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RI researchers validate tool for pain assessment in patients following cardiac surgery

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How do you measure the pain of a patient who can't communicate? A Rhode Island Hospital researcher studied an observational pain scale in cardiac surgery patients, and found that the Critical-Care Pain Observation Tool (CPOT) provided an accurate measure of a patient's pain level. The study by Sandra Linde, RN, is the first study conducted in Rhode Island Hospital's Clinical Nurse Scholar program, in which direct care nurses are mentored to serve as principal investigators. The paper is published in the *American Journal of Critical Care*.

"Pain assessment is challenging in critically ill patients who are intubated, sedated and unable to verbalize their needs," Linde said. "Many behavioral pain scales have been developed to assess pain, but no single tool has been accepted across intensive care settings, and use of these scales has been limited due to the lack of research to validate them."

The CPOT was designed for use in intensive care unit settings, and measures pain based on four behavioral indicators in non-verbal patients: facial expression; body movements; muscle tension; and compliance with the ventilator for intubated patients, or vocalization for extubated patients.

Another commonly used observation tool on critical care units is the Faces, Legs, Activity, Cry, Consolability scale (FLACC), which uses a

five-item [pain assessment](#) tool. This tool has proven effective in pediatric populations, but its accuracy has been questioned in adult patient populations due to the fact that crying behaviors and reactions to comforting vary widely in adults.

"Being able to accurately assess a patient's pain level is crucial to providing high-quality and appropriate patient care," Linde said. "Use of these tools has been linked to improved patient outcomes, including shorter use of ventilators and improved pain management and we want to be sure we are using the most appropriate tool possible to best assess our patients' pain and discomfort, and to aid in their healing process."

The findings by Linde and her colleagues add to previous research through the comparison of CPOT ratings for a painful procedure with CPOT ratings for a non-painful procedure that had not previously been tested. Additionally, the results support previous findings on the validity and reliability of the CPOT for evaluating [pain](#) in nonverbal critically ill adults.

The study has resulted in the planned implementation of CPOT in all intensive care units across the Lifespan system. The launch will start with select units in 2014, with a go-live goal for all Lifespan intensive care units in 2015 with the launch of Epic, the new electronic medical records system.

The intent of the Clinical Nurse Scholar program is to foster clinical inquiry and research at the bedside. Once selected, the nurse is partnered with an experienced nurse researcher who provides mentoring in the development and implementation of research project. James Badger, Ph.D., NP, served as Linde's mentor in the program.

Provided by Lifespan

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