

What's New in the Patient Safety World

October 2015

Predicting Delirium

We've done several articles on delirium every year since 2008 (see the full list at the end of today's column). The Pennsylvania Patient Safety Authority has noted a 7-fold increase in patient safety events related to delirium reported to the Pennsylvania Patient Safety Reporting System (PA-PSRS) over a 10-year period from 2005 to 2014 ([Feil 2015](#)). The author, Michelle Feil, attributes this increase largely to increased awareness and better recognition of delirium rather than to a true increase in the incidence and prevalence of delirium.

Though the PA-PSRS data are limited in some respects to the data input by the reporters, Feil was able to determine both predisposing factors and likely precipitating factors in many cases. Male gender and age 65 or older were noted as predisposing factors in 57% and 54.3% of reports, respectively. Pre-existing cognitive dysfunction (14.3%), depression (10.8%), and serious illness (11.7%) were other frequent predisposing factors but were likely underreported compared to age and sex, which were required entries in their own fields in the reports. The most common precipitating factors mentioned were intercurrent illness or other physiologic cause (45.7%), specific medications (29.4%), environmental factors (22.9%), and surgery or procedure requiring sedation (10.8%).

Almost all areas of care were represented in the PA-PSRS data. General care areas accounted for about 50% of reports, ICU's 11.7% and psychiatry or chemical dependency services 12.3%. The delirium-related patient safety events ran the gamut of incident types, with 35% being falls. Sometimes delirium delayed recognition of other serious condition (eg. sepsis).

Feil goes on to describe strategies to prevent delirium, such as the HELP program and guidelines from several specialty societies on management of delirium as we've described in several previous columns. Multimodal non-pharmacologic approaches remain the mainstay in management of delirium. Pharmacologic management remains controversial. A recent meta-analysis ([Kishi 2015](#)) suggests that second generation antipsychotics have a benefit for the treatment of delirium with regard to efficacy and safety compared with haloperidol. However, the numbers are small and even those authors acknowledge that larger studies are needed.

It is well recognized that the occurrence of delirium has prognostic significance for patients. It is associated with increased morbidity and mortality, longer lengths of hospital stay, increased likelihood of institutionalization, and higher healthcare costs. But

does the subtype of delirium have any predictive value? Hypoactive delirium is the subtype most often overlooked yet it is just as important to recognize this subtype. A new study in terminally ill cancer patients found that such patients with hypoactive or mixed delirium were more likely to have shorter survival periods ([Kim 2015](#)).

A recent review of risk stratification models for predicting delirium actually found a need for better predictive tools ([Newman 2015](#)). The authors found only 10 cohort studies of validated tools for predicting delirium. Quality of the studies was moderate to good but there was substantial heterogeneity and only one study was replicated. The most common risk factors identified were pre-existing cognitive impairment, medical comorbidity, elevated BUN, and impaired ADL's (activities of daily living).

While we agree with the Newman study that the tools for predicting delirium may not yet be perfect, we still strongly recommend consideration of risk factors for delirium in any patient scheduled to undergo surgery. In fact, we think it is one of the three most important considerations in the pre-operative evaluation (the other two being assessing risk for obstructive sleep apnea and frailty). Particularly in patients identified as having risk factors for delirium it makes sense to avoid those potential precipitating factors that can be avoided and to screen these patients more frequently for delirium.

Some of our prior columns on delirium assessment and management:

- October 21, 2008 "[Preventing Delirium](#)"
- October 14, 2008 "[Managing Delirium](#)"
- February 10, 2009 "[Sedation in the ICU: The Dexmedetomidine Study](#)"
- March 31, 2009 "[Screening Patients for Risk of Delirium](#)"
- June 23, 2009 "[More on Delirium in the ICU](#)"
- January 26, 2010 "[Preventing Postoperative Delirium](#)"
- August 31, 2010 "[Postoperative Delirium](#)"
- September 2011 "[Modified HELP Helps Outcomes in Elderly Undergoing Abdominal Surgery](#)"
- December 2010 "[The ABCDE Bundle](#)"
- February 28, 2012 "[AACN Practice Alert on Delirium in Critical Care](#)"
- April 3, 2012 "[New Risk for Postoperative Delirium: Obstructive Sleep Apnea](#)"
- August 7, 2012 "[Cognition, Post-Op Delirium, and Post-Op Outcomes](#)"
- September 2013 "[Disappointing Results in Delirium](#)"
- October 29, 2013 "[PAD: The Pain, Agitation, and Delirium Care Bundle](#)"
- February 2014 "[New Studies on Delirium](#)"
- March 25, 2014 "[Melatonin and Delirium](#)"
- May 2014 "[New Delirium Severity Score](#)"
- August 2014 "[A New Rapid Screen for Delirium in the Elderly](#)"
- August 2014 "[Delirium in Pediatrics](#)"
- November 2014 "[The 3D-CAM for Delirium](#)"

- December 2014 “[American Geriatrics Society Guideline on Postoperative Delirium in Older Adults](#)”
- June 16, 2015 “[Updates on Delirium](#)”

References:

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