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**Clinical Skills Education Title:** Newborn Infant Developmental Milestones

**Overview**

Approximately 1 in 6 children, aged 3 to 17-years-old, has 1 or more developmental disabilities. Examples of developmental disabilities are: hearing loss, impaired vision, developmental delays, intellectual disabilities, and cerebral palsy. Children born premature, small for gestational age, and multiples are all at an increased risk for developmental disabilities. Others at risk are children with genetic conditions, congenital infections, untreated jaundice, and fetal alcohol exposure.

Rolling, sitting unsupported, smiling, and waving “bye-bye” are just a few examples of developmental milestones. Monitoring of these developmental milestones during the first year of life is an important part of the routine assessment of an infant. The assessment is best broken down into 4 areas: Social and Emotional; Language/Communication; Cognitive; and Movement and Physical Development. If a concern arises during the monitoring process, a validated developmental screening test is administered. The American Academy of Pediatrics (AAP) also recommends developmental screening with a validated tool at 9, 18, 24, and 30 months. Developmental monitoring and screening are an integral part in determining the need for further diagnostic assessment and early enrollment in services, such as early intervention.

**Procedure**

During this developmental evaluation, the Centers for Disease Control and Prevention’s (CDC) “Learn the Signs. Act Early.” Developmental Milestone Checklist is used, while observing a 12-month-old infant. Developmental milestones for the other age groups are summarized in **Table 1**. Table 1 does not represent a standardized or validated screening tool. There is no exact order a developmental assessment must be administered in. It is, however, important to ensure that the infant is in a comfortable and safe environment.

1. Introduction.

1.1 Introduce oneself to the parents/caregiver.

1.2 Explain to the parents/caregiver that you are about to do a developmental assessment of their infant.

1.3 Let them know it is a painless exam that helps show how the infant is developing in 4 areas: Social and Emotional; Language/Communication; Cognitive; and Movement and Physical Development.

2. Wash your hands.

3. Perform the developmental evaluation. Evaluate developmental milestones in each category as the infant is engaged and assessed.

* 1. Social and Emotional

3.1.1 Observe if the infant is shy or nervous with strangers.

3.1.2 Observe if the infant cries when the family/caregiver leaves.

3.1.3 Ask the family/caregiver if the infant has favorite things and people.

3.1.4 Ask the family/caregiver if the infant hands them a book when they want to hear a story.

3.1.5 Ask the family/caregiver if the infant repeats sounds or actions to get attention.

3.1.6 Ask the family/caregiver if the infant puts out their arm or leg to help with dressing.

3.1.7 Attempt to play “peek-a-boo” and “pat-a-cake” with the infant.

3.2 Language/Communication

3.2.1 Ask the family/caregiver if the infant responds to simple spoken requests.

3.2.2 Ask the family/caregiver if the infant uses gestures, like shaking their head “no” or waving “bye-bye.” Say “bye-bye” and observe the infant’s response.

3.2.3 Make different sounds (*e.g.*, mama, dada, baba, pah, dah, and mah) and gestures (*e.g.*, waving bye-bye or lifting the arms up to be picked up) while playing with the infant, and note if the infant mimics these sounds and gestures.

3.2.4 Ask the family/caregiver if the infant tries to say words they say.

3.3 Cognitive

3.3.1 Hand the infant a toy and observe how the infant explores the toy (*e.g.*, shaking, banging, throwing, etc.).

3.3.2 Hide a toy under a towel and observe if the infant finds it easily.

3.3.3 Play peek-a-boo with the infant and observe if they play or copy the gestures.

3.3.4 Open a book and point out the pictures on the page. Note if the infant looks right at the pictures or things in the book.

3.3.5 Hand the infant a cup, spoon, and brush, and observe if the infant is using the objects correctly and if the infant bangs the things together.

3.3.6 Hand the infant a cup and some blocks. Observe if the infant places the blocks in the cup and then takes them out.

* 1. Movement and Physical Development

3.4.1 Place the infant prone (on their tummy) and or supine (on their back) and observe if they can get to a sitting position without help.

3.4.2 Observe if the infant is able to pull to a standing position and walk around holding on to furniture (“cruising”).

3.4.3 Observe if the infant attempts to take a few steps alone without holding on to anything.

3.4.4 Observe if the infant stands alone.

**Summary**

The overall goal while monitoring developmental milestones is early identification of a problem or concern. The sooner the problem is identified, the sooner intervention may be implemented, ultimately aiding the infant to reach their best potential. Open communication with the family is key to a developmental history and assessment, as a pediatric visit is only a snapshot in time. A practitioner should always attend to the parent’s concerns.

The next step in developmental evaluation is administering a standardized and validated screening test aimed to address common questions and efficiently identify infants that need further and more detailed assessment. Screening tests are brief, cost-effective, culturally and linguistically relevant, and do not require highly-specialized training. Screening results should only be used to identify children who may benefit from further assessment.

Should a concern be uncovered during a screening test, the next step is a full diagnostic assessment, which are performed by trained specialists. Diagnostic assessments are norm-referenced, comprehensive evaluations that address specific questions about development and skills. They also contain specialized material designed to be unfamiliar, which is used to assess different domains. The intention of a diagnostic assessment is to identify and secure appropriate intervention services and targeted interventions, which may include early intervention services, medical evaluation and treatment, and genetic counseling and family planning for the parents.

**Figures and Legends**

Table 1: Developmental milestones assessed in several age groups in infants and toddlers.

**References**

1. Learn the Signs. Act Early. Developmental Milestones. Adapted from CARING FOR YOUR BABY AND YOUNG CHILD: BIRTH TO AGE 5, Fifth Edition, edited by Steven Shelov and Tanya Remer Altmann © 1991, 1993, 1998, 2004, 2009 by the American Academy of Pediatrics and BRIGHT FUTURES: GUIDELINES FOR HEALTH SUPERVISION OF INFANTS, CHILDREN, AND ADOLESCENTS, Third Edition, edited by Joseph Hagan, Jr., Judith S. Shaw, and Paula M. Duncan, 2008, Elk Grove Village, IL: American Academy of Pediatrics. This milestone checklist is not a substitute for a standardized, validated developmental screening tool.
2. A Guide to Assessment in Early Childhood; Infancy to Age Eight. Washington State Office of Superintendent of Public Instruction, 2008.