many Handouts available with the curriculum.



## SAMPLE CASE





# Early Warning Signs of Autism Spectrum Disorder Autism Case Training: A Developmental-Behavioral Pediatrics Curriculum

#### **Authors**

Liz Harstad, MD, Children's Hospital Boston, Harvard Medical School Carol Baum, MD, Warren Alpert Medical School of Brown University Yvette Yatchmink, MD, PhD, Warren Alpert Medical School of Brown University

#### **Editors**

Georgina Peacock, MD, MPH, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention
Carol Weitzman, MD, Yale University School of Medicine
Jana Thomas, MPA, Porter Novelli

## Learning Objectives

- 1. Identify key social-emotional and language milestones through 24 months of age.
  - Describe typical social skills.
  - -Identify expected language milestones.
  - -Identify expected play skills by age.

#### Learning Objectives

- 2. Recognize the major early warning signs of ASD.
  - Identify key red flags for ASD.
  - Recognize the difference between a typical temper tantrum and one of a child with ASD.

#### Part I

 You are attending a family reunion, and during a quiet moment, your cousin Elizabeth takes you aside...

### What stands out to you about the mother's concerns?

### From the Video Library

- The following video clip shows twins in play scenarios with their mother.
- Watch for the differences in eye contact and visual referencing from each child to his mother.
- The first child says a few single words, but the second does not.



#### Early Warning Signs of Autism

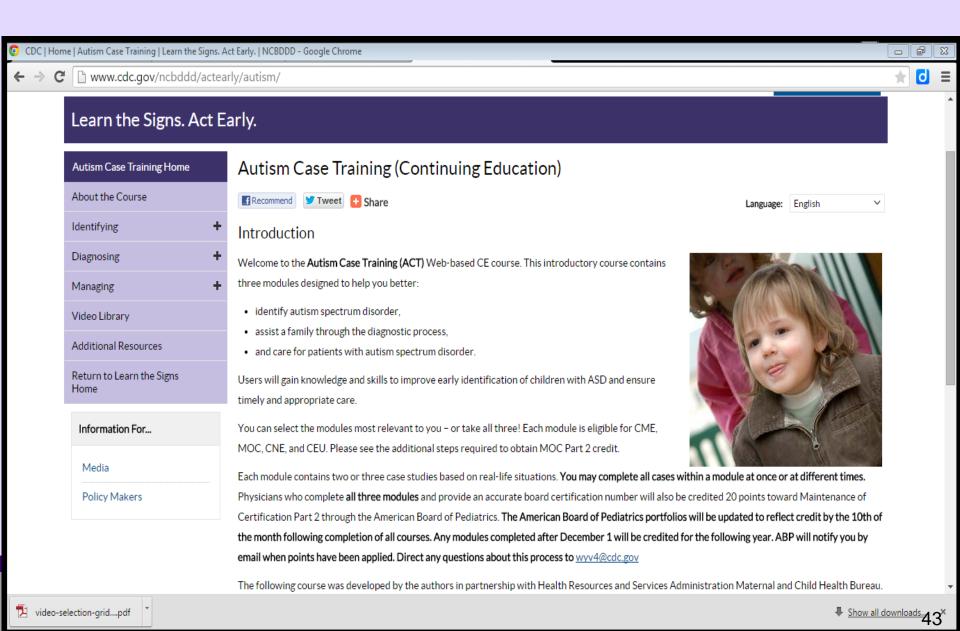
Observation: Nathan & Ben, 1 yr 7 mos

### From the Video Library

- These twins display different developmental skills and social interactions.
- Many of the video clips may be used to demonstrate various behaviors, both typical and atypical.



#### **Online Curriculum**

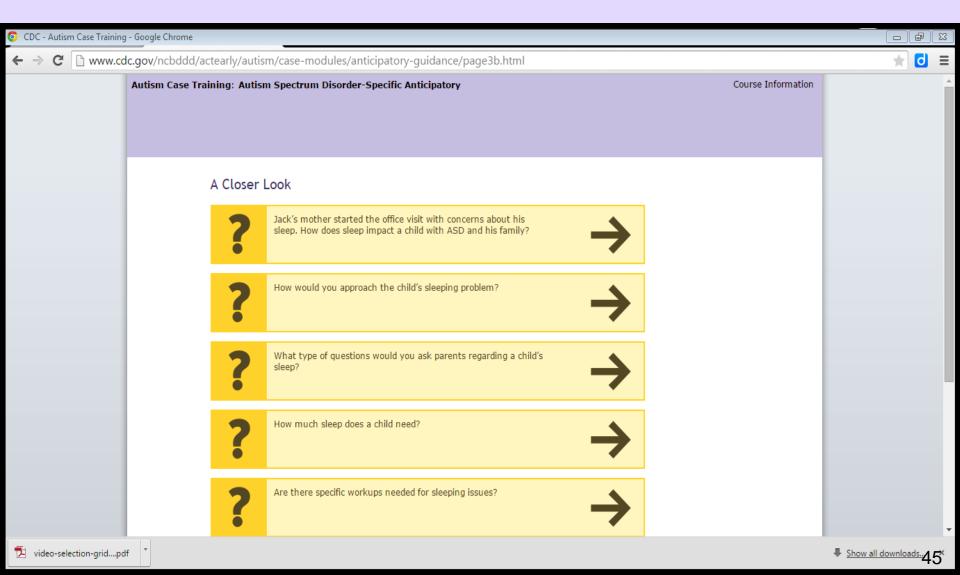


#### **Online Curriculum**

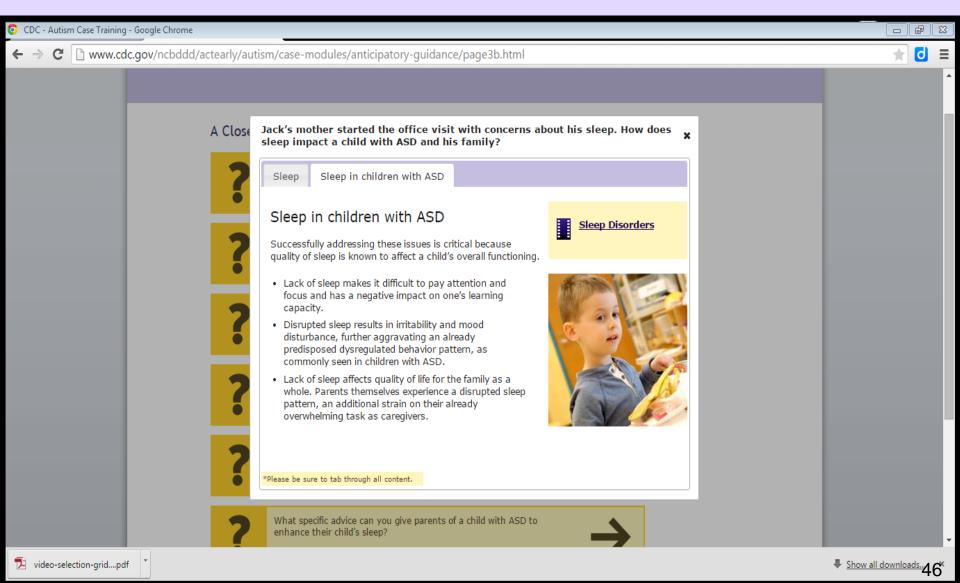
 This graphic shows the home page for accessing the online content for the ACT Curriculum.



#### Online Curriculum: Quizzes



### Additional Info and Supporting Materials



# Online Curriculum - Additional Info and Supporting Materials

 This graphic shows an example of the additional supporting materials, such as videos or resources, to aid the learner.



## Using the Curriculum: Different Teaching Scenarios



#### Learners

- Interdisciplinary Faculty
- Students, Trainees
- Paraprofessionals
- Allied Health Professionals





### **Teaching Settings**

- Typical
  - -Small group discussion
  - Large group discussion or Lecture
  - -"In the moment" using pieces of the curriculum as teaching pearls
    - Ex. Video of ABA therapy when describing it to trainee

### Using the ACT Curriculum: Factors to Consider

- Familiarity
  - Comfort level with case-based format
  - Spend time previewing material



### Using the ACT Curriculum: Factors to Consider

- Amount of time
  - -30 minute case built in
  - Pick 1-2 cases
- Very flexible
  - -Content
  - Audience





#### Continuing Education Credit



#### Free Web-Based CE Course from CDC **Endorsed by AAP**

A free web-based CE course designed to help health care professionals gain knowledge and skills to improve early identification, diagnosis, and care of children with ASD.

Now approved for MOC Part 2!

www.cdc.gov/AutismCaseTraining

Learn the Signs. Act Early.

- Continuing Medical **Education for Physicians** (CME)
- American Board of **Pediatrics Maintenance** of Certification (MOC, through 2017)



#### Continuing Education Credit



### Autism Case Training (ACT) Free Web-Based CE Course from CDC Endorsed by AAP

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Now approved for MOC Part 2!

www.cdc.gov/AutismCaseTraining

Learn the Signs. Act Early.

- Continuing Nursing Education (CNE)
- Intnl. Association for Continuing Education and Training (IACET)
   Continuing Education
   Units (CEU)

# Teaching Scenarios Toni Whitaker, MD



#### **Teaching Scenarios**

- Pediatric Residents
  - Senior Residents on monthly
     Developmental rotation
    - Lecture + Online Curriculum components
    - "100%" satisfaction
  - -Intern introductory lecture



### **Teaching Scenarios**

- Varied medical audience
  - Grand Rounds: Students, residents, academic & community faculty
- Interdisciplinary trainees
  - Classroom + web-based interactive learning series



### **Teaching Scenarios:**

Elaine M. Gabovitch, MPA





#### **Teaching Scenarios**

- Annual conferences
  - –Early Intervention providers (MEIC Conference)





#### **Teaching Scenarios**

- Annual didactic classroom guest lectures
  - Speech-Language Pathology graduate & doctoral students (UMass Amherst)
  - Child Life specialists & special educators (Wheelock College)
  - Family navigators (Boston Medical Center)
  - Early Intervention staff (Thom EI)





### Speech-Language Pathologists

- UMass Amherst SLP graduate & doctoral program
  - –(annual 3 hour in-class lecture since 2012)
- Modules: Early Warning Signs & Screening for Autism





### Speech-Language Pathologists

- Feedback:
  - Highly rated annually (80-90%)
  - Practical application includes:
     administering the M-CHAT, using
     materials when counseling families,
     directing families to available
     resources, taking parents concerns
     into consideration



### Speech-Language Pathologists

#### Feedback:

- Requested Modules 5-7 for future presentations (treatment, etc.)
- Found family/parent perspective helpful (85-90%)
- Practical resource; ACT useful for future training to SLPs
- Posted ACT links on UMass Amherst
   SLP web site



#### **Early Intervention Providers**

- Annual MEIC Conference (2012, 2014 & 2015)
- Multi-disciplinary audience (for CE credits)
- Combination CDC & MA modules (2 hour):
  - 2012: Early Warning Signs, red flags (93)
  - 2014 (Keynote): Communicating Concerns (143)
  - 2015: 2<sup>nd</sup> level screener, cultural focus (34)





#### **Early Intervention Providers**

- Feedback:
  - Learning objectives: 72-73% well met;24-27% met
  - Amount of learning: 4.22 avg rating;35% great deal; 53% good bit
  - Ratings: 64-76% excellent; 24-34% good; 98% want it offered in future





# Child Life Specialists, Special Educators & Family Navigators

- Wheelock College, Boston (Summer & Fall '14; Summer '15)
- Boston Medical Center (Spring 2015)





# Child Life Specialists, Special Educators & Family Navigators

- Combination CDC & MA modules (3 hours)
  - Introducing LTSAE to Early Childhood Educators
  - Early Warning Signs
  - Screening for Autism
  - Considering Culture in Autism Screening (MA Act Early training)



# Child Life Specialists, Special Educators & Family Navigators

- Feedback:
  - See an important role in screening & sharing concerns
  - Plan to use LTSAE resources with families



## Teaching Scenarios: Stephanie Weber, PsyD





### **Teaching Scenarios**

- LEND Trainees
  - –Classroom-based & project specific

- Early Childhood Care Providers
  - -Project specific & Outreach







### **Teaching Scenarios**

- Medical Technical Assistance and Policy Program (MEDTAPP) Healthcare Access Initiative Grant Learners
  - Classroom-based using cases
- Pediatric Residents
  - -Train-the-Trainer





#### Thank You

### To view the curriculum, visit www.cdc.gov/AutismCaseTraining

Telephone, 1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov

Web: www.cdc.gov

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#### **QUESTIONS?**

