

## Understanding Pediatric Assessment Instruments

The purpose of this continuing education series is to increase the pediatric nurse's awareness and understanding of selected assessment instruments for use with children and their families.

The first step in the nursing process is assessment. This data collection phase also entails analyzing the data. Valid and reliable assessment tools accelerate this process while helping ensure the gathering of accurate data upon which to plan appropriate interventions. Keeping updated on current assessment instruments and methods will increase the likelihood that pediatric nurses will make wise decisions in their practice settings.

This continuing education series features six articles of importance to pediatric nurses. The first article describes several parent questionnaires available for developmental screening. The second article presents findings of a study to determine the validity/reliability of one type of pacifier thermometer in approximating core body temperature. The third article reports the results of a study to evaluate the Keller Index of Nausea (KIN), a new instrument for observation assessment of nausea in children ages 1–5 years. The fourth article offers findings of a comparison study that evaluated the interrater reliability of the COMFORT Scale. The fifth article describes current trends in the development of sedation/analgesia scales for critically ill children. The final article discusses skin ulcers and the importance of accurate assessment, documentation, prevention, and treatment.

### ASSIGNMENT

- Wagner, J., Jenkins, B., & Smith, J. (2006). Nurses' utilization of parent questionnaires for developmental screening. *Pediatric Nursing, 32*(5), 409-412.
- Braun, C. (2006). Accuracy of pacifier thermometers in young children. *Pediatric Nursing, 32*(5), 413-418.
- Keller, V., & Keck, J. (2006). An instrument of observational assessment of nausea in young children. *Pediatric Nursing, 32*(5), 420-426.
- Bear, L., & Smith, P. (2006). Interrater reliability of the COMFORT scale. *Pediatric Nursing, 32*(5), 427-434.
- Razmus, I., & Wilson, D. (2006). Current trends in the development of sedation/analgesia scales for the pediatric critical care patient. *Pediatric Nursing, 32*(5), 435-441.
- Butler, C. (2006). Pediatric skin care: Guidelines for assessment, prevention, and treatment. *Pediatric Nursing, 32*(5), 443-450.

### Objectives:

1. Discuss the importance of valid and reliable assessment instruments.
2. List three parent questionnaires for developmental screening.
3. Discuss pacifier thermometry as an acceptable method of temperature approximation in young children.
4. List three criteria that achieved statistically significant positive correlations with the KIN score.
5. Define the behavioral and physiologic measures that comprise the COMFORT Scale.
6. Describe current trends in the development of sedation/analgesia scales for children who are critically ill.
7. List the four principal components for early intervention of pressure ulcer development.
8. Identify opportunities for pediatric nurses to keep current on assessment tools appropriate for their practice settings.

This offering for 8.6 contact hours is provided by Anthony J. Jannetti, Inc.

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Articles accepted for publication in the continuing education series are refereed manuscripts that are reviewed in the standard *Pediatric Nursing* review process with other articles appearing in the journal.

This test was reviewed and edited by Judy A. Rollins, PhD, RN, *Pediatric Nursing* associate editor, and Veronica D. Feeg, PhD, RN, FAAN, *Pediatric Nursing* editor.

## Earn 8.6 Contact Hours

### Questions

1. **The nurse in the office setting can be a champion for change by**
  - a. becoming knowledgeable of the direct elicitation screening tools.
  - b. identifying community resources and referrals.
  - c. increasing knowledge of the early intervention process.
  - d. taking the lead in selecting screening tools in clinical sites.
  - e. All of the above
2. **Validated screening tools with 70-80% sensitivity/specificity will**
  - a. take more time in the practice setting.
  - b. include the DDST II (Denver II).
  - c. include informal checklists.
  - d. guide the nurse in anticipatory guidance with the parent.
  - e. provide a diagnosis when scored accurately.
3. **Children identified with developmental or behavioral problems**
  - a. benefit from early intervention during preschool.
  - b. should be at least 3 years old.
  - c. should be watched and given time to mature before services are started.
  - d. represent 2-5% of all children.
4. **Which of the following screening tools can be used to screen children ages 4-16 years?**
  - a. ASQ (Ages & Stages Questionnaire)
  - b. PEDS (Parents' Evaluations of Developmental Status)
  - c. CDI (Child Development Inventories)
  - d. PSC (Pediatric Symptom Checklist)
5. **Developmental surveillance is**
  - a. completed at appropriate intervals.
  - b. a flexible continuous process.
  - c. done in the home or in the pediatric office setting.
  - d. uses validated screening tools.
  - e. All of the above
6. **Which of the following routes has been regarded as the most accurate and accessible method of core body temperature measurement?**
  - a. Rectal
  - b. Supralingual
  - c. Bladder
  - d. Tympanic membrane
  - e. Axillary
7. **Which of the following characteristics is an advantage to the use of a pacifier thermometer?**
  - a. It provides a reasonable measurement of core body temperature.
  - b. It is non-invasive.
  - c. Extensive research is available to support the use of pacifier thermometers.
  - d. It takes only a few seconds for an accurate reading.
  - e. It can replace a rectal temperature measurement.
8. **Statistical reliability of the supralingual temperature measurement was based on which of the following factors?**
  - a. The correlation between the pacifier and rectal temperature
  - b. The lack of concordance between the 3- and 6-minute pacifier readings
  - c. The agreement between the 6-minute pacifier and 3-minute rectal temperature
  - d. How consistent the same pacifier recorded temperature over time
  - e. The agreement between the adjusted pacifier and rectal temperature

9. Which of the following summarizes the results of the paired samples *t* test?
  - a. There was not a statistically significant relationship between the two measures.
  - b. There was not a statistically significant difference between the two measures.
  - c. The correlation was statistically significant.
  - d. There was a statistically significant difference between the two measures.
  - e. The results were inconclusive.
10. What criteria was used to determine clinical reliability of pacifier thermometers for Braun's study?
  - a. If there was a strong ( $r=.90$ ) correlation between the rectal and pacifier measurements
  - b. If there was a notable difference between the rectal and pacifier measurements
  - c. If 90% of the two measures were within 1.0°F
  - d. If the pacifier thermometers matched the rectal measurements exactly
  - e. If there was a concordance between pacifier thermometer readings at 3 and 6 minutes
11. Symptoms are defined as subjective experiences that reflect alterations in a person's
  - a. physiological status.
  - b. psychological or social status.
  - c. functional status.
  - d. cognitive status.
  - e. All of the above.
12. Evidence suggests that the majority of children are capable of providing self-report of symptoms after the age of
  - a. 3 years.
  - b. 4 years.
  - c. 5 years.
  - d. 6 years.
  - e. 7 years.
13. What is the theoretical advantage to calculating inter-rater reliability with Kappa rather than percent agreement?
  - a. Kappa confirms the significance of the results.
  - b. Kappa controls for the amount of agreement that would be expected to occur by chance.
  - c. Kappa reflects the percentage of both positive and negative correlations.
  - d. Kappa provides support for construct validity as well as reliability.
  - e. Kappa cannot be calculated for an item if the rating for the item is a constant according to either rater.
14. Observable indicators of symptoms include distress, physiological alterations, and alterations in affect and behaviors.
  - a. True
  - b. False
15. Which of the following clusters of symptoms were most closely associated with nausea in this sample?
  - a. Puts hand over mouth, refuses oral fluids, restlessness, crying, and increased respiratory rate
  - b. Refuses oral fluids, loss of appetite, and cold sweating.
  - c. Irritable or fussy, increased respiratory rate, tongue movement/licking lips, drooling or salivation, and changes in skin color.
  - d. Decreased activity, nausea posture/positioning, nausea facial expression, vomiting, retching/gagging, and skin feels cold to touch.
  - e. Puts hand over stomach, restlessness, loss of appetite, changes in skin color, skin feels cold to touch, and frequent swallowing.
16. Which of the following statements identifies the rationale that explains why pain assessment for those in the pediatric intensive care unit is a challenge?
  - a. These patients are unable to describe their pain.
  - b. These patients are frequently unable to communicate.
  - c. Pain is determined indirectly by vital sign alterations.
  - d. Pain is prophylactically treated and should not be an issue.
17. Which behavioral item is not a part of pain assessment with the COMFORT Scale?
  - a. Alertness
  - b. Physical movement
  - c. Facial tension
  - d. Reflex response
18. Which of the following items is the medical device that must be present to assess pain using the COMFORT scale?
  - a. An intravenous line
  - b. A Foley catheter
  - c. An arterial line
  - d. An endotracheal tube
19. Which research method is appropriate for evaluating inter-rater reliability?
  - a. Collect data from two individuals at the same time.
  - b. Collect data from one individual at several time intervals.
  - c. Use various methods of collecting data from one individual.
  - d. Determine inter-rater reliability by the statistical test performed.
20. In Bear and Smith's study, which statement regarding consent is correct?
  - a. The participants in this study were nurses, thus consent was not required.
  - b. The parent of the child and the nurse providing data needed to consent prior to data collection.
  - c. Because no intervention was performed a consent was not necessary.
  - d. Because the COMFORT Scale was a part of routine care, having the parent's verbal approval was sufficient.
21. One method for assessing neuromuscular blockade and titration of drugs is the
  - a. Ramsay Scale.
  - b. Sedation Agitation Scale.
  - c. Motor Activity Assessment Scale.
  - d. Train of Four.
22. The Bispectral Index was found to be the most effective tool in distinguishing between deep sedation and very deep sedation in children.
  - a. True
  - b. False
23. For children, under sedation could result in
  - a. excessive mechanical ventilation.
  - b. ventilator associated pneumonia.
  - c. lung injury.
  - d. ventilator asynchrony.
24. Physical manifestations of pain in the sedated, paralyzed, and ventilated patient may include
  - a. diaphoresis.
  - b. tearing.
  - c. pupillary dilatation.
  - d. skin response.
  - e. All of the above
25. Which of the following is the goal of developing an assessment tool for critically ill pharmacologically paralyzed children?
  - a. To reduce subjective impressions
  - b. To increase the benefits of oversedation
  - c. To increase the benefits of undersedation
  - d. To increase accidental removal of life sustaining equipment
  - e. To increase the validity of the BIS in children
26. Which of the following is NOT a function of the skin?
  - a. Protection
  - b. Communication and identification
  - c. Sensation
  - d. Oxygenation

# CE POSTTEST

27. Which of the following is caused by bone moving against the subcutaneous tissue while the epidermis and dermis remain in the same position against the supporting surfaces?
- Shearing
  - Friction
  - Pressure
  - Pressure ulcer

28. Assessment of a wound includes
- size.
  - dressing type.
  - location.
  - All of the above

29. All if the following have been identified as pressure points in infants and children EXCEPT the
- occipital region.
  - heels.
  - greater trochanter of the femur.
  - calcaneous.

30. Which of the following is a partial thickness wound involving the epidermis and possibly the dermis, and may be present as a broad wound similar to an abrasion or a narrow tear in the epidermis?
- Tension blister
  - Skin tear
  - Skin stripping
  - Stage I ulcer



## Answer Form: Understanding Pediatric Assessment Instruments

\*PED J606

Check the box next to the correct answer.

1.  A  B  C  D  E
2.  A  B  C  D  E
3.  A  B  C  D  E
4.  A  B  C  D  E
5.  A  B  C  D  E
6.  A  B  C  D  E
7.  A  B  C  D  E
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25.  A  B  C  D  E
26.  A  B  C  D  E
27.  A  B  C  D
28.  A  B  C  D
29.  A  B  C  D
30.  A  B  C  D  E

This test may be copied for use by others.

### COMPLETE THE FOLLOWING:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

### POSTTEST INSTRUCTIONS

- Select the best answer and check the corresponding box on the answer form. Retain the test questions as your record.
- Complete the information requested in the space provided.
- Detach the answer form or a copy of the answer form and mail to: *Pediatric Nursing*, CE Series, Jannetti Publications Inc.; East Holly Avenue Box 56; Pitman, NJ 08071-0056 with a check or money order payable to Jannetti Publications Inc. for \$20.00 (subscriber) or \$25.00 (non-subscriber).
- Test returns **must** be postmarked by October 15, 2008. If you pass the test (70% or better), a certificate for 8.6 contact hours will be awarded by Anthony J. Jannetti, Inc.

Please allow 6–8 weeks for processing. For recertification purposes, the date that contact hours are awarded will reflect the date of processing.

Test Scoring, CE Awarding/Recording fees:  
 PN Subscriber  \$20.00  
 Nonsubscriber  \$25.00  
 Expir. Date \_\_\_\_\_

Evaluation	Strongly disagree				Strongly agree
1. The objectives relate to the overall purpose/goals of the education activity.	1	2	3	4	5
2. The activity met the stated objectives.					
a. Discuss the importance of valid and reliable assessment instruments.	1	2	3	4	5
b. List three parent questionnaires for developmental screening.	1	2	3	4	5
c. Discuss pacifier thermometry as an acceptable method of temperature approximation in young children.	1	2	3	4	5
d. List three criteria that achieved statistically significant positive correlations with the KIN score.	1	2	3	4	5
e. Define the behavioral and physiologic measures that comprise the COMFORT scale.	1	2	3	4	5
f. Describe current trends in the development of sedation/analgesia scales for children who are critically ill.	1	2	3	4	5
g. List the four principal components for early intervention of pressure ulcer development.	1	2	3	4	5
h. Identify opportunities for pediatric nurses to keep current on assessment tools appropriate for their practice settings.	1	2	3	4	5
3. Home study format was appropriate.	1	2	3	4	5
4. The content was relevant to my practice.	1	2	3	4	5
5. The content met my needs.	1	2	3	4	5
6. How much time was used to complete reading assignment and posttest:					
a. Less than 1 hour _____					
b. 1-2 hours _____					
c. 2-3 hours _____					
d. 3 hours or more _____					

Comments \_\_\_\_\_

Signature \_\_\_\_\_