Healthy Times

Fitz study: Structured sleep can reduce delirium

Mercy Health System hospitals adopt uninterrupted sleep protocols.

DARBY BOROUGH – In a new study, the critical care team at Mercy Fitzgerald Hospital found that sessions of uninterrupted sleep can help patients reduce their risk for an acute brain injury known as delirium, as well as shorten their hospital stays.

Dr. Dominic Valentino, medical director of the critical care units at Mercy Fitzgerald Hospital, spearheaded the study, which evaluated 125 critically ill patients over a two-month period. The study found that patients on a structured sleep protocol for more than half of their stay in the ICU had a reduced ICU length stay by an average of 4.28 days. Sedation with benzodiazepines and an opioid infusion was associated with an increased ICU length of stay by averages of 5.49 days and 8.25 days, respectively.

Valentino and his team implemented a structured sleep protocol that included protected sleep time from midnight through 4:30 a.m., a time slot that does not impede nursing and respiratory care. Room lights are to remain off, routine bloodwork, bathing and medical exams must not take place, and loud talking is strictly prohibited during this time.

The team observed the number of days that patients were on the sleep protocol, as well as the length of critical illness and the number of days of CAM-ICU positivity. CAM-ICU stands for Confusion Assessment Method for the ICU and is an internationally validated tool for detecting delirium in ICU patients.

Due to its success, the sleep protocol has since been adopted as a best practice at other Mercy Health System hospitals, including Mercy Philadelphia Hospital in West Philadelphia, Mercy Suburban Hospital in East Norriton and Nazareth Hospital in Northeast Philadelphia.

Mercy Fitzgerald’s study followed 125 patients throughout January and February 2013. Eighty-one percent of the patients selected for the study had a diagnosis of cardiac shock/arrhythmia/heart failure, sepsis, or respiratory failure. More than half (54 percent) were male and the average age was 64.

Occurring in up to 80 percent of intensive care unit (ICU) populations, critically ill patients are more prone to developing delirium because they are subject to multiple risk factors including exposure to sedation treatments. Short-term effects of delirium often include prolonged mechanical ventilation (assisted breathing by a machine) and longer hospital stays, which can in turn increase the patient’s risk for acquiring hospital-acquired infections. Additionally, long-term effects of delirium can include mild to severe cognitive impairment and dementia.

“The international critical care community has recognized a need for non-pharmacologic means to reduce delirium in the ICU. There were some small studies that looked at sleep continuity and delirium,” says Valentino. “I thought this would be a logical process to evaluate ICU patients, allow them more structured sleep at night and see if their incidence and duration of delirium is impacted.”

The study was the first of its kind in the Philadelphia area and was featured at the Patient Care Leadership Summit in Philadelphia on March 19. The study also earned Mercy Fitzgerald Hospital the recognition of a Top Ten Project in the 2013 Delaware Valley Patient Safety and Quality Awards program.