



Update on ASD / M-CHAT-R Training

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Learning Objectives – Part 1

1. Describe the difference between developmental surveillance and screening.
2. Discuss the current diagnostic criteria (DSM-5) for Autism Spectrum Disorder
3. Outline the special healthcare needs of children with ASD.
4. Explain the elements of treatment that are necessary to provide a medical home to children with ASD.

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What is Autism Spectrum Disorder (ASD)?

**Autism is a complex
neurobiological
disorder**

- Onset before 3 years of age
- A range of abilities and disabilities
 - Intellectual disability
 - Social impairments
 - Types of unusual behaviors
 - Communication abilities
- Impairs and limits everyday functioning
- Lifelong disability



DSM-5 Criteria for ASD

*High Functioning Autism,
Asperger's, PDD*

Classic Autism

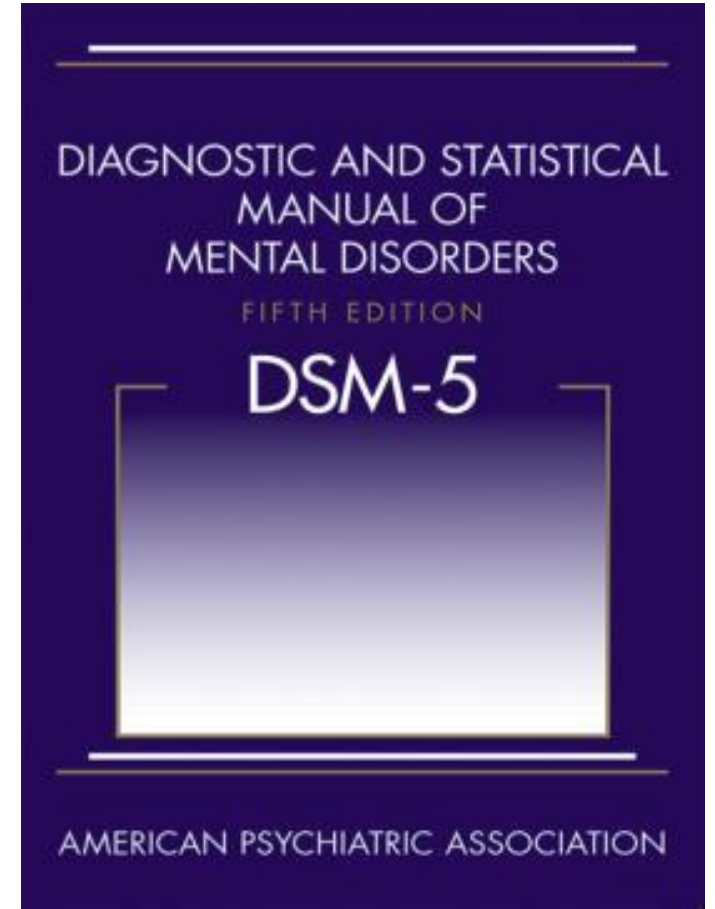


————— Autistic Spectrum Disorders —————>



DSM-5 Criteria for ASD

- Deficits in social communication and social interaction:
Must meet all 3 criteria
- Restrictive, repetitive patterns of behavior, interests or activities: **Meets 2 of 4 criteria**
- Present in the early developmental period
- Impaired function
- Not otherwise explained by other developmental problems
- Severity levels



Deficits in social communication and social interaction

1. Deficits in social-emotional reciprocity
2. Deficits in nonverbal communicative behaviors used for social interaction
3. Problems developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers)



Restricted, repetitive patterns of behavior, interests, or activities

1. Stereotyped or repetitive speech, motor movements, or use of objects
2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change
3. Highly restricted, fixated interests that are abnormal in intensity or focus
4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment



Prevalence

- **1 in 44** children in the USA
 - 22.7 per 1000, age 8 years
- Occurs in all racial, ethnic, and socioeconomic groups
- **4 X more common in boys** than among girls
- American Indian / Alaska Native children and Hispanic – less likely to be identified than White, Black, or Asian
- **> 5 million adults** in US have ASD (2.21%)
 - Higher in men than women



 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

[A-Z Index](#) [Advanced Search](#)

Morbidity and Mortality Weekly Report (MMWR)

CDC    

Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2018

Surveillance Summaries / December 3, 2021 / 70(11);1–16



BREAKING NEWS

The screenshot shows the CDC website with the following details:
- Header: CDC Centers for Disease Control and Prevention, CDC 24/7, Saving Lives. Protecting People™
- Page Title: Morbidity and Mortality Weekly Report (MMWR)
- Article Title: Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2018
- Date: December 3, 2021 / 70(11);1-16
- Author list: Matthew J. Maenner, PhD¹; Kelly A. Shaw, PhD¹; Amanda V. Bakian, PhD²; Deborah A. Bilder, MD²; Maureen S. Durkin, DrPH, PhD³; Amy Esler, PhD⁴; Sarah M. Furnier, MS²; Libby Hallas, MS⁴; Jennifer Hall-Lande, PhD⁴; Allison Hudson⁵; Michelle M. Hughes, PhD¹; Mary Patrick, MPH¹; Karen Pierce, PhD⁵; Jenny N. Poynter, PhD⁴; Angelica Salinas, MS⁵; Josephine Shenouda, MS⁷; Alison Vehorn, MS⁸; Zachary Warren, PhD⁵; John N. Constantino, MD⁹; Monica DiRienzo, MA¹; Robert T. Fitzgerald, PhD⁸; Andrea Grzybowski, MS⁶; Margaret H. Spivey¹⁰; Sydney Pettygrove, PhD¹¹; Walter Zahorodny, PhD⁷; Akilah Ali, MPH^{11,2}; Jennifer G. Andrews, PhD¹¹; Thaeer Baroud, MHSA, MA³; Johanna Gutierrez²; Amy Hewitt, PhD⁴; Li-Ching Lee, PhD¹⁰; Maya Lopez, MD⁵; Kristen Clancy Mancilla¹¹; Dedria McArthur, MPH¹; Yvette D. Schwenk, MS⁵; Anita Washington, MPH¹; Susan Williams¹; Mary E. Cogswell, DrPH¹ (View author affiliations)
- Article Metrics: Altmetric score of 656. Breakdown: News (62), Blogs (1), Twitter (239), Facebook (2), Mendeley (64).
- Summary Card: 1 IN 44 8 YEAR-OLD CHILDREN WERE IDENTIFIED WITH AUTISM IN 2018. Learn the signs.

Timing of the Diagnosis of Autism in African American Children

John N. Constantino, MD,^{1*} Anna M. Abbacchi, MS,^{2*} Celine Saulnier, PhD,^{3*} Cheryl Klairman, PhD,⁴ David S. Mandell, ScD,⁵ Yi Zhang, MS,⁶ Zoe Hawks, MA,⁷ Julianna Bates, PhD,⁸ Ami Klin, PhD,⁹ Paul Shattuck, PhD,¹ Sophie Molholm, PhD,¹ Robert Fitzgerald, PhD,⁸ Anne Roux, MPH,¹ Jennifer K. Lowe, PhD,⁴ Daniel H. Geschwind, MD, PhD⁴



Evidence-Informed Milestones for Developmental Surveillance Tools

Developmental Surveillance	A longitudinal process that involves eliciting concerns, taking a developmental history based on milestone attainment, observing milestones and other behaviors, examining the child, and applying clinical judgment during health supervision visits
Developmental Screening	Involves the use of validated screening tools at specific ages or when surveillance reveals a concern
Diagnostic Evaluations	Conducted, typically by developmental specialists, to further evaluate and diagnose DDs in children deemed at risk through surveillance and screening processes

[Evidence-Informed Milestones for Developmental Surveillance Tools | Pediatrics | American Academy of Pediatrics \(aap.org\)](#)



AAP Developmental Screening Recs

AAP: 9, 18, and 30 months | Bill 96110

Developmental Screening Tool	Ages served
Ages and Stages Questionnaire (ASQ-3)	1 - 66 months
Brigance screens	Birth to 1 st grade
Developmental Assessment of Young Children, 2 nd edition (DAYC-2)	Birth to 5 years
Early Screening Profiles	2 years – 6 years 11 months
Parent's Evaluation of Developmental Status (PEDS)	Birth to 8 years



Polling Question

The AAP recommends screening for ASD at these ages:

- A. 12 months, 18 months
- B. 18 months, 24 months
- C. 12 months, 24 months
- D. Only at 18 months
- E. Only at 24 months



AAP ASD Screening Recs

AAP: 18 and 24 months | Bill 96110

ASD Screening Tools	Ages Served
Ages & Stages Questionnaires SE-2	1 – 72 months
Childhood Autism Spectrum Test (CAST)	5 – 11 years
Communication and Symbolic Behavior Scales (CSBS DP)	6 - 24 months
M-CHAT-R	16 - 48 months
Pervasive Developmental Disorders Screening Test-II (PDDST-II)	12 – 48 months
Social Communication Questionnaire (SCQ)	4 years old and older



Initial Assessment

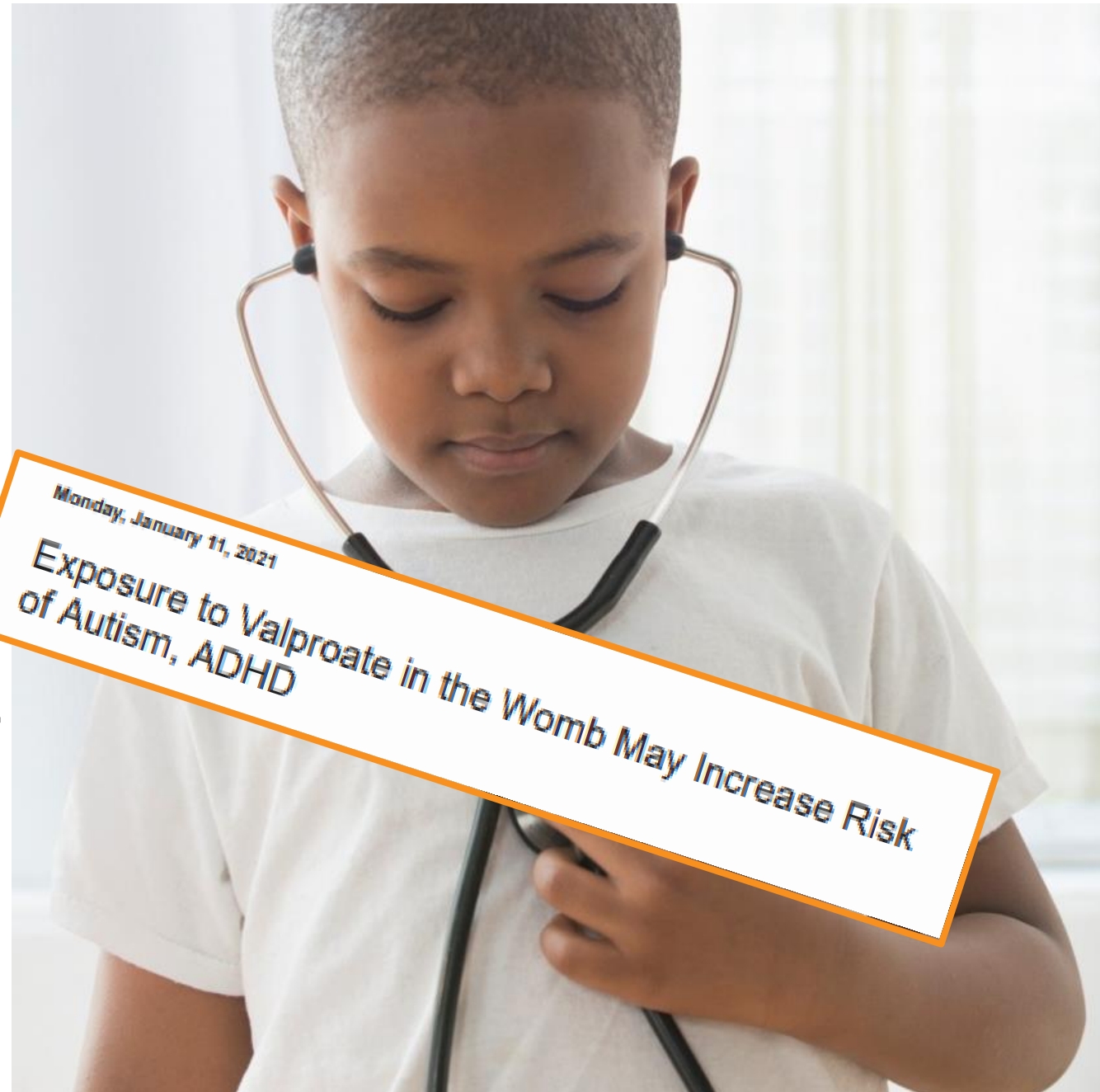
History

- Prenatal and postnatal
- Ask about seizures, sleep, nutrition / GI

Hearing / Vision

Physical / Neurological examination

- Growth, Head Circumference
- Dysmorphic features
- Neurocutaneous markings



Initial Assessment

Referrals

- Audiology
- Speech / Language
- Occupational therapy

Labs:

- Nutrition labs, lead, CBC, Ferritin, TSH
- Fragile X and CMA



Children with ASD have the least access to Medical Home Care

Lower competency
Greater need for primary
care improvement



Greater desire for
education regarding ASD



EBM - Autism Treatment

Behavioral Interventions

- Applied Behavioral Analysis
- Floor time
- Eclectic models:
 - Early Start Denver Model
 - Project Impact

Therapies

- Speech / language therapy
- Occupational therapy
- Augmentative and Alternative Communication (AAC)



Polling Question

Children with ASD have a higher rate of which medical problem?

- A. Broken bones
- B. Seizures
- C. Allergies
- D. Infectious disease



Medical Comorbidities

83% have at least **1**

GI

9-70%

Seizures

11-39%

Sleep
problems

60-80%

Common
Childhood
Illnesses

Medication

FDA approved for treating irritability associated with ASD

- Risperidone
- Aripiprazole

Treat comorbidities

- Sleep problems
- Seizures
- Hyperactivity
- Anxiety / OCD
- Depression



Autism Treatment of Comorbidities

Sleep

Restless, insomnia, OSA

GI

Selective eating, nutrition, constipation

Seizures

Use anticonvulsants with mood-stabilizing qualities

Psych

Anxiety, ADHD, irritability, aggression



Autism Treatment Network

Guidelines for Healthcare Providers



- **GI and nutrition**
 - Constipation
 - Nutrition
 - Iron Status
- **Sleep**
 - Insomnia
 - Sleep and daytime behavior
 - Sleep difficulties and medications
- **Anxiety and depression**
 - Medical and Behavioral correlates of Depression
 - Assessment and treatment of Anxiety
- **ADHD**
 - Clinical Practice Pathways
 - Adaptive functioning and Quality of Life
- **Autism and challenging behavior**
 - Psychotropic Medication
 - Irritability and problem behavior
 - Telehealth
 - Pharmacologic treatment of severe irritability
- **Behavioral therapy**
 - Nonmedical interventions
 - Long-term outcomes from short-term interventions
- **Alternative medicine**
 - CAM and “Choosing Wisely”
- **Special populations**
 - ASD and DD in children from immigrant families
 - Diagnosis and co-occurring symptoms in adopted children



Medical Home Care is Coordinated Care

- Early Intervention – birth to 3 years
- School Services
 - Preschool - 3-5 years
 - Then, 5-22 years
- State Services
- Parent Support Services / Respite
- Community Organizations
- What therapies are available and from where?



Investigate Resources in Your Community

Strategies that Support Families Support the Child

- Assess family strength and coping
- Signs of couple conflict/parental depression
- Ongoing education
- Coordination of care
- Attention to sibling needs
- Transition to adult care



Polling Question

Children with ASD may indicate pain by:

- A. Self-injurious behavior
- B. Crying / yelling
- C. Eating
- D. A and B
- E. All of the above



The Case of Ryan

Meet Ryan



- 5 years old, nonverbal, autism
- New self-injurious behavior:
 - slamming into tables, desks
- No other changes (family, school, social)
- No signs or symptoms of illness
- Independent in dressing, toileting, eating



The Case of Eduardo

Meet Eduardo



- 15 years old, severe autism, non-verbal
- On risperidone per psychiatrist
- New onset self-injurious behavior:
punching his left cheek repeatedly
- No changes in family, school, social life
- Bruising and swelling of his left cheek



Sensory Processing Problems

Hyposensitivity

- High pain tolerance or
- Unusual response
- Expect the unexpected - Ingestions

Tactile hypersensitivity

- Become upset if touched
- Band-Aids, other adhesive
- Examine slowly

Other Hypersensitivities

- Sound, Chaos, Taste / texture

Behaviors

- Significance of behavior?
- Pain, upset, or self-soothing?
- Level of cognitive, verbal, social interaction abilities?
- Best way to communicate / interact with this patient?
- What calms and soothes the patient?
 - What has the opposite effect?
- What can be done to facilitate the medical care of the patient?

Questions to Consider

- **Disruptive** – screaming, tantrums
- **Aggression** – hitting, biting, pinching
- **Self-injurious** – head-banging, self-punching, slamming into desks
- **Self-stimulatory** – rocking, masturbating, self-spinning



BREAKING NEWS

Primary Care Autism Screening and Later Autism Diagnosis

Paul S. Carbone, MD,^a Kathleen Campbell, MD, MHSc,^a Jacob Wilkes, BS,^a Gregory J. Stoddard, MPH, MBA,^a Kelly Huynh, M
Paul C. Young, MD,^a Terisa P. Gabrielsen, PhD^c

- Of 36,233 toddlers, 73% were screened; 1.4% later diagnosed with ASD
- Hispanic children were less likely to be screened
- Family physicians were less likely to screen.
- AAFP does not recommend universal ASD screening.
- FPs provide 16% to 21% of pediatric care
- Compared with unscreened children, screen-positive children were more likely to be dx'd with ASD and dx'd younger.
- M-CHAT sensitivity for ASD dx was 33.1%; positive predictive value = 17.8%
- Providers routinely omitted the M-CHAT follow-up interview and had uneven referral patterns



BREAKING NEWS

Review > Brain Sci. 2020 Apr 7;10(4):219. doi: 10.3390/brainsci10040219.

Efficacy and Safety of Melatonin Treatment in Children with Autism Spectrum Disorder and Attention-Deficit/Hyperactivity Disorder—A Review of the Literature

Beata Rzepka-Migut ¹, Justyna Paprocka ²

Affiliations + expand

PMID: 32272607 PMCID: PMC7226342 DOI: 10.3390/brainsci10040219

[Free PMC article](#)

NIH National Center for Complementary and Integrative Health

Home > Health Information > Provider > Digest > Autism Spectrum Disorder and Complementary Health Approaches: What the Science Says

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NCCIH Clinical Digest
for health professionals

Autism Spectrum Disorder and Complementary Health Approaches: What the Science Says

April 2021

Clinical Guidelines, Scientific Literature, Info for Patients:
[Autism Spectrum Disorder and Complementary Health Approaches](#)

Wandering Among Preschool Children with and Without Autism Spectrum Disorder

[Lisa D. Wiggins](#), PhD,^{*} [Carolyn DiGuseppi](#), MD PhD MPH,[†] [Laura Schieve](#), PhD,^{*} [Eric Moody](#), PhD,[†] [Gnakub Soke](#), MD PhD MPH,^{*} [Ellen Giarelli](#), PhD,[‡] and [Susan Levy](#), MD[§]

[J Dev Behav Pediatr. 2020 May; 41\(4\): 251–257.](#)



BREAKING NEWS

Autism Spectrum Disorder in Teenagers & Adults

A greater number of children identified with ASD has led to a growing interest in the transition to adolescence and adulthood. For most young people, including those with ASD, adolescence and young adulthood are filled with new challenges, responsibilities, and opportunities. However, research suggests fewer young people with ASD have the same opportunities as their peers without ASD.

- High rates of unemployment or under-employment [1-7]
- Low participation in education beyond high school [4, 7, 8]
- Majority continue to live with family members or relatives [1, 9]
- Limited opportunity for community or social activities—nearly 40% spend little or no time with friends [5, 10-12]

In addition, individuals with ASD may experience changes in their ASD symptoms, behaviors, and co-occurring health conditions during adolescence and young adulthood. These changes can affect their ability to function and participate in the community.

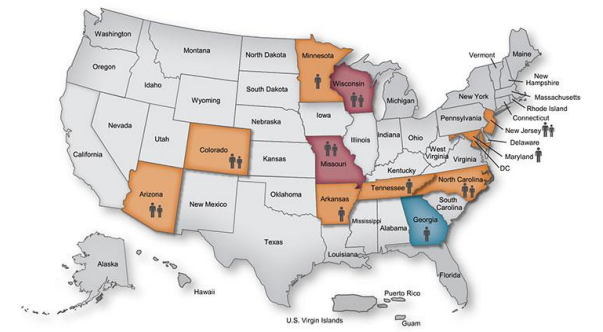
CDC Centers for Disease Control and Prevention
 CDC 24/7: Saving Lives, Protecting People™

Autism Spectrum Disorder (ASD)

Centers for Disease Control and Prevention
MMWR
 Weekly / Vol. 70 / No. 17
 Morbidity and Mortality Weekly Report
 April 30, 2021

Health Status and Health Care Use Among Adolescents Identified With and Without Autism in Early Childhood — Four U.S. Sites, 2018–2020

Current ADDM Network Sites, Tracking Years 2014–2016



Monitoring 8-year-olds
 Monitoring 4- and 8-year-olds
 Autism, Cerebral Palsy
 Autism, Intellectual Disability
 Autism, Cerebral Palsy, and Intellectual Disability



Best Practice

Transition planning / designated breaks

Behavioral techniques

Sensory understanding - Wrap in blanket with arms inside

When a child is sick, common problems may include anxiety, sensory processing problems, and communication

Family-centered care - Collaborate with family members to develop the optimal plan of care for the child

Decrease environmental stimuli – Dim lights, decrease noise, limit the number of clinicians, avoid known agitating stimuli

Provide as much consistency as possible / always let patient know what to expect

Use visual / other communication systems



Best Practice

Person-first vs Identity-first vs Person-Centered

Emphasize abilities, not limitations.

Do not use language that suggests the lack of something.

Emphasize the need for accessibility, not disability.

Do not use offensive language / Avoid language that implies negative stereotypes.

Do not portray people with disabilities as inspirational only because of their disability.

If you are ever unsure, ask the person how he or she would like to be described – remember, preferences can vary



Best Practice

Follow Screening Guidelines

Identify Early

Provide Medical Home / Family-centered Care

Shared Decision Making

Collaboration of *providers and staff with family members is crucial*

Empower the parent and patient



Listen to parents' and patient's concerns.

Remember – Parents and patients are the Experts!



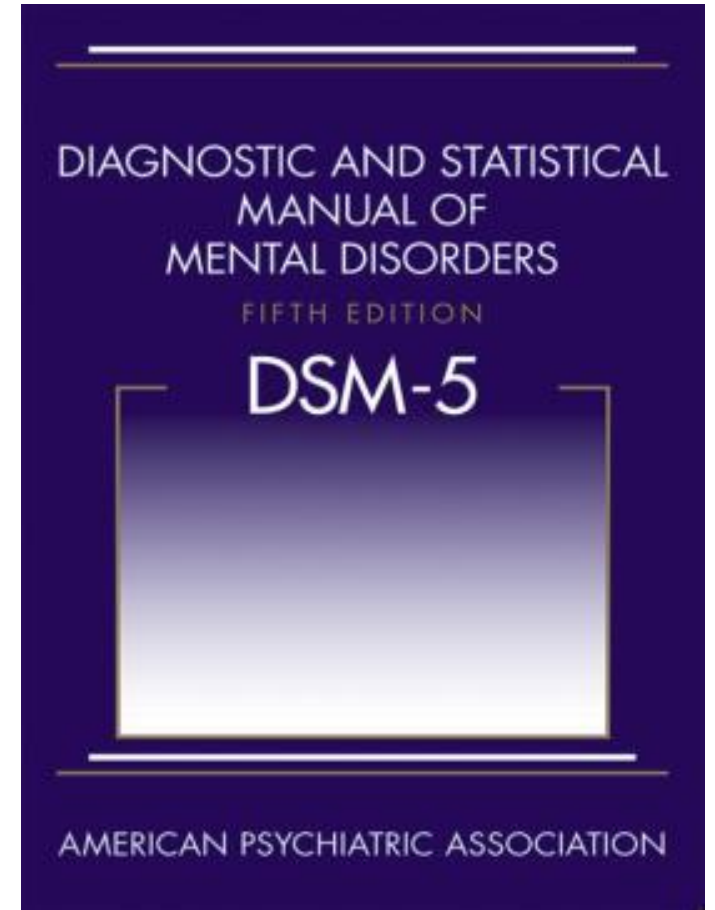


APPENDIX

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DSM-5 Criteria for ASD

- Deficits in social communication and social interaction: **Must meet all 3 criteria**
- Restrictive, repetitive patterns of behavior, interests or activities: **Meets 2 of 4 criteria**
- Must be present in the early developmental period
- Impaired function
- Not otherwise explained by other developmental problems
- Severity levels



Deficits in social communication and social interaction

1. Deficits in social-emotional reciprocity

- Unaware of other people's feelings
- Problems identifying / understanding feelings
- Lack of joint attention / reduced sharing of interests, emotions, and affect
- Abnormal social approach
- Lack of initiation of social interaction
- Failure of normal back-and-forth conversation



Deficits in social communication and social interaction

2. Deficits in nonverbal communicative behaviors used for social interaction

- Poor eye contact
- No social smile / lack of facial expression
- Deficits in understanding and use of nonverbal communication
- Does not point or gesture to communicate or share interest in something
- Poorly integrated verbal and nonverbal communication



Deficits in social communication and social interaction

3. Problems developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers)

- Difficulties adjusting behavior to suit different social contexts
- Difficulties in sharing imaginative play
- Problems initiating interactions, responding to others, sustaining interactions
- Prefers to be alone
- Absence of interest in people



Restricted, repetitive patterns of behavior, interests, or activities

1. Stereotyped or repetitive speech, motor movements, or use of objects

- Echolalia – immediate and delayed
- Idiosyncratic phrases
- Hand flapping, spinning, toe-walking
- Repetitive use of objects



Restricted, repetitive patterns of behavior, interests, or activities

2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change

- Motoric rituals
- Insistence on same route or food
- Repetitive questioning
- Extreme distress at small changes



Restricted, repetitive patterns of behavior, interests, or activities

3. Highly restricted, fixated interests that are abnormal in intensity or focus

- Restricted interests with a specific toy (or part of a toy), hobby, or topic
- Strong attachment or preoccupation with unusual objects
- Excessively circumscribed or perseverative interests



Restricted, repetitive patterns of behavior, interests, or activities

4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment

- Hypersensitive to loud noises, hair-washing, nail-cutting, tags, bright lights, food textures, chaotic environments, smells
- Sensory-seeking – licking, jumping, deep pressure
- Excessive smelling or touching objects
- Fascination with lights or spinning objects
- Indifference to pain / heat / cold





Learning Objectives – Part 2


1. Identify resources for ASD screening
2. Demonstrate accurate scoring of M-CHAT-R
3. Describe when to use follow-up questions on M-CHAT-R

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BREAKING NEWS

SPECIAL ARTICLE | FEBRUARY 08 2022

Evidence-Informed Milestones for Developmental Surveillance Tools

Jennifer M. Zubler, MD ; Lisa D. Wiggins, PhD; Michelle M. Macias, MD; Toni M. Whitaker, MD; Judith S. Shaw, EdD, MPH, RN; Jane K. Squires, PhD; Julie A. Pajek, PhD; Rebecca B. Wolf, MA; Karnesha S. Slaughter, MPH; Amber S. Broughton, MPH; Krysta L. Gerndt, MPH; Bethany J. Mlodoch; Paul H. Lipkin, MD

- The CDC checklists support developmental surveillance and other important components of the early identification process by PCPs, including developmental promotion, parent education and engagement, communication of developmental progress and concerns, and developmental screening.
- Milestone checklists used in surveillance are intended to prompt conversations, review developmental history and progress, and elicit concerns.
- The CDC checklists should not replace universal developmental screening, provide a risk categorization, or diagnose DDs.
- The SMEs recommended that most children ($\geq 75\%$) should be expected to achieve milestones by a given age
- Surveillance of social-emotional and cognitive milestones supports early identification of children with intellectual and social-emotional disorders, including autism spectrum disorder.



Upon completion of all topics, you can:

- Identify strategies for developmental surveillance, screening, referral, and follow-up for care delivery.
- Identify resources for each step in the early identification and intervention process for developmental delays and disabilities.
- Explore resources and strategies to engage, communicate, and collaborate with stakeholders during the developmental surveillance, screening, referral, and follow-up processes.
- Develop strategies for tracking and sustaining successes in dev screening, referral, and follow-up.
- **Free MOC and CME credits available**





ONLINE COURSE

Innovative Strategies for Improving Developmental Surveillance and Screening

PediaLink

The AAP Online Learning Center



The banner features a dark blue header with the text 'ONLINE COURSE' in white. Below this is a large blue section with the course title 'Innovative Strategies for Improving Developmental Surveillance and Screening' in white. Underneath is the 'PediaLink' logo in blue, with the tagline 'The AAP Online Learning Center' in a smaller blue font. The bottom half of the banner is split into two images: on the left, a doctor in a white coat points at a tablet displaying the PediaLink website; on the right, a father in a light-colored shirt smiles as he pushes a young child with glasses on a red wooden toy car outdoors.

Innovative Strategies for Improving Developmental Surveillance and Screening: Lessons Learned from the COVID-19 Pandemic

Highlights of Lessons Learned:

- Families/caregivers may need alternate options to access healthcare. Consider offering multiple modalities for appointments and communication e.g., telehealth, telephone, in-person, portal communication.
- Process changes may require trial and error in combination with innovative strategies to accommodate families/caregivers and achieve desired goals.
- Early identification processes involve front desk staff, medical assistants, nurses, pediatricians, and administration. Engage all team members and empower them in their responsibilities and roles to support families/caregivers.
- Find opportunities to enhance and/or utilize existing functions in electronic health record platforms to aid in practice processes, communication, and workflow.
- Be flexible with families and persistent in following up with early intervention (EI) agencies; educate families/caregivers and team members on EI agency operations.



Innovative Strategies for Improving Developmental Surveillance and Screening: Lessons Learned from the COVID-19 Pandemic

Developmental Surveillance:

- Use tools and program such as CDC's [milestone checklists](#), [Reach Out and Read](#), [developmental coaching models](#), [Help Me Grow](#), and [Promoting First Relationships](#) to engage families/caregivers in developmental surveillance.
- Utilize innate opportunities to conduct surveillance during telehealth visits e.g., assess the home environment, ask about toys and books. Practice cultural humility and acknowledge that families are sharing their home/family life with you.
- Explain to families/caregivers the importance of monitoring a child's developmental milestones through well-child visits, even during a public health emergency.
- Prompt families/caregivers to share any developmental findings or concerns from early childhood professionals (e.g., preschool teachers, day-care, home visitors).
- Ensure tools and resources shared with families/caregivers are easy to read, culturally appropriate, and available in multiple languages.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



Innovative Strategies for Improving Developmental Surveillance and Screening: Lessons Learned from the COVID-19 Pandemic

Developmental Screening:

- Integrate developmental screeners through a patient portal or email screeners to families/caregivers prior to visit.
- Employ an electronic health record system that permits communication with families/caregivers.
- Encourage and explain to families/caregivers the importance of completing developmental screening tools.
- Utilize staff to help families/caregivers complete screening questionnaires over the phone for a telehealth appointment and explain developmental screening questions.

Referral and Follow-up:

- Assist families/caregivers in contacting the local early intervention program, specialists' offices for diagnostic evaluations, and other agencies/service providers you referred them to.
- Stay up to date on referral agency operations (e.g., in-person or virtual services, expected wait times). Share this information with families/caregivers, so they know what to expect.
- Encourage and explain to families/caregivers the importance of making referral appointments.
- Provide ways for families/caregivers to ask questions and discuss difficulties they may encounter with developmental referrals.
- Recognize that cultural differences may exist in families' concerns about development and developmental delays. Cultural liaisons or family advisors may provide insight on how to communicate developmental screening results and any next steps.



Polling Question

Do you regularly use an Autism Screening tool in your practice?

- A. Yes
- B. No



AAP ASD Screening Recs

AAP: 18 and 24 months | Bill 96110

ASD Screening Tools	Ages Served
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Pervasive Developmental Disorders Screening Test-II (PDDST-II)	12 – 48 months
Social Communication Questionnaire (SCQ)	4 years old and older



Polling Question

What ASD Screening tools do you use?

- A. Ages and Stages Questionnaire SE (ASQ-SE)
- B. Communication and Symbolic Behavior Scales (CSBS)
- C. M-CHAT-R
- D. Pervasive Developmental Disorder Screening Test (PDDST-II)



M-CHAT™ - Autism Screening

M-CHAT™ *Diana L. Robins, Ph.D.*

[HOME](#) [M-CHAT-R/F™](#) [M-CHAT™](#) [TASI](#) [GLOBAL SCIENCE](#) [REFERENCES](#) [RESOURCES](#) [FAQ/CONTACT](#)

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Welcome to the Official M-CHAT™
Modified Checklist for Autism in Toddlers

M-CHAT-R Instructions for Use

- 18- and 24-month well-child visits or when clinician or parent has concerns
- Parent completion

M-CHAT-R™

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

	Yes	No
1. If you point at something across the room, does your child look at it? (FOR EXAMPLE , if you point at a toy or an animal, does your child look at the toy or animal?)		
2. Have you ever wondered if your child might be deaf?		
3. Does your child play pretend or make-believe? (FOR EXAMPLE , pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?)		
4. Does your child like climbing on things? (FOR EXAMPLE , furniture, playground equipment, or stairs)		
5. Does your child make unusual finger movements near his or her eyes? (FOR EXAMPLE , does your child wiggle his or her fingers close to his or her eyes?)		
6. Does your child point with one finger to ask for something or to get help? (FOR EXAMPLE , pointing to a snack or toy that is out of reach)		
7. Does your child point with one finger to show you something interesting? (FOR EXAMPLE , pointing to an airplane in the sky or a big truck in the road)		
8. Is your child interested in other children? (FOR EXAMPLE , does your child watch other children, smile at them, or go to them?)		
9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? (FOR EXAMPLE , showing you a flower, a stuffed animal, or a toy truck)		
10. Does your child respond when you call his or her name? (FOR EXAMPLE , does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?)		
11. When you smile at your child, does he or she smile back at you?	Yes	No
12. Does your child get upset by everyday noises? (FOR EXAMPLE , does your child scream or cry to noise such as a vacuum cleaner or loud music?)	Yes	No
13. Does your child walk?	Yes	No
14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her?	Yes	No
15. Does your child try to copy what you do? (FOR EXAMPLE , wave bye-bye, clap, or make a funny noise when you do)	Yes	No
16. If you turn your head to look at something, does your child look around to see what you are looking at?	Yes	No
17. Does your child try to get you to watch him or her? (FOR EXAMPLE , does your child look at you for praise, or say “look” or “watch me”?)	Yes	No
18. Does your child understand when you tell him or her to do something? (FOR EXAMPLE , if you don’t point, can your child understand “put the book on the chair” or “bring me the blanket”?)	Yes	No
19. If something new happens, does your child look at your face to see how you feel about it? (FOR EXAMPLE , if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?)	Yes	No
20. Does your child like movement activities? (FOR EXAMPLE , being swung or bounced on your knee)	Yes	No



Polling Question

When is it appropriate to complete the follow-up question interview with the M-CHAT-R?

- A. Score is Low Risk (Total score = 0-2)
- B. Score is Medium Risk (Total score = 3-7)
- C. Score is High Risk (Total score = 8-20)



M-CHAT-R Instructions for Use

- MA / RN can score (<2 minutes)
- Scoring Algorithm:
 - For all items, except 2, 5, and 12, the response “NO” indicates ASD risk
 - For items 2, 5, and 12, “YES” indicates ASD risk

Scoring Algorithm

For all items except 2, 5, and 12, the response “NO” indicates ASD risk; for items 2, 5, and 12, “YES” indicates ASD risk. The following algorithm maximizes psychometric properties of the M-CHAT-R:

LOW-RISK: Total Score is 0-2; if child is younger than 24 months, screen again after second birthday. No further action required unless surveillance indicates risk for ASD.

MEDIUM-RISK: Total Score is 3-7; Administer the Follow-Up (second stage of M-CHAT-R/F) to get additional information about at-risk responses. If M-CHAT-R/F score remains at 2 or higher, the child has screened positive. Action required: refer child for diagnostic evaluation and eligibility evaluation for early intervention. If score on Follow-Up is 0-1, child has screened negative. No further action required unless surveillance indicates risk for ASD. Child should be rescreened at future well-child visits.

HIGH-RISK: Total Score is 8-20; It is acceptable to bypass the Follow-Up and refer immediately for diagnostic evaluation and eligibility evaluation for early intervention.



M-CHAT-R Instructions for Use

The Follow-up interview is completed by the clinician if Total Score = 3-7, “Medium Risk”.

- If the child screens positive, select the follow-up items based on which items the child failed on the M-CHAT-R.
- Only the items that were originally failed need to be administered for a complete interview.
- Each page of the interview corresponds to one item from the M-CHAT-R.
- Follow the flowchart format, asking questions until a Pass or Fail is scored.
- If a parent answers with “maybe”, ask whether most often the answer is “yes” or “no” and continue interview according to that response.



M-CHAT-R Instructions Follow-up Interview

[M-CHAT-R/F™ - Guidelines for Use \(mchatscreen.com\)](https://mchatscreen.com)



M-CHAT-R

Instructions

Follow-up Interview

Question 1

1. If you point at something across the room, does _____ look at it?

Yes

No

Please give me an example of how he/she will respond if you point at something (*If parent does not give a PASS example below, ask each individually.*)

If you point at something, what does your child typically do?

Does he/she ...
PASS examples

Look at object?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Point to object?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Look and comment on object?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Look if you point and say "look!"?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Does he/she ...
FAIL examples

Ignores you?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Look around room randomly?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Look at your finger?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Yes only to
PASS
example(s)

Yes to both **PASS**
and **FAIL** examples

Yes only to
FAIL
example(s)

PASS

FAIL

Which one does
he/she do most
often?

Most often is
PASS example

Most often is
FAIL example

PASS

FAIL



M-CHAT-R

Instructions

Follow-up Interview

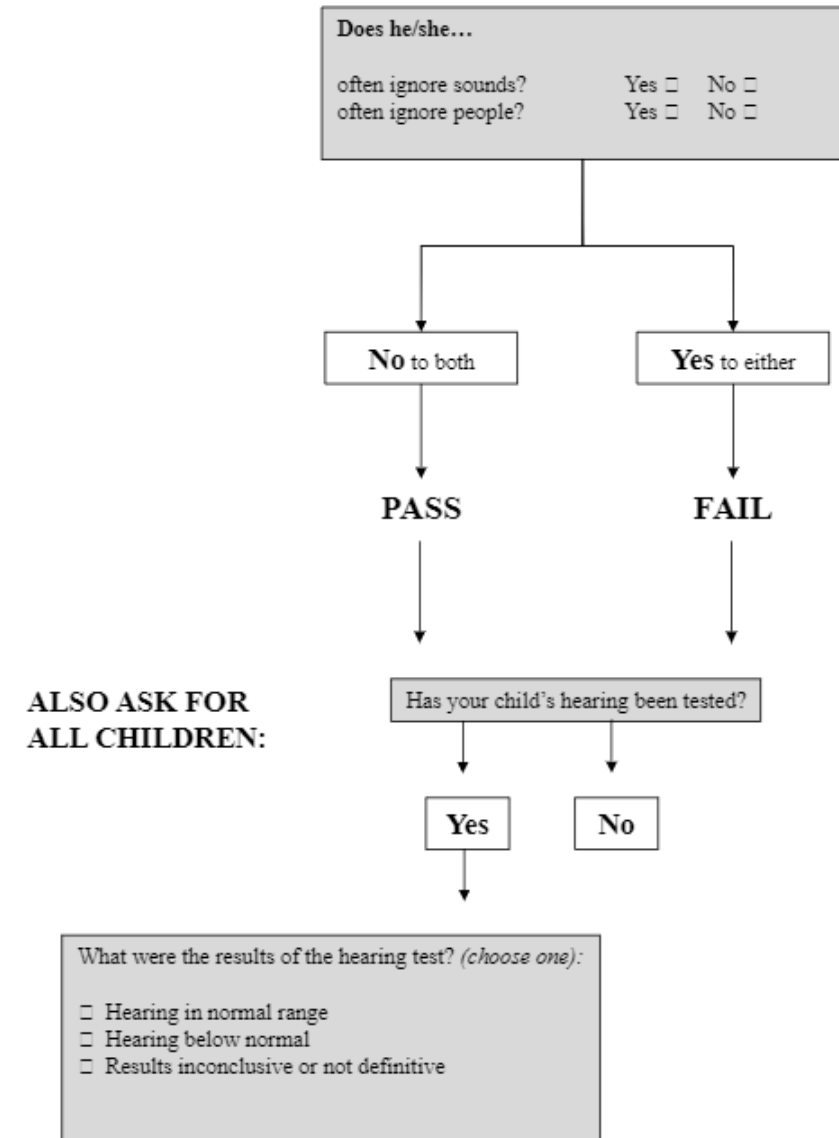
Question 2

[M-CHAT-R/F™ - Guidelines for Use \(mchatscreen.com\)](http://mchatscreen.com)



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2. You reported that you have wondered if you child is deaf. What led you to wonder that?



**ALSO ASK FOR
ALL CHILDREN:**

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M-CHAT-R

Instructions

Follow-up Interview

Question 3

3. Does _____ play pretend or make-believe?

Yes

No

Please give me an example of his/her pretend play. (If parent does not give a PASS example below, ask each individually.)

Does he/she usually...

Pretend to drink from a toy cup?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to eat from a toy spoon or fork?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to talk on the telephone?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to feed a doll or stuffed animal with real or imaginary food?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Push a car as if it is going along a pretend road?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to be a robot, an airplane, a ballerina, or any other favorite character?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Put a toy pot on a pretend stove?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Stir imaginary food?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Put an action figure or doll into a car or truck as if it is the driver or passenger?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to vacuum the rug, sweep the floor, or the mow lawn?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other (describe)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Yes to any

No to all

PASS

FAIL

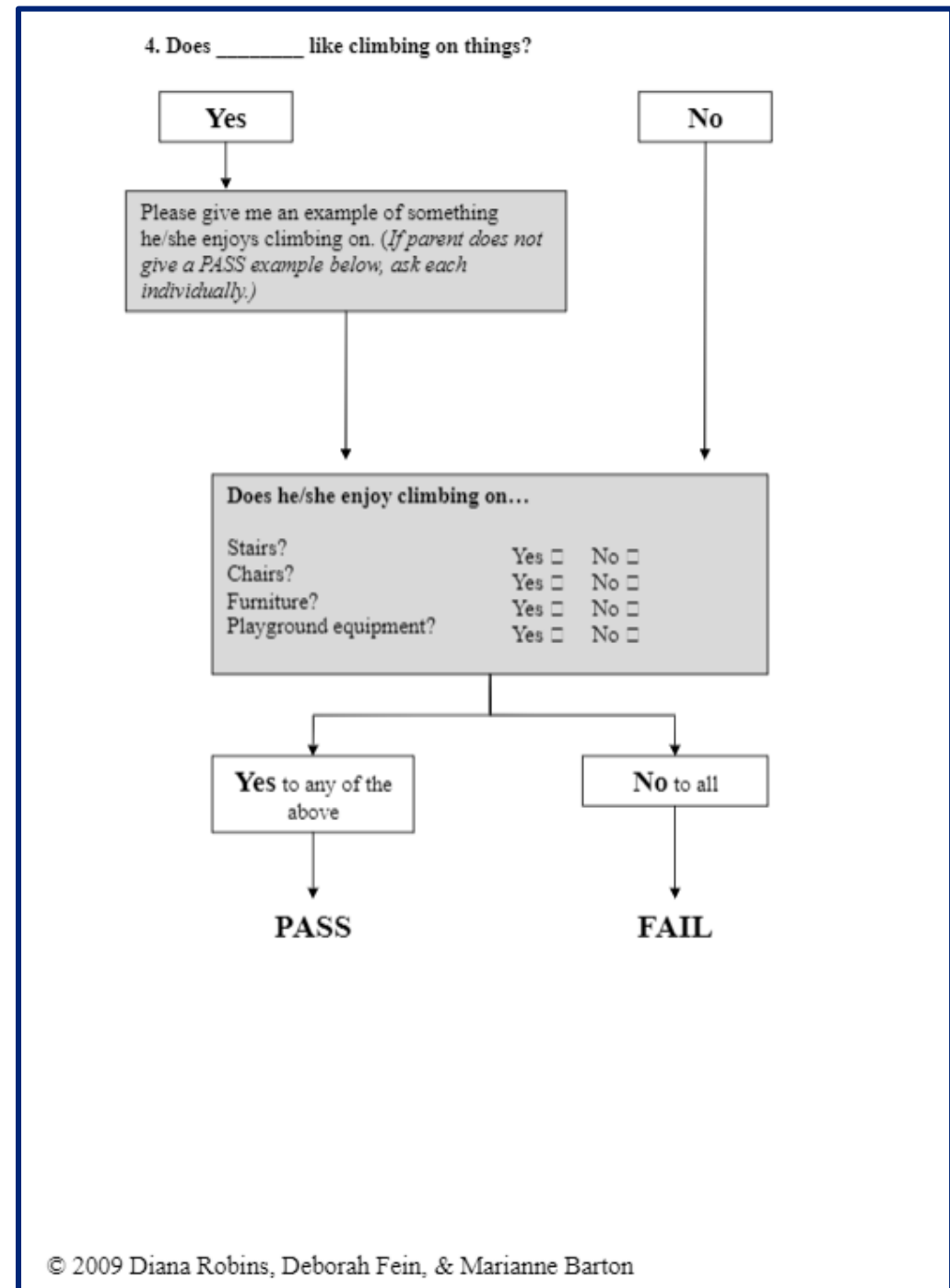


M-CHAT-R

Instructions

Follow-up Interview

Question 4

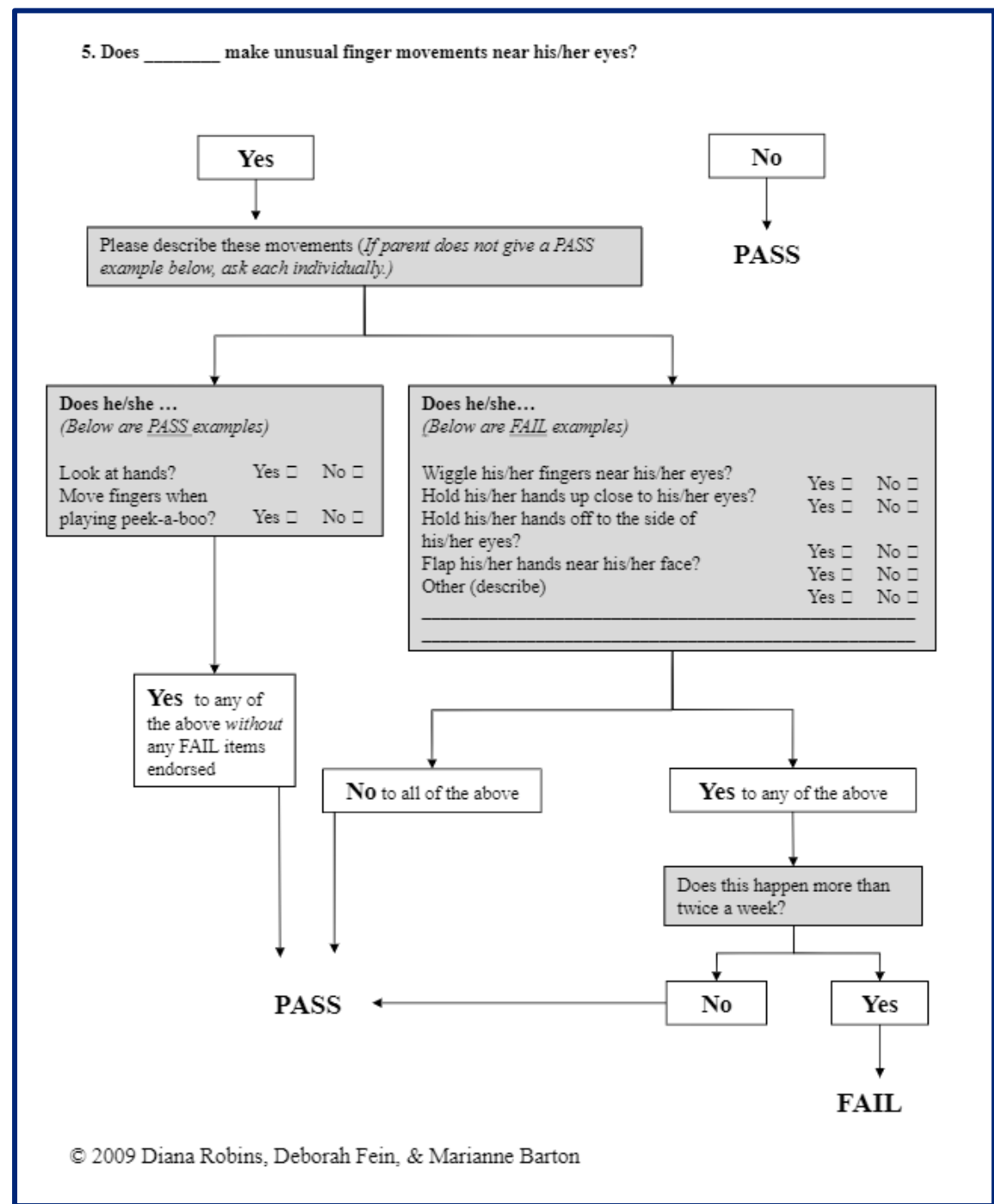


M-CHAT-R

Instructions

Follow-up Interview

Question 5



M-CHAT-R

Instructions

Follow-up Interview

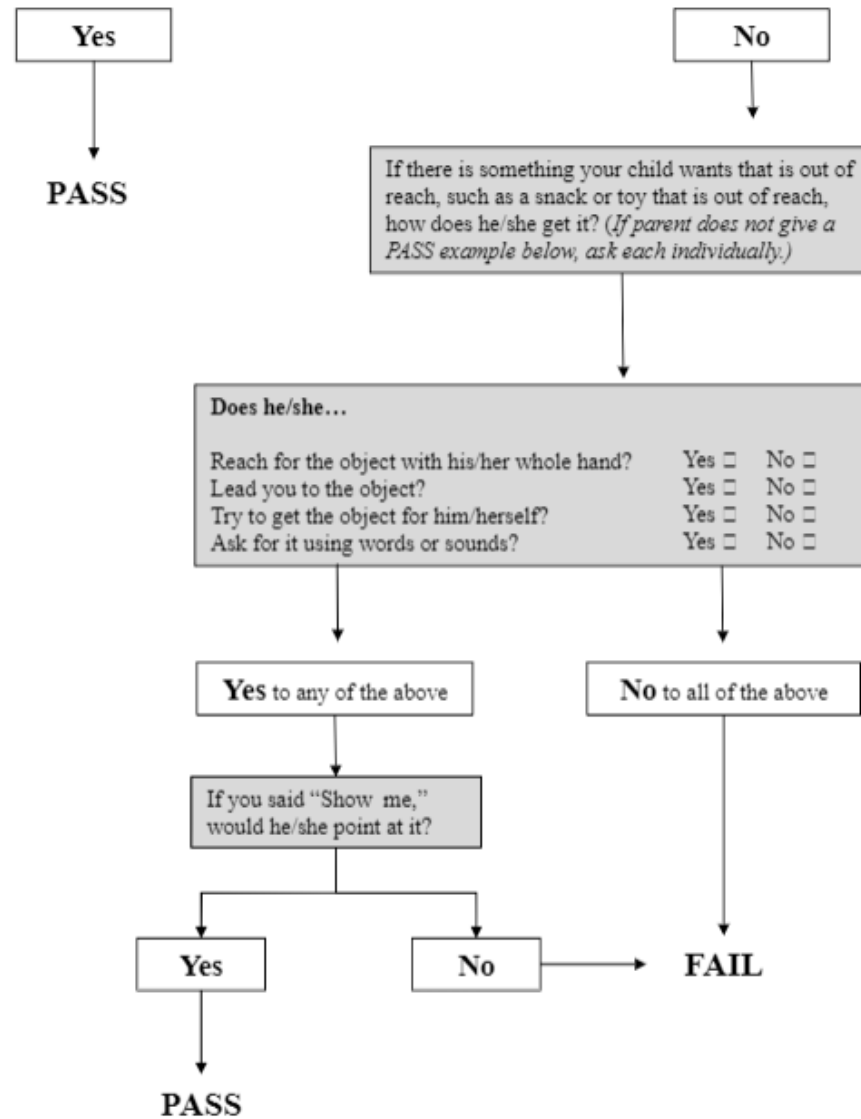
Question 6

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6. Does _____ point with one finger to ask for something or to get help?



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M-CHAT-R

Instructions

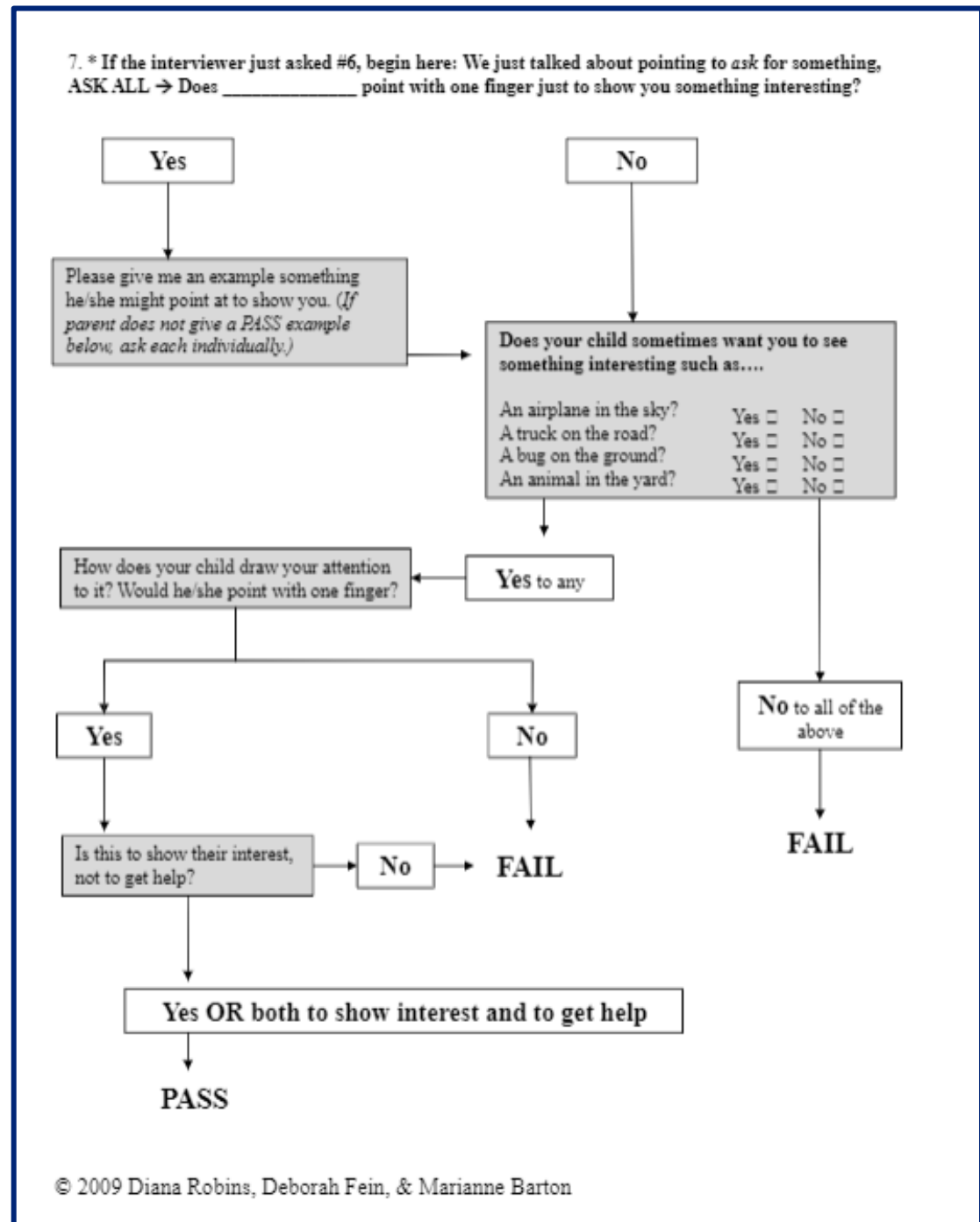
Follow-up Interview

Question 7

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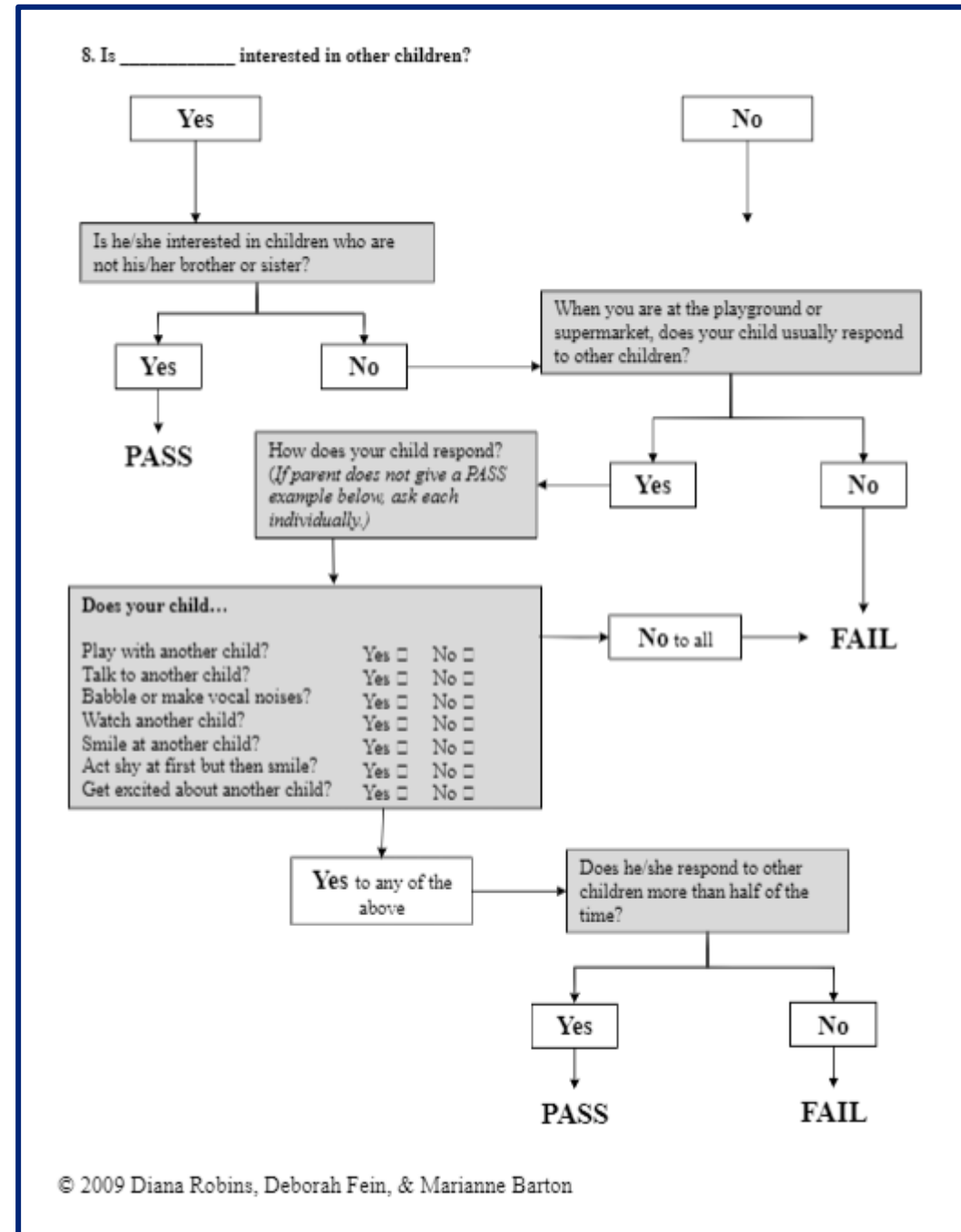


M-CHAT-R

Instructions

Follow-up Interview

Question 8

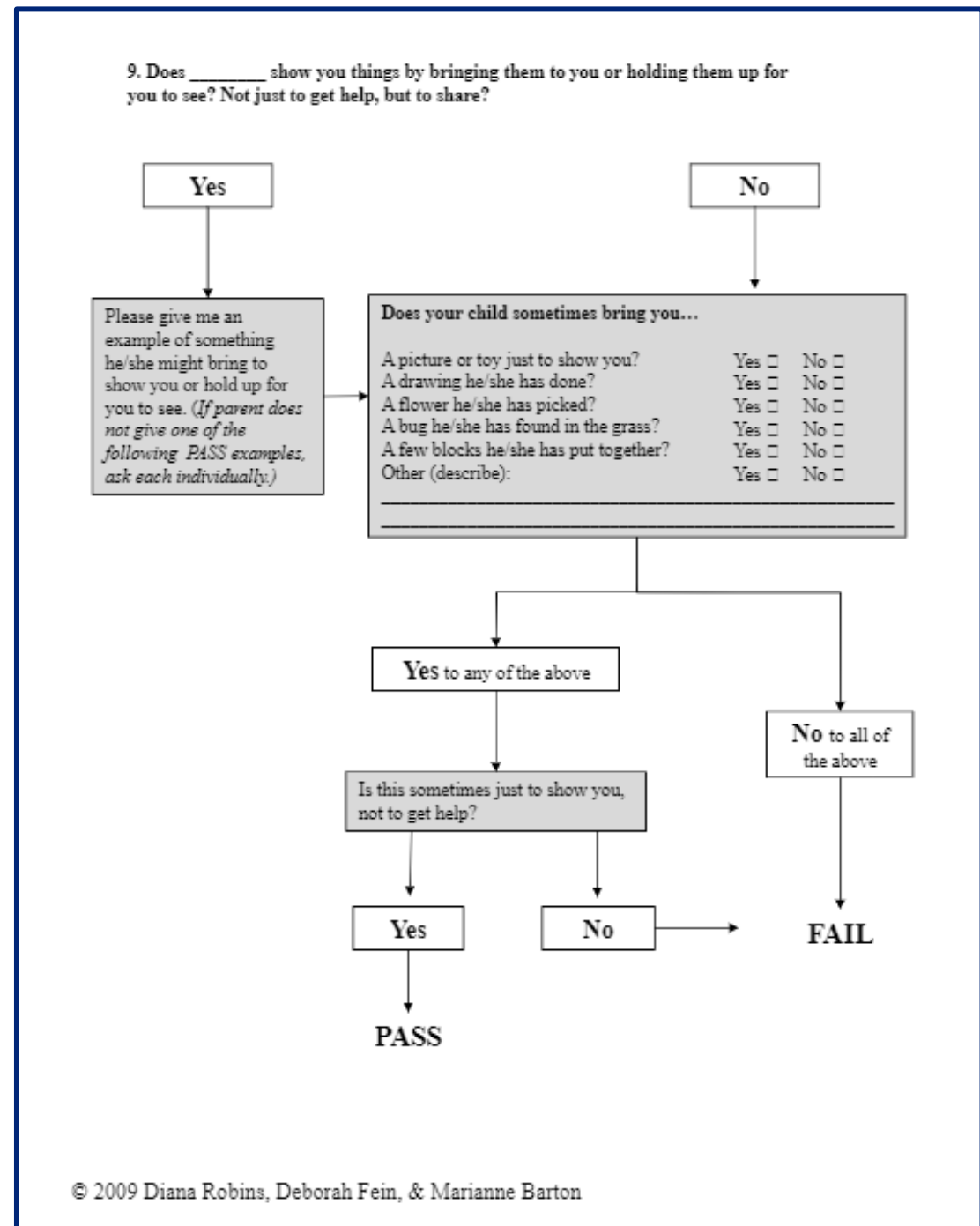


M-CHAT-R

Instructions

Follow-up Interview

Question 9

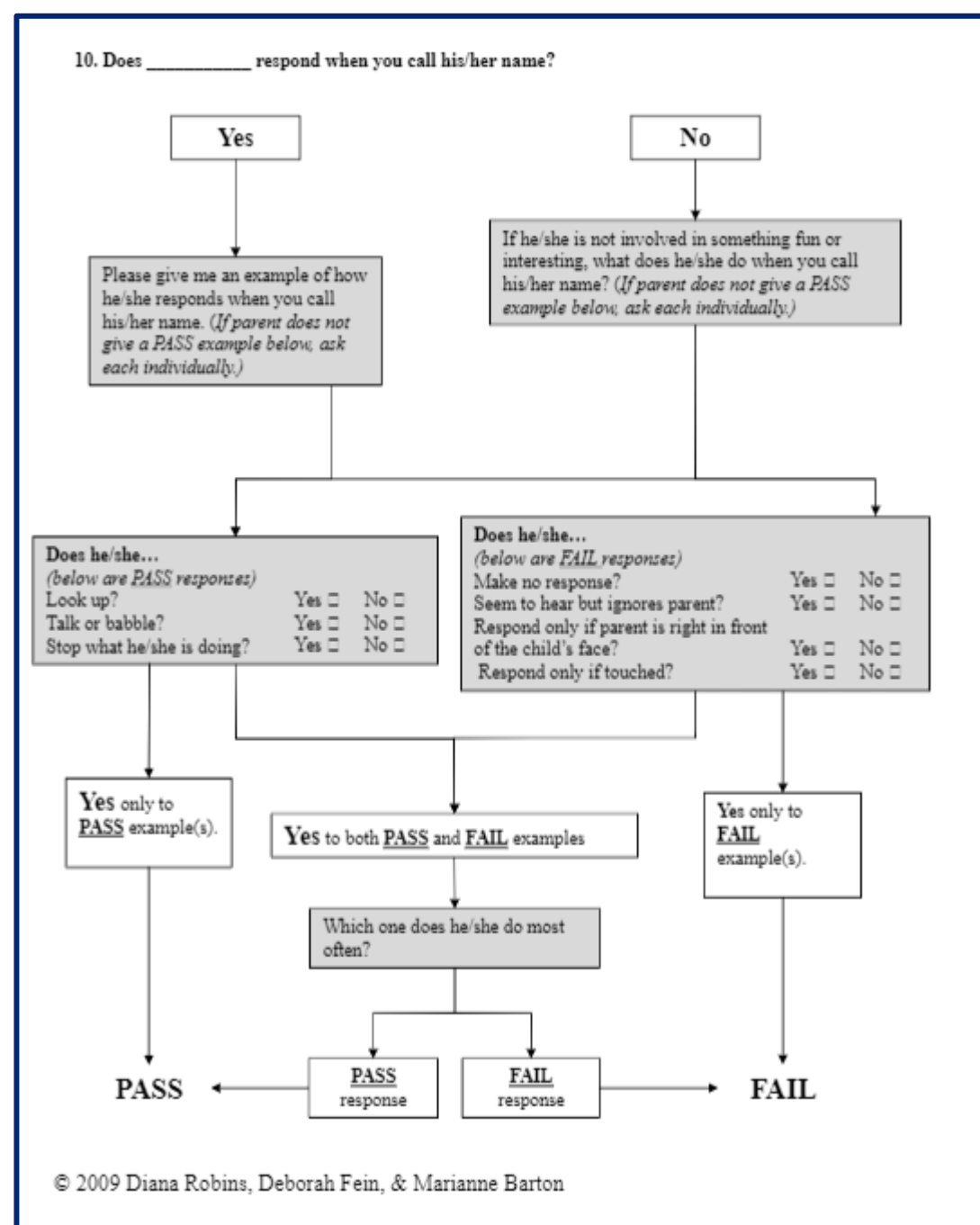


M-CHAT-R

Instructions

Follow-up Interview

Question 10

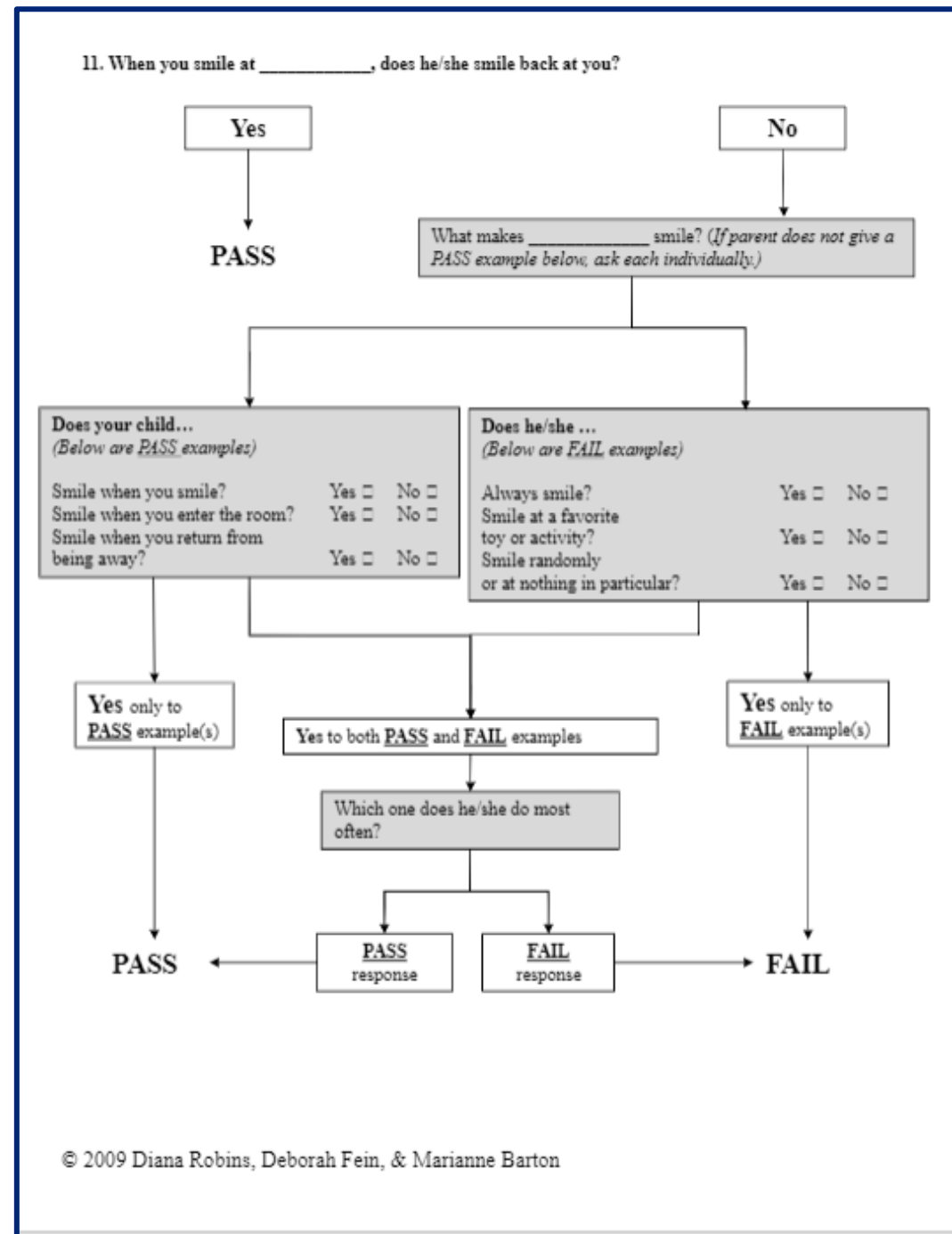


M-CHAT-R

Instructions

Follow-up Interview

Question 11

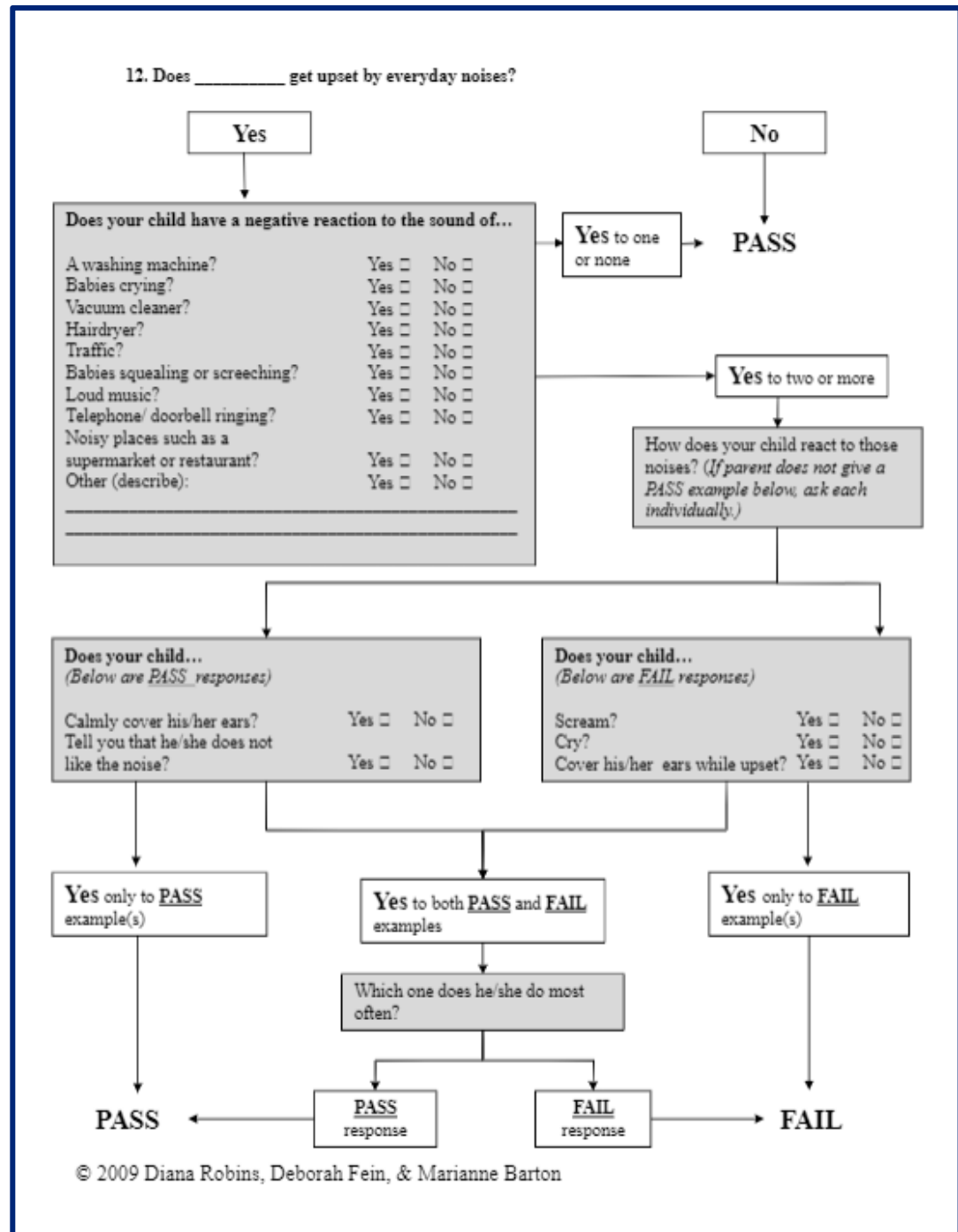


M-CHAT-R

Instructions

Follow-up Interview

Question 12



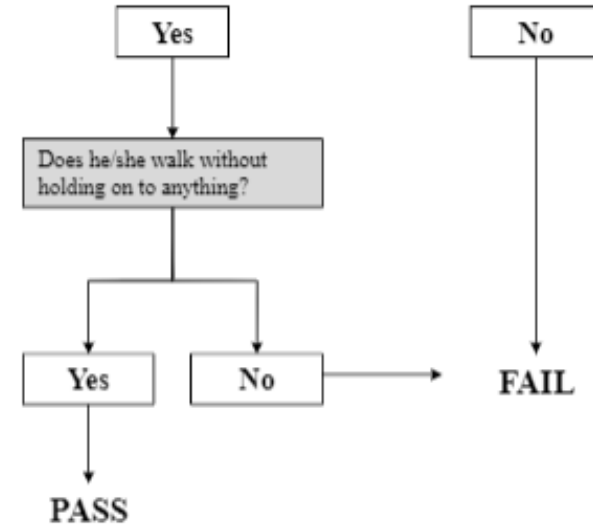
M-CHAT-R

Instructions

Follow-up Interview

Question 13

13. Does _____ walk?



M-CHAT-R

Instructions

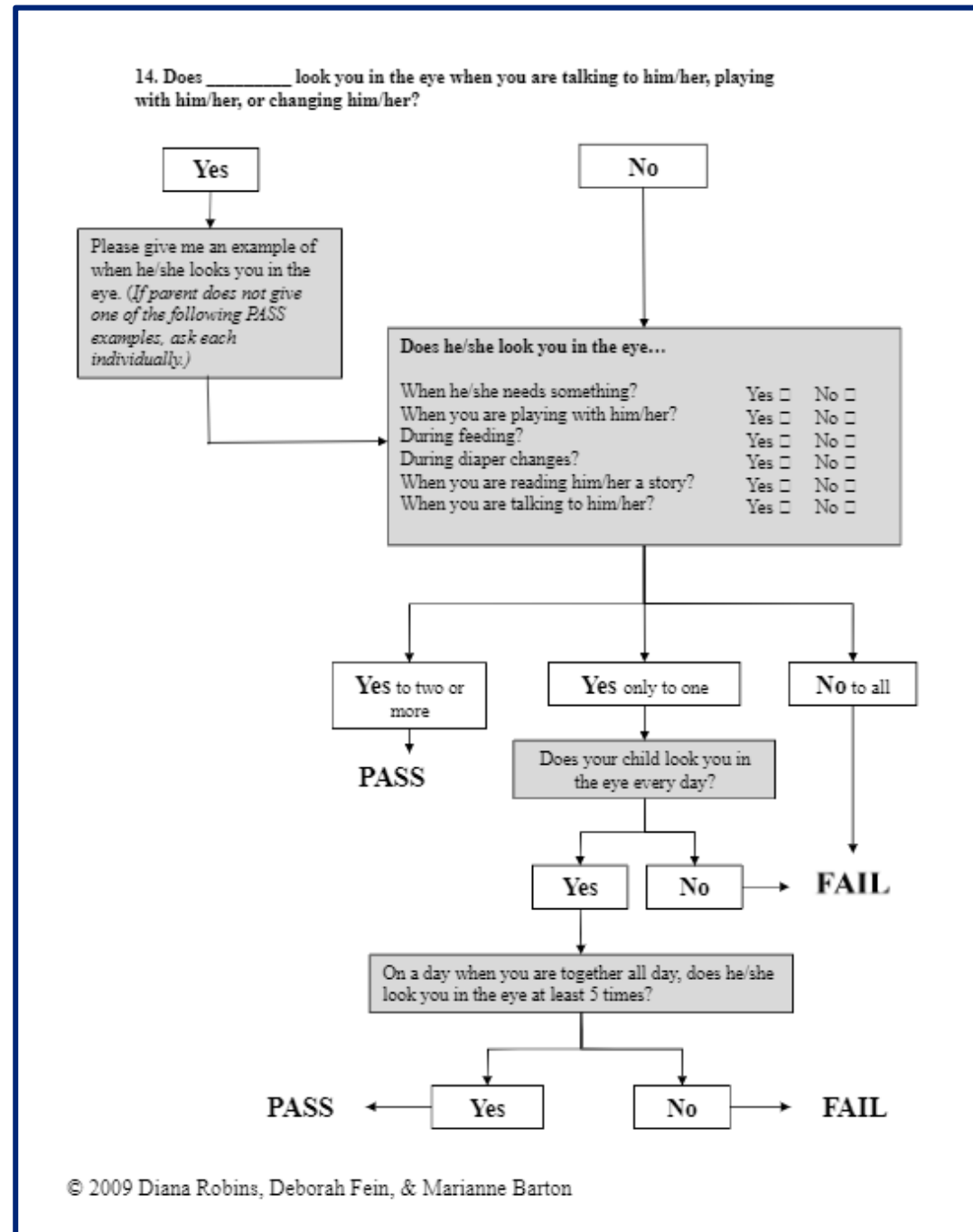
Follow-up Interview

Question 14

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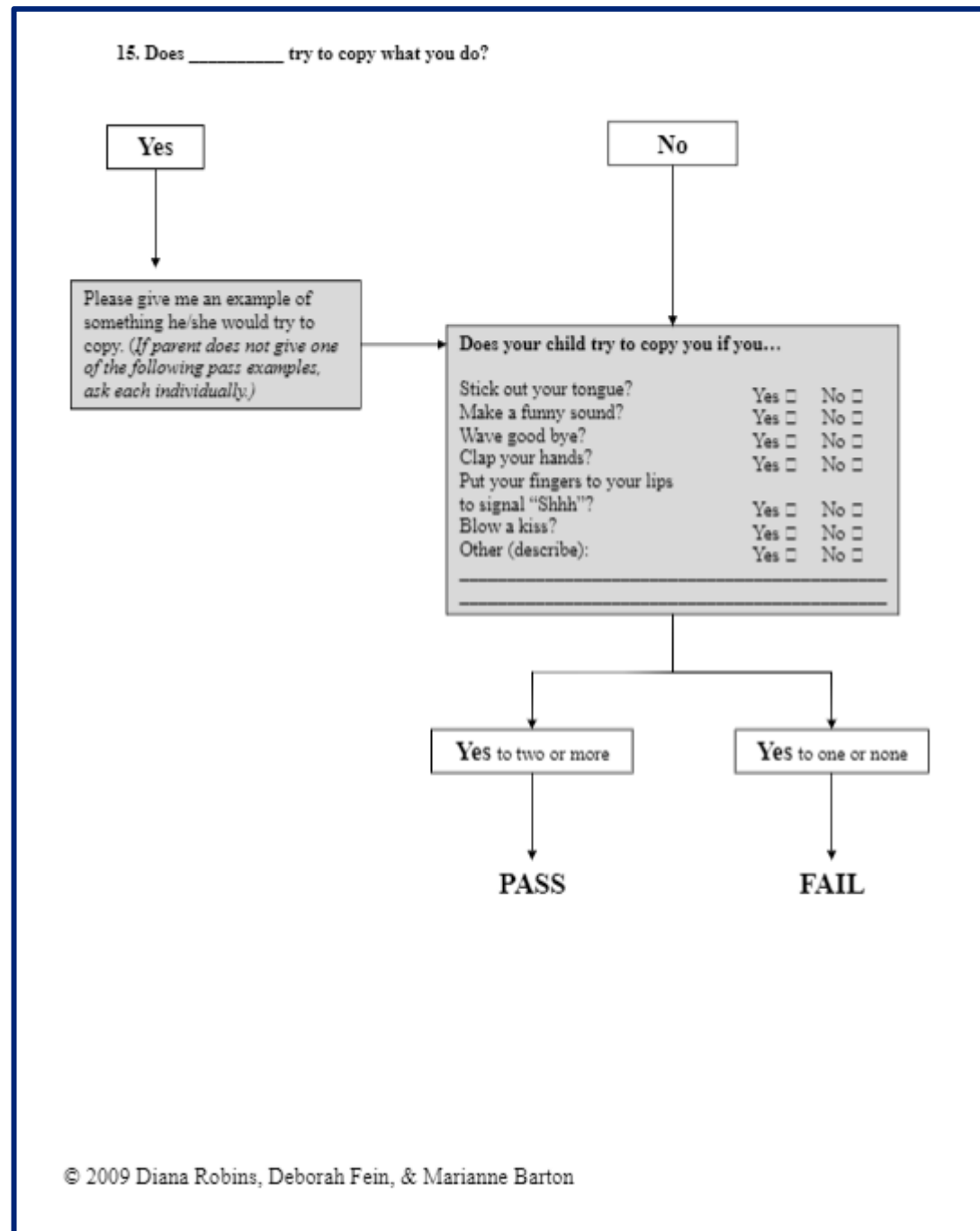


M-CHAT-R

Instructions

Follow-up Interview

Question 15

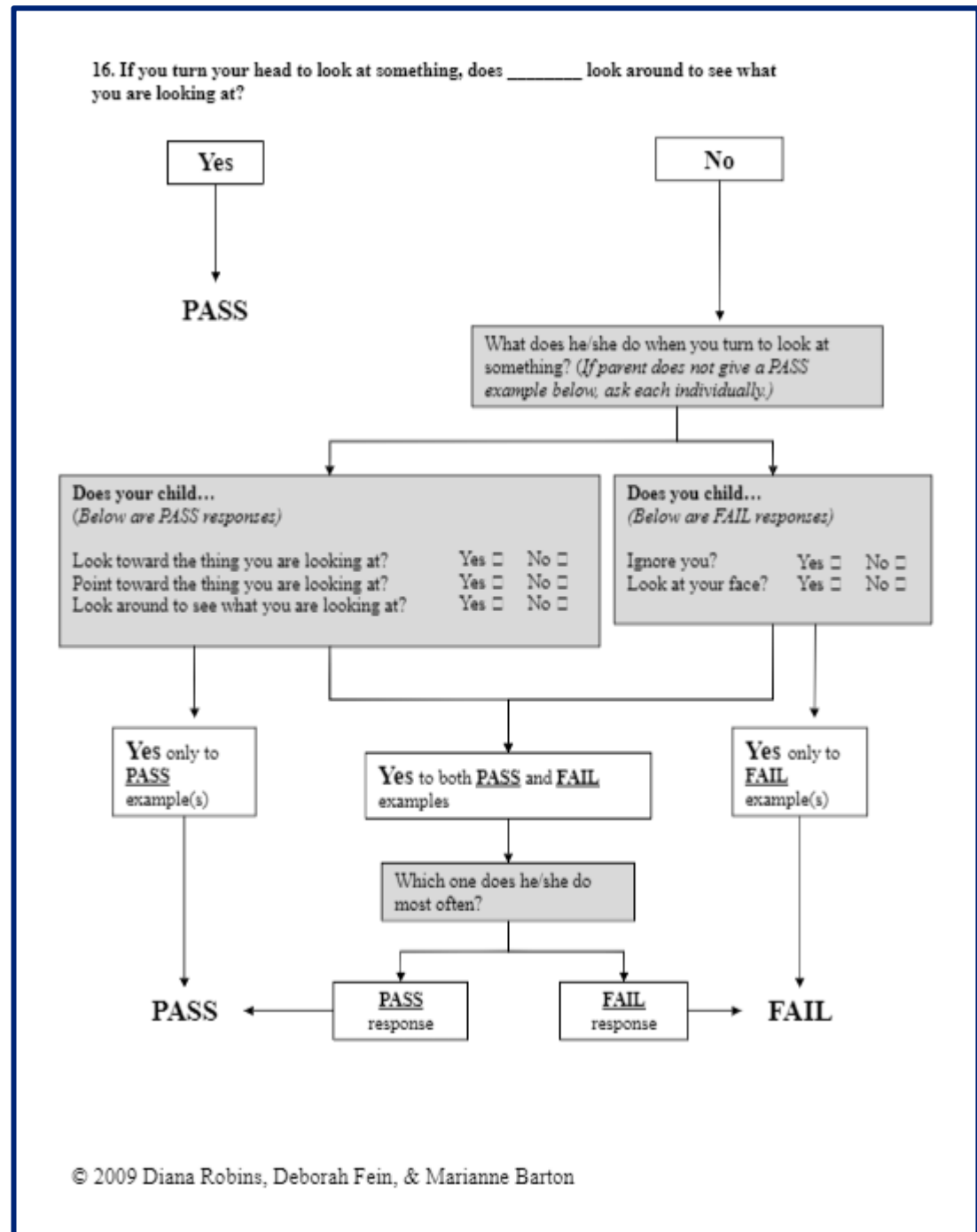


M-CHAT-R

Instructions

Follow-up Interview

Question 16

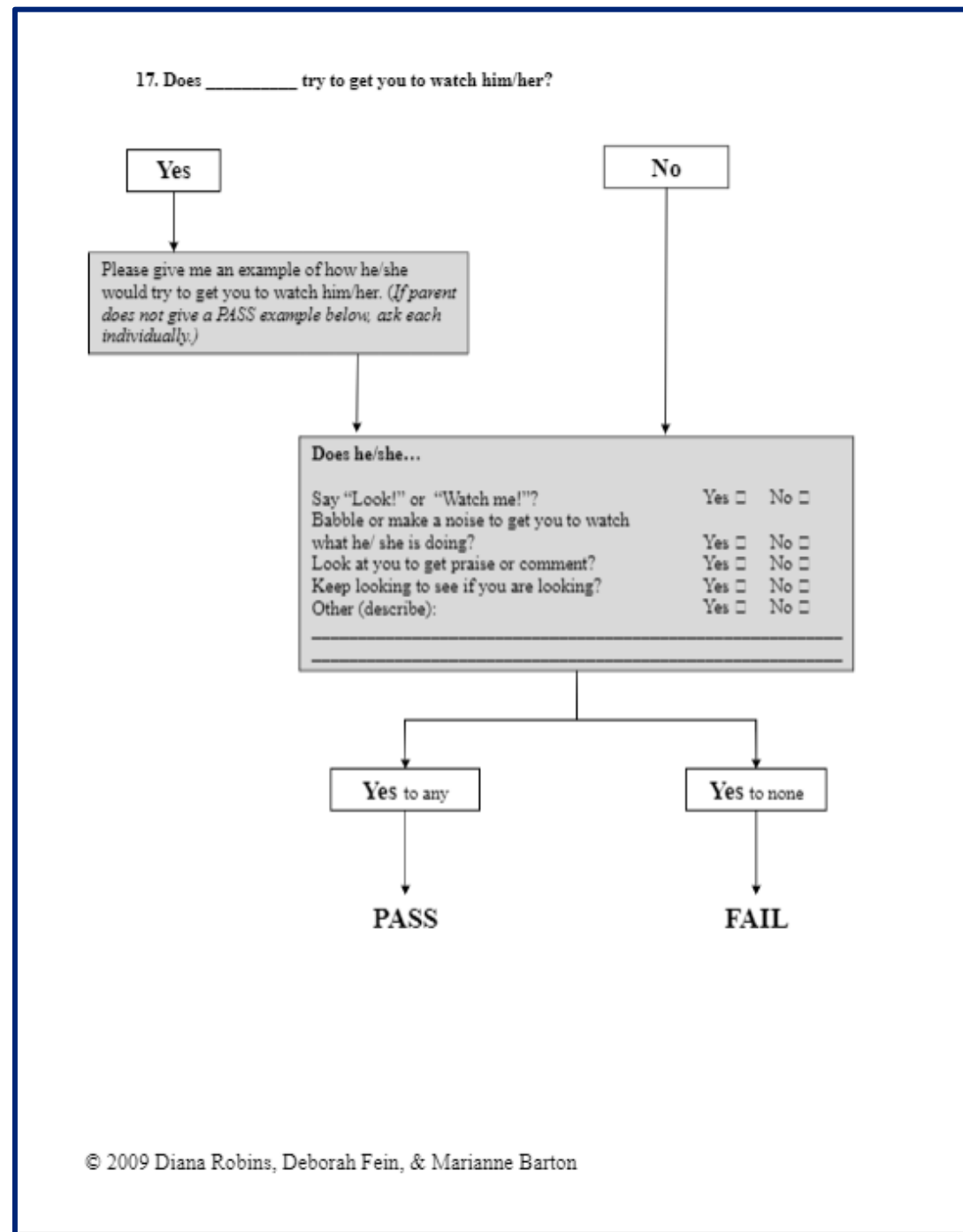


M-CHAT-R

Instructions

Follow-up Interview

Question 17

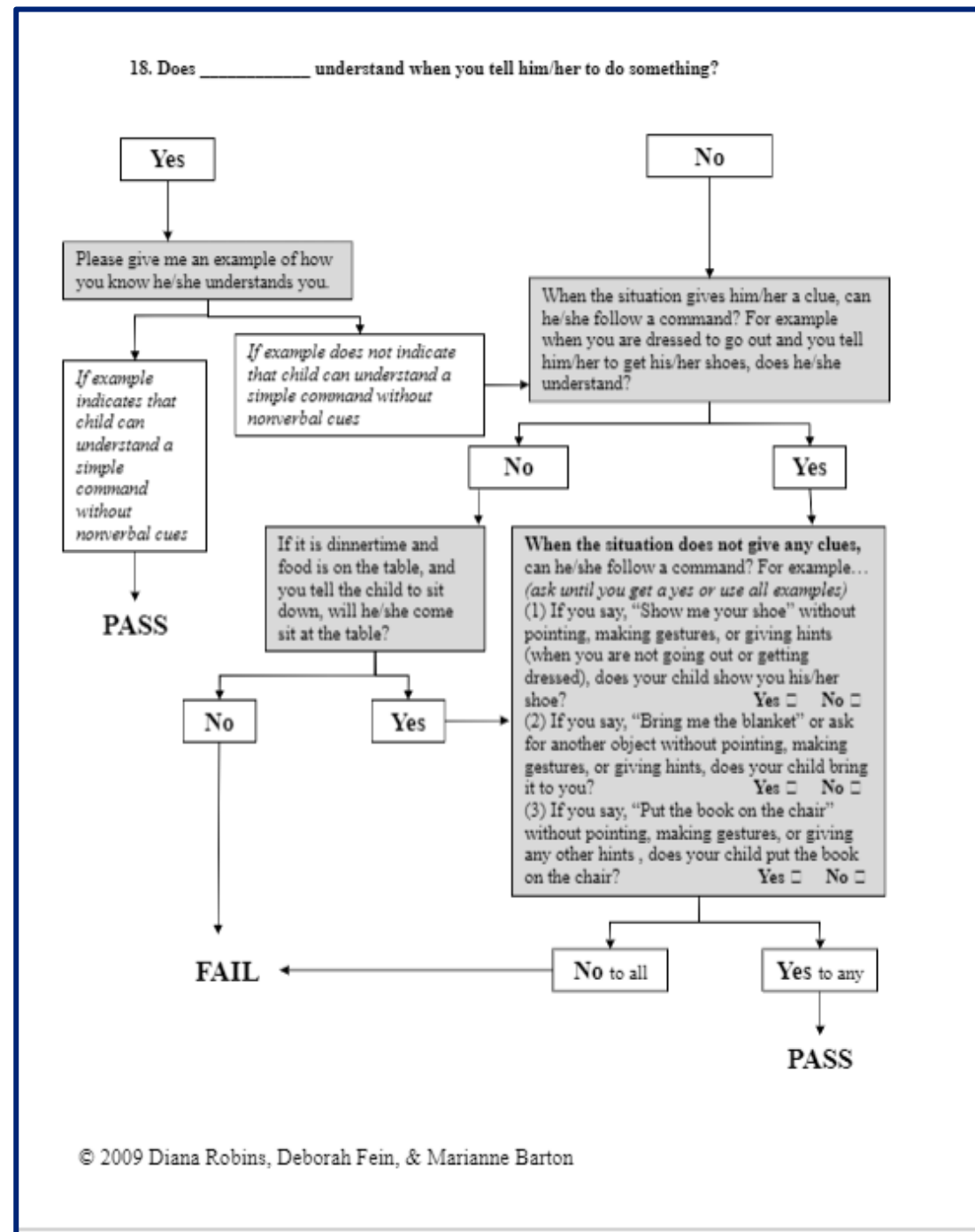


M-CHAT-R

Instructions

Follow-up Interview

Question 18



M-CHAT-R

Instructions

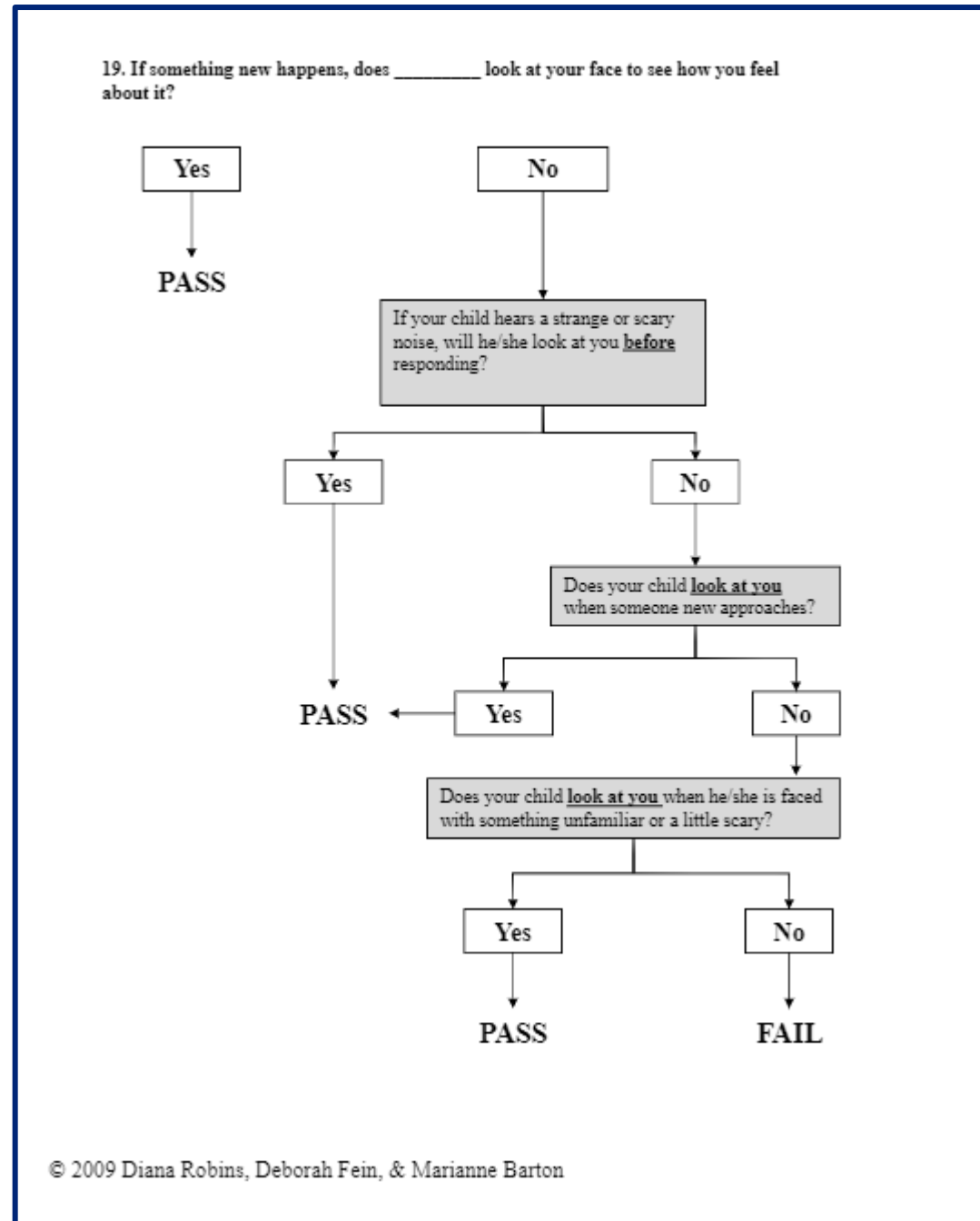
Follow-up Interview

Question 19

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M-CHAT-R

Instructions

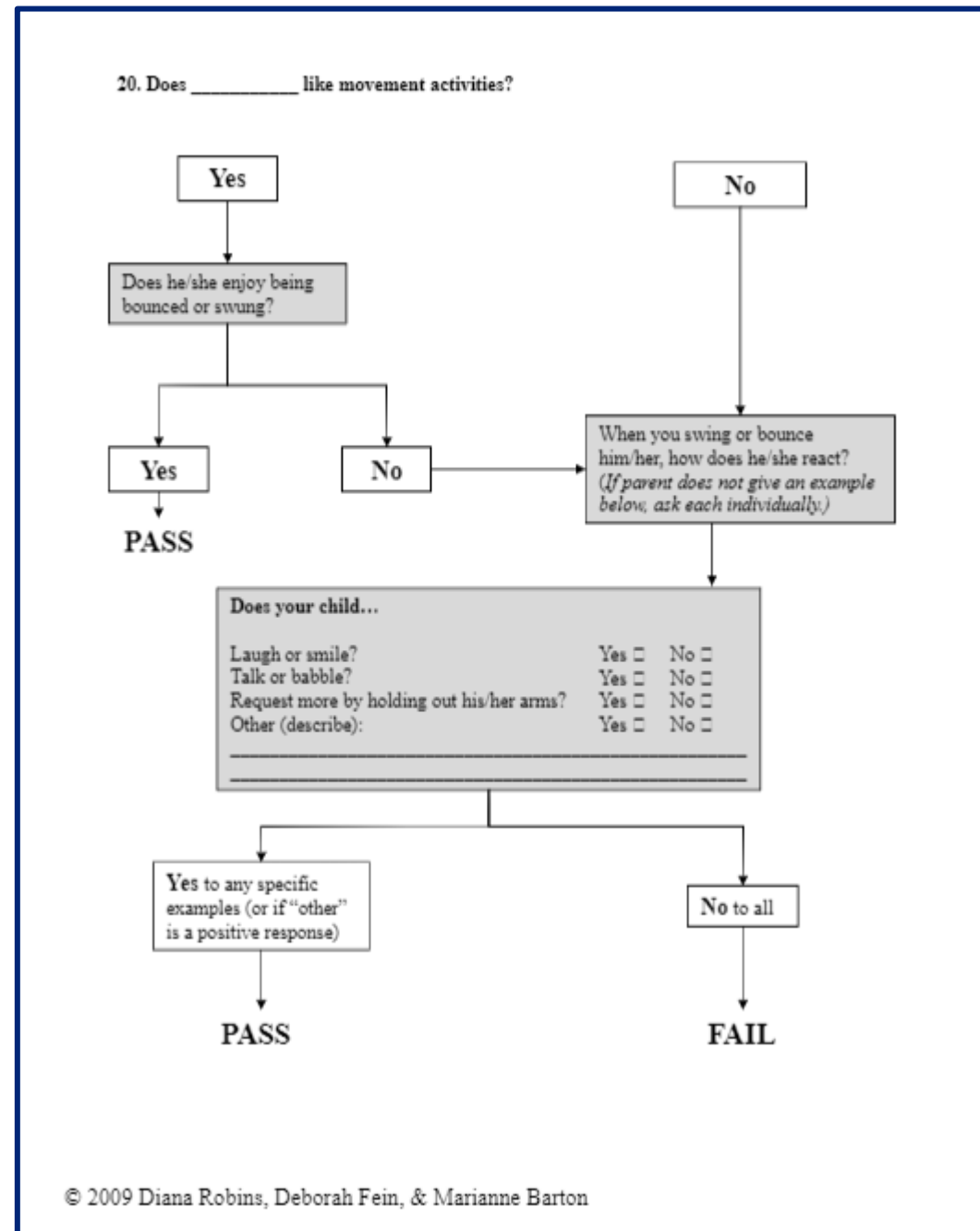
Follow-up Interview

Question 20

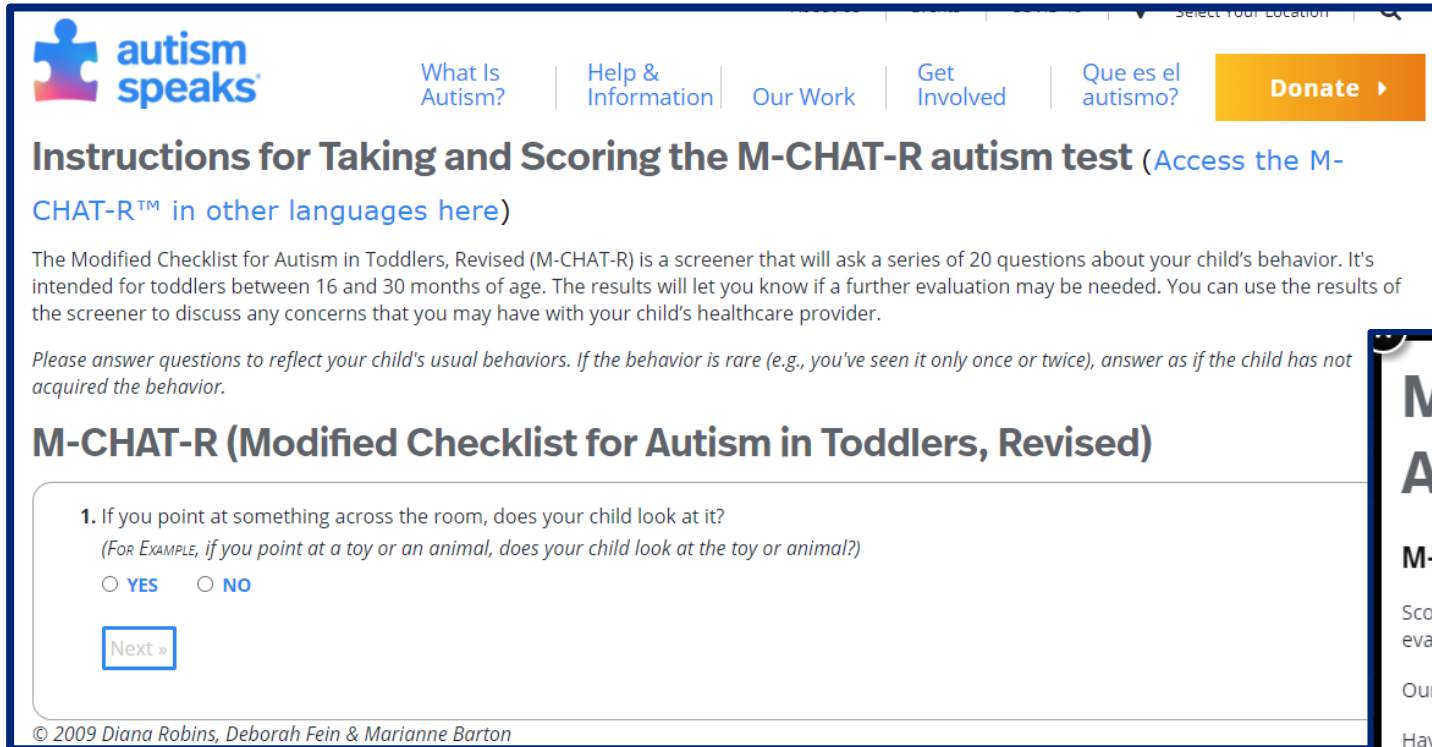
[M-CHAT-R/F™ - Guidelines for Use \(mchatscreen.com\)](http://mchatscreen.com)



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M-CHAT-R Access for parents



The screenshot shows the top navigation bar of the Autism Speaks website with links for 'What Is Autism?', 'Help & Information', 'Our Work', 'Get Involved', 'Que es el autismo?', and a 'Donate' button. Below the navigation is the title 'Instructions for Taking and Scoring the M-CHAT-R autism test' with a link to 'Access the M-CHAT-R™ in other languages here'. The main text explains that the M-CHAT-R is a screener for toddlers aged 16-30 months. A note asks users to answer based on usual behaviors. The title 'M-CHAT-R (Modified Checklist for Autism in Toddlers, Revised)' is followed by question 1: 'If you point at something across the room, does your child look at it?' with an example and radio buttons for 'YES' and 'NO'. A 'Next »' button is visible at the bottom of the question area. A copyright notice at the bottom reads '© 2009 Diana Robins, Deborah Fein & Marianne Barton'.

M-CHAT-R (Modified Checklist for Autism in Toddlers, Revised)

M-CHAT-R Risk Score: **16**

Score indicates **high risk**. This means you should take your child to his or her doctor for a full evaluation. You should also begin early intervention services for your child.

Our First Concern to Action [Tool Kit](#) will help you learn how to begin early intervention services.

Have questions? Contact our Autism Response Team at 888-AUTISM2 (288-4762) or help@autismspeaks.org.

This questionnaire is designed to screen for autism, not other developmental issues. It is important to discuss any concerns about your child's development with his or her doctor.

[Download PDF](#)

[Return to screen for autism.](#)



M-CHAT-R (Modified Checklist for Autism in Toddlers, Revised)

M-CHAT-R Risk Score: 7

The score indicates **medium risk**. This means you should take your child to his or her doctor for a follow-up screening. You can also seek early intervention services for your child.

Our First Concern to Action [Tool Kit](#) will help you learn how to begin early intervention services.

Have questions? Contact our Autism Response Team at 888-AUTISM2 (288-4762) or help@autismspeaks.org.

This questionnaire is designed to screen for autism, not other developmental issues. It is important to discuss any concerns about your child's development with his or her doctor.

[Download PDF](#)

[Return to screen for autism.](#)

Sample test results to discuss follow-up interview

Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R™)

M-CHAT-R risk score: 7

Score indicates medium risk. You should take your child to a health care provider to administer the Follow Up Interview which is designed to go with the 20 questions. This interview can be found at <http://www.mchatscreen.com>. If the score is still a 2 or higher, then you should make an appointment for a further evaluation and seek early intervention services.

For resources in your area, see our website's list of Autism Treatment Network clinics* and state-by-state Resource Guide**.

You can also call or email our Autism Response Team: 888-AUTISM2(288-4762) or help@autismspeaks.org.

This questionnaire is designed to screen for autism, not other developmental issues. If you have concerns about any area of your child's development or behavior, please discuss these concerns with your child's doctor.

*<https://www.autismspeaks.org/autism-care-network>

**<https://www.autismspeaks.org/resource-guide>



Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R™)

Checklist Answers

1. If you point at something across the room, does your child look at it?
(For example, if you point at a toy or an animal, does your child look at the toy or animal?)
You answered: No
2. Have you ever wondered if your child might be deaf?
You answered: Yes
3. Does your child play pretend or make-believe? (For example, pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?)
You answered: No
4. Does your child like climbing on things? (For example, furniture, playground equipment, or stairs)
You answered: Yes
5. Does your child make unusual finger movements near his or her eyes?
(For example, does your child wiggle his or her fingers close to his or her eyes?)
You answered: No
6. Does your child point with one finger to ask for something or to get help?
(For example, pointing to a snack or toy that is out of reach)
You answered: No
7. Does your child point with one finger to show you something interesting?
(For example, pointing to an airplane in the sky or a big truck in the road)
You answered: No
8. Is your child interested in other children? (For example, does your child watch other children, smile at them, or go to them?)
You answered: Yes
9. Does your child show you things by bringing them to you or holding them up for you to see - not to get help, but just to share? (For example, showing you a flower, a stuffed animal, or a toy truck)
You answered: Yes
10. Does your child respond when you call his or her name? (For example, does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?)
You answered: No
11. When you smile at your child, does he or she smile back at you?
You answered: Yes



Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R™)

Checklist Answers (continued)

12. Does your child get upset by everyday noises? (For example, does your child scream or cry to noise such as a vacuum cleaner or loud music?)

You answered: No

13. Does your child walk?

You answered: Yes

14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her?

You answered: No

15. Does your child try to copy what you do? (For example, wave bye-bye, clap, or make a funny noise when you do)

You answered: Yes

16. If you turn your head to look at something, does your child look around to see what you are looking at?

You answered: Yes

17. Does your child try to get you to watch him or her? (For example, does your child look at you for praise, or say "look" or "watch me"?)

You answered: Yes

18. Does your child understand when you tell him or her to do something? (For example, if you don't point, can your child understand "put the book on the chair" or "bring me the blanket"?)

You answered: Yes

19. If something new happens, does your child look at your face to see how you feel about it? (For example, if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?)

You answered: Yes

20. Does your child like movement activities? (For example, being swung or bounced on your knee)

You answered: Yes

Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R™)

Message to Health Care Providers:

Dear Health Care Provider,

The parent or caregiver of one of your patients has concerns about their child's development. He or she has taken the Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R), which is freely available online. The M-CHAT-R is a screening tool that has been endorsed by the American Academy of Pediatrics to be administered at 18 and 24 months.

The M-CHAT-R is a screening tool, and because no screening tool is perfect, research recommends that the original 20 questions include a Follow-Up Interview. This interview will improve the specificity of the screen, and also provides an opportunity for you to discuss the parent or caregiver's specific concerns. Administering the M-CHAT-R Follow-Up Interview may also reduce unnecessary referrals.

A guide to administering the Follow-Up Interview is found here:

<http://www.autismspeaks.org/sites/default/files/2018-09/m-chatinterview.pdf>

More information about the M-CHAT-R can be found at:

<http://www.mchatscreen.com>

Thank you for your time with this patient and his/her family. For more information please visit:

<http://www.autismspeaks.org/first-concern-action>

Autism Speaks

M-CHAT-R

Instructions

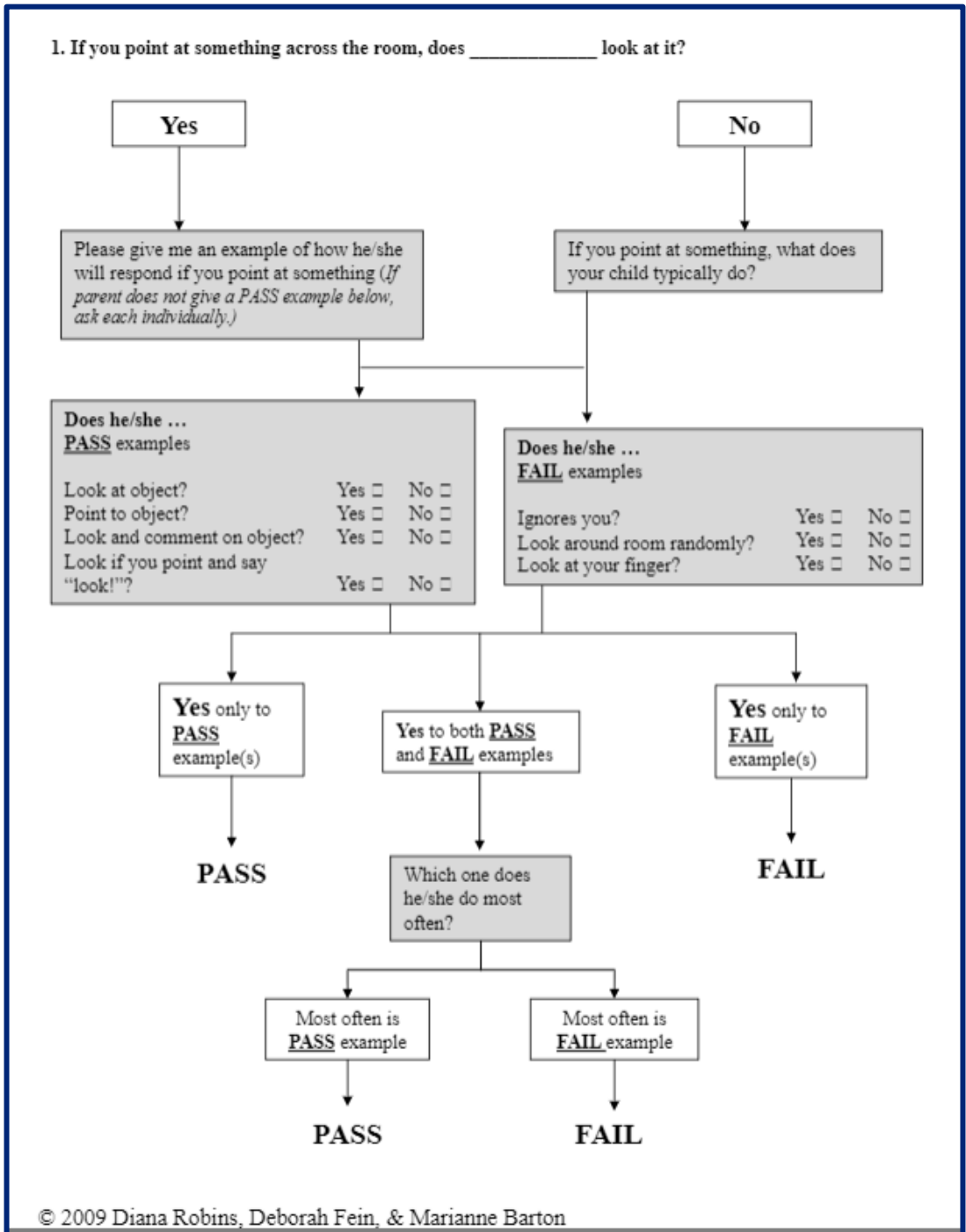
Follow-up Interview

Question 1

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M-CHAT-R

Instructions

Follow-up Interview

Question 2

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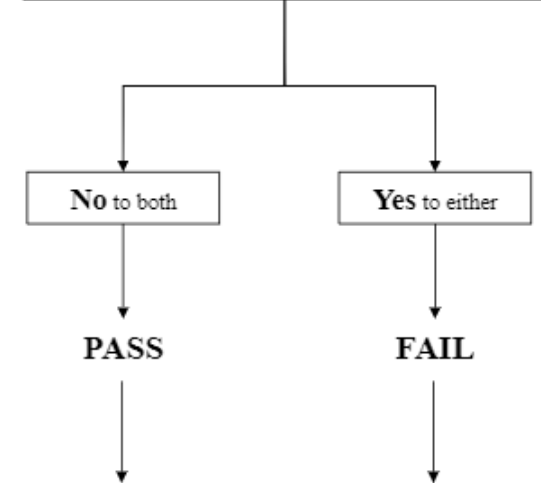


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2. You reported that you have wondered if you child is deaf. What led you to wonder that?

Does he/she...

often ignore sounds?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
often ignore people?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



ALSO ASK FOR ALL CHILDREN:

Has your child's hearing been tested?

Yes

No

What were the results of the hearing test? (choose one):

- Hearing in normal range
- Hearing below normal
- Results inconclusive or not definitive

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M-CHAT-R

Instructions

Follow-up Interview

Question 3

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3. Does _____ play pretend or make-believe?

Yes

No

Please give me an example of his/her pretend play. (If parent does not give a PASS example below, ask each individually.)

Does he/she usually...

- | | | |
|---|------------------------------|-----------------------------|
| Pretend to drink from a toy cup? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Pretend to eat from a toy spoon or fork? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Pretend to talk on the telephone? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Pretend to feed a doll or stuffed animal with real or imaginary food? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Push a car as if it is going along a pretend road? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Pretend to be a robot, an airplane, a ballerina, or any other favorite character? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Put a toy pot on a pretend stove? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Stir imaginary food? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Put an action figure or doll into a car or truck as if it is the driver or passenger? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Pretend to vacuum the rug, sweep the floor, or the mow lawn? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Other (describe) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Yes to any

No to all

PASS

FAIL

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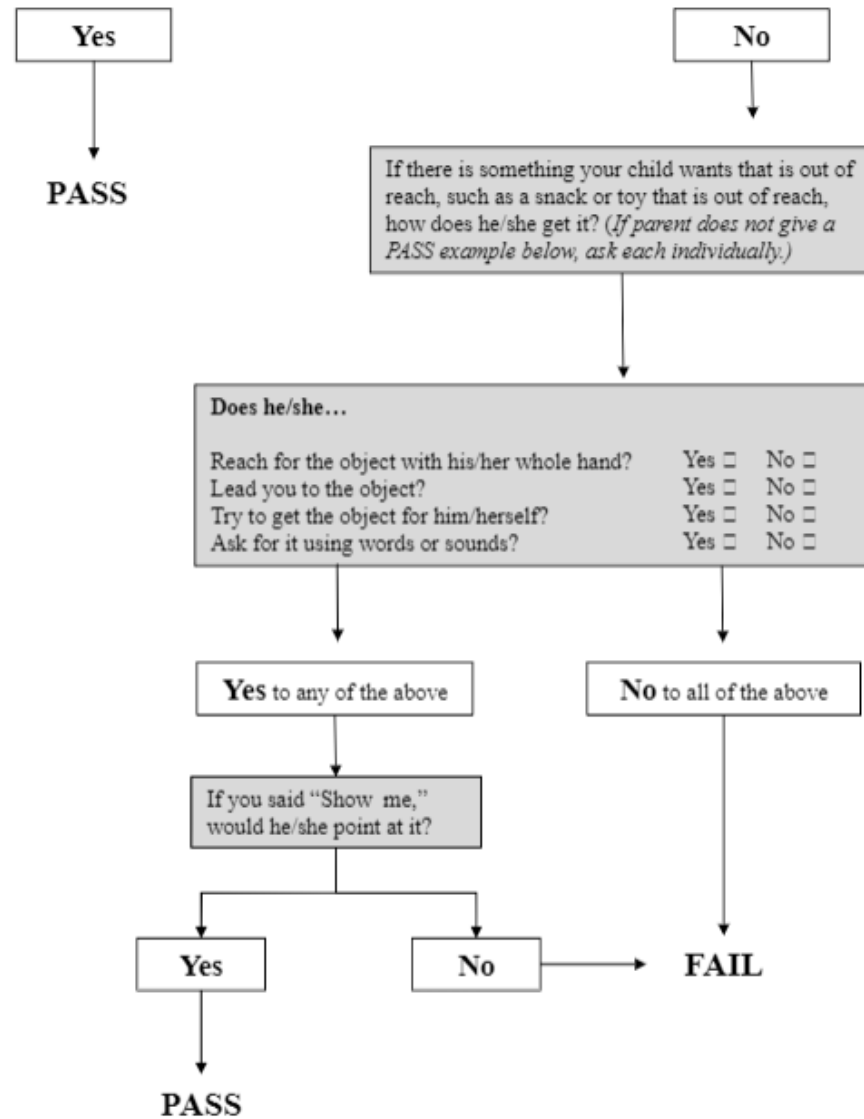
M-CHAT-R Instructions Follow-up Interview Question 6

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6. Does _____ point with one finger to ask for something or to get help?



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M-CHAT-R

Instructions

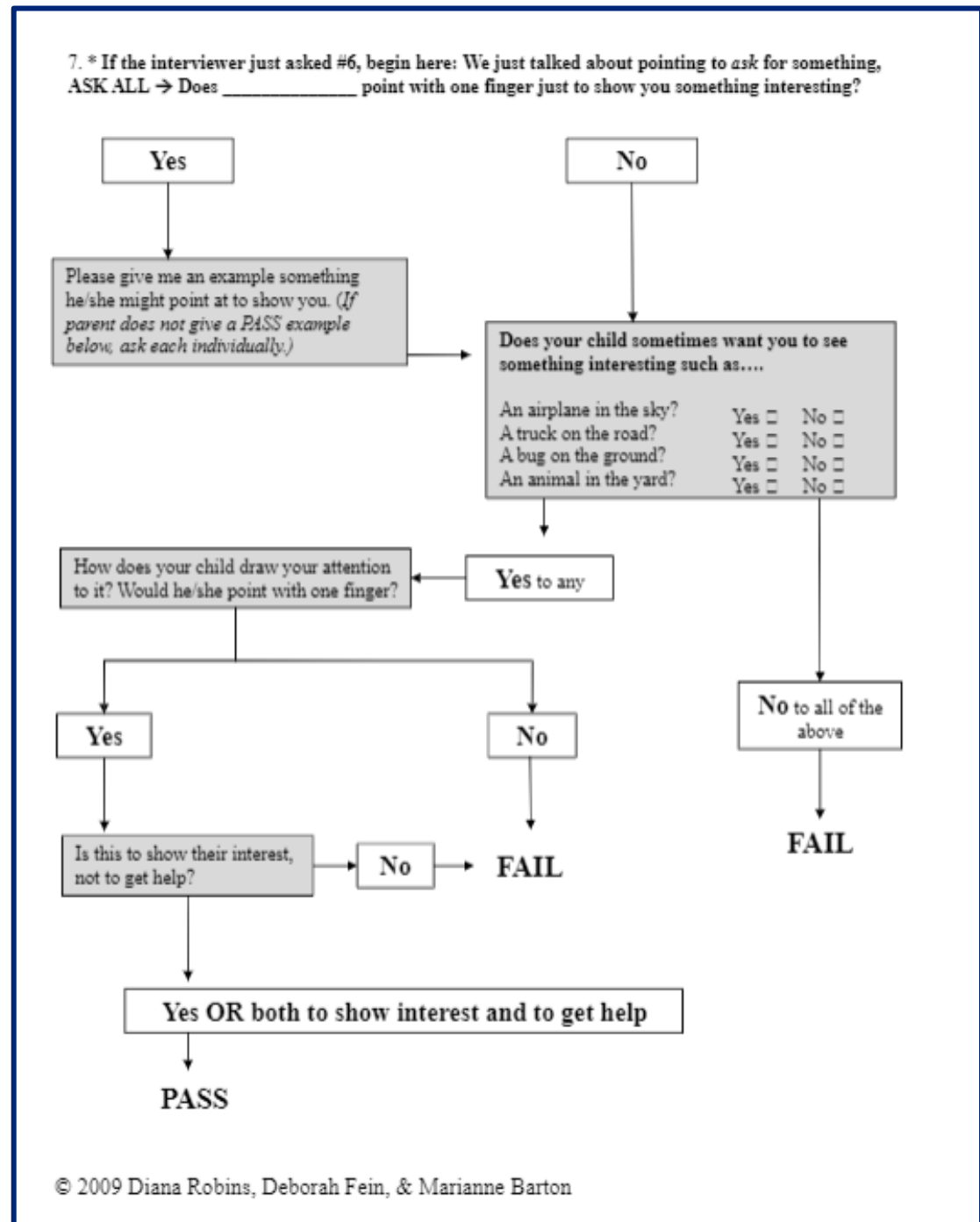
Follow-up Interview

Question 7

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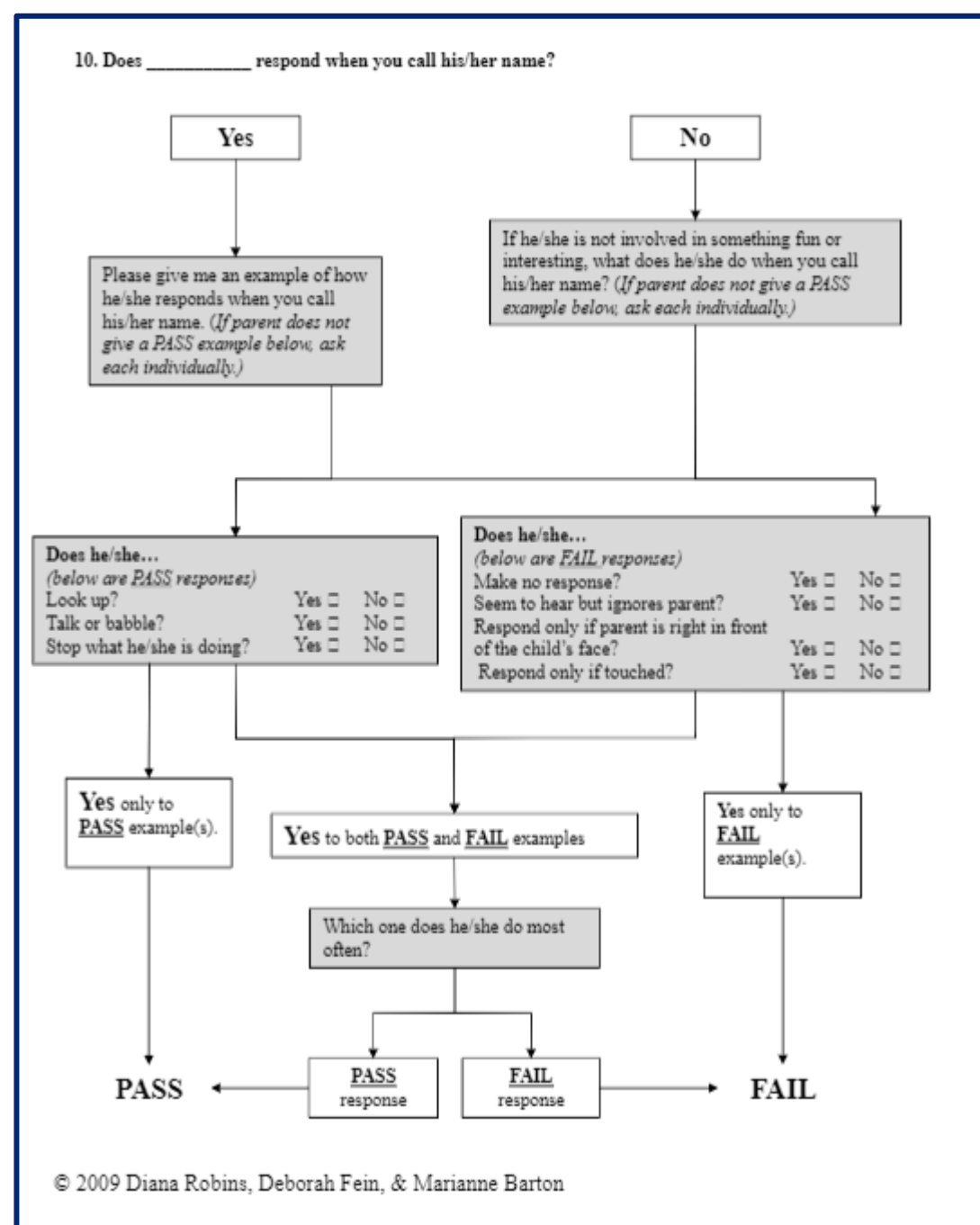


M-CHAT-R

Instructions

Follow-up Interview

Question 10



M-CHAT-R

Instructions

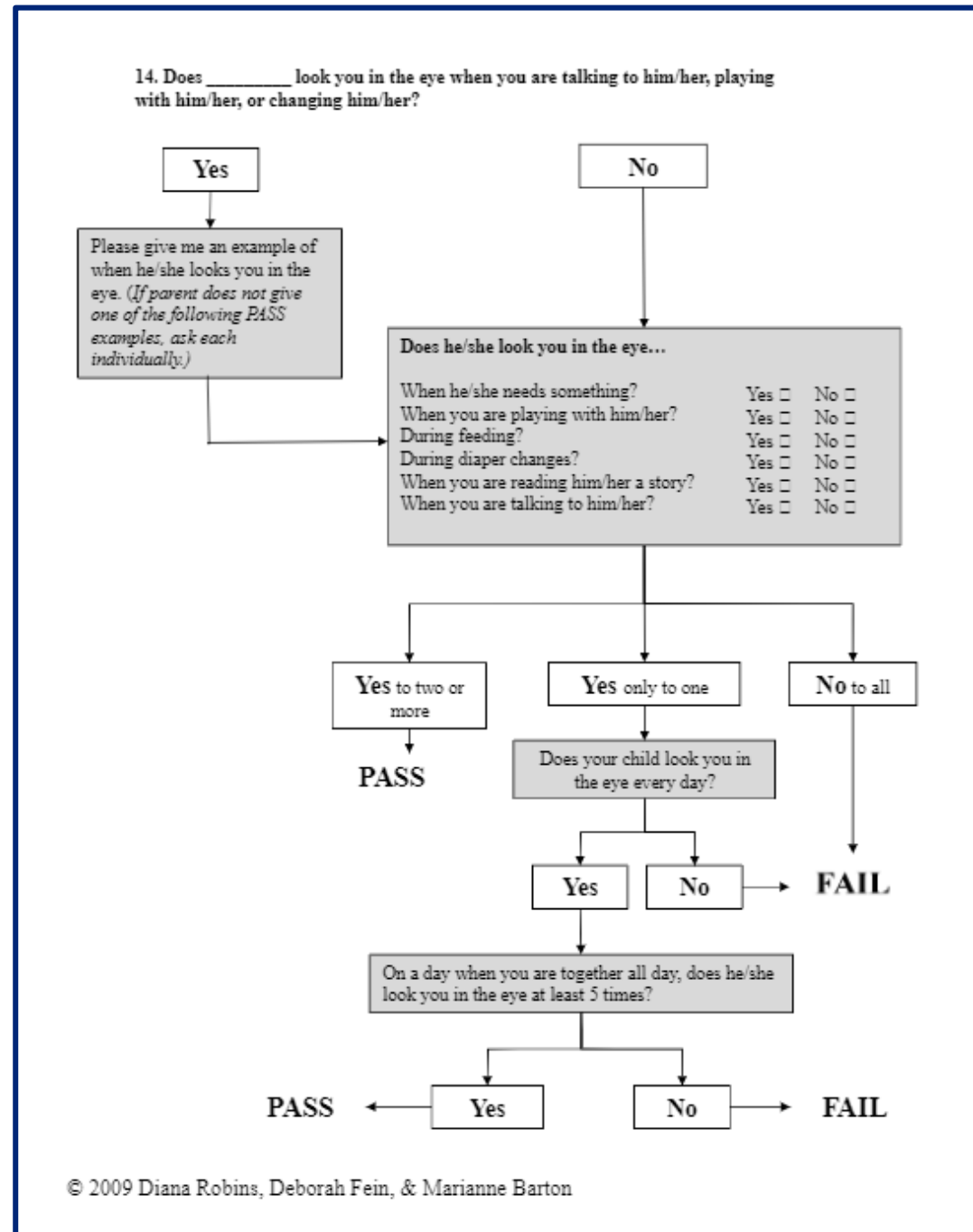
Follow-up Interview

Question 14

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First Concern to Action Tool Kit

If you have a concern about how your child is communicating, interacting or behaving, you are probably wondering what to do next.

The First Concern to Action Tool Kit can help you sort that out. The purpose of this tool kit is to provide you with specific resources and tools to help guide you on the journey from your first concern to action.

The kit was developed to provide families of children under the age of five with:

- An overview of early child development;
- Guidance on what to do if you have a concern about your child's development;
- Information about obtaining an evaluation for your child's development and treatment options, if needed.

The kit is divided into the following sections:

- **Introduction and About Autism**
- **Understanding Your Child's Development**
- **Talking to Your Health Care Provider**
- **Getting a Formal Evaluation**
- **What if My Health Care Provider Says "Autism"?**
- **Other Things to Know**
- **Tools and Resources for Families**

Keep in mind that not all concerns result in a diagnosis of autism or a specific developmental disability, but being proactive can make a world of difference.

It is important to remember that you know your child best. If you are concerned at any time, voice it!



100 Day Kit for Families of Young Children Newly Diagnosed with Autism

Start reading the first chapter

Acknowledgments

100 Day Kit for Newly Diagnosed Families of Young Children (under 5)

100 Day Kit for Families of School Age Children Newly Diagnosed with Autism

Start reading the first chapter

Acknowledgments

100 Day Kit for Newly Diagnosed Families of School Age Children (5-13)

Next Steps



Remember Part 1 of this training



Initial medical assessment



Referrals for testing and labs



Referral for Diagnostic Testing



Treatment for ASD and comorbidities



Provide Medical Home Care

Initial Assessment

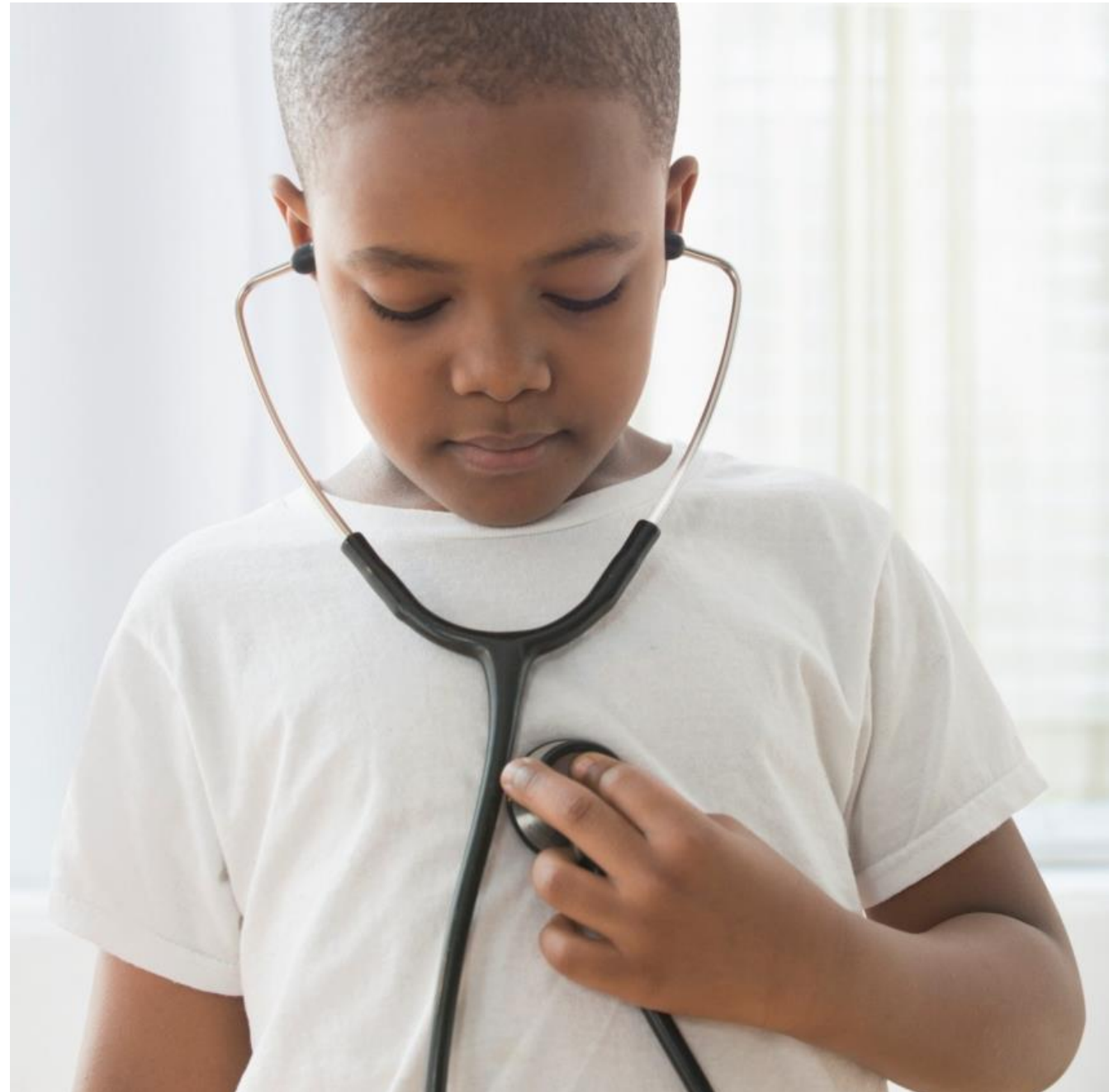
History

- Prenatal and postnatal
- Ask about seizures, sleep, nutrition / GI

Hearing / Vision

Physical / Neurological examination

- Growth, Head Circumference
- Dysmorphic features
- Neurocutaneous markings



Initial Assessment

Referrals

- Audiology
- Speech / Language
- Occupational therapy

Labs:

- Nutrition labs, lead, CBC, Ferritin, TSH
- Fragile X and CMA



EBM - Autism Treatment

Behavioral Interventions

- Applied Behavioral Analysis
- Floor time
- Eclectic models:
 - Early Start Denver Model
 - Project Impact

Therapies

- Speech / language therapy
- Occupational therapy
- Augmentative and Alternative Communication (AAC)



Autism Treatment of Comorbidities

Sleep

Restless, insomnia, OSA

GI

Selective eating, nutrition, constipation

Seizures

Use anticonvulsants with mood-stabilizing qualities

Psych

Anxiety, ADHD, irritability, aggression



Medical Home Care is Coordinated Care

- Early Intervention – birth to 3 years
- School Services
 - Preschool - 3-5 years
 - Then, 5-22 years
- State Services
- Parent Support Services / Respite
- Community Organizations
- What therapies are available and from where?



Investigate Resources in Your Community

Best Practice

Follow Screening Guidelines

Identify Early

Provide Medical Home / Family-centered Care

Shared Decision Making

Collaboration of *providers and staff with family members is crucial*

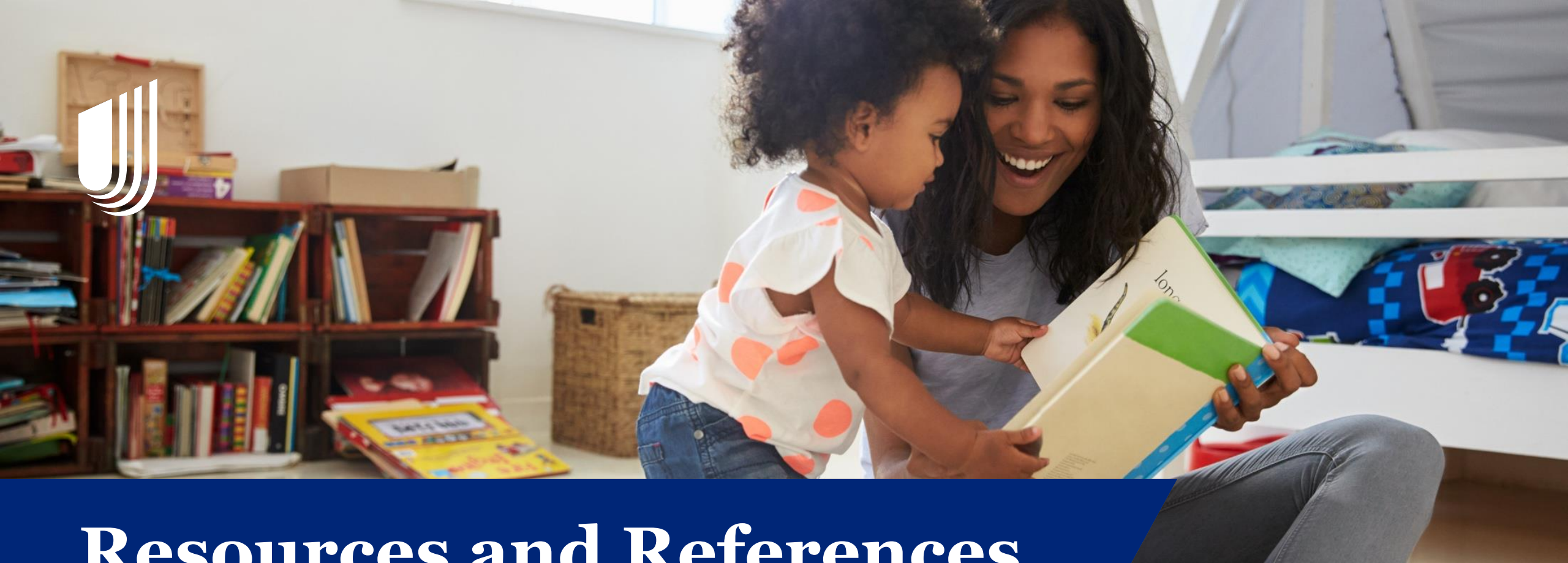
Empower the parent and patient



Listen to parents' and patient's concerns.

Remember – Parents and patients are the Experts!





Resources and References

United
Healthcare

Resources/References – Dev Screening/Surveillance

Resources	Link
Birth to 5: Watch me Thrive	https://www.acf.hhs.gov/ecd/child-health-development/watch-me-thrive
Ages and Stages Questionnaire	http://www.brookespublishing.com/resource-center/screening-and-assessment/asq/
Brigance Screens	http://www.hbe.com.au/series-brigance/early-childhood/screens.html
Developmental Assessment of Young Children, 2nd edition	http://www.therapro.com/Browse-Category/Developmental-Assessments/Developmental-Assessment-of-Young-Children-Second-Edition-DAYC-2.html
Early Screening Profiles	https://www.pearsonclinical.com/childhood/products/100000089/early-screening-profiles-esp.html
Parents' Evaluation of Developmental Status (PEDS)	http://www.pedstest.com/default.aspx
AAP Resource to Identify Risks, Strengths, and Protective Factors	LTSAE_PediatriciansResourceGuide.pdf (aap.org)
2021 AAP Article on Dev Surveillance	Evidence-Informed Milestones for Developmental Surveillance Tools Pediatrics American Academy of Pediatrics (aap.org)



Resources/References – M-CHAT-R

Resources	Links
Modified Checklist for Autism in Toddlers, Revised with Follow-up (M-CHAT-R/F)	M-CHAT™ - Autism Screening (mchatscreen.com)
M-CHAT-R scoring	M-CHAT-R Scoring Instructions CDC
CDC ASD Screening and Diagnosis	Screening and Diagnosis of Autism Spectrum Disorder CDC
AAP Jan 2020 Clinical Report	Identification, Evaluation, and Management of Children With Autism Spectrum Disorder Pediatrics American Academy of Pediatrics (aap.org)
M-CHAT-R resources and translations	Resources - M-CHAT™ (mchatscreen.com)
Autism Speaks information	Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R™) Autism Speaks



Resources/References – ASD Screening

Resources	Link
Pervasive Developmental Disorders Screening Test-II	http://www.pearsonclinical.com/psychology/products/100000132/pervasive-developmental-disorders-screening-test-ii-pddst-ii.html
Ages and Stages Questionnaire – Social-Emotional	http://agesandstages.com/products-services/asqse-2/
Social Communication Questionnaire	http://www.wpspublish.com/store/p/2954/social-communication-questionnaire-scq
CSBS DP Infant Toddler Checklist	https://firstwords.fsu.edu/checklist.html
Childhood Autism Screening Test (CAST)	www.autismresearchcentre.com/project_9_cast



Resources/References – Autism

Autism Society of America
www.autism-society.org

National Institutes of Health
<https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml>

First Signs (public awareness)
www.firstsigns.org

CDC/AAP (Act Early)
www.cdc.gov/actearly

[Key Findings: CDC Releases First Estimates of the Number of Adults Living with Autism Spectrum Disorder in the United States | Autism | NCBDDD | CDC](#)

[Identity-First Language | Autistic Self Advocacy Network \(autisticadvocacy.org\)](#)

[Data & Statistics on Autism Spectrum Disorder | CDC](#)

[Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years—Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2018](#)



Resources/References – Autism

Healthychildren.org (AAP parent website)	<i>How Pediatricians Screen for Autism - HealthyChildren.org; Autism - HealthyChildren.org</i>
AAP Autism Toolkit	<i>Autism Toolkit AAP Toolkits AAP Point-of-Care-Solutions</i>
AAP web-page	<i>Autism Spectrum Disorder (aap.org)</i>
AAP Clinical Report	<i>Identification, Evaluation, and Management of Children With Autism Spectrum Disorder American Academy of Pediatrics (aappublications.org)</i>
AAP PediaLink Course	<i>Identifying and Caring for Children with Autism Spectrum Disorder: A Course for Pediatric Clinicians - AAP</i>
Thompson Center for Autism and neurodevelopmental disorders	<i>Online Autism Training Modules - Thompson Center (missouri.edu)</i>
OCALI Autism Center	<i>OCALI Autism Center</i>



Resources/References – Medical Home

Medical Home Portal

<https://www.medicalhomeportal.org/clinical-practice>

AAP Medical Home Resources

<https://www.aap.org/en-us/professional-resources/practice-transformation/medicalhome/Pages/home.aspx>

NCQA's Patient-Centered Medical Home Recognition Program

<http://www.ncqa.org/programs/recognition/practices/patient-centered-medical-home-pcmh>

National Center for Medical Home Implementation

<https://medicalhomeinfo.aap.org/Pages/default.aspx>



Resources/References – Treatment

Floortime

<https://www.autismspeaks.org/what-autism/treatment/floortime>

<https://www.stanleygreenspan.com/>

ABA

<https://www.autismspeaks.org/science/resources-programs/autism-treatment-network/atn-air-p-applied-behavior-analysis>

Early Start Denver Model

<http://www.saceaz.org/early-start-denver-model-esdm>

Medication Decision Making – Autism Speaks Toolkit

<https://www.autismspeaks.org/science/resources-programs/autism-treatment-network/tools-you-can-use/medication-guide>

