

# Nursing Fatigue: An Evidence-Based Practice Review for Oncology Nurses

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Nursing fatigue is a current and well-researched topic. Many negative outcomes and consequences exist for patients and nurses that have been linked to nursing fatigue. Medical errors are one such consequence, and these errors have become one of the top three preventable deaths in the United States. Oncology nurses are not immune to fatigue, and the consequences of their fatigue can be much more harmful to patients.

## At a Glance

- Medication errors are the third leading cause of preventable death.
- Extended work hours can be associated with nursing fatigue and errors.
- Nursing fatigue can also be associated with nurse injury, such as needlestick injuries.

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The Institute of Medicine (IOM) published a landmark report “To Err Is Human: Building a Safer Health System” in 2000 that detailed the medical errors that were happening in the United States and their impact on patient safety (Corrigan, Donaldson, Kohn, McKay, & Pike, 2000). The report estimated that 44,000–98,000 people die each year from preventable medical errors, and more people die in a given year as a result of medical errors than from motor vehicle accidents (43,458), breast cancer (42,297), or AIDS (16,516) (Corrigan et al., 2000). In the three decades since the IOM report was released, hospital errors have climbed rapidly from the eighth leading cause of death to the third leading cause of preventable death (James, 2013). Medication errors can have a variety of outcomes from a simple incident report with no harm done to a patient death. One only needs to do a simple literature search for “medication error” and “death” to see what a moment of inattention can cause. Oncology nurses must be more vigilant than most to avoid

potentially life-threatening complications from medication errors. Imagine giving an intrathecal chemotherapy via IV push or giving chemotherapy to the wrong patient. Fatigue and extended work hours can lead to safety concerns for patients with cancer, which is why vigilance is so important in keeping patients and the nurses who care for them safe.

## Finding the Evidence

The purpose of this literature review is to synthesize and report on the body of knowledge that surrounds medication errors and nursing and oncology nurses. Using the words *nursing*, *medication error*, *fatigue*, *oncology*, *chemotherapy*, and *extended work hours*, a search was conducted on Google Scholar and ResearchGate, resulting in seven articles from 2005–2015. The results of the review are presented and organized into three categories: (a) work hours and fatigue; (b) fatigue and medication errors; and (c) medication errors, needlestick injuries, and work hours.

## Summarizing the Evidence Work Hours and Fatigue

Multiple studies have focused on nursing work hours and fatigue (Josten, Ng-A-Tham, & Thierry, 2003; Stone et al., 2006; Stimpfel, Sloane, & Aiken, 2012). Barker and Nussbaum (2011) aimed at quantifying nurses' perceived dimensions and reported states of fatigue to investigate the relationships between perceived fatigue and performance, as well as to identify differences in perceived fatigue levels and dimensions across demographic and work environment variables. The Nursing Performance Instrument (NPI) was used to measure changes in concentration, mood, and mental energy, as well as the implications of these on patient monitoring, medication administration, and documentation of tasks (Barker & Nussbaum, 2011). The researchers used four existing fatigue measurement scales, including the Swedish Occupational Fatigue Inventory (SOFI) and the Fatigue-Related Symptoms Questionnaire (F-RSQ). They determined that mental fatigue measures from SOFI ( $N = 881$ ,  $\bar{X} = 2.01$ ,  $SD = 1.56$ ) and F-RSQ ( $N = 854$ ,  $\bar{X} = 36.81$ ,  $SD = 26.14$ ) were most strongly correlated with questions in the NPI ( $p < 0.001$ ), indicating that more than one-third of participating nurses reported working greater than 40 hours per week and that all nurses' reported levels of mental fatigue were higher than physical fatigue.

For some nurses, working the night shift adds additional dimensions to fatigue and long hours. Scott, Arslanian-Engoren, and Engoren (2014) investigated the association between sleep, fatigue, and decision regret in critical care nurses ( $N = 605$ ). Decision regret was defined as

a negative cognitive emotion that occurs when the actual outcomes and the desired or expected outcome