Instrument	Pediatric Confusion Assessment Method—Intensive Care Unit
Acronym	pCAM-ICU
Core Domain	Diagnosis
Area assessed (Number of questions)	4 areas assessed: 1) Acute change or fluctuating course of mental status, 2) Inattention, 3) Altered level of consciousness, 4) Disorganized thinking
Description	Based on the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU), the pCAM-ICU is designed to assess for delirium in critically ill children, with or without mechanical ventilation. The pCAM-ICU is designed with cognitive testing that is developmentally appropriate for children 5 years and older. This includes significant changes to the attention screening examination and the interview questions addressing disorganized thinking from the adult CAM-ICU.
Versions	1
Scoring information	Each item is rated yes or no, with the pCAM-ICU laid out as a flowchart (see link below); delirium considered present if score "yes" on areas 1 AND 2 and EITHER 3 OR 4.
Cognitive testing	Yes, included in instrument
Estimated time to rate	<2 minutes
Require trained rater	Yes, validated for use by physicians or nurses with pediatric expertise
Administer to	Children age ≥5 years
Special resources required	Richmond Agitation Sedation Assessment; ASE picture cards (accessible via link below)
How to obtain	Available at http://www.icudelirium.org/pediatric.html
Licensing Fee*	None
Languages available	English, Portuguese (Brazilian), German
Highest COSMIN** rating	In progress
Test Performance Characteristics	**Smith 2011 (n=68 PICU patients age ≥5 years old, any diagnosis; reference standard: diagnosis of delirium by child psychiatrist using DSM-IV criteria)** •Inter-rater Reliability: k=0.96 [95% CI 0.74-1.0] •Sensitivity: 83% [95% CI 66-93%] •Specificity: 99% [95% CI 95-100%] •Positive Predictive Value: 93% [95% CI 63-99%] •Negative Predictive Value: 98% [95% CI 93-99%]

* Fees and licensing information is effective as of 2018, but is subject to change over time

** COSMIN is used to rate a study's evaluation of a survey or test's measurement properties. COSMIN does NOT rate the instrument itself, but helps readers understand if they can have confidence in the results of studies evaluating measurement properties of surveys and tests. For example, a rigorous study evaluating a test with poor measurement properties will receive a "good" COSMIN rating, while a poorly-conducted study evaluating a test with good measurement properties will receive a "poor" COSMIN rating. Small sample size can impact all COSMIN ratings. You must consider both the COSMIN rating and the results of studies provided when forming your opinion about that test. *COSMIN ratings shown are based solely on the instrument's original validation study.*

References: Smith HAB, Boyd J, Fuchs C, Melvin K, Berry P, Shintani A, Eden SK, et al. (2011). Diagnosing Delirium in Critically Ill Children: Validity and Reliability of the Pediatric Confusion Assessment Method for the Intensive Care Unit. *Crit Care Med,* 39(1):150-157. doi: 10.1097/CCM.0b013e3181feb489.

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Reviews: Harris J, Ramelet A-S, van Dijk M, Pokorna P, Wielenga J, Tume L, Tibboel D, Ista E (2016). Clinical recommendations for pain, sedation, withdrawal and delirium assessment in critically ill infants and children: an ESPNIC position statement for healthcare professionals. *Intensive Care Med,* 42:972-986. doi:10.1007/s00134-016-4344-1

Subgroup Analyses

Patients ≤12 years (n=34)
- Sensitivity and Specificity 100%

Patients >12 years
- Sensitivity (80% [95% CI 59-91%])
- Specificity (99% [95% CI 91-100%])

Patients on mechanical ventilation
- Sensitivity (75% [95% CI 66-100%])
- Specificity (92% [95% CI 67-100%])

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