

## **COMFORT SCALE FOR THE PATIENT RECEIVING MECHANICAL VENTILATION**

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Pain tool, Ventilator**

Purpose: The aim of this project is to establish the validity and reliability of an objective comfort scale in the adult undergoing mechanical ventilation. At this time there is not an objective tool available to assess the patient's comfort using a 10-point scale. We believe using a ten-point scale is important in promoting consistency with our current pain scale tools and pain management initiative.

Method: This is a prospective, repeated measure, observational study. The study is to be conducted in two critical care units at a community hospital over a 12-month period. Patients may be included in the study if they are older than 18 years, receiving mechanical ventilation, hemodynamically stable, and needed analgesia and/or sedation. Exclusion criteria include the patients who are able to communicate their discomfort with a scale number. The Mechanical Ventilation Comfort Scale (MVCS) will be used to evaluate the patient at rest and when receiving treatments/procedures. This study is approved by our IRB as an expedited study.

The patient is assessed by a pair of evaluators. These evaluators are registered nurses working in critical care units at Carilion. The evaluators will independently complete two assessments per patient. One assessment will be completed when the patient is at rest and the other during a treatment/procedure. There will be at least a 30-minute interval between painful/non-painful assessments. The MVCS tool was developed after a review of the literature. The tool is a modification of the FLACC, Feldt, Harris, P.A.I.N., VAS, COMFORT, and Behavior Pain Scales.

Findings: To date, 27 patients have been evaluated with a total of 108 assessments resulting in an overall tool reliability rating of 89.6%. Internal consistency reliability is as follows: Face-90.7%, Upper extremity-100%, Activity-92.6%, Compliance with mechanical ventilation-75.9%, and Responsiveness/Consolability-88.9%. Interrater reliability of all five dimensions was very strong.

Discussion: Adult patients in critical care may not be able to provide accurate subjective information about their intensity of pain. Objective information that allows assignment of a number can assist the caregiver in providing adequate pain relief. The preliminary data supports the use of the MVCS as a guide for pain assessment in the critical care setting. Further data collection is needed to solidify the reliability and begin to test the validity of this tool.