



Pathways to Professional Development

Building Foundations in Infant
and Early Childhood Mental Health

Developmental Screening with the ASQ-3

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Pathways to Professional Development: Building Foundations in Infant and Early Childhood Mental Health



Pathways to Professional Development; was developed to build workforce competence and professional preparedness for clinicians working in the perinatal and birth to 5 periods

- 21 foundational webinars focused on the foundations of Infant and Early Childhood Mental Health.
 - Provided live virtually
 - Recorded for viewing as LMS modules
- Diagnostic Classification of Mental Health And Developmental Disorders of Infancy and Early Childhood (DC:0-5) offered virtually and in-person.
- View all offerings here→ <https://www.ctacny.org/special-initiatives/pathways-to-professional-development/>

The aim is to develop a well prepared and competent workforce trained to identify and address mental health concerns early, to **promote** awareness of mental health, to **prevent** long-term problems and to **intervene** to help children stay on developmental track.



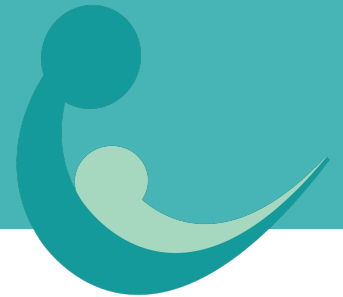
Pathways to Professional Development Webinar Series



- **Module I:** Developmental and Psychodynamic Foundations of Infant and Early Childhood Mental Health – 6 Webinars
- **Module II:** Assessment, Diagnosis, Formulation and Professional Development – 4 Webinars
- **Module III:** Risk, Stress, Protection and Resilience – 2 Webinars
- **Module IV:** Through the Lens of Family, Community and Culture – 2 Webinars
- **Module V:** Specific Disorders: A Closer Look: 4 Webinars
- **Module VI:** Helping in Infant and Early Childhood Mental Health – 3 Webinars



Who we are



These trainings are funded by the New York State Office of Mental Health (OMH) and provided by the New York Center for Child Development (NYCCD) in collaboration with CTAC.

- **New York Center for Child Development** (NYCCD) has been a major provider of early childhood mental health services in New York with a long history of providing system-level expertise to inform policy and support the field of Early Childhood Mental Health through training and direct practice.
- **NYU McSilver Institute for Poverty Policy and Research** houses the Community and Managed Care Technical Assistance Centers (CTAC & MCTAC), Peer TAC, and the Center for Workforce Excellence (CWE). These TA centers offer clinic, business, and system transformation supports statewide to all behavioral healthcare providers across NYS.
- **NYCCD and McSilver** also run the **NYC Early Childhood Mental Health Training and Technical Assistance Center (TTAC)** which offers ongoing training and technical assistance for those working during the perinatal period to age 5



Overview



- With 26% of children in the United States at-risk for developmental, behavioral or social delays, developmental screening is an effective and efficient method for early identification.
- In this presentation, the norm sample and psychometric qualities of the ASQ-3 will be reviewed.
- Strategies to engage the parent/caregiver in screening and an analysis of how the benefits of screening outweigh the risks will be discussed.
- Procedures for administering, scoring and interpreting the ASQ-3 will be reviewed in-depth.
- “Red-Flag” behaviors will be identified and guidelines for informing the parent/ caregiver about the results of the screening will be explored.



Learning Objectives



As an outcome of completing this learning module, participants will be able to:

1. Describe the purpose, value and method of screening with the ASQ-3
2. Complete the administration, scoring and interpretation of the ASQ-3
3. Identify significant red-flag behaviors
4. Discuss strategies for supporting early development



Why Developmental Screening?



- Approximately 15% of the pediatric population has developmental problems. Of this subset, 45% have speech or language issues (of these, about 16% who present with an initial language delay 8% will persist), 38% display developmental delay in other domains such as motor or adaptive skills, and 17% have autism or other disabilities (Feldman, 2020).
- The prevalence rate of developmental problems is higher in those born preterm. In fact, of children born at 25 weeks gestational age, only 5% do **not** have developmental concerns (Berry et al., 2017).
- There is essentially an inverse relationship between gestational age and developmental disabilities: the younger the gestational age, the greater the likelihood of developmental problems.



Types of Developmental Risk



- **Established risk** (e.g., Down syndrome [DS], Rett syndrome, Fragile X)
- **Medical/biologic risk** (prematurity, birth asphyxia, Grade III bleed- a 35-55% chance of disability, Grade IV 90% chance of motor and/or cognitive deficits)
- **Environmental risk (ACEs, Poverty, poor stimulation).**

Types of Developmental Risk



- Cognitive problems often first present as language delays
- For children born with extreme prematurity (less than 28 weeks) mean group IQ/DQ decrease by 1.2 to 2.5 points per week below 32 weeks
- More than 75% of extremely premature infants experience deficits in visual-motor integration and writing
- There is a risk for low-average to borderline cognitive abilities due to IVH, disruption of brain development associated with extreme prematurity and continued low grade hypoxia caused by BPD (need for supplemental oxygen after 36 weeks gestational age)
- A toddler who was born extremely premature is at risk for “high prevalence /low severity” dysfunctions (e. g. ADHD, learning disabilities)

(Aylward, 2020)



Developmental Risk and the Pandemic



In a sample of 255 infants born to mothers at Columbia-Presbyterian experiencing the pandemic, whether they were actually infected or not, were associated with slightly lower scores (not delays but small shifts) on motor and social skills scores but not communication or problem solving skills and thought to be associated with increased maternal stress (Shuffrey, et al., 2022).



Developmental Risk and the Pandemic



A total of 50,205 children (25,852 [51.5%] male; mean [SD] age, 18.6 [16.0] months) and 134,342 ASQ observations were included. In adjusted models, significant age-specific mean score decreases from prepandemic to intrapandemic were observed in communication (-0.029; 95% CI, -0.041 to -0.017), problem-solving (-0.018; 95% CI, -0.030 to -0.006), and personal-social (-0.016; 95% CI, -0.028 to -0.004) domains. There were no changes in fine or gross motor domains prepandemic to intrapandemic. For infants aged 0 to 12 months, similar effect sizes were observed but only for communication (-0.027; 95% CI, -0.044 to -0.011) and problem-solving (-0.018; 95% CI, -0.035 to -0.001). After accounting for age-standardized ASQ scores, caregiver worries about the child increased slightly in the intrapandemic period compared with the prepandemic period (rate ratio, 1.088; 95% CI, 1.036-1.143), but there were no changes in caregiver concerns about the child's behavior. **While changes in developmental screening scores were modest (2%-3%), nationwide, this could translate to more than 1500 additional recommended developmental referrals over baseline each month (Johnson et al., 2024).**



Developmental Risk and the Pandemic



A cohort of approximately 2000 children in New York City revealed no significant association between prenatal exposure to the pandemic milieu and M-CHAT-R positivity. Prenatal exposure to maternal SARS-CoV-2 infection was associated with lower rates of M-CHAT-R positivity (Firestein et al., 2024)

“We found, overall, that while there are some changes, the sky is not falling, and that is a really important and reassuring finding” - Sara Johnson, Ph.D., M.P.H.



Background data for the ASQ-3



- Third revision 2008
- Data collection: 18,572- Questionnaires 52% paper; 48% web-based
- Paper vs. web-based: 10.5% or 60 items functioned significantly differently with no consistent pattern
- Sample: 15,138 individual children between 1 and 66M
- Sample characteristics:
 - 53% male and 47% female
 - 54% 4 years of college
 - 12% associate degree
 - 23% high school education
 - 3.5% not completed high school



Background data for the ASQ-3



- Sample characteristics:
 - 57% income greater than \$40,000.00
 - 36% less than that figure
 - 82% mothers reporting
 - 66% Caucasian (Based on US census estimates 2007)
 - 12% African American/Black
 - 15% Hispanic/Latino, Asian, Native American, Hawaiian, Pacific Islander
 - 5% Mixed ethnicity



Background data for the ASQ-3



Reliability

- Test-retest : 92% agreement between ratings by parents at a 2-week interval
- Interrater agreement: 93% agreement between ASQ classifications between parents and trainer examiners

Validity

- Cut off score of 1 standard deviation below the mean for monitor
- Cut off score of 2 standard deviations below the mean for further assessment
- Children identified on the ASQ-3 as at-risk who were later categorized as actually having a delay: 85-92%
- Children identified on the ASQ-3 as not being at-risk who were later categorized as typical: 78-92%



Engaging the Family



- What Purpose
- Why Value
- How Process



Engaging the Family



What to expect

- Introduction to the tool
- The method
- Capturing your child's skills
- Processing results
- Action plan



Engaging the Family



- Make yourself the learner and let the parent teach you about their child-they are the expert on their child-not us!
- Offer the parents options:
 - Complete item on your own by the next visit and/or observe in daily life
 - Parent tries items and practitioner scores
 - Practitioner reads items and parent answers (reading levels range from 4.7-5.9 grade levels)
 - Parents and practitioner can discuss questions and concerns as items are read.
 - Questionnaire can be scored by both the parent and interviewer.
- **Assure parent if they don't know an answer better to not respond**



Background Information



- Remember that good interviewing is a “psychological conversation with an aim” not a laundry list of items to be checked off
- An Adverse Childhood Experiences (ACEs) history is an essential part of any background interview
- ACEs and risks-physical or sexual abuse, neglect, domestic violence; significant losses from any cause, living with someone with an addiction or has been incarcerated; child welfare involvement, multiple moves/placements, hospitalizations and medical dental procedures, extreme poverty, maternal age 19 or younger, prematurity (less than 39 weeks), birth weight less than 3 lb., 5oz., are among those to be identified
- The DC:0-5 Psychosocial Stressor Check List is a good reference as well as Table 4.1 page-34 in the ASQ-3 Users Guide.



Psychosocial Stressors – DC 0-5



- Challenges within the infant's/young child's family or primary support group
- Challenges in the social environment
- Educational or child care challenges
- Housing challenges
- Economic and employment challenges
- Infant/young child health
- Legal or criminal justice challenges
- Other
 - Abduction
 - Disaster
 - Disease epidemic
 - Terrorism
 - War



Benefits Outweigh the Risks



- Get to know all your child can do- strength-based
- Follow your child's development over time-staying on track
- Informs parenting
- Early identification if there is a concern-ASQ-3 **does not confirm there is a problem nor does it yield a diagnosis**-only if we should take closer look; it is a “quick check” of your child's development
- Should there be a problem, intervening early while the brain is still very much a “work-in-progress” is most effective
- Should there be a problem, getting to the best sources of help
- Learning ways to support your child's development whether he has a weakness or is on-track and how to build on strengths
- Learning a common language to talk about your child's development



Benefits Outweigh the Risks



Should there be a problem, Early Intervention:


- May “cure” the problem-some children do get declassified
- May reduce the severity of the problem
- May reduce complications
- May provide needed services to your child and your family
- May help your child function in the least restrictive environment
- May build on strengths and help your child function to the best of potential
- Support you to be your child’s best advocate- you are the best “fix” for not getting stuck in what might be the less than optimal system
- We diagnose disorders not children-a diagnosis is not a fixed quality nor the totality of the child





Administering the Scale

- Accurately calculate the child's age
- Adjust for prematurity if the child was born 3 or more weeks before due date and is under 2 years of age
- If premature, calculate adjusted age by subtracting number of weeks premature from chronological age
- Select age appropriate questionnaire
- Tell parents to:
 - Try each activity before making a response
 - Make completing the questionnaire a game-fun for you and your child
 - Make sure your child is rested and fed
 - **ASQ-3 IS NOT INTENDED TO BE COMPLETED FROM MEMORY**

ASQ Age Calculator

Administration Date 

Child's Date of Birth 

Weeks Premature 

Calculate **Clear**

<https://agesandstages.com/free-resources/asq-calculator/>

Administering the Scale



Inform parents:

- Items in each area go from easier to more difficult
- Your child may be able to do some but not all items
- Five areas of development are covered

- **Communication:**

- This refers to your child's language skills and includes what they can say and what they can understand.

- **Gross motor:**

- This refers to children's use and coordination of their arms and legs when they move and play.

- **Fine motor:**

- This refers to children's movement and coordination of their hands and fingers.

- **Problem solving:**

- This refers to children's thinking and problem solving skills and how they play with toys.

- **Personal-Social:**

- This refers to children's self-help skills and their interaction with others.



Administering the Scale



ASQ-3 48 Month Questionnaire page 3 of 7

COMMUNICATION (continued)

	YES	SOMETIMES	NOT YET	
5. Without your giving help by pointing or repeating, does your child follow three directions that are unrelated to one another? Give all three directions before your child starts. For example, you may ask your child, "Clap your hands, walk to the door, and sit down," or "Give me the pen, open the book, and stand up."	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	0
6. Does your child use all of the words in a sentence (for example, "a," "the," "am," "is," and "are") to make complete sentences, such as "I am going to the park," or "Is there a toy to play with?" or "Are you coming, too?"	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	5
COMMUNICATION TOTAL				25

GROSS MOTOR

	YES	SOMETIMES	NOT YET	
1. Does your child catch a large ball with both hands? (You should stand about 5 feet away and give your child two or three tries before you mark the answer.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
2. Does your child climb the rungs of a ladder of a playground slide and slide down without help?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
3. While standing, does your child throw a ball overhead in the direction of a person standing at least 6 feet away? To throw overhead, your child must raise his arm to shoulder height and throw the ball forward. (Dropping the ball or throwing the ball underhand should be scored as "not yet.")	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
4. Does your child hop up and down on either the right or left foot at least one time without losing her balance or falling?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
5. Does your child jump forward a distance of 20 inches from a standing position, starting with his feet together?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
6. Without holding onto anything, does your child stand on one foot for at least 5 seconds without losing her balance and putting her foot down? (You may give your child two or three tries before you mark the answer.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10
GROSS MOTOR TOTAL				60

FINE MOTOR

	YES	SOMETIMES	NOT YET	
1. Does your child put together a five- to seven-piece interlocking puzzle? (If one is not available, take a full-page picture from a magazine or catalog and cut it into six pieces. Does your child put it back together correctly?)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	5

- Respond to items with:
 - Yes** that your child performs the skill
 - Sometimes** your child is just beginning to perform the behavior or performs it on occasion but not all the time
 - Not Yet** your child is not performing the behavior

Yes=10 points

Sometimes = 5 points

No= 0 points

E101480300

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Administering the Scale

- The **overall** section asks questions about your child's broad development and about any concerns you may have

ASQ 3 48 Month Questionnaire page 6 of 7

OVERALL (continued)

2. Do you think your child talks like other toddlers her age? If no, explain: YES NO

His sentence structure and comprehension are not as advanced as other kids who are a year younger.

3. Can you understand most of what your child says? If no, explain: YES NO

4. Can other people understand most of what your child says? If no, explain: YES NO

Other people have a hard time understanding him.

5. Do you think your child walks, runs, and climbs like other toddlers his age? If no, explain: YES NO

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

7. Do you have any concerns about your child's vision? If yes, explain: YES NO

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Administering the Scale



- Calculate total area scores and transpose to Interpretation chart
- Total Area Scores falling in the:
 - White Zone-WNL
 - Lightly shaded – Monitor (1-2 standard deviations below the mean)
 - Dark zone-At-risk (2+ standard deviations below the mean)

NB an area with MORE than 2 items unanswered should not be scored

An area with 1 or 2 items unanswered, use the mean score for that area (total area score divided by number of items answered in that area= average total score for that area) then use that average total score to calculate the total area score

ASQ-3 48 Month ASQ-3 Information Summary 45 months 0 days through 50 months 30 days

Child's name: John X. Smith Date ASQ completed: 11/18/2008
 Child's ID #: 00123456789000000 Date of birth: 11/12/2004
 Administering program/provider: Anytown Preschool/Ms. Jenkins

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	30.72	25													
Gross Motor	32.78	60													
Fine Motor	15.81	20													
Problem Solving	31.30	20													
Personal-Social	26.60	60													

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

1. Hears well? **Yes** NO YES YES NO YES NO
 Comments: Ear infx ear tubes didn't talk until 2-3 yrs.

2. Talks like other toddlers his age? **Yes** YES NO YES NO YES NO
 Comments: Sentences and complex, not as advanced as younger kids

3. Understand most of what your child says? **Yes** YES NO YES NO YES NO
 Comments:

4. Others understand most of what your child says? **Yes** YES NO YES NO YES NO
 Comments:

5. Walks, runs, and climbs like other toddlers? **Yes** YES NO YES NO YES NO
 Comments:

6. Family history of hearing impairment? **Yes** YES NO YES NO YES NO
 Comments:

7. Concerns about vision? **Yes** YES NO YES NO YES NO
 Comments:

8. Any medical problems? **Yes** YES NO YES NO YES NO
 Comments: Ear infx

9. Concerns about behavior? **Yes** YES NO YES NO YES NO
 Comments:

10. Other concerns? **Yes** YES NO YES NO YES NO
 Comments: Language level - doesn't recognize numbers or letters yet.

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 child's total score is in the area, it is above the cutoff, and the child's development appears to be on schedule. If the child's total score is in the area, it is close to the cutoff. Provide learning activities and monitor. If the child'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	S	Y	S	N	N	S
Gross Motor	Y	Y	Y	Y	Y	Y
Fine Motor	S	Y	S	N	N	N
Problem Solving	S	S	S	S	S	S
Personal-Social	Y	Y	Y	Y	Y	Y

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Overall Questions



- Does your baby use both hands/legs equally well?
- When you help your baby stand, are his/her feet flat on the surface most of the time?
- Do you think your child talks like other toddlers/children his /her age?
- Can you understand most of what your child says?
- Do you think your child runs and climbs like other toddlers/children his/her age?
- Do you think your baby child hears well?
- Does either parent have a family history of childhood deafness or hearing impairment?
- Do you have concerns about your baby/child's vision?
- Has your baby had any medical problems in the last several months?
- Do you have any concerns about your baby/child's behavior?
- Does anything about your baby/child worry you?



How to Score the ASQ-3



Item analysis/intent



Sample of 12 M items:

- When your baby wants something, does he tell you by pointing?
 - **Communicative intent, dissociation of finger from hand movements, problem solving/getting his needs met**
- While holding on to furniture does your baby bend down and pick up a toy from the floor and return to a standing position?
 - **Motor planning, balance, dissociation of movement, coordination, intentionality /agency**
- Does your baby put a small toy down without dropping it, and then take his hand off the toy?
 - **Fine motor planning, motor accuracy/inhibition, release**
- When holding a small toy in each hand, does your baby clap the toys together?
 - **Bilateral integration, midline orientation, exploratory scheme**
- Does your baby roll or throw a ball back to you so that you can return it?
 - **Intentional reciprocal interaction, relatedness, engagement**



Red flags

At all ages:

- Avoids or rarely makes eye contact with caregiver
- Concerns about sleep
- Eats inedible objects (more than rarely)
- Has chronic or frequent diarrhea or vomiting
- Has growth problem in height or weight
- Engages in self-hurting behavior
- Has unusual number of injuries
- Is apathetic or listless
- Is under or over-active
- Is often hard to comfort or satisfy
- Excessive use of head banging or other self-stimulating behavior
- Rocks Excessively
- Cries excessively

Check also after 18 months:

- Is overly aggressive or combative (e.g. hits, bites pushes, kicks, etc.)
- Engages in frequent ritualistic or stereotypic behavior (e.g. body rocking, marching in place, crossing and uncrossing legs, etc.)
- Is indiscriminately friendly with strangers
- Has difficulty separating from caregivers or parent(s) on a regular basis (province, et al., 2016)

Informing



- If the ASQ-3 is positive, parents may be alarmed and anxious and set in motion host of fantasies, projections and defenses
- Attune to the parent's feelings and mirror them
- Support, reaffirm and reassure that this does not mean your child has any developmental differences-it's not a diagnosis
- Slow the parent down, help them stay in the present and take it a step-at-a-time
- Review aspects of how the benefits outweigh the risks if appropriate
- Check -in with the parent



Telehealth Administration



- Telephone or virtual administration
 - **ASQOnline:** bit.ly/ASQVirtual
 - **JPEGs of ASQ-3 and ASQ:SE-2:** Special Release Materials (in English and Spanish) allow you to text images of each questionnaire page to parents who do not have internet access. You can also email the questionnaire images to parents. Parents may view images and then provide answers via phone or video conference.

Lessons learned:

- Scheduling flexibility
- Parents and caregivers seemed more relaxed and confident
- Boost parents' knowledge of child development
- Staff learned new skills



Telehealth Administration



Challenges:

- Slow internet speed /lack of internet access- use phone option
- Placement of technology
- Not having required materials-use household materials, e.g. crumpled paper or aluminum foil for small ball; shoe lace and fruit loops for stringing
- Make cultural adaptations based on intent of item, e.g. “Does your child eat with a fork?” Use chopsticks; use hands to scoop food with bread or tortillas
- Create and distribute toy kits

Continued use of virtual administration:

- Option for bad weather, illness, transportation limitations, geography
- Scheduling flexibility
- Multiple means to engage families
- Connect virtually before in-person screenings



Tips for Supporting Development



- Maintain a routine
- Provide a language enriched environment
- Engage in two-way interactions-serve and return
- Provide sufficient monitored tummy time
- Provide developmentally appropriate objects for exploration and discovery
- Provide space for movement at all time and outdoor opportunities
- Play with your baby/toddler
- Have babies sit in the room with siblings when face timing
- Get a digital picture frame that rotates photos of family and friends or look at a photo album
- Online resources for developmental experiences:
 - www.Vroom.org,
 - <https://www.cdc.gov/ncbddd/actearly/index.html>



You Are Needed Now More Than Ever



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