Research paper

"Sedation is tricky": A qualitative content analysis of nurses' perceptions of sedation administration in mechanically ventilated intensive care unit patients

Breanna Hetland, PhD, RN, CCRN-K [a], [*]
Jill Guttormson, PhD, RN [b]
Mary Fran Tracy, PhD, RN, APRN, CNS, FAAN [c]
Linda Chlan, PhD, RN, FAAN [d]

[a] College of Nursing, University of Nebraska Medical Center, 985330 Nebraska Medical Center, Omaha, NE, USA
[b] College of Nursing, Marquette University, 530 N 16th St., Milwaukee, WI 53233, USA
[c] University of Minnesota School of Nursing, 308 Harvard Street SE, Minneapolis, MN 55455, USA
[d] Mayo Clinic College of Medicine, 200 First Street SW, Rochester, MN 55905, USA

ARTICLE INFORMATION

ABSTRACT

Introduction: Critical care nurses are responsible for administering sedative medications to mechanically ventilated patients. With significant advancements in the understanding of the impact of sedative exposure on physiological and psychological outcomes of ventilated patients, updated practice guidelines for assessment and management of pain, agitation, and delirium in the intensive care unit were released in 2013. The primary aim of this qualitative study was to identify and describe themes derived from critical care nurses' comments regarding sedation administration practices with mechanically ventilated patients.
Methods: This is a qualitative content analysis of secondary text data captured through a national electronic survey of members of the American Association of Critical-Care Nurses. A subsample (n = 67) of nurses responded to a single, open-ended item at the end of a survey that evaluated nurses' perceptions of current sedation administration practices.
Findings: Multiple factors guided sedation administration practices, including individual patient needs, nurses' synthesis of clinical evidence, application of best practices, and various personal and professional practice perspectives. Our results also indicated nurses desire additional resources to improve their sedation administration practices including more training, better communication tools, and adequate staffing.
Conclusions: Critical care nurses endorse recommendations to minimise sedation administration when possible, but a variety of factors, including personal perspectives, impact sedation administration in the intensive care unit and need to be considered. Critical care nurses continue to encounter numerous challenges when assessing and managing sedation of mechanically ventilated patients.

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1. Introduction

Mechanical ventilation is frequently used to support critically ill patients suffering from respiratory insufficiency or failure.[1] It is a distressing intervention that causes a multitude of physical and psychological symptoms for patients, including pain, dyspnoea, anxiety, and agitation.[1,2] To alleviate symptom burden, it is common practice for critical care nurses to administer sedative and opioid medications to help reduce ventilated patients' symptom burden.[2,3] Sedative medications may be necessary to improve patient comfort, promote ventilator synchrony, and ensure safety. Yet, the overuse of sedative medications can lead to psychological disturbances, delirium, higher mortality, and increased time on the

* Corresponding author at: 985330 Nebraska Medical Center, Omaha, NE, 68198-5330, USA. Tel: +1 402 559 5460.
E-mail address: breanna.hetland@unmc.edu (B. Hetland).

ventilator.[1,2,4,5] The most recent Pain, Agitation, and Delirium (PAD) guidelines contain comprehensive evidence of the adverse outcomes associated with sedative medications. These guidelines call for intensive care unit (ICU) providers to limit the amount of sedative medications administered to ventilated patients to maintain "light levels" of sedation when clinically appropriate.[6,7] In addition, they encourage the routine use of sedation protocols and bedside assessment tools to frequently evaluate PAD-related symptoms during critical illness.[6,7]

Because nurses are primarily responsible for assessing symptoms and administering sedative medications, they are essential for ensuring the successful implementation of the PAD guidelines. However, varying adherence to practice guidelines remains an issue for critical care nurses because of barriers such as lack of awareness, familiarity, agreement, perceived usefulness, and the influence of previously learned practices.[8,9] A survey published before the PAD guidelines reported that nurses' attitudes impact sedation administration practices. The authors concluded that modifying nurses' attitudes towards sedation and the experience of mechanical ventilation may be necessary to change sedation practices to reflect clinical practice guidelines.[10] Another study of ICU healthcare professionals found that the majority of respondents worked in units that adopted specific sedation protocols and had policies in place that reflected the most current sedation practice guidelines, but few reported acceptable compliance with those policies.[11] In addition, Gill et al. compared perceived and actual sedation practices for adults receiving mechanical ventilation in the ICU. They found a general under-utilisation of evidence-based guidelines as well as a higher perceived use of recommended practices such as sedation protocols and daily sedation interruption versus what was actually observed.[12]

In light of significant advancements in the understanding of the impact of sedative exposure on physiological and psychological outcomes of ventilated ICU patients[2,13–18] and the 2013 publication of the PAD guidelines,[7] it is important to reexamine critical care nurses' perceptions of sedation administration practices. Doing so will inform the development of interventions that may facilitate nurse adherence to the PAD practice guidelines.[7] The primary aim of this content analysis of secondary data was to identify and describe themes derived from nurses' responses to a single, open-ended item contained in a larger survey that evaluated sedation administration practices in a national sample of critical care nurses in the United States.

2. Methods

2.1. Overview of main survey

The findings reported in this article were part of a descriptive, correlational study of critical care nurses' perceptions surrounding sedation administration practices.[19] All members of the American Association of Critical-Care Nurses (AACN) (approximately 106,000 members) were invited to participate via electronic communications and social media sites of the AACN from September 30 to October 28, 2016. Nurses who agreed to participate were asked to complete an electronic survey, the Nurse Sedation Practices Scale.[10,19] The Nurse Sedation Practices Scale is a 28-item measure with five subscales: subjective norm, perceived behavioural control, attitudes towards sedation administration, sedation orders and goals, and sedation practices. At the end of the main survey, participants were presented with the following open-ended item: "Please use the space below if there is anything else you would like to tell us about sedation of mechanically ventilated patients." All quantitative and qualitative data were captured using the Qualtrics electronic data system. Responses were de-identified and deposited directly into the Qualtrics program upon survey completion. Institutional review board approval was obtained before survey distribution. Participation was voluntary, and study completion implied consent. Those who completed the survey were offered an opportunity to enter a raffle to win an Apple iPad®. Findings from the main survey are available elsewhere.[19]

2.2. Data analysis

Qualitative content analytic methods[20,21] were employed to identify themes and subthemes among participants' responses. No formal preexisting theory was used to guide data analysis. Researchers used conventional qualitative analysis procedures, in which all researchers repeatedly read the text, word by word, to obtain a sense of the whole. A single researcher completed the analytic process of theme development guided by the following framework: (i) initialisation—highlighting meaning units, coding, and looking for abstractions in participants' accounts and writing reflective notes; (ii) construction—classifying, comparing, labelling, defining, and describing; (iii) rectification—immersion and distancing, relating themes to established knowledge; and (iv) finalisation—developing the story line.[22] To enhance rigour and trustworthiness, all researchers met to discuss the single researcher's interpretation of the findings. Consensus of this discussion of data was reached by all researchers as measured by verbal agreement.

3. Findings

3.1. Respondent characteristics

Respondents (N = 67) were primarily staff nurses (61.8%) with a bachelor's degree in nursing (55.9%). They had an average of 14.7 years of critical care experience, and 57.6% were certified as a critical care nurse (CCRN). Nurses who completed the survey worked in a variety of critical care settings; however, most (97.1%) used a sedation assessment tool on their unit and had written sedation protocols (82.4%) that included spontaneous breathing trials (SBTs) (89.7%) and awakening trials (72.1%). The shortest response was five words, and the longest was 311 words. The mean number of words used in the responses was 56.

The content analysis of 67 open-ended nurse comments revealed two main themes regarding the sedation administration practices of critical care nurses. The first main theme, "Guiding factors of nurses' sedation administration practices," contained three subthemes: (i) individual patient needs; (ii) synthesis of clinical evidence and best practices; and (iii) personal and cultural perspectives. The second main theme was "Resources to improve nurse sedation administration factors."

3.2. Theme #1: guiding factors

Individual patient needs: Many nurses in the survey commented on the unique and individual sedative needs of each patient, reinforcing how patient needs must be carefully considered and frequently monitored. They also communicated that sedation management should be goal-oriented and administration methods should be tailored according to the care plan. Many expressed the importance of limiting the amount of sedative to what the patient requires to achieve a designated clinical goal, such as "maintain safety," "follow commands," "not buck the vent," "not pull at lines or tubes," "not show signs of distress," and "still open eyes to verbal stimuli". One nurse commented,