

## **Elderly Pain Caring Assessment 2 (EPCA-2) Brief**

The EPCA-2 was developed by a French team of physicians in longterm care facilities affiliated with University hospitals to provide a reliable and valid tool with high clinical utility to both observe and rate the intensity of both persistent and acute pain in non-verbally communicating older adults. The tool relies on caregiver familiarity with the patient to report changes in behavior. The EPCA-2 is hypothesized to measure pain intensity through doctors', nurses' and other caregivers' proxy ratings of the presence and qualitative intensity of identified pain behaviors.

Developed and refined in four stages, the final 8-item scale is comprised of 5 of 6 categories of non-verbal pain behaviors in the AGS Persistent Pain Guidelines: Facial expression, Verbalizations/vocalizations, Body language, Changes in activity patterns or routines and Changes in interpersonal interactions. These items are observed in 2 dimensions: prior to caregiving, and during caregiving. The proposed hierarchies of pain behaviors according to pain intensity appear logical, but no conceptual basis for this ordering is offered by the authors.

Content validity reflects the particular practice setting of both patients and healthcare providers in French longterm care facilities affiliated with University hospitals. Content validity was not established by an independent external panel of experts as 3 of 6 experts are co-authors of the study, but factor analysis confirmed the two-dimensional aspects of pain in this setting. Face validity presumably was established by the same raters who participated in developing and administering the tool.

The sample population is appropriate in gender and age distribution and represents mostly advanced persistent pain due to bedsores and/or cancer, but assessment of cognitive impairment was not done using a standardized tool. Non-verbal status may have been due to psychiatric status or sensory limitation. Random recruitment and large sample size contribute to the reliability of findings.

### **Administration and scoring**

A pilot study for feasibility measured an approximate time of 15 minutes to complete the assessment. A manual explaining the rating of each item and precautions for using the EPCA2 in day-to-day practice is available from the authors. Training time for proper use of the EPCA-2 was not reported but was reportedly easily incorporated in clinical practice. The scale was translated into English and then back-translated by two independent translators for publication purposes.

### **Reliability**

Initial reliability tests for this new tool are favorable. Internal consistency was established for the global scale and for each subscale separately. All Cronbach's  $\alpha$  were well within the recommended range for group comparison. Interrater reliability calculated with intra-class correlation coefficient ICC at the 95% confidence interval was very good, ranking close to +1 with range 0.85-0.92 for all groups of raters.

### **Validity**

Tool developers bring strong evidence for good convergent and discriminant validity and responsiveness of the EPCA-2. Factor analysis confirmed the 2 factors of rest and caregiving pain and explained 56% of the variation in EPCA scores.

It remains to be considered if the rule of analgesic use as gold standard for physician proxy report is dependent on local practice patterns and reflects the tool's inherent bias towards a large urban high acuity skilled care facility.

#### Summary

The EPCA-2 was developed using standard methods of item generation and conceptual validation. Tool evaluation was conducted in France on subjects with appropriate age and gender distribution but no diversity and no standardized assessment of cognitive impairment. Preliminary internal and interrater reliabilities are moderate-strong. There was high convergent and discriminant validity and strong responsiveness of the tool to treatment in preliminary testing. The tool does require some training and time for proper administration and has not been validated in English-speaking sample populations. This may limit its clinical utility in the US. Current psychometrics support the need for further evaluation in similar and diverse settings.

The authors are finding that caregivers who are familiar with the patient find the EPCA less time-consuming to administer than measured in initial feasibility studies (Dr. Remy Morello, personal communication, July 2008).

#### Source of evidence

Morello, R., Jean, A., Alix, M., Sellin-Peres, D., & Fermanian, J. (2007). A scale to measure pain in non-verbally communicating older patients: The EPCA-2 study of its psychometric properties. *Pain*, 133(1-3), 87-98.

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