# PEDIATRIC DEVELOPMENT

## IN OFFICE SCREENING TOOLS & WHAT TO DO WHEN MILESTONES ARE NOT MET

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# LEARNING OBJECTIVES

I. Describe developmental assessments in newborns to early school age children

II. Describe screening tools used during well child visits and their importance

III. Describe the principles of early intervention programs, who gets referred and when

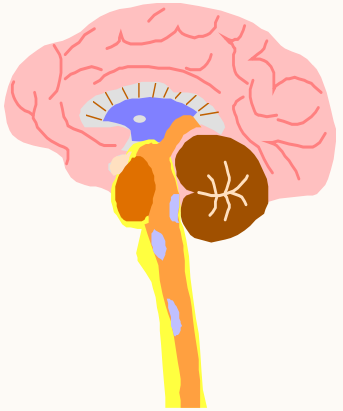
IV. Describe screenings for ADHD/anxiety/depression and the role primary care has in treating these conditions

# WHY IS THIS IMPORTANT?

- Developmental milestones are abilities achieved by majority of children by certain predictable ages.
- The CDC estimates about 1 in 6 children aged 3-17 (17%) have a developmental delay or disability.
- Early recognition and treatment of developmental disorders improve outcomes and is an integral component of pediatric care.

# FIVE DOMAINS OF DEVELOPMENT

- Gross motor - use of large muscles
- Fine motor - use of small muscles of hands
- Cognition - thinking, learning, & memory
- Language - comprehension & use of meaningful symbolic communication
- Social - emotional reactions to events & interactions with others



# NEWBORN VISIT

1. Review newborn hearing screen result (HL→ Speech delay)

2. Review newborn screen results ~2 weeks old

Congenital Hypothyroidism

# Newborn Screening Program Laboratory Report

[redacted] **Specimen Type:** First Specimen **Received:** 11/30/2020 **Reported:** 12/2/2020

| | | | | | |
|---|---|---|---|---|---|
| **Infant's Name:** | FERNANDEZ | **Gender:** | MALE | **Birth Order:** | |
| **Birth Date/Time:** | 11/23/2020 @ 09:07 | **Birth Weight:** | 3,240 grams | **Gestational Age:** | 38 wks |
| **1st Feed Date/Time:** | | **Collection Weight:** | 3,110 grams | **NICU:** | No |
| **Collection Date/Time:** | 11/24/2020 @ 13:02 | **Adoption:** | No | **Meconium Ileus:** | No |
| **Transfused Date/Time:** | | **Race:** | White, Hispanic | **Feed Status:** | Oral |
| **Mother's Name:** | FERNANDEZ, ELIZABETH | **Phone:** | [redacted] | | |
| **Address:** | [redacted] | **Alt Phone:** | | **Medicaid ID:** | |
| **City:** | | **State:** FL | **County:** BROWARD | **Zip:** | 33029 |
| **Infant's Physician:** | ALONSO, NOEL | **Phone:** | 561-963-4874 | | |
| **Hospital of Birth:** | MEMORIAL HOSPITAL MIRAMAR | **Medical Record #:** | [redacted] | | |
| **Collection Site:** | MEMORIAL HOSPITAL MIRAMAR | **Hospital Lab #:** | | **Collected By:** | 69007 |

**Hearing Screen Date:** 11/24/2020
**Test Method - Left Ear:** ABR **Test Method - Right Ear:** ABR
**Test Result - Left Ear:** Pass **Test Result - Right Ear:** Pass
**Hearing Screening Risk Factors:**
**Reason Not Tested:**

**Pulse Oximetry Screen Date:** 11/24/2020 **Pulse Oximetry Result:** Pass
**Right Hand % Result:** 97 **Lower Extremity % Result:** 98
**Reason Pulse Oximetry Screening Not Reported:**

*Hearing screening and pulse oximetry screening results were reported by the submitting entities.*

**RESULTS:**

| Disorder/Analyte(s) | Patient Results | Normal Range | Comments | Recommendations |
|---|---|---|---|---|
| Amino Acidemias | Within Normal Limits | | | |
| Fatty Oxidation Disorders | Within Normal Limits | | | |
| Organic Acidemias | Within Normal Limits | | | |
| Endocrine Disorders | Within Normal Limits | | | |
| Enzyme Disorders | Within Normal Limits | | | |
| Hemoglobinopathies | Normal Hemoglobin Pattern | | | |
| Cystic Fibrosis | Within Normal Limits - No DNA Performed | | | |
| SCID | Within Normal Limits | | | |
| X-ALD | Within Normal Limits | | | |
| LSD | Within Normal Limits | | | |
| SMA | Within Normal Limits | | | |

**Newborn Screening results should be forwarded to the primary care physician and can be obtained online at www.fnsr.net**

**COMMENT(S):**

**RECOMMENDATION(S):**

**RESULTS:**

| Disorder/Analyte(s) | Patient Results | Normal Range | Comments | Recommendations |
|---|---|---|---|---|
| Amino Acidemias | Within Normal Limits | | | |
| Fatty Oxidation Disorders | Within Normal Limits | | | |
| Organic Acidemias | Within Normal Limits | | | |
| Endocrine Disorders | | | | |
| TSH | **37.3 µU/mL Serum** | <= 23 µU/mL Serum | **A** | **1** |
| T4 | **14.4 µg/dL Serum** | >= 6.6 µg/dL Serum | | |
| 17OHP | Within Normal Limits | | | |
| Enzyme Disorders | Within Normal Limits | | | |
| Hemoglobinopathies | Normal Hemoglobin Pattern | | | |
| Cystic Fibrosis | Within Normal Limits - No DNA Performed | | | |
| SCID | Within Normal Limits | | | |
| X-ALD | Within Normal Limits | | | |

**Newborn Screening results should be forwarded to the primary care physician and can be obtained online at www.fnsr.net**

**COMMENT(S):**

A. The result indicates a Borderline TSH level, which may suggest Possible Congenital Hypothyroidism.

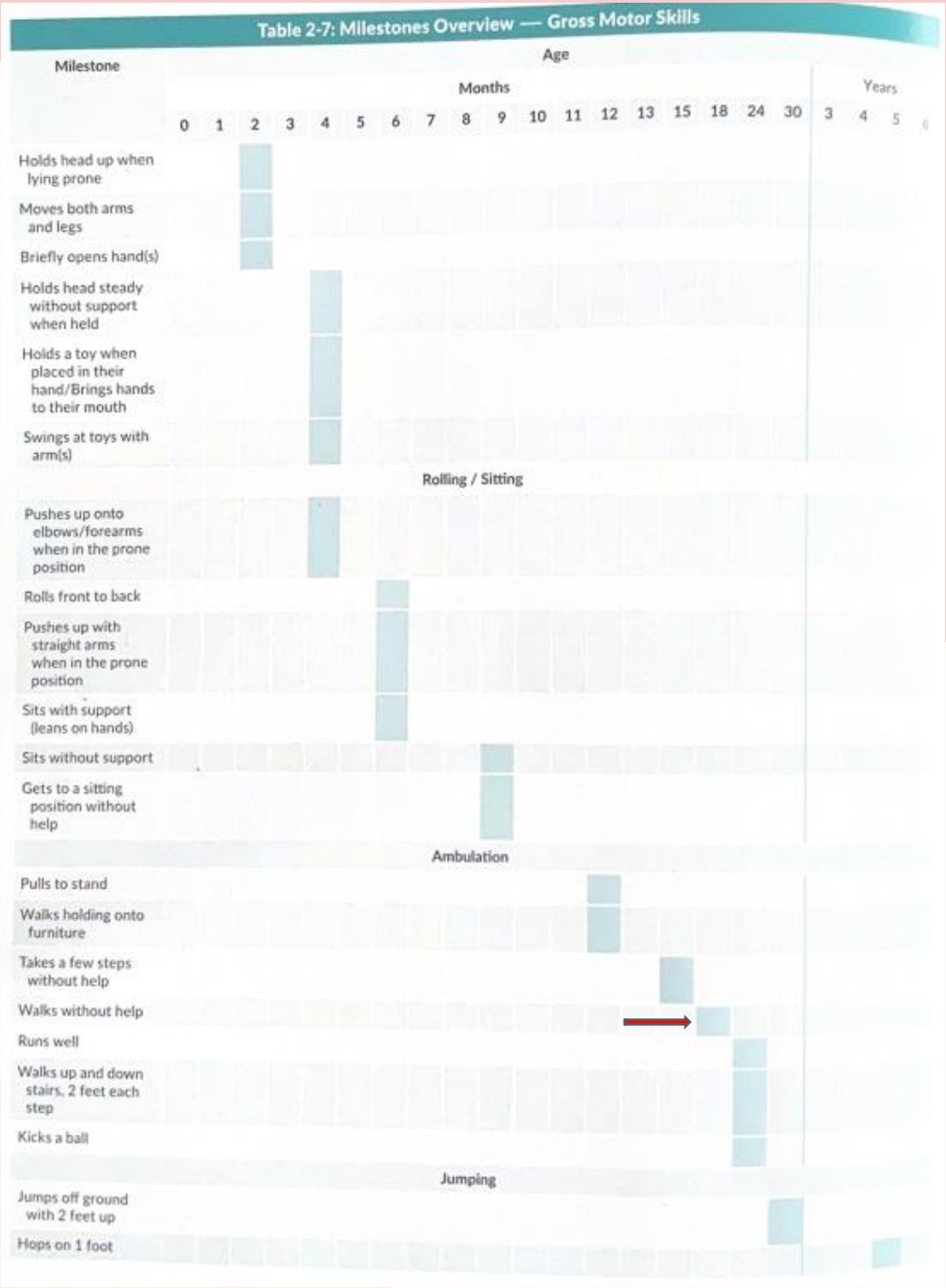
**RECOMMENDATION(S):**

1. Physician discretion strongly advised. Repeat newborn screen or test for serum TSH. Refer infant to endocrinologist if serum TSH is abnormal and fax lab report to 850-922-5385. Contact NBS Program for further assistance: 866-804-9166.

| Age | Gross Motor | Fine Motor | Self-Help | Problem-solving | Social/Emotional | Receptive Language | Expressive Language |
|---|---|---|---|---|---|---|---|
| 12 months | • Stands well with arms high, legs splayed<br>• Posterior protection<br>• Independent steps | • Scribbles after demonstration<br>• Fine pincer grasp of pellet<br>• Holds crayon<br>• Attempts tower of two cubes | • Finger feeds part of meal<br>• Takes off hat | • Rattles spoon in cup<br>• Lifts box lid to find toy | • Shows objects to parent to share interest<br>• Points to get desired object (proto-imperative pointing) | • Follows one-step command with gesture<br>• Recognizes names of two objects and looks when named | • Points to get desired object (proto-imperative pointing)<br>• Uses several gestures with vocalizing (eg, waving, reaching) |
| 13 months | • Walks with arms high and out (high guard) | • Attempts to release pellet in bottle | • Drinks from cup with some spilling | • Dangles ring by string<br>• Reaches around clear barrier to obtain object<br>• Unwraps toy in cloth | • Shows desire to please caregiver<br>• Solitary play<br>• Functional play | • Looks appropriately when asked, "Where's the ball?" | • Uses three words<br>• Immature jargoning: inflection without real words |
| 14 months | • Stands without pulling up<br>• Falls by collapse<br>• Walks well | • Imitates back and forth scribble<br>• Adds third cube to a two-cube tower<br>• Puts round peg in and out of hole | • Removes socks/shoes<br>• Chews well<br>• Puts spoon in mouth (turns over) | • Dumps pellet out of bottle after demonstration | • Points at object to express interest (proto-declarative pointing)<br>• Purposeful exploration of toys through trial and error | • Follows one-step command without gesture | • Names one object<br>• Points at object to express interest (proto-declarative pointing) |
| 15 months | • Stoops to pick up toy<br>• Creeps up stairs<br>• Runs stiff-legged<br>• Walks carrying toy<br>• Climbs on furniture | • Builds three-to four-cube tower<br>• Places 10 cubes in cup<br>• Releases pellet into bottle | • Uses spoon with some spilling<br>• Attempts to brush own hair<br>• Fusses to be changed | • Turns pages in book<br>• Places circle in single-shape puzzle | • Shows empathy (someone else cries, child looks sad)<br>• Hugs adult in reciprocation<br>• Recognizes without a demonstration that a toy requires activation; hands it to adult if can't operate | • Points to one body part<br>• Points to one object of three when named<br>• Gets object from another room upon demand | • Uses three to five words<br>• Mature jargoning with real words |
| 16 months | • Stands on one foot with slight support<br>• Walks backwards<br>• Walks up stairs with one hand held | • Puts several round pegs in board with urging<br>• Scribbles spontaneously | • Picks up and drinks from cup<br>• Fetches and carries objects (same room) | • Dumps pellet out without demonstration<br>• Finds toy observed to be hidden under layers of covers<br>• Places circle in form board | • Kisses by touching lips to skin<br>• Periodically visually relocates caregiver<br>• Self-conscious; embarrassed when aware of people observing | • Understands simple commands, "Bring to mommy"<br>• Points to one picture when named | • Uses 5 to 10 words |

Depending on your source, exact timing of milestones will differ

*range when majority of children should have developed each skill



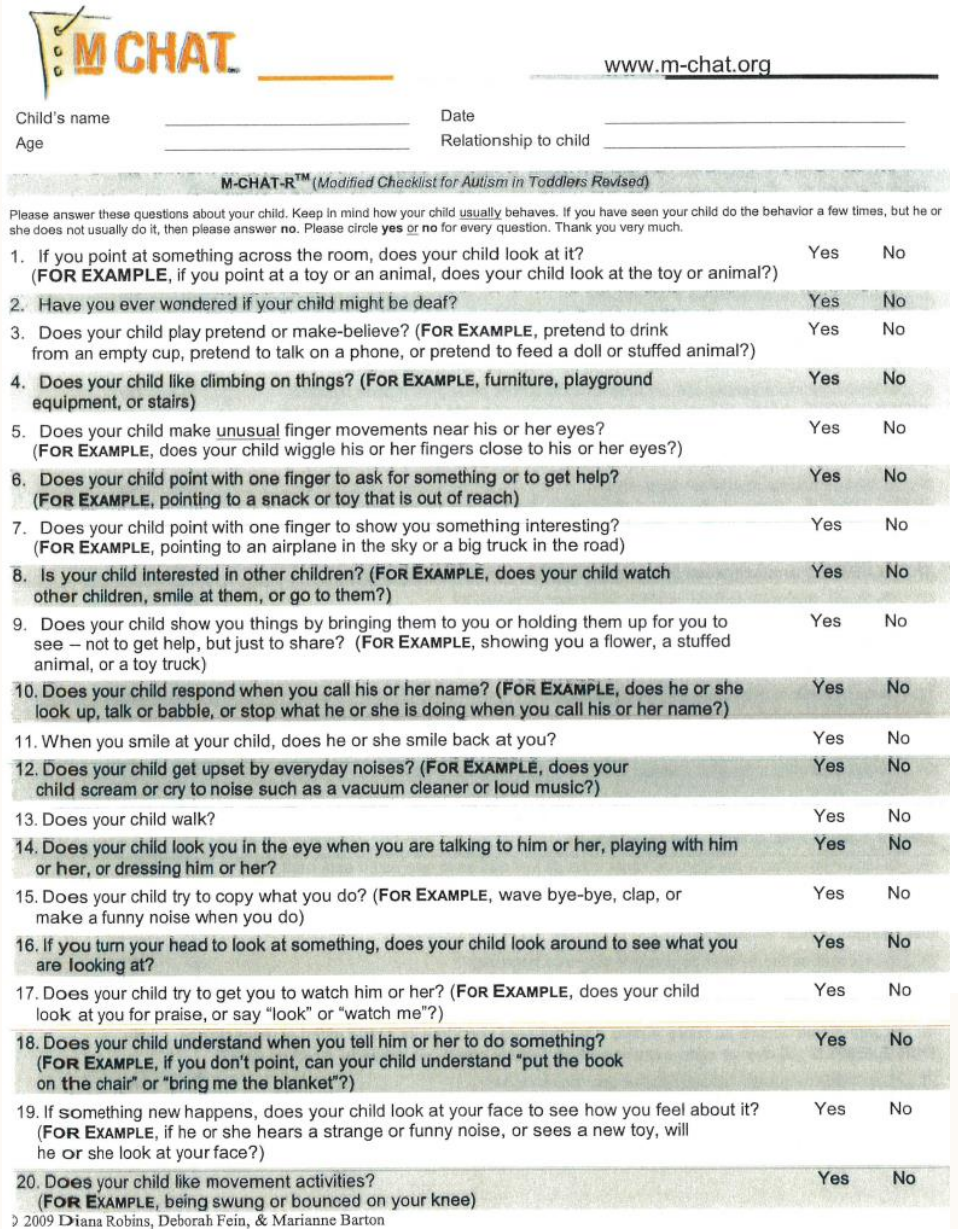
# OVERCOMING TIME HURDLES

Questionaries can be completed ahead of visit or in waiting room.

-ASQ at 9 mo., 18 mo. & 30 mo. WCC

-MCHAT at 18 mo. & 24 mo. WCC

9 and 30 mo. WCC are not vaccine visits typically 100% growth and development!



M CHAT

www.m-chat.org

Child's name _____ Date _____

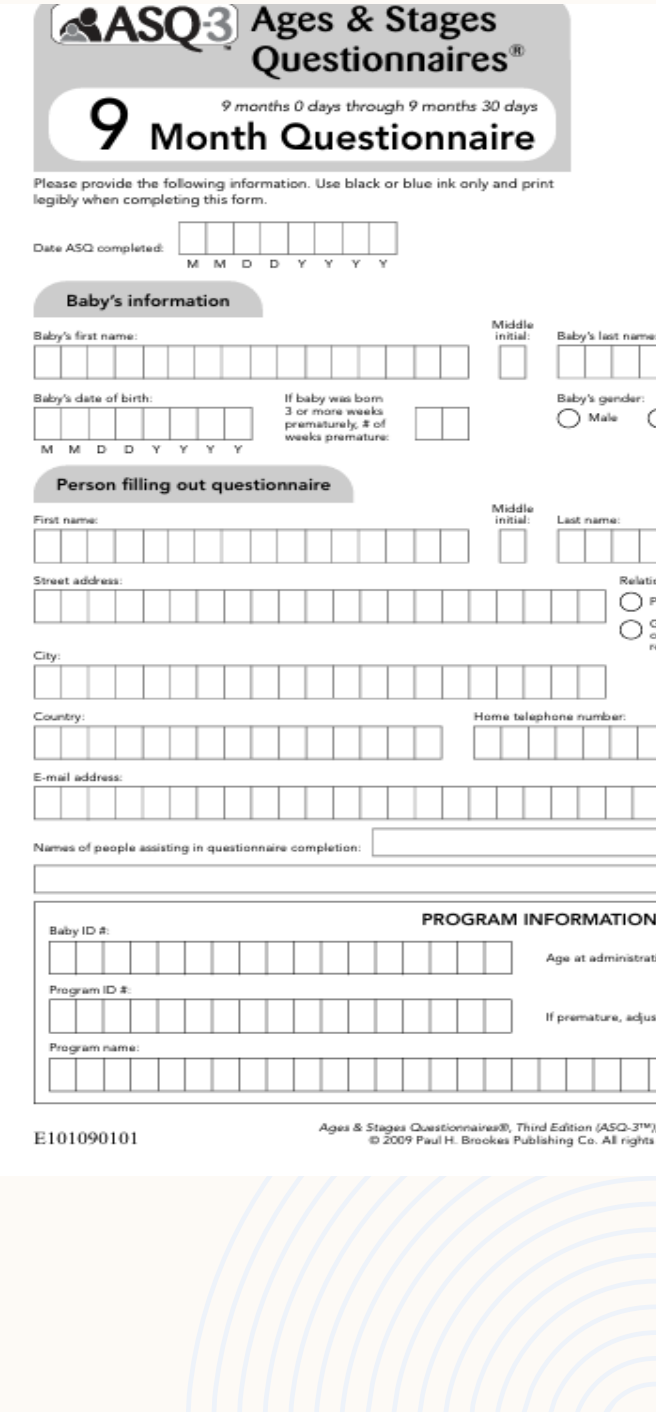
Age _____ Relationship to child _____

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

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.

| | | |
|---|---|---|
| 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?) | Yes | No |
| 2. Have you ever wondered if your child might be deaf? | Yes | No |
| 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?) | Yes | No |
| 4. Does your child like climbing on things? (FOR EXAMPLE, furniture, playground equipment, or stairs) | Yes | No |
| 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?) | Yes | 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) | Yes | 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) | Yes | No |
| 8. Is your child interested in other children? (FOR EXAMPLE, does your child watch other children, smile at them, or go to them?) | Yes | No |
| 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) | Yes | No |
| 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?) | Yes | No |
| 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 |





ASQ-3 Ages & Stages Questionnaires®

9 Month Questionnaire

*9 months 0 days through 9 months 30 days*

Please provide the following information. Use black or blue ink only and print legibly when completing this form.

Date ASQ completed: M M D D Y Y Y Y

**Baby's information**

Baby's first name: | Middle initial: | Baby's last name:

Baby's date of birth: M M D D Y Y Y Y | If baby was born 3 or more weeks prematurely, # of weeks premature: | Baby's gender: ○ Male

**Person filling out questionnaire**

First name: | Middle initial: | Last name:

Street address:

City:

Country: | Home telephone number:

E-mail address:

Names of people assisting in questionnaire completion:

**PROGRAM INFORMATION**

Baby ID #: | Age at administrat

Program ID #: | If premature, adjus

Program name:

E101090101

# SCREENING TOOLS

- ASQ
  - English/Spanish
  - available for every age well visits are done
  - easy to score
  - easy to see where referral(s) ST/PT/OT/ABA or closer follow up needed

- MCHAT (Modified Checklist for Autism in Toddlers)
  - English/Spanish
  - For all questions except #2, 5, 12, the answer NO indicates ASD risk
  - RED flags questions #2, 5, 12 the answer YES indicates ASD risk
  - Additional referral to ABA therapy if Autism concern

ASQ-3

# 9 Month Questionnaire

*9 months 0 days through 9 months 30 days*

On the following pages are questions about activities babies may do. Your baby may have already done some of the activities described here, and there may be some your baby has not begun doing yet. For each item, please fill in the circle that indicates whether your baby is doing the activity regularly, sometimes, or not yet.

**Important Points to Remember:**

- ☑ Try each activity with your baby before marking a response.
- ☑ Make completing this questionnaire a game that is fun for you and your baby.
- ☑ Make sure your baby is rested and fed.
- ☑ Please return this questionnaire by _____.

**Notes:**

_____

_____

_____

_____

## COMMUNICATION

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 1. Does your baby make sounds like "da," "ga," "ka," and "ba"? | ○ | ○ | ○ | ___ |
| 2. If you copy the sounds your baby makes, does your baby repeat the same sounds back to you? | ○ | ○ | ○ | ___ |
| 3. Does your baby make two similar sounds like "ba-ba," "da-da," or "ga-ga"? *(The sounds do not need to mean anything.)* | ○ | ○ | ○ | ___ |
| 4. If you ask your baby to, does he play at least one nursery game even if you don't show him the activity yourself (such as "bye-bye," "Peeka-boo," "clap your hands," "So Big")? | ○ | ○ | ○ | ___ |
| 5. Does your baby follow one simple command, such as "Come here," "Give it to me," or "Put it back," *without* your using gestures? | ○ | ○ | ○ | ___ |
| 6. Does your baby say three words, such as "Mama," "Dada," and "Baba"? *(A "word" is a sound or sounds your baby says consistently to mean someone or something.)* | ○ | ○ | ○ | ___ |
| | | | COMMUNICATION TOTAL | ___ |

## GROSS MOTOR

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 1. If you hold both hands just to balance your baby, does she support her own weight while standing?  | ○ | ○ | ○ | ___ |
| 2. When sitting on the floor, does your baby sit up straight for several minutes *without* using his hands for support?  | ○ | ○ | ○ | ___ |



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## GROSS MOTOR (continued)

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 3. When you stand your baby next to furniture or the crib rail, does she hold on without leaning her chest against the furniture for support?  | ○ | ○ | ○ | ___ |
| 4. While holding onto furniture, does your baby bend down and pick up a toy from the floor and then return to a standing position?  | ○ | ○ | ○ | ___ |
| 5. While holding onto furniture, does your baby lower himself with control (without falling or flopping down)? | ○ | ○ | ○ | ___ |
| 6. Does your baby walk beside furniture while holding on with only one hand? | ○ | ○ | ○ | ___ |

GROSS MOTOR TOTAL ___

## FINE MOTOR

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 1. Does your baby pick up a small toy with only one hand?  | ○ | ○ | ○ | ___ |
| 2. Does your baby *successfully* pick up a crumb or Cheerio by using her thumb and all of her fingers in a raking motion? *(If she already picks up a crumb or Cheerio, mark "yes" for this item.)*  | ○ | ○ | ○ | ___ |
| 3. Does your baby pick up a small toy with the *tips* of his thumb and fingers? *(You should see a space between the toy and his palm.)*  | ○ | ○ | ○ | ___ |
| 4. After one or two tries, does your baby pick up a piece of string with her first finger and thumb? *(The string may be attached to a toy.)*  | ○ | ○ | ○ | ___ |
| 5. Does your baby pick up a crumb or Cheerio with the *tips* of his thumb and a finger? He may rest his arm or hand on the table while doing it.  | ○ | ○ | ○ | ___ * |
| 6. Does your baby put a small toy down, without dropping it, and then take her hand off the toy? | ○ | ○ | ○ | ___ |

FINE MOTOR TOTAL ___

**If Fine Motor Item 5 is marked "yes" or "sometimes," mark Fine Motor Item 2 "yes."*







## PROBLEM SOLVING

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 1. Does your baby pass a toy back and forth from one hand to the other?  | ○ | ○ | ○ | ___ |
| 2. Does your baby pick up two small toys, one in each hand, and hold onto them for about 1 minute?  | ○ | ○ | ○ | ___ |
| 3. When holding a toy in his hand, does your baby bang it against another toy on the table?  | ○ | ○ | ○ | ___ |
| 4. While holding a small toy in each hand, does your baby clap the toys together (like "Pat-a-cake")? | ○ | ○ | ○ | ___ |
| 5. Does your baby poke at or try to get a crumb or Cheerio that is inside a clear bottle (such as a plastic soda-pop bottle or baby bottle)? | ○ | ○ | ○ | ___ |
| 6. After watching you hide a small toy under a piece of paper or cloth, does your baby find it? *(Be sure the toy is completely hidden.)* | ○ | ○ | ○ | ___ |

PROBLEM SOLVING TOTAL ___

## PERSONAL-SOCIAL

| | YES | SOMETIMES | NOT YET | |
|---|---|---|---|---|
| 1. While your baby is on her back, does she put her foot in her mouth?  | ○ | ○ | ○ | ___ |
| 2. Does your baby drink water, juice, or formula from a cup while you hold it? | ○ | ○ | ○ | ___ |
| 3. Does your baby feed himself a cracker or a cookie? | ○ | ○ | ○ | ___ |
| 4. When you hold out your hand and ask for her toy, does your baby offer it to you even if she doesn't let go of it? *(If she already lets go of the toy into your hand, mark "yes" for this item.)* | ○ | ○ | ○ | ___ |
| 5. When you dress your baby, does he push his arm through a sleeve once his arm is started in the hole of the sleeve? | ○ | ○ | ○ | ___ |
| 6. When you hold out your hand and ask for her toy, does your baby let go of it into your hand? | ○ | ○ | ○ | ___ |

PERSONAL-SOCIAL TOTAL ___

## OVERALL

*Parents and providers may use the space below for additional comments.*

1. Does your baby use both hands and both legs equally well? If no, explain: ○ YES ○ NO

2. When you help your baby stand, are his feet flat on the surface most of the time? If no, explain: ○ YES ○ NO

3. Do you have concerns that your baby is too quiet or does not make sounds like other babies? If yes, explain: ○ YES ○ NO

4. Does either parent have a family history of childhood deafness or hearing impairment? If yes, explain: ○ YES ○ NO

5. Do you have concerns about your baby's vision? If yes, explain: ○ YES ○ NO

6. Has your baby had any medical problems in the last several months? If yes, explain: ○ YES ○ NO



## OVERALL (continued)

7. Do you have any concerns about your baby's behavior? If yes, explain: ○ YES ○ NO



## ASQ-3 9 Month ASQ-3 Information Summary

*9 months 0 days through 9 months 30 days*

Baby's name: _____ Date ASQ completed: _____

Baby's ID #: _____ Date of birth: _____

Administering program/provider: _____ Was age adjusted for prematurity when selecting questionnaire? ○ Yes ○ No

1. **SCORE AND TRANSFER TOTALS TO CHART BELOW:** See *ASQ-3 User's Guide* for details, including how to adjust scores if item responses are missing. Score each item (YES = 10, SOMETIMES = 5, NOT YET = 0). Add item scores, and record each area total. In the chart below, transfer the total scores, and fill in the circles corresponding with the total scores.

| Area | Cutoff | Total Score | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Communication | 13.97 | | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Gross Motor | 17.82 | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Fine Motor | 31.32 | | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| Problem Solving | 28.72 | | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Personal-Social | 18.91 | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

2. **TRANSFER OVERALL RESPONSES:** Bolded uppercase responses require follow-up. See *ASQ-3 User's Guide*, Chapter 6.

| | | | | | |
|---|---|---|---|---|---|
| 1. Uses both hands and both legs equally well? Comments: | Yes | **NO** | 5. Concerns about vision? Comments: | **YES** | No |
| 2. Feet are flat on the surface most of the time? Comments: | Yes | **NO** | 6. Any medical problems? Comments: | **YES** | No |
| 3. Concerns about not making sounds? Comments: | **YES** | No | 7. Concerns about behavior? Comments: | **YES** | No |
| 4. Family history of hearing impairment? Comments: | **YES** | No | 8. Other concerns? Comments: | **YES** | No |

3. **ASQ SCORE INTERPRETATION AND RECOMMENDATION FOR FOLLOW-UP:** You must consider total area scores, overall responses, and other considerations, such as opportunities to practice skills, to determine appropriate follow-up.

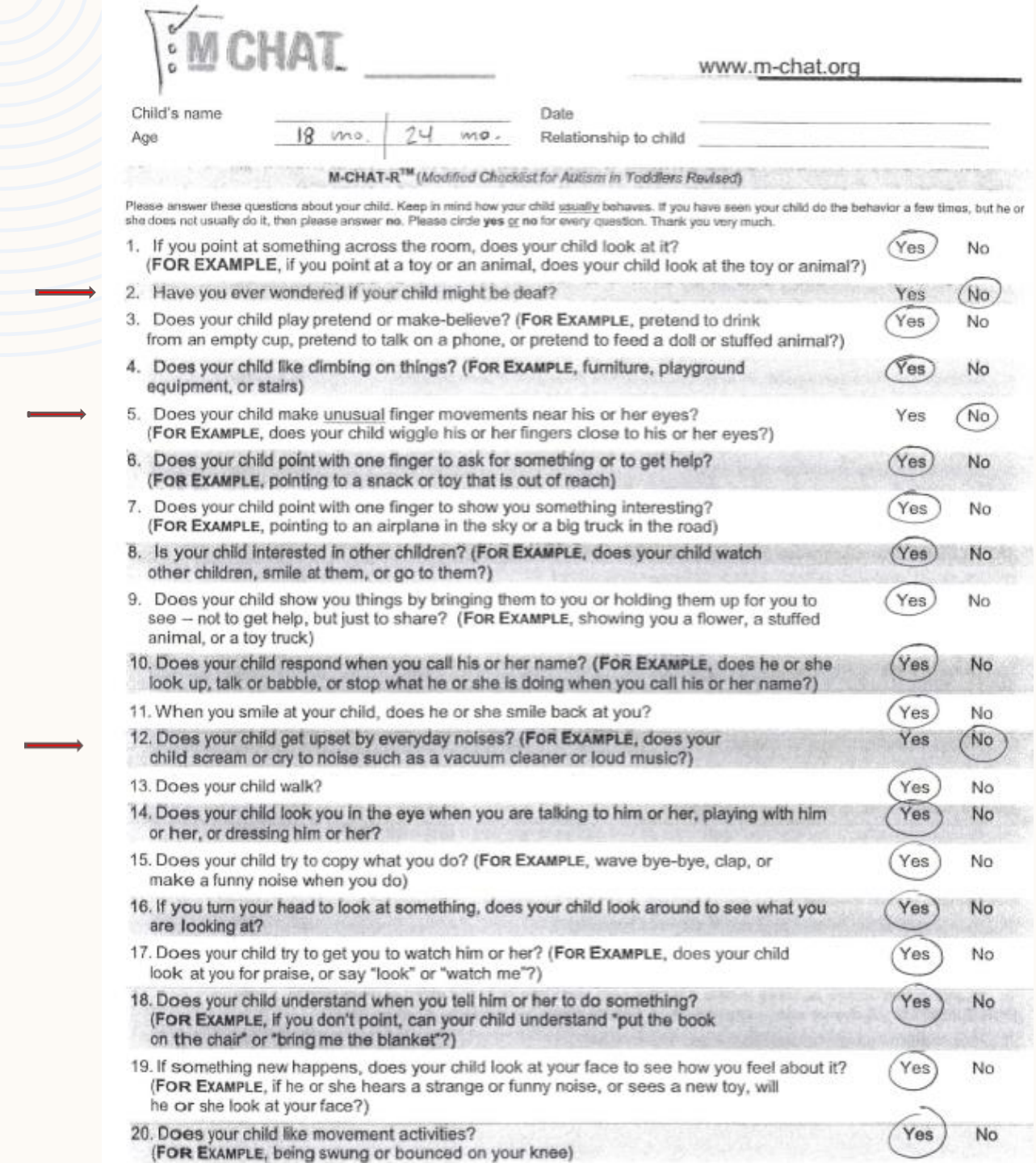
If the baby's total score is in the ▭ area, it is above the cutoff, and the baby's development appears to be on schedule.
If the baby's total score is in the ▭ area, it is close to the cutoff. Provide learning activities and monitor.
If the baby's total score is in the ■ area, it is below the cutoff. Further assessment with a professional may be needed.

4. **FOLLOW-UP ACTION TAKEN:** Check all that apply.

_____ Provide activities and rescreen in _____ months.
_____ Share results with primary health care provider.
_____ Refer for (circle all that apply) hearing, vision, and/or behavioral screening.
_____ Refer to primary health care provider or other community agency (specify reason): _____.
_____ Refer to early intervention/early childhood special education.
_____ No further action taken at this time
_____ Other (specify): _____

5. **OPTIONAL:** Transfer item responses (Y = YES, S = SOMETIMES, N = NOT YET, X = response missing).

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Communication | | | | | | |
| Gross Motor | | | | | | |
| Fine Motor | | | | | | |
| Problem Solving | | | | | | |
| Personal-Social | | | | | | |



M-CHAT

www.m-chat.org

Child's name _____ Date _____

Age 18 mo. | 24 mo. Relationship to child _____

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

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.

| | | |
|---|---|---|
| 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?) | (Yes) | No |
| 2. Have you ever wondered if your child might be deaf? | Yes | (No) |
| 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?) | (Yes) | No |
| 4. Does your child like climbing on things? (FOR EXAMPLE, furniture, playground equipment, or stairs) | (Yes) | No |
| 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?) | Yes | (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) | (Yes) | 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) | (Yes) | No |
| 8. Is your child interested in other children? (FOR EXAMPLE, does your child watch other children, smile at them, or go to them?) | (Yes) | No |
| 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) | (Yes) | No |
| 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?) | (Yes) | No |
| 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 |

## MCHAT at 18 mo. & 24 mo. WCC



**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 Follow-Up™ Scoring Sheet

**Please note: Yes/No has been replaced with Pass/Fail**

| | | |
|---|---|---|
| 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?) | Pass | Fail |
| 2. Have you ever wondered if your child might be deaf? | Pass | Fail |
| 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) | Pass | Fail |
| 4. Does your child like climbing on things? (**For Example**, furniture, playground equipment, or stairs) | Pass | Fail |
| 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?) | Pass | Fail |
| 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) | Pass | Fail |
| 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) | Pass | Fail |
| 8. Is your child interested in other children? (**For Example**, does your child watch other children, smile at them, or go to them?) | Pass | Fail |
| 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) | Pass | Fail |
| 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?) | Pass | Fail |
| 11. When you smile at your child, does he or she smile back at you? | Pass | Fail |
| 12. Does your child get upset by everyday noises? (**For Example**, a vacuum cleaner or loud music) | Pass | Fail |
| 13. Does your child walk? | Pass | Fail |
| 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? | Pass | Fail |
| 15. Does your child try to copy what you do? (**For Example**, wave bye-bye, clap, or make a funny noise when you do) | Pass | Fail |
| 16. If you turn your head to look at something, does your child look around to see what you are looking at? | Pass | Fail |
| 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") | Pass | Fail |
| 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") | Pass | Fail |
| 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?) | Pass | Fail |
| 20. Does your child like movement activities? (**For Example**, being swung or bounced on your knee) | Pass | Fail |

Nombre:_____ Fecha De Nacimiento:____

## M-CHAT-R™

Por favor conteste las siguientes preguntas teniendo en cuenta el comportamiento que su hijo/a preser
usualmente. Si ha notado cierto comportamiento algunas veces, pero no es algo que hace usualmente,
favor conteste **no**. Conteste cada una de las preguntas, marcando con un círculo, la palabra **sí** o **no** co
respuesta. Muchas gracias.

| | |
|---|---|
| 1. ¿Si usted señala un objeto del otro lado del cuarto, su hijo/a lo mira? (**POR EJEMPLO** ¿Si usted señala un juguete o un animal, su hijo/a mira al juguete o al animal?) | Sí |
| 2. ¿Alguna vez se ha preguntado si su hijo/a es sordo/a? | Sí |
| 3. ¿Su hijo/a juega juegos de fantasía o imaginación? (**POR EJEMPLO** finge beber de una taza vacía, finge hablar por teléfono o finge darle de comer a una muñeca o un peluche) | Sí |
| 4. ¿A su hijo/a le gusta treparse a las cosas? (**POR EJEMPLO** muebles, escaleras o juegos infantiles) | Sí |
| 5. ¿Su hijo/a hace movimientos inusuales con los dedos cerca de sus ojos? (**POR EJEMPLO** ¿Mueve sus dedos cerca de sus ojos de manera inusual?) | Sí |
| 6. ¿Su hijo/a apunta o señala con un dedo cuando quiere pedir algo o pedir ayuda? (**POR EJEMPLO** señala un juguete o algo para comer que está fuera de su alcance) | Sí |
| 7. ¿Su hijo/a apunta o señala con un dedo cuando quiere mostrarle algo interesante? (**POR EJEMPLO** señala un avión en el cielo o un camión grande en el camino) | Sí |
| 8. ¿Su hijo/a muestra interés en otros niños? (**POR EJEMPLO** ¿mira con atención a otros niños, les sonríe o se les acerca?) | Sí |
| 9. ¿Su hijo/a le muestra cosas acercándoselas a usted o levantándolas para que usted las vea, no para pedir ayuda sino para compartirlas con usted? (**POR EJEMPLO** le muestra una flor, un peluche o un camión/carro de juguete) | Sí |
| 10. ¿Su hijo/a responde cuando usted le llama por su nombre? (**POR EJEMPLO** ¿Cuando usted lo llama por su nombre: lo mira a usted, habla, balbucea, o deja de hacer lo que estaba haciendo?) | Sí |
| 11. ¿Cuándo usted le sonríe a su hijo/a, él o ella le devuelve la sonrisa? | Sí |
| 12. ¿ A su hijo/a le molestan los ruidos cotidianos? (**POR EJEMPLO** ¿Llora o grita cuando escucha la aspiradora o música muy fuerte?) | Sí |
| 13. ¿Su hijo/a camina? | Sí |
| 14. ¿Su hijo/a le mira a los ojos cuando usted le habla, juega con él/ella o lo/la viste? | Sí |
| 15. ¿Su hijo/a trata de imitar sus movimientos? (**POR EJEMPLO** decir adiós con la mano, aplaudir o algún ruido chistoso que usted haga) | Sí |
| 16. ¿Si usted se voltea a ver algo, su hijo/a trata de ver que es lo que usted está mirando? | Sí |
| 17. ¿Su hijo/a trata que usted lo mire? (**POR EJEMPLO** ¿Busca que usted lo/la halague, o dice "mírame"?) | Sí |
| 18. ¿Su hijo/a le entiende cuando usted le dice que haga algo? (**POR EJEMPLO** ¿Su hijo/a entiende "pon el libro en la silla" o "tráeme la cobija" sin que usted haga señas?) | Sí |
| 19. ¿Si algo nuevo ocurre, su hijo/a lo mira a la cara para ver cómo se siente usted al respecto? (**POR EJEMPLO** ¿Si oye un ruido extraño o ve un juguete nuevo, se voltearía a ver su cara?) | Sí |
| 20. ¿ A su hijo/a le gustan las actividades con movimiento? (**POR EJEMPLO** Le gusta que lo mezan/columpien, o que lo haga saltar en sus rodillas) | Sí |

# WHAT TO DO NEXT:

If patient less than 3 y/o → Florida's Early Steps program: will be evaluated and referred for therapies (ST/PT/OT/ABA) (954-728-1101) or https://floridaearlysteps.com/make-a-referral/

If < 3 y/o and concerned for Speech delay also refer to Audiology for hearing screen

If 3-5 years old and not in public school no referral needed for FDLRS (Florida Diagnostic and Learning Resources System) https://fdlrs.jotform.com/251444884796069

If Autism/Developmental delay assessment needed 18 mos-7 years old → Unicorn Children's Foundation Developmental Assessment Clinic (954) 262-7122 (~3 mo. waitlist)

# WHERE TO REFER CONT.

If 3-5 years old and in public school: screening process completed by school. https://www.browardschools.com/bcps-departments/early-childhood-education/head-start/apply-now-head-start-application-steps

Neurology will see autism but not urgently. (~8 mo. waitlist) in meantime PCP can refer for therapies; May need formal Comprehensive Diagnostic Evaluations (CDEs) for insurance to cover ABA. And PCP to write ABA letter of medical necessity.

# ADDITIONAL SCREENING TESTS IN OFFICE:

# ADHD

DSM -5 diagnostic criteria: several inattentive or hyperactive-impulsive symptoms present prior to age 12 years

# VANDERBILT FORMS



## NICHQ Vanderbilt Assessment Scale—PARENT Informant

Today's Date: _____ Child's Name: _____ Date of Birth: _____

Parent's Name: _____ Parent's Phone Number: _____

**Directions:** **Each rating should be considered in the context of what is appropriate for the age of your child. When completing this form, please think about your child's behaviors in the past 6 months.**

**Is this evaluation based on a time when the child ☐ was on medication ☐ was not on medication ☐ not sure?**

| Symptoms | Never | Occasionally | Often | Very Often |
|---|---|---|---|---|
| 1. Does not pay attention to details or makes careless mistakes with, for example, homework | 0 | 1 | 2 | 3 |
| 2. Has difficulty keeping attention to what needs to be done | 0 | 1 | 2 | 3 |
| 3. Does not seem to listen when spoken to directly | 0 | 1 | 2 | 3 |
| 4. Does not follow through when given directions and fails to finish activities (not due to refusal or failure to understand) | 0 | 1 | 2 | 3 |
| 5. Has difficulty organizing tasks and activities | 0 | 1 | 2 | 3 |
| 6. Avoids, dislikes, or does not want to start tasks that require ongoing mental effort | 0 | 1 | 2 | 3 |
| 7. Loses things necessary for tasks or activities (toys, assignments, pencils, or books) | 0 | 1 | 2 | 3 |
| 8. Is easily distracted by noises or other stimuli | 0 | 1 | 2 | 3 |
| 9. Is forgetful in daily activities | 0 | 1 | 2 | 3 |
| 10. Fidgets with hands or feet or squirms in seat | 0 | 1 | 2 | 3 |
| 11. Leaves seat when remaining seated is expected | 0 | 1 | 2 | 3 |
| 12. Runs about or climbs too much when remaining seated is expected | 0 | 1 | 2 | 3 |
| 13. Has difficulty playing or beginning quiet play activities | 0 | 1 | 2 | 3 |
| 14. Is "on the go" or often acts as if "driven by a motor" | 0 | 1 | 2 | 3 |
| 15. Talks too much | 0 | 1 | 2 | 3 |
| 16. Blurts out answers before questions have been completed | 0 | 1 | 2 | 3 |
| 17. Has difficulty waiting his or her turn | 0 | 1 | 2 | 3 |
| 18. Interrupts or intrudes in on others' conversations and/or activities | 0 | 1 | 2 | 3 |
| 19. Argues with adults | 0 | 1 | 2 | 3 |
| 20. Loses temper | 0 | 1 | 2 | 3 |
| 21. Actively defies or refuses to go along with adults' requests or rules | 0 | 1 | 2 | 3 |
| 22. Deliberately annoys people | 0 | 1 | 2 | 3 |
| 23. Blames others for his or her mistakes or misbehaviors | 0 | 1 | 2 | 3 |
| 24. Is touchy or easily annoyed by others | 0 | 1 | 2 | 3 |
| 25. Is angry or resentful | 0 | 1 | 2 | 3 |
| 26. Is spiteful and wants to get even | 0 | 1 | 2 | 3 |
| 27. Bullies, threatens, or intimidates others | 0 | 1 | 2 | 3 |
| 28. Starts physical fights | 0 | 1 | 2 | 3 |
| 29. Lies to get out of trouble or to avoid obligations (ie, "cons" others) | 0 | 1 | 2 | 3 |
| 30. Is truant from school (skips school) without permission | 0 | 1 | 2 | 3 |
| 31. Is physically cruel to people | 0 | 1 | 2 | 3 |
| 32. Has stolen things that have value | 0 | 1 | 2 | 3 |



Adapted from the Vanderbilt Rating Scales developed by Mark L. Wolraich, MD.

Revised - 1102



## D4 NICHQ Vanderbilt Assessment Scale—TEACHER Informant

Teacher's Name: _____ Class Time: _____ Class Name/Period: _____

Today's Date: _____ Child's Name: _____ Grade Level: _____

**Directions:** **Each rating should be considered in the context of what is appropriate for the age of the child you are rating and should reflect that child's behavior since the beginning of the school year. Please indicate the number of weeks or months you have been able to evaluate the behaviors: _____.**

**Is this evaluation based on a time when the child ☐ was on medication ☐ was not on medication ☐ not sure?**

| Symptoms | Never | Occasionally | Often | Very Often |
|---|---|---|---|---|
| 1. Fails to give attention to details or makes careless mistakes in schoolwork | 0 | 1 | 2 | 3 |
| 2. Has difficulty sustaining attention to tasks or activities | 0 | 1 | 2 | 3 |
| 3. Does not seem to listen when spoken to directly | 0 | 1 | 2 | 3 |
| 4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand) | 0 | 1 | 2 | 3 |
| 5. Has difficulty organizing tasks and activities | 0 | 1 | 2 | 3 |
| 6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort | 0 | 1 | 2 | 3 |
| 7. Loses things necessary for tasks or activities (school assignments, pencils, or books) | 0 | 1 | 2 | 3 |
| 8. Is easily distracted by extraneous stimuli | 0 | 1 | 2 | 3 |
| 9. Is forgetful in daily activities | 0 | 1 | 2 | 3 |
| 10. Fidgets with hands or feet or squirms in seat | 0 | 1 | 2 | 3 |
| 11. Leaves seat in classroom or in other situations in which remaining seated is expected | 0 | 1 | 2 | 3 |
| 12. Runs about or climbs excessively in situations in which remaining seated is expected | 0 | 1 | 2 | 3 |
| 13. Has difficulty playing or engaging in leisure activities quietly | 0 | 1 | 2 | 3 |
| 14. Is "on the go" or often acts as if "driven by a motor" | 0 | 1 | 2 | 3 |
| 15. Talks excessively | 0 | 1 | 2 | 3 |
| 16. Blurts out answers before questions have been completed | 0 | 1 | 2 | 3 |
| 17. Has difficulty waiting in line | 0 | 1 | 2 | 3 |
| 18. Interrupts or intrudes on others (eg, butts into conversations/games) | 0 | 1 | 2 | 3 |
| 19. Loses temper | 0 | 1 | 2 | 3 |
| 20. Actively defies or refuses to comply with adult's requests or rules | 0 | 1 | 2 | 3 |
| 21. Is angry or resentful | 0 | 1 | 2 | 3 |
| 22. Is spiteful and vindictive | 0 | 1 | 2 | 3 |
| 23. Bullies, threatens, or intimidates others | 0 | 1 | 2 | 3 |
| 24. Initiates physical fights | 0 | 1 | 2 | 3 |
| 25. Lies to obtain goods for favors or to avoid obligations (eg, "cons" others) | 0 | 1 | 2 | 3 |
| 26. Is physically cruel to people | 0 | 1 | 2 | 3 |
| 27. Has stolen items of nontrivial value | 0 | 1 | 2 | 3 |
| 28. Deliberately destroys others' property | 0 | 1 | 2 | 3 |
| 29. Is fearful, anxious, or worried | 0 | 1 | 2 | 3 |
| 30. Is self-conscious or easily embarrassed | 0 | 1 | 2 | 3 |
| 31. Is afraid to try new things for fear of making mistakes | 0 | 1 | 2 | 3 |



Adapted from the Vanderbilt Rating Scales developed by Mark L. Wolraich, MD.

# Scoring Instructions for the NICHQ Vanderbilt Assessment Scales

**These scales should NOT be used alone to make any diagnosis. You must take into consideration information from multiple sources. Scores of 2 or 3 on a single Symptom question reflect *often-occurring* behaviors. Scores of 4 or 5 on Performance questions reflect problems in performance.**

The initial assessment scales, parent and teacher, have 2 components: symptom assessment and impairment in performance. On both the parent and teacher initial scales, the symptom assessment screens for symptoms that meet criteria for both inattentive (items 1–9) and hyperactive ADHD (items 10–18).

To meet *DSM-IV* criteria for the diagnosis, one must have at least 6 positive responses to either the inattentive 9 or hyperactive 9 core symptoms, or both. A positive response is a 2 or 3 (often, very often) (you could draw a line straight down the page and count the positive answers in each subsegment). There is a place to record the number of positives in each subsegment, and a place for total score for the first 18 symptoms (just add them up).

The initial scales also have symptom screens for 3 other co-morbidities—oppositional-defiant, conduct, and anxiety/depression. These are screened by the number of positive responses in each of the segments separated by the "squares." The specific item sets and numbers of positives required for each co-morbid symptom screen set are detailed below.

The second section of the scale has a set of performance measures, scored 1 to 5, with 4 and 5 being somewhat of a problem/problematic. To meet criteria for ADHD there must be at least one item of the Performance set in which the child scores a 4 or 5; ie, there must be impairment, not just symptoms to meet diagnostic criteria. The sheet has a place to record the number of positives (4s, 5s) and an Average Performance Score—add them up and divide by number of Performance criteria answered.

| Parent Assessment Scale | Teacher Assessment Scale |
|---|---|
| **Predominantly Inattentive subtype**<br>■ Must score a 2 or 3 on 6 out of 9 items on questions 1–9 AND<br>■ Score a 4 or 5 on any of the Performance questions 48–55 | **Predominantly Inattentive subtype**<br>■ Must score a 2 or 3 on 6 out of 9 items on questions 1–9 AND<br>■ Score a 4 or 5 on any of the Performance questions 36–43 |
| **Predominantly Hyperactive/Impulsive subtype**<br>■ Must score a 2 or 3 on 6 out of 9 items on questions 10–18 AND<br>■ Score a 4 or 5 on any of the Performance questions 48–55 | **Predominantly Hyperactive/Impulsive subtype**<br>■ Must score a 2 or 3 on 6 out of 9 items on questions 10–18 AND<br>■ Score a 4 or 5 on any of the Performance questions 36–43 |
| **ADHD Combined Inattention/Hyperactivity**<br>■ Requires the above criteria on both inattention and hyperactivity/impulsivity | **ADHD Combined Inattention/Hyperactivity**<br>■ Requires the above criteria on both inattention and hyperactivity/impulsivity |
| **Oppositional-Defiant Disorder Screen**<br>■ Must score a 2 or 3 on 4 out of 8 behaviors on questions 19–26 AND<br>■ Score a 4 or 5 on any of the Performance questions 48–55 | **Oppositional-Defiant/Conduct Disorder Screen**<br>■ Must score a 2 or 3 on 3 out of 10 items on questions 19–28 AND<br>■ Score a 4 or 5 on any of the Performance questions 36–43 |
| **Conduct Disorder Screen**<br>■ Must score a 2 or 3 on 3 out of 14 behaviors on questions 27–40 AND<br>■ Score a 4 or 5 on any of the Performance questions 48–55 | **Anxiety/Depression Screen**<br>■ Must score a 2 or 3 on 3 out of 7 items on questions 29–35 AND<br>■ Score a 4 or 5 on any of the Performance questions 36–43 |
| **Anxiety/Depression Screen**<br>■ Must score a 2 or 3 on 3 out of 7 behaviors on questions 41–47 AND<br>■ Score a 4 or 5 on any of the Performance questions 48–55 | |

The parent and teacher follow-up scales have the first 18 core ADHD symptoms, not the co-morbid symptoms. The section segment has the same Performance items and impairment assessment as the initial scales, and then has a side-effect reporting scale that can be used to both assess and monitor the presence of adverse reactions to medications prescribed, if any.

Scoring the follow-up scales involves only calculating a total symptom score for items 1–18 that can be tracked over time, and the average of the Performance items answered as measures of improvement over time with treatment.

**Parent Assessment Follow-up**
- Calculate Total Symptom Score for questions 1–18.
- Calculate Average Performance Score for questions 19–26.

**Teacher Assessment Follow-up**
- Calculate Total Symptom Score for questions 1–18.
- Calculate Average Performance Score for questions 19–26.



# SCORING

# ADHD Medication Flow Chart

## for Children ≥ 6 Years Old

**Start with a first line medication, either from the methylphenidate or dextroamphetamine-amphetamine class.**

- Start at minimum dose and titrate up every two weeks until you reach the average effective dose.
- Maximize dosing of one agent before moving to the next. If ineffective or side effects develop then move to second line medication if needed.
- Long acting medications are preferred for school-age children. An immediate release formulation can be added in the afternoon if needed for increased duration.

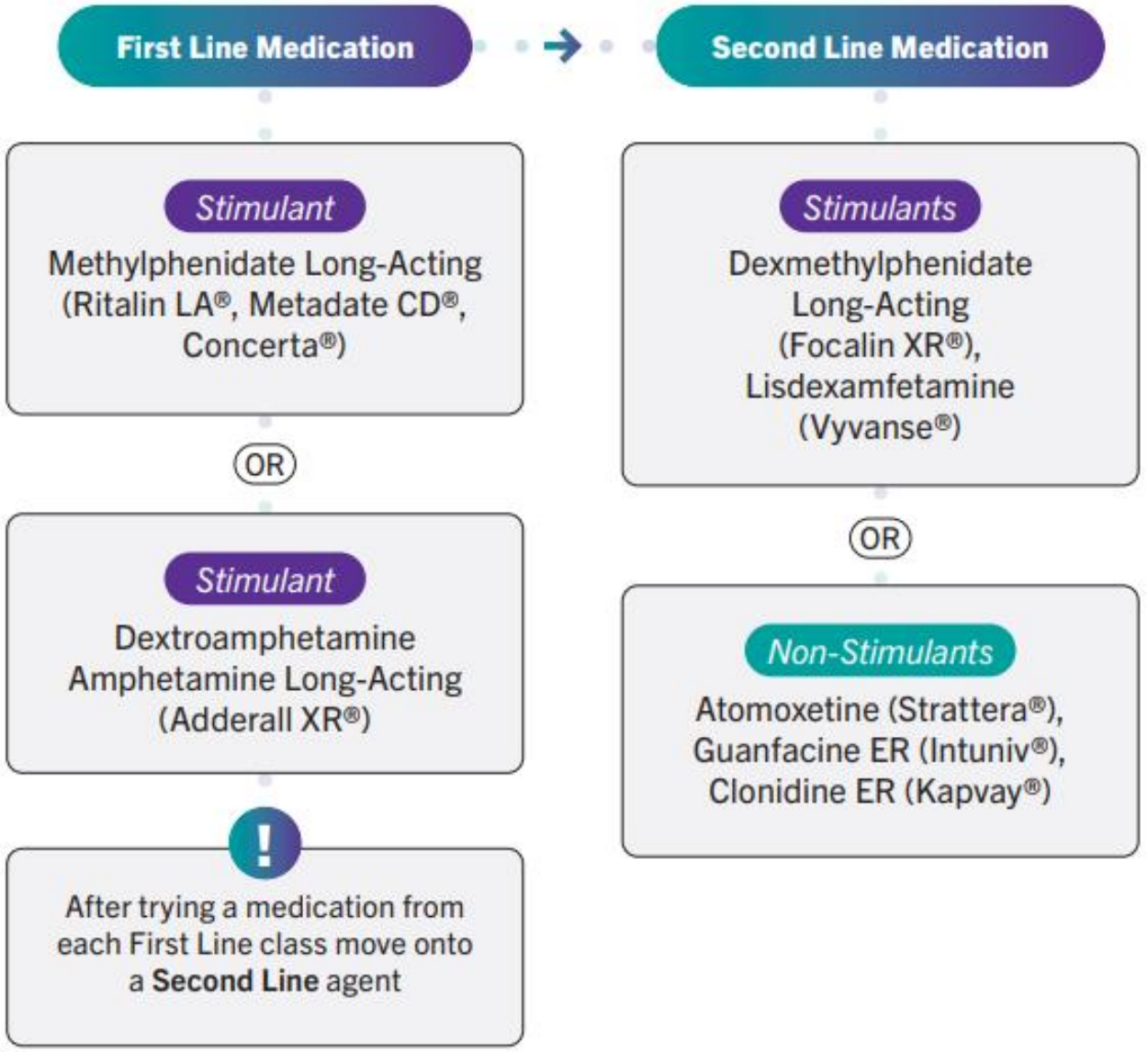
### Screening Tools

→ Vanderbilt Assessment Scales is most commonly used to diagnose children 6-12 years old.

- Parent rating in office plus copy for teacher(s) to complete

→ Use and Interpretation of Vanderbilt Score

Need to monitor weight & BP




ILLINOIS CHAPTER American Academy of Pediatrics

IDPH Illinois Department of Public Health

**Scan the QR code or click the following links for additional information:**

- Alternative Treatment Algorithm
- Guide for Dosage Equivalencies When Switching Classes
- Medicaid Preferred Drug List

Also information for pts <6 y/o

| Drug Name & Class | Starting Dose Daily | Average Effective Dose | Max Dose Daily | Formulations | Clinical Pearls |
|---|---|---|---|---|---|
| **First Line** | | | | | |
| Methylphenidate **Long-Acting** (Ritalin LA®) *Stimulant* | 10-20 mg | 1-2 mg/kg | 60 mg | Capsules can be opened and sprinkled | Duration 8-10 hours<br>10 mg strength is not available generically |
| Methylphenidate **Long-Acting** (Metadate CD®) *Stimulant* | 10-20 mg | 1-2 mg/kg | 60 mg | Capsules can be opened and sprinkled | Duration 8-10 hours |
| Methylphenidate **Long-Acting** (Concerta®) *Stimulant* | 18 mg | 1-2 mg/kg | 54 mg (<13y)<br>72 mg (≥13y) | Tablet cannot be crushed | Duration 10-12 hours<br>May cause skin irritation |
| Dextroamphetamine Amphetamine **Long-Acting** (Adderall XR®) *Stimulant* | 5-10 mg | 0.5 mg/kg | 40 mg | Capsules can be opened and sprinkled | Duration 10-12 hours |

## Second Line

| | | | | | |
|---|---|---|---|---|---|
| Dexmethylphenidate **Long-Acting** (Focalin XR®) *Stimulant* | 5 mg | 0.5-1 mg/kg | 30 mg | Capsules can be opened and sprinkled | Duration 10-12 hours<br>When switching from methylphenidate, reduce dose by half<br>25 mg & 35 mg strengths are not yet available generically |
| Lisdexamfetamine (Vyvanse®) *Stimulant* | 20 mg | 1-2 mg/kg | 70 mg | Can be opened and dissolved in liquid; also comes in chewable form | Duration 10-12 hours |
| Atomoxetine (Strattera®) *Non-Stimulant* | 0.5 mg/kg | | 1.4 mg/kg<br>100 mg | Cannot be opened or crushed | Must be taken daily<br>Start at minimum dose and titrate up every three to four weeks until you reach the average effective dose |
| Guanfacine (Tenex®) *Non-Stimulant* | 0.5 mg | | 4 mg | No formulations specified | Taper when discontinuing |
| Guanfacine ER (Intuniv®) *Non-Stimulant* | 1 mg | | 4 mg | Tablet cannot be opened or crushed | Must be taken daily<br>Taper when discontinuing<br>1mg intuniv =0.66 guanfacine IR |

# ANXIETY

- Ages 8+

- Plan:

Psychology referral – (CBT) Cognitive Behavioral Therapy

If severe in combo with CBT Rx SSRI

## GAD-7 Anxiety

| Over the last two weeks, how often have you been bothered by the following problems? | Not at all | Several days | More than half the days | Nearly every day |
|---|---|---|---|---|
| 1. Feeling nervous, anxious, or on edge | 0 | 1 | 2 | 3 |
| 2. Not being able to stop or control worrying | 0 | 1 | 2 | 3 |
| 3. Worrying too much about different things | 0 | 1 | 2 | 3 |
| 4. Trouble relaxing | 0 | 1 | 2 | 3 |
| 5. Being so restless that it is hard to sit still | 0 | 1 | 2 | 3 |
| 6. Becoming easily annoyed or irritable | 0 | 1 | 2 | 3 |
| 7. Feeling afraid, as if something awful might happen | 0 | 1 | 2 | 3 |

Column totals _____ + _____ + _____ + _____ =

*Total score* _____

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

| Not difficult at all | Somewhat difficult | Very difficult | Extremely difficult |
|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ |

Source: Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues. For research information, contact Dr. Spitzer at ris8@columbia.edu. PRIME-MD® is a trademark of Pfizer Inc. Copyright© 1999 Pfizer Inc. All rights reserved. Reproduced with permission

## Scoring GAD-7 Anxiety Severity

This is calculated by assigning scores of 0, 1, 2, and 3 to the response categories, respectively, of "not at all," "several days," "more than half the days," and "nearly every day."
GAD-7 total score for the seven items ranges from 0 to 21.

0–4: minimal anxiety

5–9: mild anxiety

10–14: moderate anxiety

15–21: severe anxiety

# ADOLESCENTS



**H** **HOME:** who lives at home? What are the relationships like? Divorce?

**E** **EDUCATION:** going to school? Stress of exams/grades? Friends? Bullying?

**E** **EATING:** stress from eating habits, weight or body shape change?

**A** **ACTIVITIES:** any hobbies? Meet with friends? Time spent on internet/TV?

**D** **DRUGS:** do you, friends or family use tobacco, alcohol or drugs?

**S** **SEXUALITY:** previous or current relationship? Sexual orientation?

**S** **SUICIDE:** sad? Stressed? Previous or current thoughts? Medication? DSH?

**S** **SAFETY:** aware of any risk-taking? Violence at home or school?

https://teachmepaediatrics.com/community/holistic-care/headsss-assessment/

## Safety and abuse

It may not be necessary to ask every young person but is particularly important in cases of self-harm or substance misuse.

Example questions:

- Do you ever feel unsafe?
- Is there anyone in your life that you don't feel safe around?
- Is anyone doing things to you that you don't want them to? What sort of things?
- Does anyone put pressure on you to do things you don't want to do?
- Is there anyone you can talk to about these things?

From: **HEADS⁴: Social Media Screening in Adolescent Primary Care**

Pediatrics. 2018;141(6). doi:10.1542/peds.2017-3655

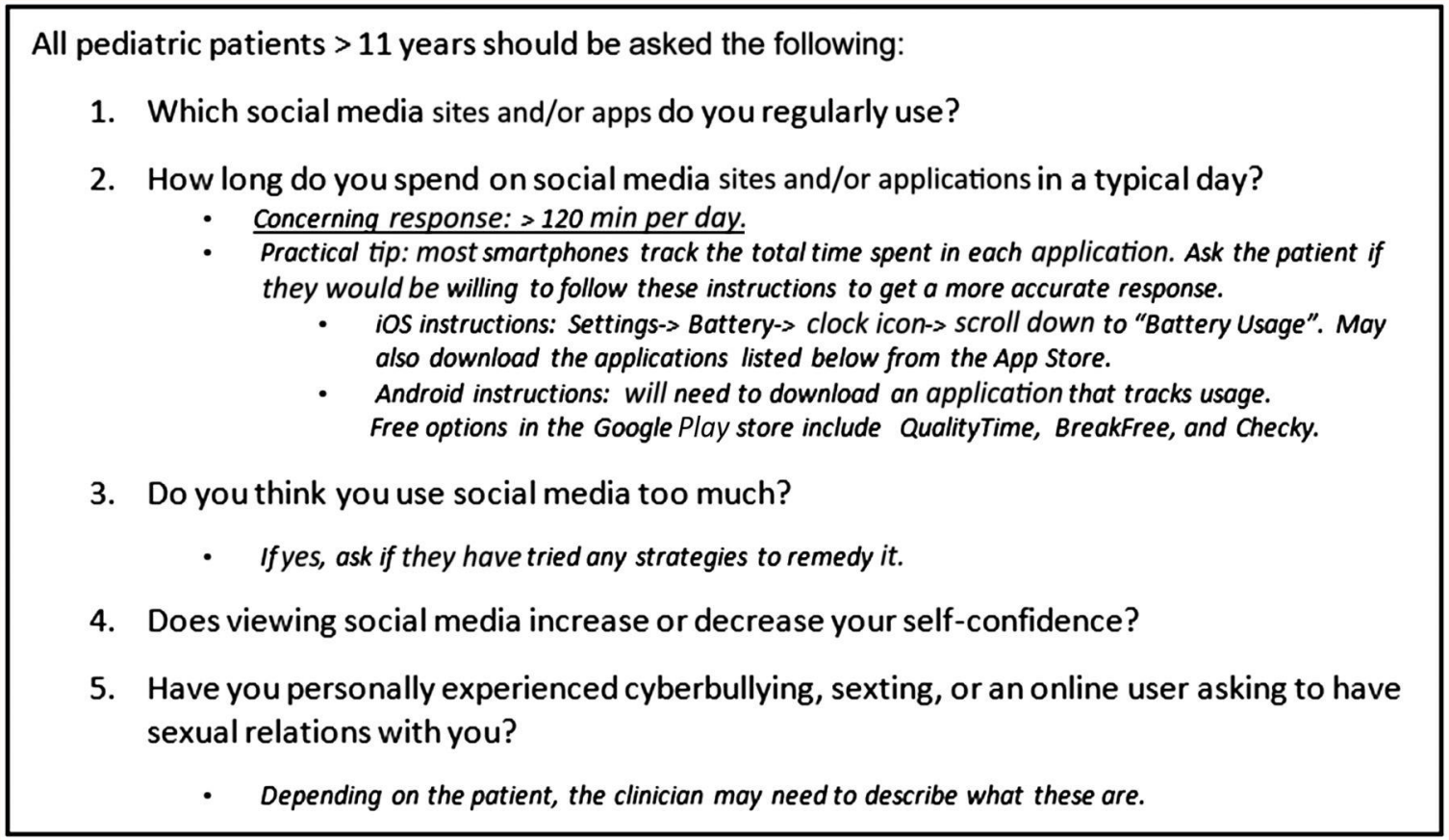



**Figure Legend:**

HEADSSS-"S": social media extension.

# ADOLESCENT VISITS:

-PHQ-Adolescent - depression

| Provisional Diagnosis and Proposed Treatment Actions | | |
|---|---|---|
| **PHQ-9 Score** | **Depression Severity** | **Proposed Treatment Actions** |
| 0 – 4 | None-minimal | None |
| 5 – 9 | Mild | Watchful waiting; repeat PHQ-9 at follow-up |
| 10 – 14 | Moderate | Treatment plan, considering counseling, follow-up and/or pharmacotherapy |
| 15 – 19 | Moderately Severe | Active treatment with pharmacotherapy and/or psychotherapy |
| 20 – 27 | Severe | Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management |

## PHQ-9 modified for Adolescents (PHQ-A)

**Name:** _____ **Clinician:** _____ **Date:** _____

**Instructions:** How often have you been bothered by each of the following symptoms during the past **two weeks**? For each symptom put an **"X"** in the box beneath the answer that best describes how you have been feeling.

| | (0) Not at all | (1) Several days | (2) More than half the days | (3) Nearly every day |
|---|---|---|---|---|
| **1.** Feeling down, depressed, irritable, or hopeless? | | | | |
| **2.** Little interest or pleasure in doing things? | | | | |
| **3.** Trouble falling asleep, staying asleep, or sleeping too much? | | | | |
| **4.** Poor appetite, weight loss, or overeating? | | | | |
| **5.** Feeling tired, or having little energy? | | | | |
| **6.** Feeling bad about yourself – or feeling that you are a failure, or that you have let yourself or your family down? | | | | |
| **7.** Trouble concentrating on things like school work, reading, or watching TV? | | | | |
| **8.** Moving or speaking so slowly that other people could have noticed?<br><br>Or the opposite – being so fidgety or restless that you were moving around a lot more than usual? | | | | |
| **9.** Thoughts that you would be better off dead, or of hurting yourself in some way? | | | | |

In the **past year** have you felt depressed or sad most days, even if you felt okay sometimes?

☐Yes ☐No

If you are experiencing any of the problems on this form, how **difficult** have these problems made it for you to do your work, take care of things at home or get along with other people?

☐Not difficult at all ☐Somewhat difficult ☐Very difficult ☐Extremely difficult

Has there been a time in the **past month** when you have had serious thoughts about ending your life?

☐Yes ☐No

Have you **EVER**, in your WHOLE LIFE, tried to kill yourself or made a suicide attempt?

☐Yes ☐No

***If you have had thoughts that you would be better off dead or of hurting yourself in some way, please discuss this with your Health Care Clinician, go to a hospital emergency room or call 911.*

**Office use only:** **Severity score:** _____

Modified with permission from the PHQ (Spitzer, Williams & Kroenke, 1999) by J. Johnson (Johnson, 2002)

# Anxiety and Depression Medication Flow Chart

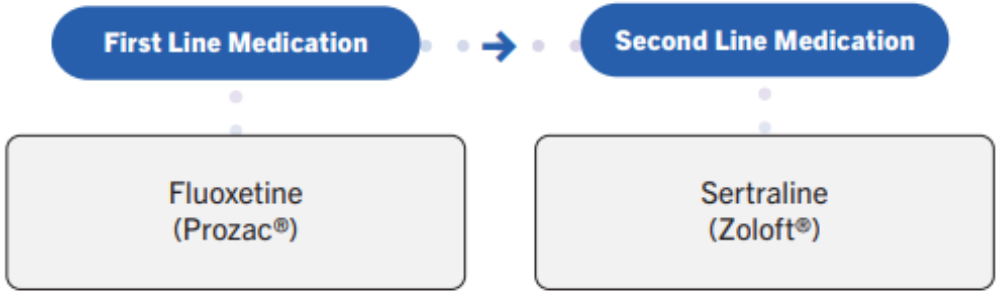
## for Children ≥ 6 Years Old

- Start at minimum dose and titrate up every three to four weeks until you reach the average effective dose.
- Assess response to SSRI in two to three weeks.
- On average, a higher dose is needed to effectively treat anxiety than is required for depression.

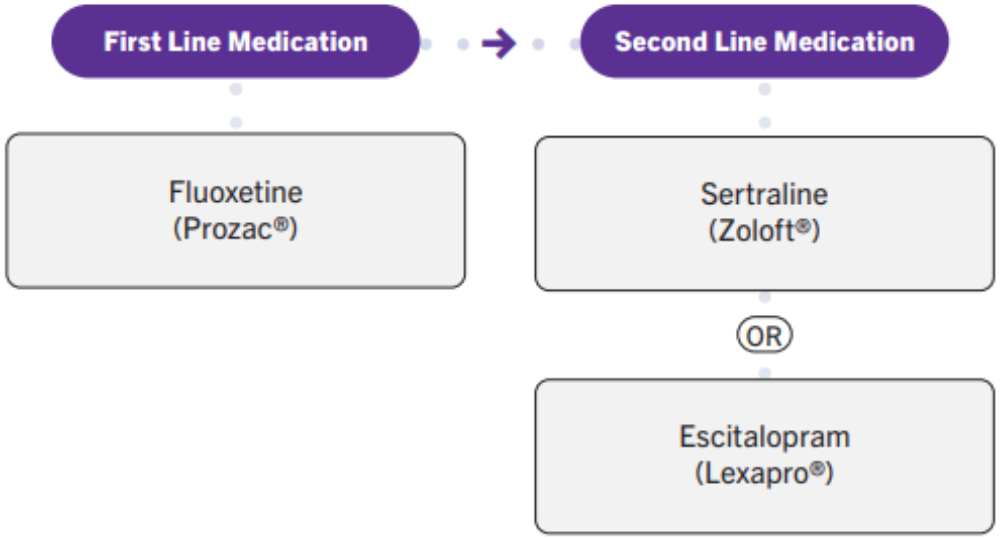
### Screening Tools

- → **Depression:** PHQ-9A and Columbia Suicide Severity Rating or Ask Suicide Screening
- → **Anxiety:** SCARED-C/SCARED-P or GAD-7

## Anxiety Disorders




## Depression

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Illinois Department of Public Health

**Scan the QR code or click the following links for additional information:**

- KER Unit Depression Medication Choice Tool
- Medicaid Preferred Drug List

| Drug Name & Class | Starting Dose Daily | Average Effective Dose | Max Dose Daily | Formulations | Clinical Pearls |
|---|---|---|---|---|---|
| **First Line for Anxiety** | | | | | |
| Fluoxetine (Prozac®) | 5-10 mg | 20-40 mg | 60 mg | Tablet, capsule, or liquid. | Good with adherence issues due to half-life. Slow onset. |
| **Second Line for Anxiety** | | | | | |
| Sertraline (Zoloft®) | 12.5-25 mg | 50-100 mg | 200 mg | Tablet or liquid. | Fewer interactions. CYP450 and CYP2D6. |

## First Line for Depression

| | | | | | |
|---|---|---|---|---|---|
| Fluoxetine (Prozac®) | 5-10 mg | 20-40 mg | 60 mg | Tablet, capsule, or liquid. | Good with adherence issues due to half-life. Slow onset. |

## Second Line for Depression

| | | | | | |
|---|---|---|---|---|---|
| Sertraline (Zoloft®) | 12.5-25 mg | 50-100 mg | 200 mg | Tablet or liquid. | Fewer interactions. CYP450 and CYP2D6. |
| Escitalopram (Lexapro®) | 2.5 mg | 10-20 mg | 20 mg | Tablet or liquid. | Can be sedating. Mild QTc prolong. CYP450 and CYP2D6. |

# FINAL TIPS & TAKEAWAYS

- Can use any screening tool as long as you use it!

**Clinicians should be alert to the loss of previously acquired abilities or skills, such as vision, language, hearing, hand use, ambulation, or mood regulation!**

The term "neurodegenerative disorders" covers a broad range of genetic, metabolic, and neurological syndromes that affect the brain. The child can be symptomatic from birth or can acquire symptoms later in life. By definition, neurodegenerative disorders include a *progressive decline in functioning*.

- Always listen to the parents' concerns
- Speak to adolescents without parents in room

# REFERENCES


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# THANK YOU!

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