



The occurrence of adverse events potentially attributable to nursing care in medical units: Cross sectional record review



Danielle D'Amour^{a,*}, Carl-Ardy Dubois^a, Éric Tchouaket^b,
Sean Clarke^c, Régis Blais^d

^a Faculty of Nursing, University of Montreal, Canada

^b Université du Québec en Outaouais, Canada

^c Susan E. French Chair in Nursing Research, McGill University, Montreal, Canada

^d Department of Health Administration, Faculty of Medicine, University of Montreal, Canada

ARTICLE INFO

Article history:

Received 31 May 2013

Received in revised form 12 September 2013

Accepted 18 October 2013

Keywords:

Adverse events

Nursing-sensitive outcomes

Patient safety

Pressure sores

Falls

Medication administration errors

Inappropriate use of restraints

Pneumonia

Urinary infections

ABSTRACT

Background: Ensuring the safety of hospitalized patients remains a major challenge for healthcare systems, and nursing services are at the center of hospital care. Yet our knowledge about safety of nursing care is quite limited. In fact, most earlier studies examined one, or at most two, indicators, thus presenting an incomplete picture of safety at an institutional or broader level. Furthermore, methodologies have differed from one study to another, making benchmarking difficult.

Objectives: The aim of this study was to describe the frequencies of six adverse events widely considered in the literature to be nursing-sensitive outcomes and to estimate the degree to which these events could be attributed to nursing care.

Method: Cross-sectional review of charts of 2699 patients hospitalized on 22 medical units in 11 hospitals in Quebec, Canada. The events included: pressure sores, falls, medication administration errors, pneumonias, urinary infections, and inappropriate use of restraints. Experienced nurse reviewers abstracted patients' charts based on a grid developed for the study.

Results: Patient-level risk for at least one of these six adverse events was 15.3%, ranging from 9% to 28% across units. Of the 412 patients who experienced an event, 30% experienced two or more, for a total of 568 events. The risk of experiencing an adverse event with consequences was 6.2%, with a unit-level range from 3.2% to 13.5%. Abstractors concluded that 76.8% of the events were attributable to nursing care.

Conclusion: While the measurement approach adopted here has limitations stemming from reliance on review of documentation, it provided a practical means of assessing several nursing-sensitive adverse events simultaneously. Given that patient safety issues are so complex, tracking their prevalence and impact is important, as is finding means of evaluating progress in reducing them.

Crown Copyright © 2013 Published by Elsevier Ltd. All rights reserved.

What is already known about the topic?

- Almost 15 years into the current patient safety movement, hospital safety remains a major challenge. Rates of

adverse events are high, and these events clearly have negative impacts on patients' quality of life and healthcare system costs.

- There is no consensus on data collection approaches and indicators to evaluate nursing-sensitive adverse events, rendering benchmarking difficult, if not impossible.
- While there are many indicators for evaluating safety of care, there has been limited research on effective

* Corresponding author at: P.O. Box 6128, Centre-ville Station, Montreal, Quebec, Canada H3C 3J7. Tel.: +1 514343-7578.

E-mail address: Danielle.damour@umontreal.ca (D. D'Amour).

methods for tracking a set of nursing-sensitive safety indicators.

What this paper adds

- Our data suggest that one patient out of seven hospitalized on medical units experiences at least one nursing-related adverse event, a significant number in terms of quality of life and healthcare costs. This paper provides a fuller picture of care safety by tracking simultaneously six nursing sensitive safety indicators as opposed of most research that track one indicator at a time.
- Our reviewers found evidence in documentation that 76% of the events were attributable to nursing care processes. This result provides initial benchmarks regarding the attribution of six adverse events to nursing care from patients' charts.
- The results show that the risk of occurrence of an AE is at 15.3% and the risk of occurrence of an adverse effect with consequence at 6.2%. This distinction is important for highlighting risks to patient well-being of nursing-related safety problems and is crucial for properly assessing the costs of safety events to the healthcare system. If we should not take into account the risk of considering globally all the AE we would lack information on the cost of poor quality of care.
- The results show large variations between units as of the occurrence of AE and their attribution to nursing care. This result reinforces the need to have benchmarks in order to have a more realistic view.

1. Introduction and background

Improving hospital safety remains an ongoing challenge more than a decade after the beginning of the current wave of attention by policymakers, researchers, and clinicians (Agency for Healthcare Research and Quality 2009; Institute of Medicine, 2000, 2001; National Quality Forum, 2009). Obtaining an accurate sense of the magnitude of the problem has been difficult, especially with respect to safety outcomes potentially sensitive to nursing care, since progress in gauging the frequency and severity of events hinges on consensus around data collection methods and benchmarks. The objective of the present study was to develop a profile of the occurrence of six adverse events (AEs), determine the severity of these events and the degree to which they are attributable to nursing care, and develop a methodology that could foster benchmarking.

In Canada, a study by Baker et al. (2004) reviewed a random sample of charts for nonpsychiatric, nonobstetric adult patients in 15 Canadian hospitals in the year 2000. Out of 3745 patients' charts, and after adjustment for the sampling strategy, the AE rate was 7.5 per 100 hospital admissions (95% confidence interval [CI] 5.7–9.3). Among the AEs experienced by patients, 36.9% (95% CI 32.0–41.8%) were judged to have been preventable and 20.8% (95% CI 7.8–33.8%) resulted in death. While these data provide a general sense of the frequency of AEs, they do not speak specifically to issues particular to nursing care. To our

knowledge, the only study based on multiple indicators potentially attributable to nursing was conducted by Blegen and Vaughn (1998) in the United States, who reported an incidence rate of 13.2 per 1000 patient days for five types of AEs.

Brown et al. (2010) describe nursing-sensitive outcomes as those reflecting care that is mainly provided by nurses. Generally accepted assumptions about nursing's role in clinical care (Savitz et al., 2005) and empirical evidence linking nursing interventions with care outcomes (Doran, 2003) suggest these indicators are particularly related to nursing work. Other indicators that have an established association with nursing care include deep vein thrombosis and pulmonary embolism, inappropriate use of restraints, and medication administration errors (Needleman et al., 2007). These AEs have a serious impact on patient morbidity and mortality as well as on the use of resources, since the clinical issues that emerge prolong hospital stays and additional treatments often required to address them tend to increase the costs of care (Gallagher et al., 2008; Kohlbrenner et al., 2011).

Safety research in nursing has been characterized by several problems: (1) an absence of systematic strategies and methodologies for measuring outcomes related to nursing care; (2) the use of isolated indicators that provide only a fragmented sense of safety in practice; and (3) the inability to distinguish what is attributable to nursing care (Kurtzman, 2010), with the end result that we lack important information about the scope of risks associated with nursing care. Better understanding of the magnitude of the problem and of nursing's part in it could make it possible to acknowledge the problem openly, measure its complexity, identify the contributing factors, and most importantly, take action.

The present study examined the charts of nearly 3000 patients admitted to medical units in a major Canadian province. These units generally admit adult patients experiencing serious acute exacerbations of chronic illnesses as well as individuals with acute illnesses requiring close monitoring and/or intensive evaluation of serious signs and symptoms that cannot be managed on an outpatient basis.

2. Methods

This was a descriptive study of the occurrence of six adverse events (AE) based on a cross-sectional review of patients' charts. Three AE indicators were examined: all events, events with consequences, and events attributable to nursing care. An AE is generally defined as "an unintended injury or complication that results in disability at the time of discharge, death or prolonged hospital stay and that is caused by healthcare management" (Baker et al., 2004, p. 1679). To broaden this definition to include all events, even those with no consequence on the patient's health but with repercussions on nurses' work and on health system costs, we used the AE classification from the Common Terminology Criteria for Adverses Events (CTCAE) (US Department of Health & Human Services, 2009). In this classification, events without consequence correspond to Grade 1 on the CTCAE scale entitled

Download English Version:

<https://daneshyari.com/en/article/1076101>

Download Persian Version:

<https://daneshyari.com/article/1076101>

[Daneshyari.com](https://daneshyari.com)