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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www.cdc.gov/actearly
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Assistant Professor of Pediatrics
UHCMC/Rainbow Babies & Children’s Hospital

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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

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www.cdc.gov/actearly
From Vision to Collaboration

CDC and MCHB Developmental-Behavioral Pediatrics

Yale

Stanford

U. Of Oklahoma

Albert Einstein

Case Western

Rhode Island Hospital

Boston Medical Center

U of Arkansas

Children's Hosp of Penn

Children's Hosp of Boston

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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
- 12/2009: Case Revisions
- 2-5/2010: Clearance
- 5-9/2011: Pilot Testing and Analysis
- 10/2010-2/2011: Pilot Test Revisions
- 2-6/2011: Pre/Post Test Evaluation and HHS Clearance
- 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.

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

• 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
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

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Curriculum Modules

• This graphic shows the 7 different modules covering 3 topic areas.
## At a Glance

<table>
<thead>
<tr>
<th>Early Warning Signs of Autism</th>
<th>Screening for Autism</th>
<th>Communicating Abnormal Results</th>
<th>Making an Autism Diagnosis</th>
<th>Early Intervention and Education</th>
<th>Treatments for Autism</th>
<th>Anticipatory Guidance</th>
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</table>

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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
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Sample from Facilitator Guide

Early Warning Signs of Autism

Case Study Part I

You are attending a family reunion and during a quiet moment, your cousin Elizabeth takes you aside and asks you what you think about the development of her son, Mark. She seems a bit worried about his behavior. Mark is a 2-year-old boy, and he seems different from the other children on the playground. Although he is an affable and happy little boy, his behavior can be unpredictable. He is very shy and has terrible temper tantrums. It is usually impossible to reason with him. Small changes in his routine throw him off, and Elizabeth is worried that he won’t be able to handle the crowd at this family gathering without causing a scene. You ask her what her pediatrician thinks.

Elizabeth tells you that Mark has been seen by his pediatrician, and he has expressed concerns about his temper tantrums. The doctor has told her to “give him some time; he is still young and will likely grow out of this phase.” Mark enjoys going to the doctor’s office because they have a large tropical fish tank, and he has generally been calm in that setting. Mark’s doctors have all been very reassuring, and think he has a bad case of the “terrible twos.”

You have been pre-occupied by your relatives, and you honestly haven’t been paying too much attention to Mark. You know that your cousin is a loving and caring mother. Elizabeth and her husband, Sam, had fertility struggles, and she was thrilled to give birth to Mark after a grueling course of in vitro fertilization treatments. You know that Mark was born full term without any complications. You heard that he was a busy baby, but that he was otherwise healthy.

Case Study Part I: Discussion Question

After reading the case, ask participants, “What stands out to you about the mother’s concerns?”

Case Study Part I: Potential Prompts

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?

2. How can you determine the difference between a child with a shy temperament and a child with an autism spectrum disorder?

3. As you begin to ask Elizabeth about her son, what other developmental milestones do you want to consider?
Sample from Facilitator Guide

• This graphic shows a sample of a guide for module facilitators.
Facilitator Guide Icons

• POST-IT NOTE – Tips and clarification

• CALL-OUT - Step-by-step teaching instructions

• :30 – Helps if have only 30 minutes to teach
Facilitator Guide Icons

• PAPER - Handout could be introduced

• SLIDE - Optional slide presentation

• FILMSTRIP – Slide with a video

I. Hallmark Dev. Milestones
Slide 3
Slide 6 Joint Attn.
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
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

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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

**Key:**
- ● Most relevant case for video
- ○ Supplementary information about case in video

### Early Warning Signs of ASD

<table>
<thead>
<tr>
<th>Observation</th>
<th>Communication Concerns: Screening and Diagnosing Results</th>
<th>Making an ASD Diagnosis</th>
<th>Early Intervention &amp; Education</th>
<th>Treatment for ASD</th>
<th>ASD-Specific Anticipatory Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boy Drawing Bully</td>
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<td>Difficulty with Transitions: Joseph, 4 yrs. 4 mos.</td>
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<td>Eye Contact: Leghomin, 2 yrs. 9 mos.</td>
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<td>Initiation: James, 3 yrs. and Alex, 5 yrs.</td>
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<td>Inability to Locate Body Parts: Blake, 3 yrs. 1 mos.</td>
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<td>Inappropriately Play: Erin, 11 mos.</td>
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<td>Joint Attention: Movah, 15 mos.</td>
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<td>Lack of Response to Name: Eshu, 18 mos.</td>
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<td>Looking at Book with Mom: Kallie, 14 mos.</td>
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<td>Nathan &amp; Ben, 1 yr. 7 mos.</td>
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<td>Painting to Body Parts</td>
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<td>Reading Sequences</td>
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<td>Response To Name: Kila, 12 mos.</td>
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<td>Rubens: Alexa, 3 yrs. 2 mos.</td>
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<td>Speech Milestones at 2 yrs.</td>
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<td>Tamir: Millennium, 3 yrs. 6 mos.</td>
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<td>Typical Play: Kyle, 5 yrs. 9 mos.</td>
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<td>Typical Play: Michael, 2 yrs. 6 mos.</td>
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### ASD Case Training: A Developmental-Behavioral Pediatrics Curriculum

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### Early Intervention for ASD

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Comments on Getting Diagnosis: Cariyn, Mom of Riley</td>
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<td>Comments on Getting Diagnosis: Lynnea and David, Parents of Wynon</td>
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<td>Comments on Getting Diagnosis: Nathan, 3 yrs.</td>
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<td>Communicating Concerns: Screening and Diagnosing Results</td>
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<td>Communicating Concerns: Screening and Diagnosing Results, Part 1</td>
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<td>Communicating Concerns: Screening and Diagnosing Results, Part 2</td>
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<td>Comments on Getting Diagnosis: Requiel and Anthony, Parents of f, 3 yrs.</td>
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<td>Comments on Getting Diagnosis: Ryan, Mom of Riley</td>
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<td>Comments on Getting Diagnosis: Sean, 3 yrs.</td>
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<td>Comments on Getting Diagnosis: Special Education</td>
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<td>Feeding Problems</td>
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### ASD-Specific Anticipatory Guidance

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Video Library

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

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

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

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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.
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.
Learn the Signs. Act Early.

Online Curriculum

Autism Case Training (Continuing Education)

Introduction

Welcome to the Autism Case Training (ACT) Web-based CE course. This introductory course contains three modules designed to help you better:

- Identify autism spectrum disorder.
- Assist a family through the diagnostic process,
- And care for patients with autism spectrum disorder.

Users will gain knowledge and skills to improve early identification of children with ASD and ensure timely and appropriate care.

You can select the modules most relevant to you – or take all three! Each module is eligible for CME, MOC, CNE, and CEU. Please see the additional steps required to obtain MOC Part 2 credit.

Each module contains two or three case studies based on real-life situations. You may complete all cases within a module at once or at different times. Physicians who complete all three modules and provide an accurate board certification number will also be credited 20 points toward Maintenance of Certification Part 2 through the American Board of Pediatrics. The American Board of Pediatrics portfolios will be updated to reflect credit by the 10th of the month following completion of all courses. Any modules completed after December 1 will be credited for the following year. ABP will notify you by email when points have been applied. Direct any questions about this process to www4@cdc.gov.

The following course was developed by the authors in partnership with Health Resources and Services Administration Maternal and Child Health Bureau.
Online Curriculum

• This graphic shows the home page for accessing the online content for the ACT Curriculum.
Online Curriculum: Quizzes

Autism Case Training: Autism Spectrum Disorder-Specific Anticipatory

A Closer Look

Jack's mother started the office visit with concerns about his sleep. How does sleep impact a child with ASD and his family?

How would you approach the child's sleeping problem?

What type of questions would you ask parents regarding a child's sleep?

How much sleep does a child need?

Are there specific workups needed for sleeping issues?
Jack's mother started the office visit with concerns about his sleep. How does sleep impact a child with ASD and his family?

**Sleep in children with ASD**

Successfully addressing these issues is critical because quality of sleep is known to affect a child's overall functioning.

- Lack of sleep makes it difficult to pay attention and focus and has a negative impact on one's learning capacity.
- Disrupted sleep results in irritability and mood disturbance, further aggravating an already predisposed dysregulated behavior pattern, as commonly seen in children with ASD.
- Lack of sleep affects quality of life for the family as a whole. Parents themselves experience a disrupted sleep pattern, an additional strain on their already overwhelming task as caregivers.

*Please be sure to tab through all content.*
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

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

• Continuing Nursing Education (CNE)

• Intnl. Association for Continuing Education and Training (IACET)

Continuing Education Units (CEU)

Autism Case Training (ACT)
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!

Learn the Signs. Act Early.

Learn the Signs. Act Early.

www.cdc.gov/actearly
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

- 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: 2nd 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

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
QUESTIONS?