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Diagnosing delirium in critically ill children: Spanish translation and cultural adaptation of the Pediatric Confusion Assessment Method for the Intensive Care Unit

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To the Editor

Smith et al recently developed the Pediatric Confusion Assessment Method for the Intensive Care Unit (pCAM-ICU), which is a highly reliable and valid bedside tool conducted by the caregiver that assesses four cardinal features of the diagnosis of delirium in critically ill children 5 yrs of age. The characteristics of the pCAM-ICU, including the pocket card, worksheet, and daily guide, are amply explained in a report published in *Critical Care Medicine* (1). Given the absence of this kind of instrument in the Spanish language, we translated and adapted the original tool to the pCAM-ICU-Spanish (pCAM-ICU-S). Principles of good practice for translation and cultural adaptation were followed (2). The ten steps of the translation and adaptation process are described subsequently.

1) Preparation: We formed an international interdisciplinary team of native Spanish speakers from Colombia and Spain (JGF, CR, JFM, JdeP) and members of the original instrument development group (PB, EWE, HABS). The team members' expertise included pediatric

consultation–liaison psychiatry, pediatric neuropsychology, pediatric critical care, and delirium research; 2) forward translation: three independent forward-translated versions were developed (JGF, CR, JFM); 3) reconciliation: divergences in the interpretation of concepts in the three versions were resolved by consensus of the three translators, and a merged Spanish version was obtained; 4) back translation: an independent, highly qualified, native English-speaking medical translator back translated the merged Spanish version into English to provide quality control; 5) back translation review: the back-translated version was reviewed against the English source language (PB, EWE, HABS) to ensure its conceptual equivalence. Comments from this review were returned to the forward translators; 6) harmonization: the merged Spanish version was modified, taking into account the comments from the back translation reviewers; 7) cognitive debriefing: one expert on delirium from Spain (JdeP) evaluated the merged and modified, Spanish version to highlight and correct potentially confusing issues. All team members were informed of any changes; 8) approval and finalization: the Spanish tool was approved by all international team members; 9) proofreading: an independent, Spanish-speaking proofreader checked the Spanish tool for remaining spelling errors; and 10) publication: the pCAM-ICU-S was published on the Web site (<http://www.icudelirium.org>).

The most relevant potentially confusing aspects that were resolved in steps 3 through 8 were related to the use of the word “delirium.” Although some clinicians in Spain use the word *delirio* when referring to the brain dysfunction evaluated by the pCAM-ICU-S, the word “delirium” was preferred for this tool, which was developed for use in Spain and Latin America. The Spanish word *delirio* also means “delusion” and is a source of interdisciplinary communication difficulties. The acute brain dysfunction evaluated by the pCAM-ICU-S is called “delirium” in the Spanish version of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Revised. It is recommended that the term “delirium” be used across languages and medical disciplines (3, 4). Another cultural adaptation issue that deserves mention is that a backslash (/) was used in a few cases to include different words when cultural differences could hinder comprehension of the items (for example, “alligator” was translated as “*caimán/cocodrilo/lagarto*”).

Validity and reliability studies of the pCAM-ICU-S in diverse clinical settings are needed.

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