

Holston Valley Medical Center's MVP Status

Most Valuable Program for Mechanically Ventilated Patients

When the Centers for Medicare & Medicaid Services changed definitions and outcome measures for ventilator-associated events (VAE), Holston Valley Medical Center, part of Ballad Health, quickly realized their numbers weren't great.

"We were typically having one possible ventilator-associated pneumonia (PVAP) event a month in different units," noted Infection Prevention Manager Vicki Jarnagin, RN. She added the events were happening across the hospital's five critical care units. "We did a root cause analysis, and there was no common denominator."

Chief Nursing Officer Lisa Smithgall, PhD, RNC-NIC, CPNP, NEA-BC, who also serves as vice president of Patient Care Services at Holston Valley, said the hospital's leadership team wasn't the only one to notice the higher numbers. Smithgall recalled being approached by Darlene Swart, RN, MS, clinical director for the Tennessee Center for Patient Safety (TCPS), at the organization's regional meeting in August 2015. Swart said TCPS was launching a new Comprehensive Unit-based Safety Program in October 2015 utilizing the Johns Hopkins' CUSP 4 MVP-VAP, a national quality improvement project.

"They invited us to participate based on our results ... which were not great," Smithgall said, adding it was an invitation the hospital gladly accepted.

Smithgall said nursing and quality leaders at Holston Valley spent the next few months forming a CUSP team, reviewing best practices, creating standardized processes, and setting up systems to track and report data. "We kicked off in October and had no infections in October, one event in November in the medical ICU, and we have six months since then ... December through May ... with zero possible ventilator-associated pneumonia in all of our adult critical care population," she said of the exciting transformation.

Genevieve Rhonemus, RN, clinical leader in Critical Care, said the team made numerous changes on the frontline. An emphasis was placed on being extra vigilant during oral care to keep one line specifically for inline suction and to have another canister set up just for oral care to eliminate the chance of cross-contamination. Nurses also now take additional precautions to keep patients' heads above a 30° angle and to use chlorhexidine oral care on every patient.

New initiatives also have been launched including progressive upright mobility and ensuring sedation vacations. Rhonemus added one of the biggest changes was to embrace the 'why.' She said it is now a point of focus to teach the 'why' behind each best practice rather than just present it as a checklist item to undertake. She also said the question of 'why' a patient

remains on a ventilator is asked and answered each day to determine whether or not that patient is ready to begin the process of weaning.

"Every day in Grand Rounds, we look at how long a patient has been on the ventilator. We are trying to remove it in five to seven days ... we're being more aggressive with getting the endotracheal tube out and more aggressive with CPAP trials," said Rhonemus.

An interdisciplinary team of intensivists, pulmonologists, critical care nursing, respiratory therapists, pharmacists, metabolic support, case management and others now come together to discuss each patient individually and make joint decisions. "Each discipline offers their insight to direct the patient care plan for the day," said Smithgall. "We're very fortunate in that we

have all these resources right on the unit," Rhonemus added.

Another point of emphasis became how data was tracked, measured and acted upon. The Tennessee Hospital Association provided a new data collection option, which Holston Valley has adopted as their audit tool.

Jarnagin said one of the biggest challenges on her end had been seeing and reporting near misses. With a focus on prevention, she knew highlighting those red flags could keep them from turning into real emergencies. Now, she continued, "We look at patients daily to see if their FiO2 and PEEP have increased, which could be an indication they need more help and an early indicator that there is potentially an infection."

The leadership team said being part of the CUSP focused on ventilator-associated events under the TCPS HEN umbrella has been enormously valuable in addressing their former issues with the medically fragile patients who must rely on mechanical ventilation. "It gave us another resource tool and put in perspective that other hospitals are having the same issues and learning from them," said Rhonemus.

Smithgall noted, "We're very excited about this, and we obviously have made great strides." In recognition that it truly takes a team effort to change any process, she said the leadership group recently created a personal thank-you card for all 330-plus staff members of respiratory and nursing. "You have to celebrate your success," she said.

With the number of adverse events due to mechanical ventilation plummeting, Holston Valley certainly has a lot to celebrate.

The Tennessee Center for Patient Safety, a department of the Tennessee Hospital Association, develops and shares hospital and health system success stories and promotes best practices.



Standardized protocols and regular meetings of an interdisciplinary team of providers at Wellmont Holston Valley has helped the medical center change the narrative on VAEs.