

CareFusion Launches Application to Help Clinicians Improve Patient Care for Mechanically Ventilated Patients

Sedation Analytics Application Combines Infusion and Ventilator Data to Help Ensure Compliance with Sedation Best Practices for Ventilated Patients

SAN DIEGO, CA, Aug. 8, 2014 – CareFusion (NYSE:CFN), a leading global medical technology company, today announced the availability of a new capability on the CareFusion Respiratory Knowledge Portal to help clinicians improve patient care for ventilated patients.

Appropriate use of sedatives in critically ill patients helps improve tolerance associated with invasive interventions, like mechanical ventilation, and also helps to decrease physiologic stress and improve patient care. However, maintaining deep sedation in critically ill patients is associated with increased duration of mechanical ventilation, increased ICU length of stay and increased brain dysfunction.¹ The new Sedation Analytics application combines data from CareFusion mechanical ventilators and the company's Alaris[®] System infusion pumps to identify variability from the ICU sedation protocol at the hospital.

"The Respiratory Knowledge Portal has enabled us to measure the specific causes of delays in ventilator weaning and to act on that information," said Harold Oglesby, manager of Respiratory Therapy and Sleep Disorders Medicine at St. Joseph's/Candler, the first to adopt the new application. "By using these analytics we have achieved a significant reduction in ventilator length-of-stay, and we have been able to sustain that improvement."

A key strategy for sedation optimization is the use of daily spontaneous awakening trials (SATs), also known as sedation vacations, which are planned interruptions to continuous sedative infusions. Spontaneous breathing trials, which happen during a sedation vacation, help clinicians determine if the patient is ready to be weaned from the ventilator. The Sedation Analytics application can measure compliance with the hospital's protocols for sedation vacations and spontaneous breathing trials, and can detect increases in sedation over a specified limit.

"The ability to measure compliance with our ICU Sedation Protocol is a huge improvement in these analytics, which were very powerful to begin with," said Sherry Danello, vice president of patient care services and chief nursing officer at St. Joseph's/Candler. "Our goal is to provide the best possible care for our patients. These analytics make it possible to measure and improve our performance towards this goal."

On average in the United States, a ventilated patient in an ICU bed for one day costs hospitals \$2,296.² After the fourth day, the average daily cost of care for the ventilated patient goes up to \$3,917.³ In a typical 400-bed hospital with 40 critical care ventilators, these daily costs can add up to more than \$18 million per year.⁴ A 10 percent reduction in ventilator time for 15 percent of the most difficult-to-wean patients could result in an estimated \$700,000 in savings per year with significant potential for additional savings in the remaining 85 percent of patients.⁵

The CareFusion Respiratory Knowledge Portal is an analytics and reporting tool that enables hospitals to measure clinical and process variability in mechanical ventilation by providing actionable information to help hospitals improve patient care. In addition to the new Sedation Analytics application, reporting capabilities include ventilator weaning analytics, lung protective strategies analytics, alarm policy compliance analytics and ventilator associated event surveillance.

About BD

BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its 65,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com

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¹ Institute for Healthcare Improvement: IHI Ventilator Bundle: Daily “Sedation Vacations” and Assessment of Readiness to Extubate. Retrieved from: <http://www.ihl.org/knowledge/Pages/Changes/DailySedationVacationsandAssessmentofReadinesstoExtubate.aspx> SA1.

² Cooke, C. Economics of mechanical ventilation and respiratory failure. Crit Care Clin, 2012, 28:39–45.

³ Zilderberg, M., Luippoid, R., Slutsky, S., Shoor, A. Prolonged acute mechanical ventilation, hospital resource utilization and mortality in the United States. Critical Care Medicine, March 2008, 23(3):724–730.

⁴ Survey: Seven hospitals with an average of 400 beds and 40 ventilators. CareFusion, Summer 2012. 3 Awissi, D., Bégin, C., Moisan, J. et al. I-SAVE Study: Impact of sedation, analgesia and delirium protocols evaluated in the intensive care unit: an economic evaluation. The Annals of Pharmacotherapy, January 2012, 46:O1.

⁵ Barr, J., Fraser, G., Puntillo, K. Clinical practice guidelines for the management of pain, agitation and delirium in adult patients in the intensive care unit: Executive summary. Am J Health-Syst Pharm, 2013, 70:53–58.

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