ABSTRACT

Title:

Effectiveness of Christian Medical College Pediatric Acute Care Score (CMC PACS) based protocol on the clinical outcomes of children, quality of nursing care and satisfaction of health care workers with its implementation

Background:

PEWS reduce deterioration among children, quality of nursing care improves with defined protocols.

Objectives:

To compare the clinical outcomes and quality of nursing care of children with use of CMC PACS based protocol and satisfaction of health care workers with its implementation.

Methodology:

Using quasi-experimental before and after design, this study was done over 6 weeks. Using consecutive sampling technique, children who were on palliative care, transferred-in from or admitted in Pediatric Intensive Care Unit and children for whom Do Not Intubate (DNI) and Do Not Resuscitate (DNR) consents had been signed were excluded from the study. CMC PAC score was marked for the children being admitted to the selected areas (nurses were blinded to the score in the control group). The patients in the control group received standard care, whereas patients in the experimental group received care based on CMC PACS. Clinical Outcome Indicator was used to assess the clinical outcomes at 48 hours of hospitalization. Quality of Nursing Care Observation Checklist was used to assess the quality of nursing care every 12^{th} hourly. One week between control and experimental groups was used to educate nurses and doctors regarding the CMC PACS based protocol. Satisfaction Questionnaire was used to determine their satisfaction.

Results:

Majority of the population were infants (31.6%), male (64.6%), well-nourished (70.0%) and had medical diagnosis' (80.2%). Majority of children in both groups had low risk of deterioration (CMC PACS < 4) at admission (80.6%) and also at 48 hours of hospitalization (90.3%). No significant difference occurred in the clinical outcomes ('p' value = 0.435). Significant improvement was seen in the quality of nursing care (QNC) across both groups ($p<0.001$). A weak negative correlation existed between the QNC and the risk of deterioration at 48 hours ($r = -.080$). QNC and clinical outcomes had no significant association ($p= .116$). Majority of the registered nurses were GNM (72.5%), <30 years old (82.4%) with < 3 years of experience (70.6%). Similarly, majority of the registered doctors were > 30 years of age, were Diploma and MD in equal numbers (33.3%) and had experience of 3-6 years (77.8%). Majority of them were moderately satisfied (52.9%- nurses, 77.8%- doctors).

Conclusion:

Efforts are needed to develop the protocol to be more effective. Nursing care will improve in quality if regular in-service education is conducted on the protocol.

Key words: Pediatric early warning scores, quality nursing care, protocol, satisfaction