Heart & Lung 43 (2014) 416–419

Contents lists available at ScienceDirect

Heart & Lung

journal homepage: www.heartandlung.org

Clinical decision regret among critical care nurses: A qualitative analysis

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ARTICLE INFO

Article history:
Received 3 November 2013
Received in revised form
11 February 2014
Accepted 15 February 2014
Available online 19 March 2014

Keywords:
Clinical decision making
Critical care nurses
Decision regret
Fatigue
Sleepiness

ABSTRACT

Background: Decision regret is a negative cognitive emotion associated with experiences of guilt and situations of interpersonal harm. These negative affective responses may contribute to emotional exhaustion in critical care nurses (CCNs), increased staff turnover rates and high medication error rates. Yet, little is known about clinical decision regret among CCNs or the conditions or situations (e.g., feeling sleepy) that may precipitate its occurrence.
Objectives: To examine decision regret among CCNs, with an emphasis on clinical decisions made when nurses were most sleepy.
Methods: A content analytic approach was used to examine the narrative descriptions of clinical decisions by CCNs when sleepy.
Results: Six decision regret themes emerged that represented deviations in practice or performance behaviors that were attributed to fatigued CCNs.
Conclusion: While 157 CCNs disclosed a clinical decision they made at work while sleepy, the prevalence may be underestimated and warrants further investigation.

Introduction

Critical care nurses (CCNs) often make clinical decisions under conditions that are uncertain, complex and time limited. Given that patients in the critical care environment are amongst the most vulnerable and least resilient to health care errors, nurses must remain alert and vigilant to detect subtle changes in patient status. However, inadequate sleep jeopardizes the ability of nurses to remain alert and increases the risk of error.[1–3] When nurses make patient care decisions when sleepy and the outcomes of these decisions are less than desirable or unfavorable, negative affective emotions can occur that manifest as decision regret.[4] Decision regret is a negative cognitive emotion that is experienced when the decider perceives that the outcome of the decision would have been better or improved had they made a different decision.[5,6] It is also associated with experiences of guilt and situations of interpersonal harm.[7]

The study of clinical decision regret among nurses, while limited, has been examined in pediatric oncology[8] and hospital based[9,10] nurses. Regret has been associated with poor interpersonal communications and failing to perform good nursing care,[8] which can lead to feelings of guilt, anger, shame and helplessness,[8] and reduce nurses' self-esteem and self-confidence.[9] These negative affective responses may in turn contribute to emotional exhaustion (staff burnout), increased staff turnover rates and high medication error rates.[9] Yet, less is known about clinical decision regret among CCNs or the conditions or situations (e.g., feeling sleepy) that may precipitate its occurrence.

The purpose of this study was to examine decision regret among CCNs, with an emphasis on clinical decisions made when nurses were most sleepy. In particular, we examined the prevalence of decision regret among CCNs and the narrative descriptions of the type of decisions made when sleepy that resulted in decision regret. Given the complexity and vulnerability of the critical care patient population, coupled with the negative consequences of sleep deprived nurses, it is imperative to develop a better understanding of the types of decisions that result in decision regret.

Methods

These findings are the qualitative results of a large survey study that explored the association between sleep-related variables, fatigue, and clinical decision self-efficacy among CCNs.[11] Prior to the

This research was funded in part by Kirkhof College of Nursing, Grand Valley State University and the American Association of Critical Care Nurses.
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http://dx.doi.org/10.1016/j.hrtlng.2014.02.006

implementation of the study protocol, institutional review board approval was obtained from Grand Valley State University. Completion and return of the study questionnaires were indicative of informed consent.

To be eligible for the study, participants had to be working full-time (≥36 h/week) in a critical care unit. Advanced practice nurses, nurses working in specialized roles such as discharge planning, or who no longer practiced in critical care were not eligible to participate.

Potential participants were recruited using the American Association of Critical Care Nurses' (AACN) membership list of full-time CCNs practicing in staff nurse roles. A mailing list of 3500 CCNs was randomly generated from approximately 14,000 full-time CCNs. Individuals were mailed a questionnaire packet that included a participant characteristic form and self-report measures for sleep quality, daytime sleepiness, sleep quantity, clinical decision self-efficacy, and decision regret. No incentives were employed in the study.

Open-ended questions on the Clinical Decision Self-Efficacy Questionnaire (CDSEQ) served as a source for the qualitative data on decision regret. More specifically, the CDSEQ was developed by the investigators to assess perceptions about confidence in and satisfaction with clinical decisions (0–100 mm visual analog scale), obtain examples of clinical decisions made when alert and sleepy (narrative response), and to identify whether or not they experienced decision regret (yes/no). If participants responded yes to experiencing decision regret, they were asked to briefly describe the clinical decision. The timeframe for the clinical decision was within the past seven days of receiving the mailed questionnaire. Content validity for the CDSEQ was established using experts in critical care, sleep and decision making.

A total of 737 questionnaires were returned (21%) within the four week data collection period. However, 132 questionnaires were excluded because of late returns or because respondents did not meet the inclusion criteria (e.g., no longer practicing in critical care or employed in a full-time position). This resulted in a total of 605 questionnaire packets (17%) for analysis in this study.

Content analysis procedure

The content analysis procedure described by Morse and Field[12] was used to analyze the written descriptions of clinical decisions made when CCNs felt sleepy. The unit of analysis was the entire group of nurses ($n = 157$) who reported decision regret. Following verbatim transcription from the questionnaires, each clinical decision description was read multiple times to identify major ideas, phrases, and statements. A coding scheme was developed to organize the data and to identify emerging themes. Once initial themes were identified, supporting statements were reviewed to ensure that the derived themes captured the narrative descriptions of the CCNs' clinical decisions. The approach of Miles and Huberman[13] was used to establish inter-rater reliability. The number of agreements was divided by the total number of agreements and disagreements, which resulted in an inter-rater reliability of 100%.

Results

Of the 605 CCNs who completed the larger study, 546 responded to the question on decision regret, with a total of 157 CCNs reporting that they experienced decision regret. These CCNs were predominately female, middle age, Caucasian, and worked 12 h shifts. In addition, nearly one out of six respondents (17%) reported working, on average, an additional 12 h/week beyond their full time employment (Table 1). When compared to the participants in the larger study, nurses who reported decision regret, were more likely to work nights, 12 h shifts, and experience more acute fatigue, daytime sleepiness and insufficient recovery between shifts.[11] All other personal and work related characteristics were similar between nurses who reported regret and those who did not.

Critical care nurses reported making similar types of clinical decisions when most alert and when most sleepy. Prior to specific theme identification, the types of clinical decisions reported focused primarily on patient assessment and care processes, airway management, medication administration, documentation and interpersonal communication. However, six clinical regret themes emerged from the data: 1) failure to adhere to standards of practice; 2) failure to ensure patient safety; 3) failure to be a patient advocate; 4) failure to communicate in a professional manner; 5) impaired cognition; and 6) negative affective responses. Narrative exemplars representative of each derived theme are presented below.

Failure to adhere to standards of practice

Critical care nurses described several decisions they regretted that failed to adhere to standards of practice. One participant indicated, she 'forgot to gown and glove on an isolation patient,' while another 'forgot to go into my lab results and call the physician for abnormal results.' Similarly, another participant indicated she 'forgot to order it [IV solution] from pharmacy' and that she 'had to leave it to the night shift.' Two different participants attributed their failure to adhere to normal standards of practice to being 'too busy and tired' to give patients a bath, even when they really needed it.

Failure to ensure patient safety

A number of nurses reported deviations related to patient safety. Medication errors were frequently cited as areas of regret. One critical care nurse indicated that 'medication errors are very rampant due to sleep derivation of overworked and short-staffed nursing units [sic].' While one participant 'hung the wrong [IV] fluid,' another reported giving 'Lovenox to a patient with an epidural' and a third struggled to properly use a new pump and as a result 'made a med error' attributing it to 'being very tired during an overnight shift.' Fatigue appeared to play a significant role in two separate clinical decisions that were reported as regretted. For example, one participant stated:

Table 1
Participant characteristics ($n = 157$).

Characteristics	*n*	Mean (SD)
Age	157	46 (10)
Years as a Registered Nurse	157	20 (10)
Female	156	80.8%
Caucasian	155	88.4%
Hospital unit:		
Combined ICU/CCU	41	26.1%
Intensive care	26	16.6%
Multiple units	19	12.1%
Surgical ICU	16	10.2%
Coronary care unit	12	7.6%
Shift length:		
12 hours	144	92.9%
8 hours	10	6.5%
Shift type:		
Day	77	49.4%
Night	55	35.3%
Additional employment	27	17.0%

Not all totals = 157 because of missing data. ICU = intensive care unit; CCU = coronary care unit.