

CRILES (Crying, Requires oxygen, Increased vital signs, Expression, Sleep) Scale for Neonatal Postoperative Pain Assessment: http://www.medical.org/ch44.html	Five parameters are assessed: Crying, Requires oxygen, Increased vital signs, Expression, and Sleep. Each has a score of 0-2; sum of subscores ranges from 0 to 10. Higher scores indicate more pain.	Neonates: 32-60 weeks' gestation	Reliable and valid; Kreechel & Bidner, 1995
Behavioral Pain Score (BPS) http://www.medical.org/ch44.html	An abbreviated form of CHEOPS; three behavioral parameters are assessed: facial expression, cry, and movements, scored 0 to 2 or 3. Total score range is 0 to 8; higher numbers indicate more pain.	3-36 months	Data on reliability and validity not available; Robieux & Kumar, 1991
Riley Infant Pain Scale (RIPS) http://www.medical.org/ch44.html	Six parameters (facial, body movement, sleep, verbal/touch, consolability, and response to movements/touch) are scored on a 0-3 scale; total score ranges from 0 to 18; higher scores indicate more pain.	Preverbal infants and children with cerebral palsy	Reliable (specific, not sensitive) and valid; Joyce et al, 1994; Schade et al, 1996
FLACC (Face Legs Activity Cry Consolability) Behavioral Scale for Postoperative Pain in Young Children http://www.medical.org/ch44.html	Five categories of pain behaviors—facial expression, leg movement, activity, cry, and consolability—are scored on a 0- to 2-point scale. Total score range is 0 to 10; higher score reflects discomfort and pain.	2 months-7 years: reliable for children with cognitive impairment	Reliable and valid; high interrater reliability; Merkel et al, 1997; Voepel-Lewis et al, 2002; Willis et al, 2003
Toddler-Pre-schooler Postoperative Pain Scale (TPPPS) http://www.medical.org/ch44.html	Seven behavioral descriptors for three categories of behavior (verbal, facial, bodily movements) are used to assess acute pain following procedures. Each behavior descriptor scores 0 or 1, depending on presence in a 5-minute period; total scores range from 0 to 7.	1-5 years	Reliable and valid per authors; Tarbell et al, 1992
Physiologic Measures Autonomic measures (e.g., heart rate, blood pressure, heart rate spectral analyses)	Scores changes in heart rate, blood pressure, or measures of heart rate variability (e.g., "vagal tone").	All ages	Can be used at all ages; useful for patients receiving mechanical ventilation; nonspecific: changes can occur unrelated to pain; unreliable in infants; Buttner & Finke, 2000
Hormonal-metabolic measures	Plasma or salivary sampling of hormones (e.g., cortisol, epinephrine)	All ages	Can be used at all ages; nonspecific; changes can occur unrelated to pain; inconvenient, cannot provide "real-time" information; Ho et al, 1996

(Continued)