Measuring Pain in Children

THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE PHOENIX

TAPPPS

Tools for Assessing Pediatric Pain in the Prehospital Setting

Assessment

Assess pain as part of the general patient care in children and adults.

Consider all patients as candidates for pain management regardless of transport interval.

(strong recommendation, low quality evidence)

- Assess pain as part of general patient care
- Every patient experiencing pain should be considered a candidate for pain management, regardless of transport time

How Do We Assess Pain?

The Kid-Friendly Basics:

- Speak calmly and gently
- Get down on their level
- Use the child's name
- Ask the parents to remain calm

Physical exam

Pain Scores

Pain Scoring Methods

Use age appropriate pain scale to assess pain

(Weak recommendation, very low quality evidence for patients;
<12 years moderate quality of evidence for patients >12 years)

Age <4 yrs: Consider using an observational scale such as FLACC or CHEOPS
Age 4-12 yrs: Consider using a self-report scale such as FPS, FPS-revised, or Wong-Baker Faces)
Age >12 yrs: Consider using a self-report scale such as NRS

- Pain scores
  - Assigned using pain assessment tools
- Two Types:
  - Self-report
  - Observational or Behavioral

Pain Assessment Tool Types

- Self-Report:
  *Patients able to understand instructions and point or verbalize
  - Considered most reliable
- Observational or Behavioral:
  *Young or cognitively impaired patients
  - Pre-verbal
  - Unable to understand self-report scale

Age-appropriate Pain Scales

- Age >12 years:
  Numeric or Color Analog scales
- Age 4-12 years:
  Pictorial Self-report scales
- Age <4 years:
  Observational/Behavioral scales

Self-Report Pain Assessment Tools

- Numerical Rating Scale
- Color Analog Scale
- Visual Analog Scale

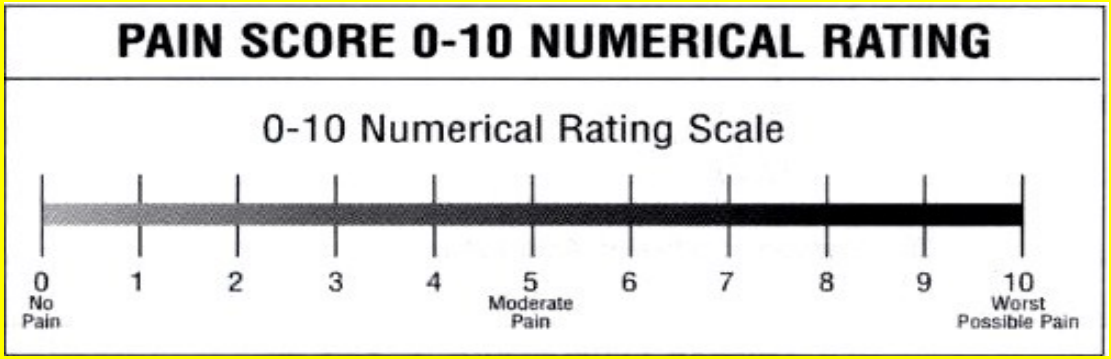
Age >12 yrs

Age 4-12 yrs

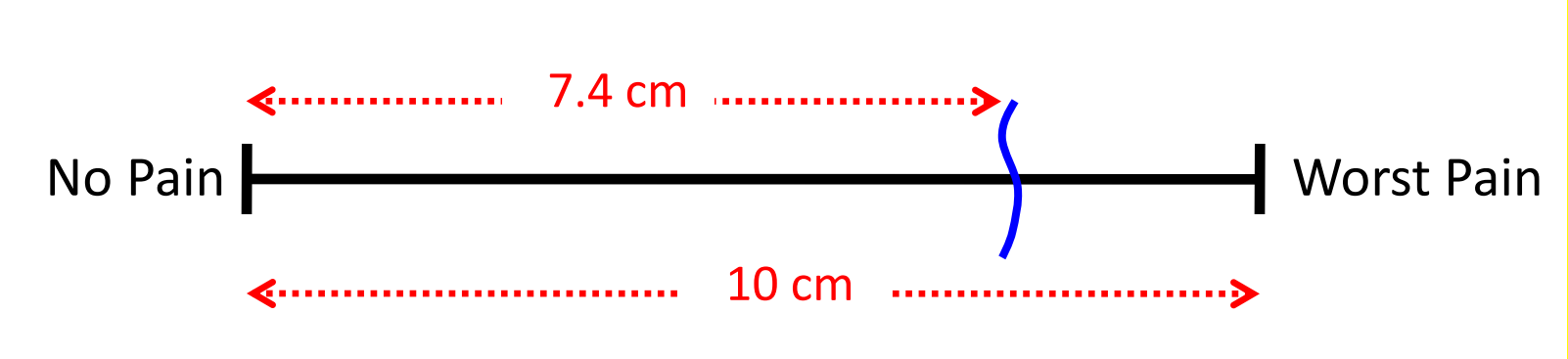
- Faces Pain Scale-Revised
- Oucher Scale
- Wong-Baker FACES Pain Scale

Numerical Rating Scale (NRS)

- Scored 0 – 10
  - Also known as Verbal Numerical Scale (VNS)
- Record score as number

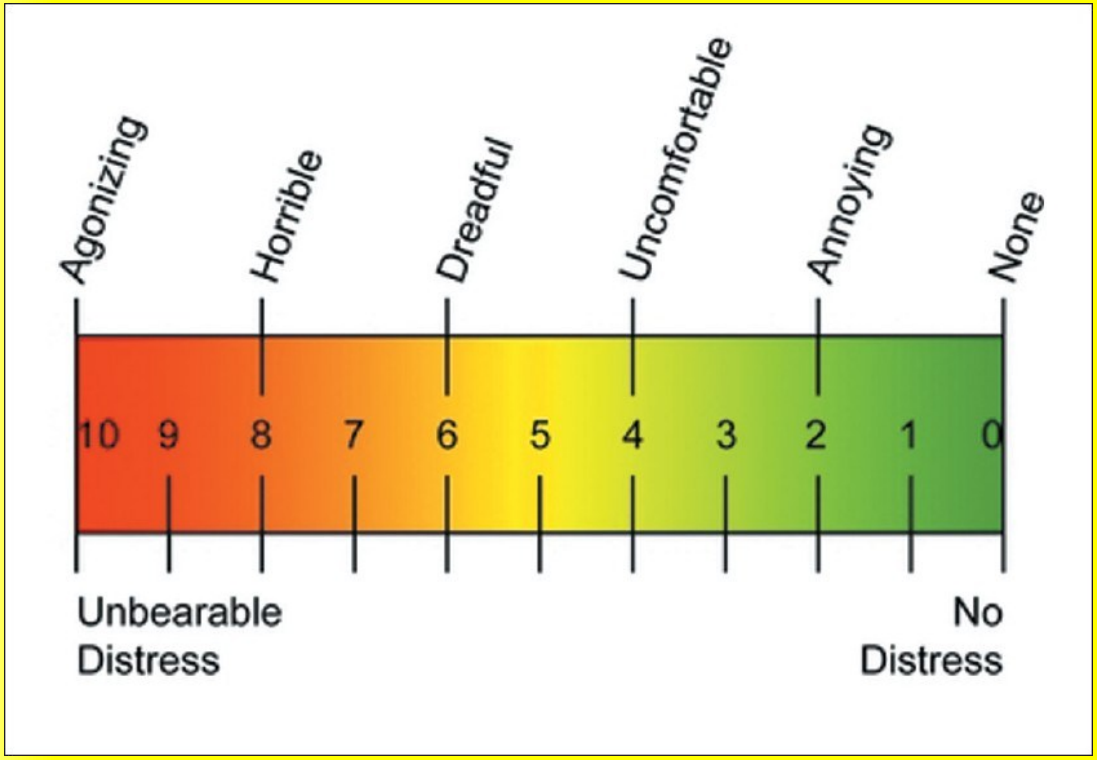


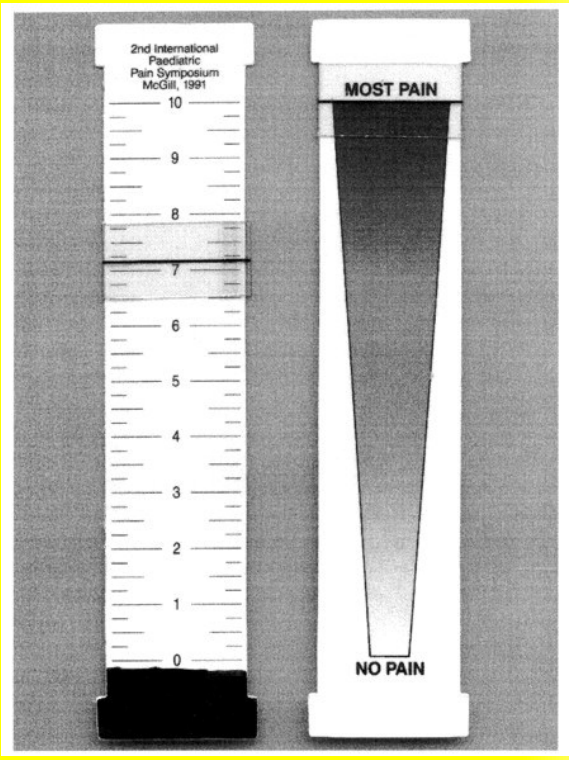
Visual Analog Scale (VAS)



- Score recorded in centimeters (0 – 10)

Color Analog Scale (CAS)

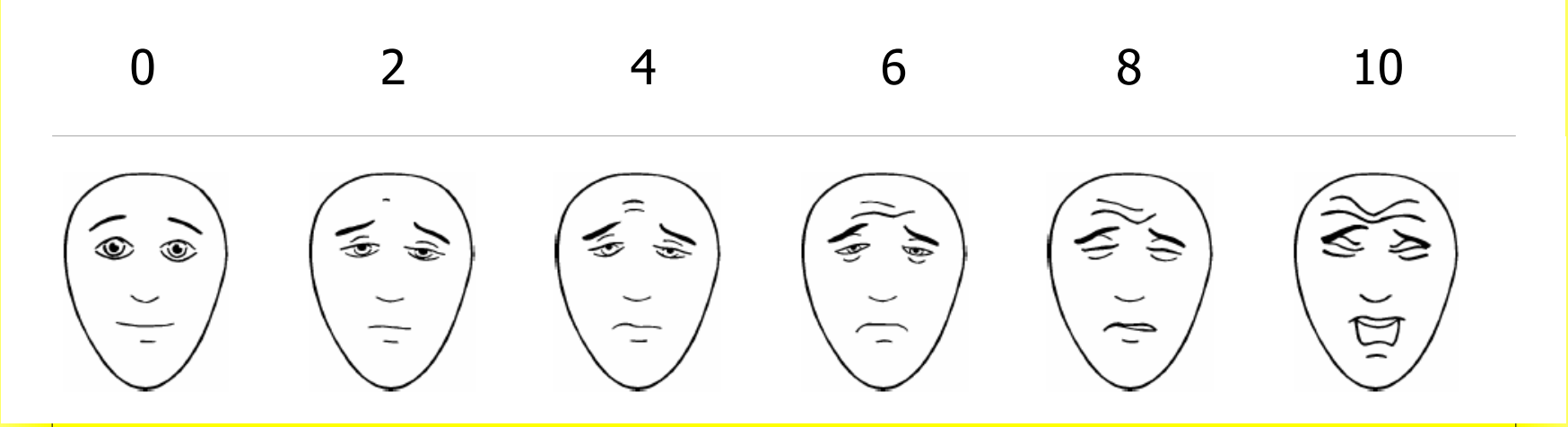




- Score recorded in centimeters (0 – 10)

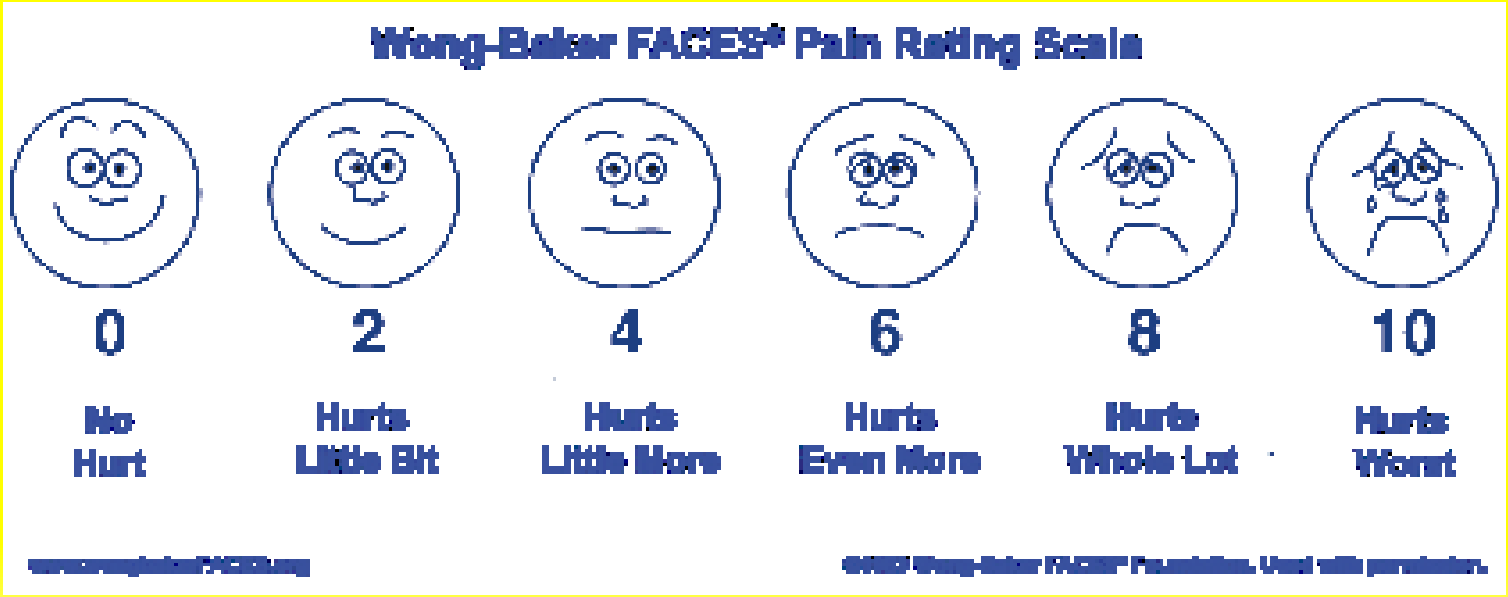
Faces Pain Scale-Revised

- Used in children 4 – 12 years
- Patients point to face that represents pain
- Score 0 – 10



Wong-Baker Faces Scale

- Used in children 4 – 12 years
- Patients point to face that represents pain
- Score 0 – 10



Oucher Scale

- Used in children 4 – 12 years
- Patients point to face that represents pain
- Score 0 – 10

FLACC

Categories	Scoring		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractable	Difficult to console or comfort

- Each category is scored 0 – 2, scores are added
- Total score range: 0 – 10

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CHEOPS

Children's Hospital Eastern Ontario Pain Scale (CHEOPS)

(Recommended for children 1-7 years old) - A score greater than 4 indicates pain

Item	Behavioral		Definition	Score
Cry	No cry	1	Child is not crying.	
	Moaning	2	Child is moaning or quietly vocalizing silent cry.	
	Crying	2	Child is crying, but the cry is gentle or whimpering.	
	Scream	3	Child is in a full-lunged cry; sobbing; may be scored with complaint or without complaint.	
Facial	Composed	1	Neutral facial expression.	
	Grimace	2	Score only if definite negative facial expression.	
	Smiling	0	Score only if definite positive facial expression.	
Child Verbal	None	1	Child not talking.	
	Other complaints	1	Child complains, but not about pain, e.g., "I want to see mommy" of "I am thirsty".	
	Pain complaints	2	Child complains about pain.	
	Both complaints	2	Child complains about pain and about other things, e.g., "It hurts; I want my mommy".	
	Positive	0	Child makes any positive statement or talks about others things without complaint.	
Torso	Neutral	1	Body (not limbs) is at rest; torso is inactive.	
	Shifting	2	Body is in motion in a shifting or serpentine fashion.	
	Tense	2	Body is arched or rigid.	
	Shivering	2	Body is shuddering or shaking involuntarily.	
	Upright	2	Child is in a vertical or upright position.	
	Restrained	2	Body is restrained.	
Touch	Not touching	1	Child is not touching or grabbing at wound.	
	Reach	2	Child is reaching for but not touching wound.	
	Touch	2	Child is gently touching wound or wound area.	
	Grab	2	Child is grabbing vigorously at wound.	
	Restrained	2	Child's arms are restrained.	
Legs	Neutral	1	Legs may be in any position but are relaxed; includes gentle swimming or separate-like movements.	
	Squirm/kicking	2	Definitive uneasy or restless movements in the legs and/or striking out with foot or feet.	
	Drawn up/tensed	2	Legs tensed and/or pulled up tightly to body and kept there.	
	Standing	2	Standing, crouching or kneeling.	
	Restrained	2	Child's legs are being held down.	

- 6 categories, each with 3-4 levels
- Total score 4 – 13

Alder Hey Triage Pain Score

- Developed specifically for emergency setting
- Total score range 0 – 10

Response	Scoring		
	0	1	2
Cry or Voice	No complaint/cry Normal conversation	Consolable Not talking/negative	Inconsolable Complaining of pain
Facial Expression	Normal	Short grimace <50% of time	Long grimace >50% of time
Posture	Normal	Touching/rubbing/sparing	Defensive/tense
Movement	Normal	Reduced or restless	Immobile or thrashing
Color	Normal	Pale	Very pale/"green"

Summary

- Types of Pain Scales:
  - Self-report
    *Patients able to understand instructions and point or verbalize
  - Observational/Behavioral
    *Young or cognitively impaired patients
    - Pre-verbal
    - Unable to understand self-report scale

- Age >12 years: Numeric or Color Analog scales
- Age 4-12 years: Pictorial Self-report scales
- Age <4 years: Observational/Behavioral scales

Questions?

- Thank you for completing the surveys

**** If you are interested in participating in a study to evaluate these tools in the field, please provide your contact information on the last page***

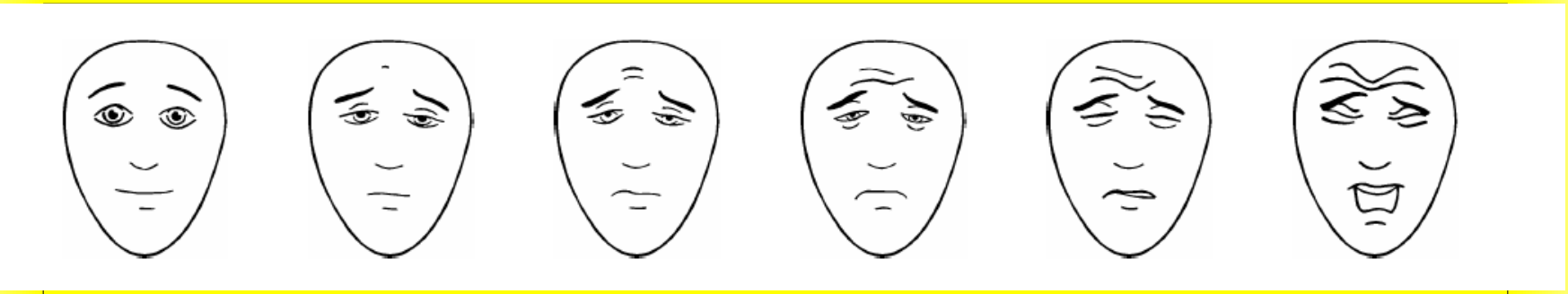
END

PQRST: Pain History

- **O:** Onset
  - When did it start
- **P:** Provocation or Palliation
  - what makes it better or worse
- **Q:** Quality
  - sharp, dull, crushing
- **R:** Region and Radiation
- **S:** Severity and scale
  - pain scales
- **T:** Timing and type of onset
  - intermittent, constant

Faces Pain Scale

- Used in children 4-12 years
- Children point to face that represents their pain
- Compute using score 0-10



FLACC Scale

Category	Scoring		
	1	2	3
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distractible	Difficult to console or comfort

Each of the five categories (F) Face; (L) Legs; (A) Activity; (C) Cry; (C) Consolability is scored from 0-2, which results in a total score between zero and ten.

From *The FLACC: A behavioral scale for scoring postoperative pain in young children*, by S Merkel and others, 1997, Pediatric Nurse 23(3), p. 293-297. Copyright 1997 by Jannetti Co. University of Michigan Medical Center. Reprinted with permission.

A pain scale for children under 7

EVENDOL

A pain scale validated for children from birth to 7 years

Score ranges from 0 to 15.
Treatment threshold: 4/15.

Note everything you observe, even if you think the symptoms are not due to pain but to fear, tiredness or illness severity.

Name	sign absent	sign weak or transient	sign moderate or present about half the time	sign strong or present almost all the time	Assessment at admission		Analgesic	Following assessments and/or after analgesic[3]			
					at rest[1] (R)	during examination[2] or mobilization (M)		R / M	R / M	R / M	R / M
Vocal or verbal expression											
cries *and/or* screams *and/or* moans *and/or* complains of pain	0	1	2	3							
Facial expression											
furrowed forehead *and/or* frown, furrowed or bulging brow *and/or* tense mouth	0	1	2	3							
Movements											
restlessness, agitation *and/or* rigidity *and/or* muscular tenseness	0	1	2	3							
Postures											
unusual *and/or* antalgic posture *and/or* protection of the painful area *and/or* immobility	0	1	2	3							
Interaction with the environment											
can be comforted *and/or* interested in playing *and/or* interacts with people	normal 0	low 1	very low 2	absent 3							
Remarks				Total /15							
				Date & Time							
				Signature							

[1] At rest (R): observe the child from a distance, before performing any examination or procedure, at rest, ensuring the best possible conditions of safety and comfort, for example with his/her parents, when he/she is playing.
[2] During examination or mobilization (M): assess pain during examination or mobilization or palpation of the painful area by nurse or by doctor.
[3] Reassess pain regularly after analgesic administration: wait 30 to 45 minutes if analgesic is administered by oral or rectal route, 5 to 10 minutes if administered by IV route. Note whether the child is at rest (R) or mobilized (M).

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