

What's New in the Patient Safety World

July 2017

HELP Program Reduces Delirium Rate and LOS

Multi-component non-pharmacological interventions such as HELP, the [Hospital Elder Life Program](#) (see our October 21, 2008 Patient Safety Tip of the Week "[Preventing Delirium](#)") and our September 2011 What's New in the Patient Safety World column "[Modified HELP Helps Outcomes in Elderly Undergoing Abdominal Surgery](#)") or tools like the ABCDEF Bundle (see our September 20, 2016 Patient Safety Tip of the Week "[Downloadable ABCDEF Bundle Toolkits for Delirium](#)") have been used to reduce the rate or impact of delirium in hospitalized patients.

In our March 21, 2017 Patient Safety Tip of the Week "[Success at Preventing Delirium](#)" we noted that a delirium prevention bundle (DPB) in ICU patients reduced the odds of delirium were reduced by 78% despite considerable barriers to implementation of the bundle ([Smith and Grami 2017](#)).

Similar success with the modified Hospital Elder Life Program (mHELP) was recently demonstrated in a cluster randomized clinical trial in Taiwan of patients age 65 and older who underwent major abdominal surgery ([Chen 2017](#)). The intervention consisted of 3 protocols administered daily: orienting communication, oral and nutritional assistance, and early mobilization. The odds of delirium were reduced by 56% and LOS was reduced by 2 days in the group receiving mHELP compared to the control group.

The success of non-pharmacologic interventions to prevent delirium is particularly important given the relative lack of success of pharmacologic interventions in preventing it. Since our last column on delirium there have been two more unsuccessful attempts at preventing delirium with agents that had shown promise.

A randomized clinical trial of intraoperative infusion of **dexmedetomidine** for prevention of postoperative delirium and cognitive dysfunction in elderly patients undergoing major elective noncardiac surgery found that intraoperative dexmedetomidine does not prevent postoperative delirium ([Deiner 2017](#)). And the Prevention of Delirium and Complications Associated with Surgical Treatments (PODCAST) study found that a single subanaesthetic dose of **ketamine** did not decrease delirium in older adults after major surgery, and might cause harm by inducing negative experiences ([Avidan 2017](#)).

So, while the search is likely to continue for pharmacologic agents that might reduce the rate of delirium in several populations of hospitalized patients, hospitals should be

implementing multi-component interventions like mHELP. Given the substantial financial savings that a 2-day reduction in LOS for such patients, you should have no difficulty convincing your CFO to support the resources necessary to implement an effective mHELP or similar program.

One of the components of almost all multi-component programs for delirium is promoting more natural sleep and trying to simulate more natural sleep/waking cycles. It turns out that not only is sleep disruption in the hospital an important contributing factor to delirium but sleep disruption at home prior to hospitalization is also a risk factor for delirium. Todd and colleagues ([Todd 2017](#)) used the Pittsburgh Sleep Quality Index and actigraphy to objectively measure sleep disruption in the hospital before and after elective surgery in patients age 65 and older. They found that those patients with sleep disruption at home were 3.26 times as likely to develop postoperative delirium as those without it. So that is another risk factor to add to your pre-op assessments.

We'd also be remiss if we did not take the opportunity to direct our readers to the recent excellent review of hypoactive delirium by Hosker and Ward in the British Medical Journal ([Hosker 2017](#)). Hypoactive delirium, of course, is both more common and more difficult to recognize than its counterpart of the agitated, hyperactive type of delirium. But its impact on patient outcomes and use of healthcare resources is just as or even more significant than that for hyperactive delirium. Multi-component interventions like HELP remain the mainstays for all types of 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](#)”
- February 2013 “[The ABCDE Bundle in Action](#)”
- 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](#)”
- October 2015 “[Predicting Delirium](#)”
- April 2016 “[Dexmedetomidine and Delirium](#)”
- April 2016 “[Can Antibiotics Lead to Delirium?](#)”
- July 2016 “[New Simple Test for Delirium](#)”
- September 20, 2016 “[Downloadable ABCDEF Bundle Toolkits for Delirium](#)”
- January 24, 2017 “[Dexmedetomidine to Prevent Postoperative Delirium](#)”
- March 21, 2017 “[Success at Preventing Delirium](#)”

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<http://jamanetwork.com/journals/jamasurgery/fullarticle/2629730?widget=personalizedcontent&previousarticle=2627287>

Avidan MS, Maybrier HR, Abdallah AB, et al. Intraoperative ketamine for prevention of postoperative delirium or pain after major surgery in older adults: an international,

multicentre, double-blind, randomised clinical trial. The Lancet 2017; Published 30 May 2017

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