

Speech, Language, and Feeding of Children Birth to 5 Years Old and the Use of Developmental Milestone Checklists

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Abstract

The use of developmental milestone checklists is an excellent opportunity to highlight significant behaviors and the ages at which the majority of children display the behaviors. The checklists are intended to help parents know what to expect as their young children grow and when it is appropriate to refer their child to an expert for a screening or assessment. Information regarding ages and descriptions of the speech sounds that children produce, description of word lengths, and feeding skills that are typically developed by children learning to speak English in the US are being updated by the American Speech-Language-Hearing Association.

Young children grow and develop communication and feeding skills between birth and 5 years old at a remarkable pace. First-time parents are eager to know what they should expect in the typical development and when they should refer their child to an expert. Moreover, language, communication, and culture are intertwined, and some children learning to speak English in the United States are also exposed to other languages in the home or community. In these cases parents may ask: "How does being exposed to multiple languages affect my child's language development? Will my child be ready to learn in an English-speaking school?"

Developmental Milestone Checklists

The Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) issued revised developmental milestones (Zubler et al., 2022) in February 2022 as a part of the CDC's "Learn the Signs. Act Early." (CDC, 2021) program. The American Speech-Language-Hearing Association (ASHA) and its members expressed concerns that speech-language pathologists (SLPs) were not involved in reviewing the changes and that the revised checklists may

result in fewer children from birth to 3 years old being referred for assessments.

The CDC checklists previously used 50th percentile, or average-age, to determine when milestones should be observed in a young child. The updated milestones use the 75th percentile, and this change prompted questions about early intervention (EI) because the higher standard could create a delay in making a referral for services.

To gain an understanding of the purpose of the CDC and AAP's updates to the developmental milestones and to discuss some of the concerns expressed by ASHA members, a few ASHA representatives met with CDC representatives on February 28 and with AAP representatives on March 8, 2022.

The CDC and AAP participants emphasized that they updated developmental *surveillance checklists*, not developmental *screenings*. This distinction is significant because the purpose of the surveillance checklists is to provide parents and pediatricians with milestones to focus on during the well-baby visits. The checklists are not intended for developmental screening, which is best done by early interventionists. The screening of feeding, swallowing, speech, language, and communication skills should be conducted by SLPs with expertise in the developmental skills of young children (McNeilly, 2022a).

During the meeting with ASHA, CDC noted that one of the pediatrician subject-matter experts on the milestone revision

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had previously trained as an SLP. AAP said it consulted with an SLP on early development tips and activities. The following points were conveyed to ASHA members regarding the revised milestones.

The revised milestones are:

- evidence-informed, not expert-developed. The AAP reviewed research evidence for the existing milestones.
- intended to be more clearly actionable and to boost developmental screening and referral.
- part of a suite of communication tools; others include open-ended questions to prompt consideration of a child’s development and an “act early message” on how to address concerns.
- not developmental screening tools, nor are they standards or guidelines. Thus, they do not lower standards of early childhood language development.
- not supposed to be used as factors in how or if children are evaluated or qualify for services.

The article *Evidence-Informed Milestones for Developmental Surveillance Tools* (Zubler et al., 2022), published in AAP’s journal *Pediatrics*, provides detailed information regarding the process used to update the checklists and their intended purpose.

EI Referrals

Early developmental surveillance, monitoring, and screening to identify delays and specific speech, language, and hearing disorders is important for ensuring appropriate referrals for evaluation and intervention. The AAP recommends standardized developmental screenings at 9, 18, and 24 or 30 months (Lewis, 2017).

In 2004, the CDC developed the “Learn the Signs. Act Early.” program which offers free, user-friendly, research-based materials for parents, early childhood professionals, and health care providers. The materials include milestone checklists, tips for parents, early warning signs, fact sheets, and more. (See Abercrombie et al., this issue, p. 5).

If a parent has a concern about any developmental milestone not being exhibited by their child, they should seek an EI professional or SLP to conduct a screening or assessment of their child. An SLP can provide specific information to facilitate the child’s development or can begin EI if the assessment results show that the child warrants treatment.

EI is critical in helping children with developmental delays achieve their maximum potential. Many children are not identified as having delays until they enter kindergarten. It is important that early and regular developmental/behavioral screening are accessible across the United States. Audiologists and SLPs are integral to early identification and timely referrals to EI programs—especially given the prevalence of communication delays in very young children. SLPs need to



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engage in interdisciplinary efforts with pediatricians, early childhood education providers, home visitors, behavioral health professionals, and EI specialists.

Exposure to Multiple Languages and Neurodiversity

Many available checklists and milestones are not inclusive of multilingual and neurodivergent children who may have differences in acquisition of milestones. SLPs need to assess the nature and amount of exposure to different languages for children living in homes where more than one language is spoken. Families of children who exhibit neuroatypical behaviors need information that will help them to assist children in engaging with others at home and in the community. Therefore, it is important for SLPs to have explicit conversations with families so that they clearly understand some of the elements that impact language and communication.

It is interesting that there are variations in the expected linguistic milestones based on the language spoken. Recommendations vary internationally regarding age at which developmental skills are expected, and there is a growing recognition of the low sensitivity of commonly used developmental screening tools. For example, Borkhoff and colleagues (2022) examined the validity of using the Infant Toddler Checklist (ITC), in a primary care setting, with 18-month-olds to predict whether they would receive a developmental diagnosis at 3–5 years old. The ITC at 18 months revealed high specificity and negative predictive value, and a low false positive rate for a developmental diagnosis including developmental delay at 3–5 years. Children with a positive ITC at 18-months had higher odds of a developmental

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diagnosis at follow-up visits. The low sensitivity of the ITC suggests that a positive ITC at the 18-month visit cannot accurately identify children that will have a developmental diagnosis at 3–5 years (Borkhoff et al., 2022).

Guidance for SLPs

Many ASHA members sent comments to ASHA after the CDC checklists were issued (McNeilly, 2022a). Apart from the lack of SLP involvement in the milestones, other concerns expressed by SLPs included:

- The criteria and milestones added for the 15- and 30-month health supervision visits result in a 26.4% reduction and 40.9% replacement of previous CDC milestones.

Learn More

Centers for Disease Control and Prevention's "Learn the Signs. Act Early." Program

www.cdc.gov/ncbddd/actearly/index.html

How Does Your Child Hear and Talk?

www.asha.org/public/speech/development/chart

Frequently Asked Questions: CDC and AAP Developmental Milestones Updates

www.asha.org/practice/Frequently-Asked-Questions-CDC-and-AAP-Developmental-Milestones

- A third of the retained milestones are transferred to different ages; 67.7% of those transferred are for older ages.
- Approximately 80% of the final milestones have normative data from one source or no source.
- Gaps are evident in the data for social–emotional and cognitive milestones, which also have the least normative data.

Guidance from ASHA suggests how the CDC/AAP information can be used to support developmental surveillance, but SLPs should not use that information to make clinical decisions (McNeilly, 2022b). Speech and language assessments should include culturally appropriate assessment tools, observations of the child in their community, and information from the parent/caregiver to determine the appropriate next steps. These steps might include sharing strategies to facilitate communication, examples of desired behaviors and ways to communicate with children, reevaluation in a few months if the child does not make progress, and enrollment in EI or speech–language therapy.

ASHA also emphasizes the use of culturally and linguistically appropriate screenings and assessments—and not developmental milestones—in EI decision-making. Families and caregivers can benefit from SLPs' expertise regarding concerns about the communication or swallowing of children from 1 to 5 years old.

Summary and Future Directions

Children that exhibit communication needs should be identified early so that intervention strategies can begin and so children enter kindergarten ready to learn. Both the CDC and AAP expressed interest in engaging with ASHA in the future regarding developmental milestones. ASHA welcomes the opportunity to continue to engage in discussions related to speech, language, cognition, communication, and feeding/swallowing skills, and culturally relevant and neurodiverse-affirming resources.

ASHA has also developed norms and milestones for speech–language development. The organization is currently reviewing the evidence base for speech, language, feeding, and swallowing development of children learning English in the United States. ASHA is analyzing each milestone and reviewing the latest research evidence to determine which milestones are salient and helpful to parents, families, pediatricians, and others who make referrals to SLPs. ASHA expects to have the updated milestones ready by the end of 2022.

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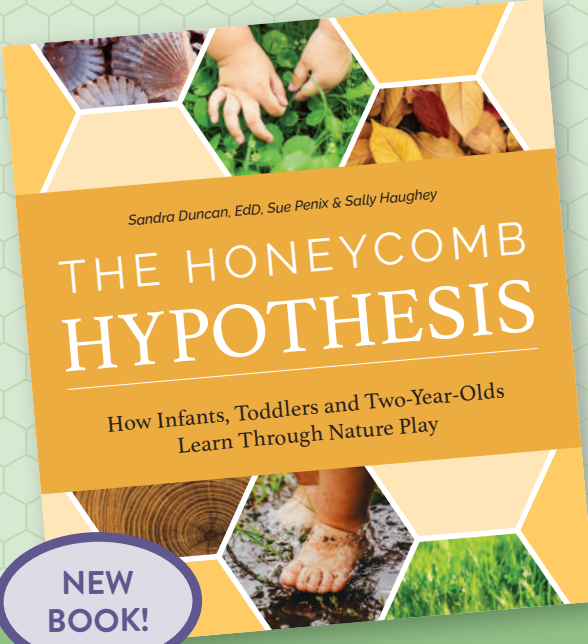
of speech-language pathology assistants, the International Classification of Functioning, Disability and Health, and practicing at the top of the license. Her resume includes numerous publications and international presentations and expertise managing health care teams, neonatal and pediatric

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References

- Abercrombie, J., Wiggins, L., & Green, K. K. (2022). CDC's "Learn the Signs. Act Early": Developmental milestone resources to improve early identification of children with developmental delays, disorders, and disabilities. *ZERO TO THREE Journal*, 43(1), 5–12.
- Borkhoff, C. M., Atalla, M., Bayoumi, I., Birken, C. S., Maguire, J. L., & Parkin, P. C. (2022). Predictive validity of the Infant Toddler Checklist in primary care at the 18-month visit and developmental diagnosis at 3–5 years: A prospective cohort study. *BMJ Paediatrics Open*, 6(1). <https://bmjpaedsopen.bmj.com/content/6/1/e001524>
- Centers for Disease Control and Prevention. (2021). *CDC's developmental milestones*. <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>
- Lewis, N. (2017). Our role in early identification. *The ASHA Leader*. <https://doi.org/10.1044/leader.FMP.22012017.6>. <https://leader.pubs.asha.org/doi/10.1044/leader.FMP.22012017.6>

- McNeilly, L. G. (2022a). CDC milestones are intended as tool, not screening, agency officials clarify. *The ASHA Leader*. <https://leader.pubs.asha.org/doi/10.1044/2022-0314-cdc-milestones-update/full>
- McNeilly, L. G. (2022b). New developmental milestones: Reviewing the changes and evidence. *The ASHA Leader*. <https://leader.pubs.asha.org/doi/10.1044/2022-0225-cdc-developmental-milestone-concerns/full>
- Zubler, J. M., Wiggins, L. D., Macias, M. M., Whitaker, T. M., Shaw, J. S., Squire, J. K., Pajek, J. A., Wolf, R. B., Slaughter, K. S., Broughton, A. S., Gerndt, K. L., Mlodoch, B. J., & Lipkin, P. H. (2002). Evidence-informed milestones for developmental surveillance tools. *Pediatrics*, 149(3), e2021052138. <https://publications.aap.org/pediatrics/article/149/3/e2021052138/184748/Evidence-Informed-Milestones-for-Developmental>



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