

What's New in the Patient Safety World

February 2013

The ABCDE Bundle in Action

Our December 2010 What's New in the Patient Safety World column "[The ABCDE Bundle](#)" described a very logical bundle for ICU care ([Vasilevskis 2010](#)). We noted that getting some actual outcome measurements after implementation of the full ABCDE bundle should further solidify more widespread use of this bundle. Some of that outcome data was just presented January 20, 2013 in an abstract at the Society of Critical Care Medicine 42nd Critical Care Congress ([Balas 2013](#)).

The ABCDE acronym stands for "Awakening and Breathing Coordination", "Delirium monitoring", and "Exercise/Early mobility" and focuses on prevention of two very common and very serious iatrogenic problems seen in our ICU's: delirium and ICU-acquired weakness. ICU delirium and ICU-acquired weakness are associated with significant morbidity and mortality, excessive lengths of ICU and hospital stay, and excessive costs.

The individual components of the bundle are well-accepted interventions in most ICU's and are described in our December 2010 column. But they also note that using members of the entire ICU team, interdisciplinary care, good communication, and developing a culture of safety in the ICU, as well as use of tools like checklists and ICU daily goals, are helpful during implementation of the ABCDE bundle.

The new study ([Balas 2013](#)) was a prospective, cohort, before-after study of the ABCDE bundle at a large, tertiary medical center, involving patients from multiple ICU's (93 prior to implementation of the bundle and 94 after implementation of the ABCDE bundle). They found patients treated with the ABCDE bundle experience more days breathing without assistance and a shorter duration of ICU delirium. But there were no significant differences in the time to ICU or hospital discharge, incidence or duration of coma, or change in residence between groups. Mortality was lower in those receiving the ABCDE bundle but this did not achieve statistical significance.

This is a very promising bundle of interventions and perhaps studies on a larger patient population in the future may also demonstrate improvement in the important clinical outcomes like mortality and ICU/hospital LOS. However, it remains difficult to sort out what improvements were the result of specific bundle interventions vs. what impact came from the more general improvement in culture of safety that the project obviously fostered. Nevertheless, the early outcomes are promising.

Update: See also our September 20, 2016 Patient Safety Tip of the Week “[Downloadable ABCDEF Bundle Toolkits for Delirium](#)”.

References:

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