

DEVELOPMENTAL SCREENING: Administration, Scoring, and Interpretation



EARLY SCREENING, BETTER OUTCOMES:
Developmental Screening & Referral Toolkit
for Pediatric Medical Clinics



The Perez Family: Miguel



Miguel is a 9-month-old Latino boy.

Miguel's mother came to the well-child visit and completed the ASQ-3 and ASQ:SE-2 questionnaires.

Miguel's mother expressed concerns because Miguel cries “all the time” and it is hard for her to keep him on a consistent feeding and eating schedule.

Miguel's mother was anxious to hear the results of the screening...

TO BE CONTINUED . . .

It Takes a Whole Team!



Workflow: Roles of Care Team Members



Care coordinator identifies in the EMR which children have well-child visits scheduled and selects correct screening measures for child's age and language of parent.



Care coordinator mails screening and letter explaining screening to parent two weeks prior to visit and asks parents to hand in date of visit.



Parent completes screening measures at home before Well-child visit.

Day of visit:

Registration staff collects screening measure; if not completed/failed to bring in, gives blank screening to parent to complete in the waiting area.

MA collects screening measures from parent; if not done, helps parent to finish in exam room.

MA scores screening measures and puts in folder for provider along with *Milestones Moments* booklet.



Provider initiates developmental conversation with parents and discusses screening results.

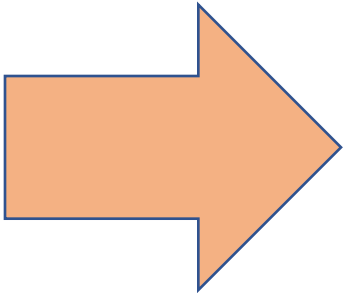
If a referral is recommended, provider discusses recommendation with parents and provides guidance re: process.

If a referral is recommended, MA assists with completing referral forms and provides family written referral info.

Provider documents screening results and follow-up plan in EMR

Front desk staff scans screening results and uploads in EMR.

If a referral made, within one week, care coordinator assists family with linkage to referrals





Tips for Successful Screening

- Explain to the parents the screening process:
 - Purpose
 - Importance
 - Next steps
- If a parent declines to complete measure, provide this information to provider.
- Determine whether a parent needs additional help with the questionnaires.



Documents Needed after Screening

- Completed summary page showing scores of screening measures
- *Milestones Moments* booklet
- Referral forms:
 - Early intervention program
 - School IEP
 - Mental health program
- Plan for inputting information in chart



SCREENING TRAINING:

Ages and Stages Questionnaire-3® (ASQ-3)



ASQ-3: Overview

- Standardized screening measure
- Available in English, Spanish and other languages
- Completed by parent/caregiver in 10-15 min
- For children ages 2 to 60 months (different forms for different ages)
- Accurately identifies children at risk for developmental delays
- Encourages parent involvement
- Parents learn about development while completing measure



ASQ-3: Domains

- **Communication:**
language skills
- **Gross Motor:**
coordination of arms and legs
- **Fine Motor:**
coordination of hands and fingers
- **Problem Solving:**
problem-solving skills and how to play with toys
- **Personal-Social:** self-help skills and interactions with others





ASQ-3: Age Administration Chart

The first step is to select the correct ASQ-3 for the child's age





Online Age Calculator

<http://agesandstages.com/age-calculator/>





ASQ-3: Adjustment for Prematurity

- Children considered premature: were born before 37 weeks of gestational age.
- Adjust the age for prematurity for children younger than 24 months of age.
- Example: Alexandra is 18-months and 2 days old. According to the age chart, she would get the 18 month ASQ-3. However, she was born 6 weeks premature. So instead of giving the 18 month ASQ-3, she will get the 16 month ASQ.



ASQ-3: Administration

- Explain to the parent how to complete the questionnaire
 - Parent will answer each question using: “yes”, “sometimes” or “not yet.”
 - Ask the parent to check “yes” or “no” for each question in the “Overall” section. If they check “yes” they should write an explanation.
- Provide parent with assistance and independence





ASQ-3: Scoring

Score each section of the questionnaire

Yes= 10

Sometimes= 5

Not yet= 0

Sample Scoring





ASQ-3: Scoring Steps

1. Write the score from each item in the blank to the right of each question.
2. Total the number of points and write in the total number for that specific domain
 - Communication Total ____, Gross Motor Total ____ etc.
3. In Section 1 of “ASQ-3 Information Summary” page
 - Transfer the Total score for each domain in the Total Score column.



ASQ-3: Scoring Steps (cont'd)

4. Fill in the circles with the corresponding score for each domain.
5. Transfer the **Overall** responses onto Section 2 of the scoring sheet by
 - circling “yes” or “no” depending on the parent’s response to each question.



Practice Scoring





ASQ-3: Omitted Items

- Try to obtain answers from parent; encourage them to make their “best guess.”
- 2 items maximum can be omitted

Steps to take when 1-2 items are omitted:

1. Calculate the average score for the answered questions in that domain (divide the total score by the number of questions answered in that domain).
2. Add that number (the average score) to the total score to get a new Total Score for that domain.



ASQ-3 Omitted items example

1. Divide total domain score by the number of items answered in that domain.

Example: The domain has 6 items, and the parent only answered 5 of them. The total score for the 5 items that were answered is 45.

$$45 \text{ (area score)} \div 5 \text{ (items)} = \underline{9 \text{ points.}}$$

2. Add this average item score to the total domain score to get a new total score.

$$45 + 9 \text{ points} = \text{new total of } \underline{54 \text{ points}}$$



Practice Omitted Items





ASQ-3: Interpretation

Black area: Problem

Gray area: May have a problem

White area: No Problem

**Parent concerns may also justify a problem*



Ages and Stages Questionnaire: Social-Emotional (ASQ:SE-2)®





What is the ASQ:SE-2

- Parent-completed questionnaire
- Identifies young children at risk for social or emotional difficulties.
- Research shows that if only the ASQ-3 is administered, many children who have social-emotional needs will be missed





ASQ:SE-2 Domains

Self-Regulation: Does your child settle herself down after exciting activities?

Compliance: Does your child do what you ask him to do?

Communication: Does your child look at you when you talk to her?

Adaptive Functioning:
Does your child stay away from dangerous things, such as fire and moving cars?

Autonomy: Does your child cling to you more than you expect?

Affect (mood): Does your child seem happy?

Interactions with People:
Does your child try to hurt other children, adults, or animals (for example, by kicking or biting)?



ASQ:SE-2 Scoring

Response to each item can be:

- “Often or always”
- “Somewhat”
- “Rarely or Never”

In addition, parents are asked to check items that they are concerned about.





ASQ:SE-2 Scoring

Each question response has a small letter next to it, which indicates what numerical score to give that response.

z = 0 points

v = 5 points

x = 10 points

If the parent checked “concern” = 5 additional points

Write the correct number of points in the blank to the right of the question for each item.

Practice Scoring ASQ:SE-2





ASQ:SE-2 Summary Sheet

- Transfer “Total Points” on each page to summary sheet.
- Add up all “Total Points” in section 1 for the “Total Score”
- Transfer “Total Score” to the box next to the cutoff score.
- If the “Total Score” is **higher** than the cutoff, then there is a concern and referral should be made.
- Section 3: circle “yes” or “no” for each question.



ASQ:SE-2 Summary Sheet Sample



ASQ:SE-2: Scoring Omitted Items

- Check for missing items and ask parents to try to answer.
- If 1 or 2 items missing: go ahead and score the usual way.
- If 3 or more items missing: determine if the total score within 5 points of the cutoff?
 - If no, do not adjust score.
 - If yes, you need to adjust the score (see next slide).

ASQ:SE-3: Adjusting the Score

Divide the Total Score by the number of items parents answered.
That gives you the average score per item.

Use that average score for each missing item

Example:

- Parent omitted 3 items (answered 30 out of 33 questions)
- Total score = 80 80 divided by 30 = 2.66
- Add 2.66 to each unanswered question.
- 3 missing items x 2.66 points = 7.98 (Can round up to 8)
- Add to total score: $80 + 8 = 88$



Miguel's Results...

Please score the ASQ-3 and ASQ:SE-2 screening measures and determine if there are any areas of concern based on the results.

Please debrief with your partner and as a group.



ASQ: Frequently Asked Questions

Q: Isn't the medical provider's impression of the child's development more accurate than that of the parents'?

A: The ASQ is designed to be completed by a parent or caregiver who knows the child well. This information is then combined with the provider's expertise to determine the best approach to any concerns that come up.

Q: What if the provider does not see the problems that the parent is reporting on the questionnaire?

A: Defer to the parent or caregiver, because they have the opportunity to observe the child in many different settings.

Q: Can the ASQ be completed by a babysitter or other family member?

A: The ASQ:SE can be completed by anyone who has 20 or more contact hours per week with a child.

Q: I've noticed when the ASQ:SE-2 is completed by two different caregivers, the scores come out different. How do we know which one is right?

A: Scores may differ since a child's behavior will often be different in different settings and with different caregivers. There are no right and wrong answers.



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

- [add picture of a toddler]



Disparities in Screening for ASD?

- Referral, diagnosis, and treatment may be late or reduced for:
 - Ethnic minority children, particularly Latinx and Black children
 - Children with less severe symptoms and delays
 - Screening is less consistent and later for children who are ethnic minorities or low socio-economic status (SES)
- Consistent screening helps reduce disparities and ensure children get connected with early intervention.

M-CHAT-R: Overview



- Parent report
- Standardized questionnaire
- Validated for ages 16-30 months
- 20 items: yes/no questions
- Translated into multiple languages, used in many countries
- Available for free at www.mchatscreen.com



M-CHAT-R: Overview



MCHAT-R Items as Predictors of ASD

Best discriminators of ASD:

- Pointing to show interest
- Responds to name
- Interest in other children
- Bring to show
- Follows point
- Imitation
- Reciprocal smile



M-CHAT-R: Scoring

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 (0)

No (1)

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 (0)

No (1)



Reverse Scoring

For items 2, 5, and 12 “YES” indicates ASD risk

2. Have you ever wondered if your child might be deaf?

YES (1)

NO (0)

Remember except for the reverse scoring questions:

Yes (0)

No (1)

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 (1)

NO (0)

12. Does your child get upset by everyday noises? (FOR **EXAMPLE**, does your child scream or cry in response to noise such as a vacuum cleaner or loud music?)

YES (1)

NO (0)

M-CHAT-R Interpretation and Follow-up Recommendations

HIGH- RISK: Total Score is 8-20 (Problem)

- Refer for diagnostic evaluation and eligibility evaluation for early intervention.

MEDIUM- RISK: Total Score is 3-7 (Possible problem)

- Administer the Follow-up (second stage of M-CHAT-R/F) to get additional information about at-risk responses.

LOW- RISK: Total Score is 0-2 (No problem)

- If child is younger than 24 months, screen again after second birthday.

M-CHAT-R Follow-up Questions

- If Total Score is 3-7, the provider should use the guide for follow-up questions to get more information, to decide if the child is high-risk and if they should be referred for additional evaluation.

M-CHAT-R Case Exercise



- Please score the sample M-CHAT-R and review the results as a group





THANK YOU!

