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Pediatric Development and Chronic Illness

General: Coping and adjustment to living with a chronic illness is an ongoing process influenced by many factors. Parent and child adjustment may include grief, denial, anger, acceptance, and adaptation. Denial may manifest as medical non-adherence or declining treatment against medical advice (AMA). Anger may manifest as conflict with staff or within families. Developmental intervention assessment is recommended for children under the age of 3 years needing hospitalization for more than 2-4 weeks.

Period/Age	Physical Growth	Gross and Fine Motor	Language/ Cognitive	Affect/ Social	Behavioral Issues	Suggested Interventions	Issues with Chronic Illness	Suggested Interventions
INFANCY ***< 6 months***	Gains 10 grams/d	Grasps finger	Alerts to light/ dark	Alerts to faces	**1-3 mos:** Colic	**1-3 mos:** Crying, peaks at 6 weeks, resolves by 3-4 mos. To decrease over-stimulation, swaddle infant, use white noise, swing, car rides. Avoid frequent formula changes and medication. Relieve primary care taker for short periods.	**Neonate:** Chronic illness may decrease infant's access to environment. Physiological stability is essential for development in all other areas. Parental guilt, grief or anger may interfere with attachment as well as the infant's ability to respond.	**Neonate:** Help caretaker cope with infant's pattern of sleep, feeding, and elimination. Encourage parents to express feelings and identify them as normal. Give factual info about known causes of problem. Guide parents to establish physical and emotional contact with infant. Help parents develop a sense of competence.
	3-4 mos: Growth 20g/day	Sits with head steady	**4 mos:** Gurgles and laughs out loud	Prefers to face outward	**3-4 mos:** Waking at night	**3-4 mos:** Comfort quietly, avoid reinforcing night waking behaviors; avoid feeds or play at night; consistent bedtime routine; Place down while drowsy/ not fully asleep.	**Infancy:** Major separations from parents may interfere with attachment; infant's social responsiveness may be decreased; developing trust is dependent on having needs met in a consistent manner — this may be difficult to achieve in hospital setting; inconsistent care and separations may lead to mistrust	**Infancy:** Help families maintain consistent presence during hospitalization; maximize opportunities for parents to participate in care, learn about their infant's characteristic responses; teach when to stimulate infant and when to decrease intensity; communicate infant's characteristics with other care providers

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6-12 months	Doubles birth weight **5-7 mos:** Eruption of deciduous incisors	Sits, grasps, transfers toys	Startles to loud sudden sounds **6 mos:** Babbles	Recognizes friendly, warning, angry voices. Reaches in anticipation of being picked up by familiar person	**< 6 months:** Separation difficulty transferring care from caregivers to others		Illness may lead to a sense of helplessness.	Encourage parents to provide opportunities for exploration and mastery as much as possible using appropriate toys and play
				Reorganization issues of feeding and sleeping re-emerge	**9 mos:** Stranger anxiety/ separation anxiety begin Waking at night	**9 mos:** Use transitional object; have routine to transition from parent; keep lights off, avoid picking up or feeding, and reassure verbally		
12 -15 months	Triples birth weight; anterior fontanel of head closes	Walks alone; dislikes any restraint; finger foods, feeds self; uses index finger to point	First words in addition to mama, dada; understands and uses gestures	Expresses many feelings; may recognize feelings in others; enjoys active games peek-a-boo, chasing; short attention span	Aggression	Say "No" with facial cues; begin time out (1min/year) — no eye contact or interaction, place in non-stimulating location; emphasize child proofing and distraction.	May be delayed in motor and language milestones.	Encourage parents to continue fostering independence when possible; discuss parents' disappointment with delays in milestones

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TODDLERHOOD ***18 months***	Growth rate begins to slow and appetite declines	Toddlers master reaching, grasping and releasing by stacking blocks, imitation and putting things in slots	Points to major body parts; uses jargon	Short attention span; temper tantrums with fatigue, anger or frustration; pretends; carries a special toy or doll	Tendency to tantrum; noncompliance with medical regimen; temper-tantrums	Determine cause and react appropriately; maintain safety of environment	Illness may hamper exploring and using motor skills; parents may overprotect and be reluctant to set limits; some conditions affect ability to control bowel and bladder functions	Help parents devise methods so child can move and play independently if possible; give child simple choices when possible; discuss flexibility vs. firmness in limit-setting; successful toileting should be broken down into small specific behaviors
24 months	Head growth slows slightly	Runs well, kicks ball; builds tower of 6-7 cubes; right or left handed; imitates vertical and circular strokes with pencil	Speaks about 50 words; associates names with most familiar objects; limited understanding of time; language focuses on here and now; may reverse pronouns	Has strong positive or negative reactions; intense sense of self-importance; anticipates routine events; parallel play	Coping mechanisms developing; tendency to regres; toilet training	**2-4 y:** Introduce potty, avoid pressure or punishment for accidents; expect some periods of regression, especially with stressors; readiness requires interest, neurological maturity, ability to walk, to undress self, desire to please, increased periods of daytime dryness.	Illness may further delay potty training; assess readiness	Help parents assess child's ability to tolerate frustration; help parents prioritize limit-setting.
3 years	Deciduous teeth calcified	Rides a tricycle; can undress self; imitates 3 cube bridge; copies a circle; builds tower of 9-10 cubes	Understands about 500 words; can give first and last name; uses three- to four-word sentences; can match four colors; can remember three directions at a time	Understands taking turns; enjoys helping others; gender identity-knows own sex, body parts; beginning to play with others	Magical thinking and cognitive distortion; phobias; susceptible to fears of harm to body; nightmares; night terrors	Avoid scary movie or TV; avoid over-tiredness; explain they had a bad dream and there are no monsters under the bed; nightlight; be calm, speak soothingly in repetitive tones, return to sleep, protect against injury	Illness cause is thought to be punishment for bad behavior; parents may overprotect; regression occurs in most children during illness; initiative may be discouraged	Help parents verbalize concerns, suggest parents' strengths; help parents encourage age independence and self reliance; encourage play to help child explore experiences and feelings about illness; help child prepare for procedures by repeating facts several times and playing out procedures

http://www.cc.nih.gov/ccc/pedweb/pedsstaff/chronicped.html

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