Title:
Nursing Workload and its Relationship to Patient Care Error in the Paediatric Critical Care Setting

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Session Title:
Rising Stars of Research and Scholarship Invited Student Poster Session 1

Keywords:
nurse staffing, nursing-workload and patient care error

Abstract Summary:
Increased workload has been reported to contribute to errors, a leading cause of death and disability. This prospective observational study examined a correlation between nursing workload and patient care error. A statistically significant association was identified. Further findings noted many patients requiring more care than one nurse could provide.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
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<tbody>
<tr>
<td>Following this presentation, the learner will be able to state the potential deleterious effects of patient care error.</td>
<td>Learner will meet objective through presenter description of content in addition to question and answer period allowing the audience to contribute to learning through personal reflection and personal stories.</td>
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<tr>
<td>Following this presentation, the learner will be able to describe the relationship between nursing workload and patient care error.</td>
<td>Learner will meet objective through presenter description of study results in addition to question and answer period allowing the audience to contribute to learning through personal stories.</td>
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Abstract Text:
Patient care error, a leading cause of death and disability in the critical care setting, contributes to suffering of the patient and family; can precipitate an emotional crisis for health care staff; and creates an increased financial burden to the health care system. Nurses, who provide the majority of direct patient care in the hospital setting, have reported a perception that increased workload contributes to many of these errors. Nursing practice, which requires complex knowledge work and vigilant patient assessment to promote best outcomes, may be compromised by time and manpower constraints.

To examine the relationship between nursing workload and the delivery of best-practice care in the paediatric critical care setting, a prospective observational study was performed. This study was nested within a larger study, using direct observation strategies of critically ill patients admitted to a critical care unit over a period of 5 months. The main outcome was the occurrence of 13 complications of care. For each patient-day, nursing workload scores, which quantified physical and emotional care of the patient including underlying cognitive activities and indirect care, were determined for each patient using data entered directly by the patient’s nurse. Using a correlational design, the presence or absence of complications was compared to the workload score for the nurse(s) over a 24 hour period.

Data for 2,117 total patient days representing 3,845 nursing shifts over the 5 months of the study identified 665 complications that occurred on 497 (23%) patient days. A statistically significant ($p < .001$) association between nursing workload and patient care error was identified. Although the relationship was small ($\rho (2117) = .11$), the odds of error increased as the nursing workload increased. The difference in mean workload hours between those entries with an error and those without was 1.77 hours over 24. Further findings indicated that a large number of patients in the study required nursing care in excess of what was suggested that one nurse could provide.

Staffing models responsive to the nursing care needs of individual patients have been suggested as a method to reduce the potential for error and increase the nurse’s ability to complete appropriate patient care in the time allotted.