Staying in Sync With High-Reliability Organizations

By Joe Murphy, APR, NCPS public affairs officer

The VA’s patient safety program is in part based upon applying ideas from high-reliability industries to target and eliminate system vulnerabilities.

“The aviation industry, in particular, clearly defines such an industry: high risk, low adverse event rate. And it’s not simply about technology and automation; the way flight crews are trained to work together is vital,” said Gary Sculli, M.S.N., A.T.P., NCPS program manager, “which is why we are very happy that Delta Air Lines agreed to our request to visit their flight simulation center.”

“During the tour of the Delta simulator, when an instructor paused a simulation to discuss how best to handle an aircraft abnormality, the exact words of the flight crew were ‘expand the team,’ driving home the importance of teamwork and use of resources.”

Sculli is also director of NCPS’ Clinical Team Training program, which centers on building high-reliability teams by teaching specific behaviors for use in clinical settings that can reduce risk and mitigate the effects of error for hospitalized Veterans.

Aimed at a multi-disciplinary group of front-line health care providers, the program is based on techniques used in aviation’s Crew Resource Management (CRM) training. CRM was implemented by the airline industry in the 1980s after a series of highly publicized accidents resulted from poor communication and team decision-making, not from mechanical malfunctions. Today, the airlines enjoy an exemplary safety record, due in large part to the implementation of CRM methodologies.

“One of the reasons we reached out to Delta was because it’s important for us to stay connected to high-reliability organizations and industries,” he said. “It’s critical for us to understand the latest team training efforts being offered in aviation so that we are in sync with the most up-to-date CRM curriculum.”

The first part of the visit was held in Delta’s research and development department, where the airline’s current CRM efforts were discussed.

“One of the things we learned from that part of the visit was that we were clearly on the right track,” Sculli said, “because we based our team training program on CRM techniques. Just like a pilot, it’s important that a physician or nurse have highly developed technical skills. But pilots are also expected to demonstrate CRM skills, such as managing the team, using resources adequately, showing effective leadership, applying ‘assertive advocacy’ when necessary and maintaining situational awareness. It’s exactly the kind of thing we present to clinicians.”

“I’m proud to say that what we’ve been doing for the past several years with our team training...”
The VA Caribbean Healthcare System (VACHS) in San Juan, Puerto Rico participated in a virtual breakthrough series 1 with a goal of reducing 10 percent of fall events in acute care and 20 percent of fall injuries in long-term care.

“We got involved in the breakthrough series to take advantage of fall prevention best practices and resources. We are consistently striving to improve our preventive measures and interventions and thus prevent further injuries to our Veterans,” said Kathleen Ruiz, R.N., D.N.P., A.D.P.C.S.

The VACHS provides services to a population of approximately 110,000 Veterans of which 66,000-plus are actively enrolled and receiving services. In addition to the main facility in San Juan, Veterans are offered services in ten outpatient clinics throughout the island and U.S. Virgin Islands.

Taking Action

“Incorporating our Veterans and relatives in their own care, including fall preventive measures is extremely important to us,” said Aida Rodriguez, facility patient safety manager.

To insure that key staff members are aware, current statistics of the number of fall events, types and rates by units are shared monthly with nurse managers, clinical nurse leaders, and with the facility’s Nursing Executive Council.

The facility took specific actions in acute care and long-term care units, such as implementing a post-fall huddle debriefing to identify frequent fallers and those that might be predisposed to a fall. A method to categorize the event was also developed to include accidental, anticipated, non-anticipated (physiological), and intentional falls. “We are integrating fall protective equipment information concerning such things as non-skid slippers, hip protectors, floor mattresses, and helmets to a patient’s communication head board for staff awareness,” said Ada Lúgaro, performance improvement (PI) nurse.

To provide a way forward that would include staff, patients and family members, the facility chose the “ICARE” model:

- Identification: Using at least two identifiers for each patient; i.e., name and complete social security number
- Comfort: Maintaining skin integrity and providing toileting assistance
- Assessing pain: Providing prompt intervention
- Respond: Promptly answering call lights and patient requests
- Environment: Keeping rooms clean and uncluttered, with patient belongings within easy reach

“Comfort rounds are integrated into the ICARE model. Our education methods included providing staff, Veterans and family members an ICARE hand-out that explained why we would be making interventions to promote patient care,” said Lúgaro.

Using ICARE has promoted a comprehensive new approach to patient safety and satisfaction.

“The ICARE approach integrates participation by Veterans and their families into their care during hourly nursing rounds,” said Awilda Rivera, R.N., fall champion, “making the rounds more effective at promoting a patient’s well-being.”

Lessons Learned

- The importance of identifying and evaluating frequent fallers individually
- Developing different falls prevention strategies based on individual assessments
- Implementation of comfort rounds leads to comprehensive falls prevention measures
- Sustaining hourly comfort rounds requires taking a proactive approach to patient needs
- Recurrent reinforcement of purpose and aims has demonstrated the effectiveness of practices implemented

Looking Ahead

Regardless of how far the facility has come in falls reduction efforts, the staff continues to focus on future strategies.

“For instance, we are asking nurse managers to participate in rounds to oversee the process,” said Ruiz, “because leadership participation is one of the keys to success in any patient safety effort.”

Redesigning comfort rounds is also an important aspect of future plans to sustain and enhance the falls reduction program. “So we will continue to focus on refining the quality and sustainability of comfort rounds,” Lúgaro said.

“In fact, we want to focus on the components of each different round done in our wards and integrate tasks that can be performed simultaneously,” Rivera continued, “in an effort to redesign them to better support Veterans and make the rounds as efficient as possible for staff.”

The facility also maintained the falls prevention team, rather than disbanding it, following the breakthrough series, which will help reinforce educational efforts and promote better care practices.

“The interdisciplinary team brings together a wide range of professional expertise that will continue to help us advance our goals,” said María Rosado, patient safety specialist. Data collection and one-to-one educational tracers will also continue.

“Due to a true team effort, we have been able to reduce falls by 20 percent in acute care and fall injuries by 25 percent in long-term care,” Ruiz concluded. “We are proud of what we have accomplished for our Veterans.”

Team Members

- Kathleen Ruiz, R.N., D.N.P., A.D.P.C.S. process owner
- Awilda Rivera, R.N., M.S.N., fall champion, team leader
- Ada Lúgaro, R.N., PI nurse, alternate team leader
- María Rosado, patient safety specialist
- Xavier Avilés, M.D., attending psychiatrist
- Maritza Carrasquillo, M.D., extended care service
- Vivian Ramos, physical therapist
- Inabielle Rosado, R.N., CLC PI nurse
- Maritere Acevedo, supervisory program specialist, PMR service
- Aristides Maldonado, R.N., TJC coordinator

Notes

1. A virtual breakthrough series allows VA teams, often with members in different geographic locations, to meet by phone or video conference, rather than face-to-face. Such a series allows for effective sharing of ideas while avoiding travel expenses and staff time lost in travel. VA employees interested in further information: NCPS@va.gov

2. Readers interested in obtaining the facility’s post-fall debriefing guide or other related material developed during the breakthrough series can contact Ada.Lugaro@va.gov
The “Butler Tornados” Take on Falls Prevention

By Joe Murphy, APR, NCPS public affairs officer

An interdisciplinary falls team who dubbed themselves “The Butler Tornados” were determined to reduce falls by 20 percent at VA Butler Healthcare’s “Village of Valor,” as a part of the virtual breakthrough series 1—but a 20 percent reduction turned out to be just the start.

The Village is a 30-bed unit in the facility’s Community Living Center (CLC). “It’s a brand-new, state-of-the-art facility,” said Village of Valor Clinical Manager George Yarrington, R.N. “The footprint of the unit is extremely large. It has a library, a game room, a bingo room, an atrium, and several outdoor patio and garden areas.”

Because of the geographical layout of the unit combined with the clinical needs of the population, the staff faced many challenges, especially reaching their falls prevention goal by the end of fiscal year 2013.

“We hoped that what we learned from this work would also help us reduce falls when we opened another 30-bed unit, ‘Halls of Honor,’ which has a similar footprint,” he said.

Taking Action

The team devised a number of enhancements to facility procedures such as having a staff member read out loud falls interventions that had been carried out for individual Veterans during shift-to-shift reports and assignments.

“This significantly heightened staff awareness of day-to-day problems,” Yarrington noted. “We also asked CLC leadership to conduct rounds to ensure the interventions were being carried out consistently, such as using the proper alarm.”

The Tornados also engaged coworkers, sharing such things as falls prevention interventions.

Many new processes were put in place, to include:

- Yellow sheets with individualized fall interventions, present at point of care, were posted on each Veteran’s bulletin board and attached in clear document protectors to each Veteran’s wheelchair
- Caregivers were assigned specific room numbers to enhance individual responsibility
- Development of a falls intervention “Peer Monitor” program (using compensated work therapy (CWT) workers as “buddies” to high-risk Veterans)
- Installation of new beds with built-in alarms that interfaced with the call bell system
- Kinesiotherapy transfer evaluation updated with nursing verification and completion within four hours of admission
- Increased staffing on evening tours once time frames for high-fall risks were identified
- CLC falls data spreadsheets were made consistent on all units to enable uniform data comparisons
- Leadership approved the use of the Morse Scale to determine falls risk and allow for a VISN 4-wide data comparison
- Implementation of a sub-team from the falls committee to complete monitoring tools
- Initiated a “Smile Calendar” on the Village of Valor to record and award days of “No Falls”
- Staff recognition for “No Falls” for a month, which facilitated staff buy-in
- CWT staff members were also asked to assist with hall monitoring and a new “Veterans Buddy” program, an intervention that won a Federal Executive Board Award in 2012.

Butler Buddies

Potential Veteran “Buddies” are identified by the vocational rehabilitation staff following completion of a comprehensive assessment. Once identified, a Veteran Buddy, under the supervision of a designated site supervisor:

- Provides close observation of CLC residents
- Assists in the provision of a safe and clean environment
- Promotes the therapeutic environment and the efficiency of the nursing team
- Provides assistance with activities, unless the Veteran’s needs are such that adverse health consequences are predictable

“The staff also offers a comprehensive training package to potential buddies,” Yarrington said. “It’s a very practical approach that includes such things as learning about the nursing call system, infection control procedures and protected health information.”

Follow-up refresher training occurs after one week; progress reviews after the first two weeks and monthly until the Veteran Buddy completes his or her assignment within the CWT program.

Results

The number of falls was reduced from 74 in fiscal year 2012 to just 26 in fiscal year 2013—a nearly 65 percent reduction in falls. “And by the end of the third quarter of calendar year 2013, we have had no falls reported in the CLC,” Yarrington stated, “which is a testament to the commitment of our staff, the falls team and our Butler Buddies.”

Moving Forward

Continuing to gather and disseminate accurate and timely information so that interventions can be monitored, data recorded and measured for effectiveness is of great importance, but only one of the keys to future success.

“The real key to implementation of an effective falls prevention program requires team dedication and team effort,” Yarrington stated, “or as we say ‘share the road and share the load.’ That’s because efforts like this aren’t confined to creating a new program or initiative—it’s really about cultural transformation. Getting people to do things in a new way that advances our standard of care.”

The Tornadoes

- George Yarrington R.N., Village of Valor clinical manager
- David Portman, CLC pharmacist
- Suzanne Schaefer, physical therapist
- Rhonda Mough, M.D., CLC provider
- Eric Podchaski, M.D., geropsychologist
- Shawn Stanton, physical therapist

Reference

1. A virtual breakthrough series allows VA teams, often with members in different geographic locations, to meet by phone or video conference, rather than face-to-face. Such a series allows for effective sharing of ideas while avoiding travel expenses and staff time lost in travel. VA employees interested in further information: NCPS@va.gov

2. Compensated Work Therapy (CWT) is a VA vocational rehabilitation program that endeavors to match and support work-ready veterans in competitive jobs, and to consult with business and industry regarding their specific employment needs. In some locations CWT is also known as Veterans Industries; these designations are synonymous.
program, and what we are doing now, is right on the mark when it comes to what high-reliability organizations are doing,” he continued, “but we are always open to learning something new.”

“In this case, it turned out to be observing how the airline heavily emphasizes with crews the importance of ‘expanding the team’ when faced with a problem or a decision,” said Sculli. “For instance, when we observed an instructor pausing a simulation to discuss how best to handle an aircraft abnormality, the exact words of the flight crew were ‘expand the team,’ really driving home the importance of teamwork and using resources.”

Using the specific term “managing known threats,” was another point of emphasis. “This means taking time to think about and discuss known risks or threats to safety and developing a plan to deal with them beforehand,” he said. “It’s about vigilance, thinking ahead and being prepared.”

“We left the experience with a renewed sense of commitment to our mission,” said Sculli. “Health care is lagging behind other industries when it comes to teamwork, communication and threat management. Any new term or point of emphasis can help us find ways to better teach clinicians how to practice CRM. Quite frankly, we are in the business of cultural change, so any time we can learn a new way to get a key concept across it’s really helpful.”

The second part of the visit was spent observing a flight crew during a pre-flight briefing with their instructor and in the simulator “flying the aircraft.” Of particular interest was the manner in which the crew conducted briefings, managed automation, used checklists during normal operations, and worked together as a team when handling abnormalities.

“In addition to the actual flying skills, the captain was clearly trained to manage the crew, not just the aircraft,” he said. “The key being to manage abnormalities in such a way that pulls in all the resources at the crew’s disposal.” This is right in line with what we are trying to convey to health care workers: teamwork, resource management, leadership, advocacy – ensuring people feel free to speak up if they see something that is unsafe.”

Sculli was accompanied at Delta’s simulation center by Dr. Robin Hemphill, VHA chief safety and risk awareness officer, and director, NCPS.

“It was a great experience,” she said. “The team concepts we are teaching clinicians are commensurate with what the airlines are doing – and we have adapted those concepts to health care quite well.”

As a long-time emergency room physician, Dr. Hemphill found the team work displayed by the flight crew to be exemplary. “Whether you are a captain of an aircraft or a lead physician in the emergency room, teamwork is critical. The more efficient the team, in our case, the more likely a successful outcome for the patient,” she said.

“We hope to continue our relationship with Delta in the future,” said Dr. Hemphill, “and send other staff members to learn first-hand how aviation simulations are conducted.”

High-fidelity human patient simulators are an important aspect of NCPS’ team training efforts. “Allowing other staff members to witness how aviation simulation is conducted can lead to new ideas on how to better our simulation training,” she continued. “If a new technique can be adapted to health care, we can better carry out our mission and reduce risk for our hospitalized Veterans.”