



**1st National Nursing Informatics Conference 2005 Proceedings**

Nurses & Informatics: Transforming Healthcare

Sept 14 – 16th, 2005 – University of Toronto, Ontario

**POSTER THEME: Nursing Informatics Innovations in Practice**

**Implementation and adoption of electronic documentation tools by direct care nursing staff: A systematic review of the literature**

*by Margaret MacLennan, RN & Shona McIntyre, RN*

**ABSTRACT**

**Background:** The APACHE II score is used in critical care for clinical, research and administrative purposes. In a previous study (1), APACHE II scores collected by an research coordinator and 2 research clerks were reliable. When comparing these scores against clinical information system (CIS, Carevue), reliability was suboptimal. Problematic areas included Chronic Health Index (CHI) and Best Verbal component of Glasgow Coma Scale (GCS-V).

**Objectives:** 1. Improve compliance with documentation of the CHI and GCS-V of the APACHE II score. 2. Reconfigure Carevue to optimize APACHE calculation.

**Population and Setting:** ICU nurses in a 15 bed Medical Surgical University affiliated ICU.

**Methods:** We implemented multimodal strategies to improve ICU nurses' knowledge and compliance with documentation of CHI and GCS-V of the APACHE II score. Strategies were: 1) In-services 2) Use of local opinion leaders, 3) Real-time reminders, 4) Audit and feedback, 5) Restructuring the CIS, CareVue (Philips, Andover, MA). We used the intraclass correlation coefficient (ICC) to calculate agreement in CHI and GCS-V scoring between data entered by a research coordinator versus data entered into CareVue by nurses.

**Results:** Complete data from 35 consecutive admissions were used. The ICC (95% CI) of the overall APACHE II score was 0.91 (0.82 to 0.95), CHI, 0.35 (0 to 0.62), and the GCS-V was 0.65 (0.39 to 0.82).

**Conclusions:** Carevue accurately captures the overall APACHE II score. Some variability remains in GCS-V collection and the CHI. More education and re-evaluation is required to improve the human element of GCS-V and CHI scoring.