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RATIONALE

Developmental and socio-emotional/behavioral observations by a health care provider can identify problems early so that additional comprehensive assessments and intervention can be initiated. The Early Intervention Program for Infants and Toddlers with Disabilities was enacted in 1986 under the Individuals with Disabilities Education Act (IDEA; 20; U.S.C., Section 1431 et seq.), IDEA Part H (Public Law 99-457(1986) to ensure that children from birth to age three years with risk conditions or exhibiting signs of developmental problems receive the earliest intervention possible. This law provided the states with planning money from the federal government to design a comprehensive interagency, multidisciplinary program of services for children with handicapping conditions and their families. To achieve these goals, California responded to this legislation by establishing the Early Start Program and receives ongoing federal funding for the program.

Pediatric health care providers are critical in the successful implementation of this mandate through the timely referral of children with suspected early delays. Some behaviors are more readily identified as problems because they are observable whereas other problems may not be as apparent, such as depression and anxiety. For this reason a careful review of a child's developmental and behavioral functioning is necessary at each well child encounter.

Parents and caregivers play an important role in the development of children at all ages. Studies of children show that children do best if they have secure emotional ties with a parent or relative, and find a support system through school, church, or community. Helping parents and caregivers support children in their developmental processes and achievements becomes an essential part of each health assessment visit. See Table 1 Developmental Anticipatory Guidance By Age for a summary of developmental milestones and activities to stimulate growth.

SCREENING REQUIREMENTS

Developmental, Socio-Emotional/Behavioral Screening

Developmental screening is the administration of a standardized tool that helps identify children at risk of a developmental disorder. Good screening tools are validated and culturally and linguistically sensitive and reliable. A tool that has good validity can discriminate between a child at risk for delay and the general population. In most cases, a general screening tool is appropriate. Other screening tools are available if there is a need to screen in a specific domain. For a list of approved tools, see Developmental Screening Tools.

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Normal screening results provide an opportunity to focus on supporting normal developmental tasks with the parents, together with other anticipatory guidance. If the screening results raise concerns, this should be discussed with the family and there should be a referral of the child for developmental testing to identify specific developmental disorders. Early identification of a disorder will provide prognostic information and allow initiation of appropriate early childhood therapeutic interventions. In addition, when a delay is confirmed, the child needs a comprehensive medical evaluation. There is no universally accepted list of the dimensions of development for the different age ranges of childhood and adolescence. In younger children up to age 5**,** at least the following elements should be screened:

1. Gross motor development, focusing on strength, balance, locomotion.
2. Fine motor development, focusing on eye-hand coordination.
3. Communication skills or language development, focusing on expression, comprehension, and speech articulation.
4. Social-emotional development, focusing on the ability to engage in social interaction with other children, adolescents, parents, and other adults.
5. Cognitive skills, focusing on problem solving or reasoning.

As the child grows through school age, focus should be on visual-motor integration, visual-spatial organization, visual sequential memory, attention skills, auditory processing skills, and auditory sequential memory. The assessment should also encompass such areas of special concern as potential presence of learning disabilities, peer relations, psychological/psychiatric problems.

For adolescents, the assessment should include the areas described above, as well as emotional well-being, building healthy relationships, sexual health, exposure to substance abuse, violence and injury prevention, and vocational skills.

<u>Developmental Surveillance</u>

Developmental surveillance is the ongoing process of recognizing children who may be at risk of developmental delays.

- Conduct an age appropriate and culturally sensitive socio-emotional/behavioral history and surveillance at each health assessment visit. Integrate information from the health history and physical examination to determine whether the child's socio-emotional development and behavior falls within an expected range according to age group and cultural background.
    1. Elicit and attend to the parents' concerns about their child's development.
    2. Document a developmental history.

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3. Make observations of the child.
4. Identify risk factors.
5. Maintain an accurate record of findings.

- Give developmental anticipatory guidance appropriate for age. See Table 1 Developmental Anticipatory Guidance.
- For specific social and emotional information and anticipatory guidance, see Bright Futures' developmental tools for parents and providers; "What to Expect and When to Seek Help."
- A concern in any developmental domain raised during developmental surveillance should be promptly addressed with standardized developmental screening tests and/or appropriate referral. Developmental screening that targets the area of concern is indicated whenever a problem is identified during developmental surveillance. The AAP provides an algorithm for developmental surveillance and screening found in *Pediatrics* 2006;118:405.

Developmental Screening
Screening is the use of standardized tools to support and refine risk.

- Administer standardized developmental screening tools routinely at the 9, 18- and the 24 or 30-month visits. These tests are reimbursable through fee-for-service Medi-Cal for eligible children and available through Medi-Cal Managed Care Plans. They are not reimbursable for children who are eligible for CHDP health assessments-only.
- Consider administering behavioral screening tools such as the Pediatric Symptom Checklist, PEDS (Parents Evaluation of Developmental Status) or ASQ-SE when a concern about behavioral or mental health issues is raised by the parent or during the assessment. There is no reimbursement for behavioral screening through the CHDP program, but the screening results may guide necessary treatment and referrals for certain children.

Bright Futures*
Bright Futures Tool and Resource Kit, Developmental, Behavioral, Psychosocial, Screening, and Assessment Forms.

Bright Futures Guidelines for Health Supervision of Infants, Children, and Adolescents, 3rd Edition Pocket Guide

CONSIDERATIONS FOR REFERRAL, TREATMENT AND/OR FOLLOW-UP

- Providers are required to refer a child to the Early Start Program within two days of identifying an individual who is under three years of age and might be in need

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of early intervention services. (California Code of Regulations, Title 17, Section 52040(e)(4).

- Eligible infants and toddlers are those who have a diagnosed developmental delay or who may be at risk for having a developmental disability.

- The Early Start Central Directory of Early Intervention Resources is a comprehensive resource for parents, family members, service providers, and members of the public. It provides information on the early intervention resources available in California by county.

- Preschool Special Education Programs at local school districts conduct evaluations of suspected developmental abnormalities in children ages 3-5 and provide services for eligible children and their families, following standards established by AB 2666 **(**Hannigan**)** (Chapter 311, Statutes of 1987). Contacting the local school district and speaking with the responsible party for the 0-5 population is the most direct way for families to find the information about services. CHDP providers may also obtain information from the local CHDP program.
- Refer to appropriate child development resources for additional assessment, diagnosis, treatment or follow-up when concerns or questions remain after the screening process.
- All children who may have developmental abnormalities should be referred to California Regional Centers. The regional centers are nonprofit private corporations that contract with the Department of Developmental Services to provide or coordinate services and supports for individuals with developmental disabilities.

AUTISM SPECTRUM DISORDER (ASD)

Autism spectrum disorder is no longer a rare condition. Recent CDC data from the 10 Things to Know About New Autism Data, indicate that about 1 in 68 children (or 14.7 per 1,000 8 year olds) were identified with ASD. It is important to remember that this estimate is based on 8-year-old children living in 11 communities. It does not represent the entire population of children in the United States. In California, the number of individuals with a diagnosis of ASD has increased over 1100% since 1987, according to the California Department of Developmental Services.[1] Early identification of children with an autism spectrum disorder (ASD) increases the likelihood of successful treatment. Screening tools that evaluate social and communication skills are helpful. CHDP provides for basic behavioral screening. If ASD is suspected or diagnosed the child/teen should be referred to one of California's Department of Developmental Services' Regional Centers; and/or Medi-Cal Managed Care health plans; and/or local health agencies.

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Current recommendations of the AAP are as follows:

- Administer an autism screening tool at 18 months of age and at 24 months of age.
- Consider administering an autism screening tool prior to 18 months of age if there is a sibling with a diagnosis of autism and/or there are parental or caregiver concerns.
- Refer to the American Academy of Pediatrics Policy statement on the *Management of Children with Autism Spectrum Disorders, Pediatrics,* Volume 120, Issue 5, November 2007 for screening tools
- For further information on ASD in California.
- For further information and resources on child development and behavior in the medical setting, American Academy of Pediatrics section on Developmental and Behavioral Pediatrics.

Resources

ASQ Ages and Stages Questionnaires

Anticipatory guidance for cognitive and social-emotional development: Birth to five years
Paediatrics& Child Health 2012 February17 (2) 75-80 PMCID: PMC3299350
Cara Dosman, MD FRCPC FAAP and Debbie Andrews, MD FAAP FRCPC

Developmental Screening Tool Kit for Primary Care Providers.

Centers of Disease Control and Prevention (CDC), Developmental Milestones.

CDC, Autism Spectrum Disorder (ASD).

Developmental Screening Tools Chart

Evidence-based milestone ages as a framework for developmental surveillance.
Paediatrics and Child Health. 2012 December 17, (10): 561-568 Copyright 2012.
PMCID:PMC3549694Cara F Dosman, MD FRCPC FAAP, Debbie Andrews, MD FRCPC, and Keith J Goulden MD DPH FRCPC. Division of Developmental Pediatric, Department of Pediatrics, University of Alberta, Edmonton Alberta.

University of Washington Medical Center – UW Medicine General Developmental tools

Health Child Care America, American Academy of Pediatrics, 141 Northwest Point Blvd., Elk Grove Village, IL, 60007, 847-434-4000

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Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening. American Academy of Pediatrics. Pediatrics Vol. 118 No. 1 July 1, 2006 pp. 405 -420(doi: 10.1542/peds.2006-1231)

PEDS and ASQ Developmental Screening Tests May Not Identify the Same Children. Copyright © 2009 by the American Academy of Pediatrics. Laura Sices, MD, MS[a], Terry Stancin, PhD[b], H. Lester Kirchner, PhD[c], Howard Bauchner, MD[a]

PEDS and PEDS:DM. PEDStest.com – Tools for Developmental-Behavioral Screening and Surveillance.

Snapshots* Developmental Milestones. Division of Developmental Pediatrics, Department of Pediatrics, Faculty of Medicine and Dentistry of Alberta Complied by Dr. Debbie Andres, Division Director 2009 Amended by D Andrews and C Dosman, August 2014.

References

[1] "Autism Spectrum Disorders: change in the California Caseload. An Update: June 1987-June 2007." California Health and Human Services Agency

[2] Hagan JF, Shaw JS, Duncan PM, eds. 2008. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.p.89-90

3 Centers for Disease Control and Prevention (CDC), Child Development, Facts about Child Development. Retrieved February 19, 2016.

4 CDC, Developmental Milestones. Retrieved February 19, 2016.

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Table 1: Developmental Anticipatory Guidance By Age[2, 3, 4]

Age Group	Developmental Surveillance and Milestones	Activities to Stimulate Growth and Development
Newborn	Primitive reflexes – step, place Moro, Babinski, ATNR, Flexor Posture, grasp, root, suck, alerts to sound, startles to loud sounds, orientate to sounds smiles to voice, variable cries, turns to visual stimuli, bonding (parent to child), self-regulation/soothing	Talk, sing, play music and play the baby. Praise the baby and provide loving attention. Cuddle and hold the baby. Play with the baby when alert and relaxed.
1 month	Responds to sounds by blinking, crying, quieting, or startle response. Fixates on human face and follows with eyes. Responds to parent's face and voice. Lifts head momentarily when in prone position. Has flexed posture; moves all extremities. Can sleep for 3-4 hours at a time; can stay awake for 1 hour or longer.	Learn baby's temperament. Hold, cuddle, and play with baby. Crying usually peaks around 6 weeks old. Talk and sing to baby.
2 months	Coos and vocalizes reciprocally. Is attentive to voices. Shows interest in visual and auditory stimuli. Smiles responsively. In prone position, lifts head, neck and upper chest with support on forearms. Some head control in upright position.	Learn baby's temperament. Hold, cuddle, and play with baby. Talk, sing, read to baby; play music. Establish bedtime routine/ Provide age-appropriate toys.
4 months	Controls head well. Smiles, laughs, babbles and coos. Grasps rattle. Inspects and plays with hands and feet. Shows range of feelings like joy, surprise, anger, and fear.	Talk, sing, read to baby; play music. Play pat-a-cake, peek-a-boo. Provide age-appropriate toys. Set bedtime routine; put baby to bed awake with same comfort object.

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		Imitate baby's sounds when playing together.
6 months	Reaches persistently. Sits with no support. Grasps and mouths objects. Vocalizes single consonants. Turns to rattling sounds. Rolls over.	Provide toys and items that baby can grasp easily. Read, play music, and sing to baby. Set bedtime routine; put baby to bed awake with same comfort object. Talk to baby and try to have baby repeat single syllable sounds, "ba", "da", and "ma".
9 months	Holds objects in one hand. Responds to own name. Smiles at self-image in mirror. Bears weight on legs. Pokes with index finger. Feeds self with fingers. Drinks from a cup. Plays peek-a-boo and pat-a-cake.	Place on floor in safe area to provide opportunity to strengthen large muscles and explore. Talk, sing, and read to baby; play games, music. Set simple rules, limits. Offer small pieces of soft foods for baby to eat with fingers.
1 year	Cruises and may take a few steps alone. Plays with toys; puts several objects in a container. Says mama or dada. Imitates vocalizations. Plays social games.	Talk, sing, and read together. Encourage safe exploration. Don't allow hitting, biting, aggressive behavior. Limit rules, set routines, be consistent. Expect curiosity about genitals.
15 months	Vocabulary of 3-6 words Walks well. Understands simple commands. Stacks two blocks. Indicates wants by pointing or grunting. Waves bye-bye.	Praise good behavior and accomplishments. Talk, sing, and read to child. Use discipline to teach, not punish.

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		Avoid power struggles; set limits; be consistent. Discourage hitting, biting, aggressive behavior.
18 months	Uses spoon. Points to at least one body part. Walks up steps. Listens to a story. Helps in house Scribbles. Points with index finger to indicate interest in something. Brings object to parent to show them something.	Praise good behavior and accomplishments. Encourage self-expression and choices. Allow assertiveness within limits. Keep discipline brief. Read stories with child. Offer pretend play toys such as playhouse and toy figures. Listen to child, show interest; spend time with child. Don't expect child to share all toys. Help siblings resolve conflicts. Help child express emotions.
2 years	Can kick ball. Steady gait, runs. Vocabulary of 20 words; speech half understandable. Uses 2 word phrases. Puts on some clothing. Washes and dries hands.	Play social games. Hug, talk, read, and play together. Praise good behavior and accomplishments. Reinforce limits, be consistent. Learn how to help with fears, nightmares. Encourage self-expression, choices and safe exploration.
	Jumps in place. Pedals tricycle. Washes and dries hands and face; brushes teeth.	Provide opportunities to ride tricycle. Teach simple songs; read stories together.

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3 years	Separates from mother easily. Knows own name, age, and sex. Talks well; is easily understandable and uses plurals, and 4-5 word sentences.	Help child name what he/she sees, hears, or does. Encourage safe exploration, socialization, physical activity. Provide choices, reinforce limits, and use “time out”. Use correct terms, answer questions. Expect normal curiosity.
4 years	Prints a few letters or numbers. Walks backward, skips and hops. Can sing a song. Enjoys making up and telling stories. Gives first and last name.	Encourage child to talk about feelings, experiences, and school. Read together with child. Assign chores. Set appropriate limits. Visit parks, museums, and libraries.
5-10 years	Interacts with small number of neighborhood children in groups. Adheres to predetermined rules. Knows right from left. Cause and effect are understood. Can walk a chalk mark. Feels good about school. Develops self-efficacy, or the knowledge of what to do and the confidence and ability to do it.	Offer board games and cards. Encourage participation in clubs and team sports. Encourage safe, healthy habits, healthy foods, physical activity, and seat belt use. Provide books for reading; interest child in hobbies. Praise child. Set limits, establish consequences. Assign chores. Teach how to resolve conflicts and handle anger. Provide personal space. Show interest in school performance and activities. Encourage good physical health and exercise

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		patterns.
11-14 years	Participates in organized sports, social activities, and community groups. Uses both hands independently. Becomes more graceful and coordinated. Ability to get along with peers; maintains peer relationships. Can understand another point of view. Learns from mistakes and failures, tries again. Understands parental limits and consequences for unacceptable behavior. Shares in household chores. Learns new skills. Preoccupation with rapid body changes.	Promote family activities. Show affection, praise good behavior. Model respect, family values, safe driving practices, and healthy behaviors. Respect adolescent's need for privacy. Emphasize importance of school, show interest in school activities. Keep guns unloaded and locked up, or remove from home. Minimize criticism; avoid nagging, negative messages.
15-17 years	Improved social skills; maintains family relationships. Sets goals and works toward achieving them. Takes on new responsibility. Beginning emotional emancipation.	Promote participation in social activities. Expect responsibility for some household chores. Promote healthy and safe habits. Encourage responsibility for school attendance, homework, and course selection.
18-21 years	Acts responsibly for self. Maintains family relationships. School achievement. Begins preparation for further education, career, marriage, and parenting. Exhibits capacity for empathy, intimacy, and reciprocity in interpersonal relationships, and self-identity.	Promote community interaction. Promote responsible, safe driving. Encourage participation in family traditions. Promote maintenance of strong family relationships.

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Developmental Screening Tools Choices for Practices and Providers

The following table is designed to help select high-quality and practical tools to screen children from birth to 8 years of age for developmental delays or disabilities. All tools listed have at least 70% accuracy – that is, sensitivity and specificity, correctly identifying at least 70% of children with and without disabilities, delays or problems. The American Academy of Pediatrics recommends that physicians administer developmental screenings with a high-quality tool – such as ASQ3 (the Ages and Stages Questionnaires), ASQ: Social-Emotional, Second Edition (ASQ:SE-2™), PEDS (Parent's Evaluation of Developmental Status), and PEDS:DM (PEDS: Developmental Milestones) – at least three times before a child's third birthday – at the 9-month, 18-month, and 30-month (or 24-month) pediatric visits.1

The *screening starting point* for all children is general developmental screening**.** All of the tools in the table "*General Developmental Screening Tools"*:2

Cover all developmental domains;
Have high accuracy – 80-90%;
Are short, simple, parental-report instruments;
Are low-cost and easy to administer and score;
Are appropriate for very young children; and
Can be completed in many settings – in a pediatric or family medicine practice, in a child care center or Head Start program, during a home visit to a family with a young child, etc.

ASQ ASQ: Social-Emotional, Second Edition (ASQ:SE-2™), ASQ3, PEDS, and PEDS:DM:

• Are billable under CPT-4 Code #96110 (developmental screening) in fee-for-service Medi-Cal settings;
• Can be used with Electronic Medical Records (EMR); and
• Are available online.

ASQ3 is available online in English and Spanish, as is the ASQ:SE (Social-Emotional).

PEDS is online in English, Spanish and Vietnamese. The online application includes a record of parental concerns, PEDS results by developmental domains, summary report for parents, billing codes (ICD-9 and procedure codes), and a referral letter to the child's pediatrician or Early Intervention program when indicated.

PEDS:DM is available online in English and Spanish.

To help providers select appropriate second-level screening tools for specific developmental domains, the list of *General Developmental Screening Tools* is followed by a number of specialized screening tools (*Other Developmental Screening Tools*).

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Name of Tool	Description of the Tool	Developmental Domains Covered	Age Range	Administration Time	To Purchase or for Additional Information
ASQ – Ages and Stages Questionnaires Parental report about a child's skills	30 questions (answered yes, sometimes, not yet), plus 7-8 unscored overall questions. Parents indicate a child's developmental skills, using one of 19 age-specific questionnaires.	All Domains Covered: communication, gross motor, fine motor, problem-solving, and personal-social skills	4-60 months (5 years) Can be given as young as 3 months	15-30 minutes	www.brookespublishing.com and www.agesandstages.com
ASQ:SE-2	Parent completed questionnaires that reliably identify young children at risk for social or emotional difficulties.	All Domains cover: Self-regulation, compliance, communication, adaptive behaviors, autonomy affect and interaction with people	1-72 months	10-15 minutes	www.brookespublishing.com and www.agesandstages.com
ASQ-3 – Ages and Stages-3 Questionnaire Parental report about a child's skills	Questions are answered yes, sometimes, not yet. Parents indicate a child's developmental skills, using one of 21 age-specific questionnaires.	All Domains Covered: communication, gross motor, fine motor, problem-solving, and personal-social skills	1-66 months Can be given as young as 1 month	10–15 minutes 1-3 minutes to score	www.brookespublishing.com and www.agesandstages.com

PEDS – **Parents' Evaluation of Developmental Status** – Parental-report about parental concerns	10 questions (the same for all ages, answered yes, no, a little). Parents identify "concerns" they have in each developmental domain.	All Domains Covered: expressive language and articulation, receptive language, gross motor, fine motor, school, self-help, social-emotional, behavior, and global-cognitive	0-95 months (7 years, 11 months)	2-10 minutes	www.pedstest.com
PEDS:DM – **PEDS: Developmental Milestones** – Parental-report about a child's skills	6-8 items or questions, depending on the age level. Parents indicate a child's developmental skills, using one of 22 age-specific questionnaires	All Domains Covered: expressive and receptive language, gross motor, fine motor, self-help, social-emotional, behavior, and (for older children) reading and math	0-95 months (7 years, 11 months)	3-5 minutes	www.pedstest.com