Qstream Helps Houston Methodist Staff to Recognize Under-Diagnosed Condition

Seventy-eight percent of hospital personnel using the mobile learning platform called the approach "enjoyable" or "extremely enjoyable"

Delirium in the elderly patient often goes unrecognized and its low recognition is one of the most significant problems in geriatrics today. Some 14%-24% of hospitalized patients over the age of 70 have the condition at the time of hospital admission, with greater than 54% incidence in the general hospital population. Houston Methodist Hospital sought to improve knowledge of issues surrounding delirium among an interdisciplinary healthcare team.

Using a mobile, game-based reinforcement platform from Qstream, Houston Methodist Hospital was able to drive expanded awareness of delirium among hundreds of staff members – in just minutes a day at their convenience, and in an engaging, memorable way.

The Challenge

Houston Methodist Hospital is a non-profit health care organization based in Houston, Texas, which is consistently named to U.S. News & World Reports' "Best Hospitals" list. The facility oversees over 35,542 inpatients each year, aiming to provide high quality, cost-effective healthcare to the people it serves.

As part of a quality improvement initiative, Houston Methodist wanted to significantly increase the rate of recognition of delirium. Clinicians often do not recognize the condition as a severe problem, do not know how to diagnose it, and are unaware that it may be prevented with improved methods of care. The hospital obtained CMS funding to target interdisciplinary members of the healthcare team – physicians, nurses, nurse practitioners, speech and occupational therapists – who are in positions where they can catch simple warning signs for delirium and thereby preference it.

The Solution

In January 2012, Houston Methodist deployed the first of three "Qstreams," where users receive Q&A-format challenges on delirium every other day that they answer from their mobile device or laptop. The approach adapts to individual performance while allowing participants to respond to questions in just to 3 to 5 minutes a day at their convenience – without requiring the hospital to staff and schedule in-service sessions on site, or requiring participants to find time to attend them.

Developed at Harvard Medical School, Qstream uses a "spacing and testing" methodology that is scientifically proven to increase knowledge retention by up to 170% and change clinical practice patterns to improve patient outcomes. Qstream then analyzes response data in real-time to deliver predictive, actionable insights to supervisors, including areas for improvement.

The Results

The first Qstream on "Delirium Impact and Recognition" enrolled approximately 456 clinicians with over three quarters of participants completing the challenges, calling the approach "enjoyable" or "extremely enjoyable" – the top two ratings on a five-part scale. The program was so successful that additional Qstreams were launched to target non-clinical staff such as medical technologists and at home-based caregivers – others who can become empowered to recognize and act upon warning signs.

"By using an educational intervention that includes a commonly used diagnostic screening algorithm for delirium, and delivering this intervention to all members of the health care team, Houston Methodist hopes to significantly increase the rate of recognition of delirium."

About Houston Methodist

Houston Methodist is a non-profit health care organization based in Houston, Texas. It has extended the world-renowned clinical and service excellence of its founding entity, Houston Methodist Hospital, through a network of community hospitals. Affiliated with the Texas Annual Conference of the United Methodist Church, Houston Methodist works closely with local church leaders to bring compassion and spirituality to all its endeavors and to help meet the health needs of the community. Houston Methodist is comprised of a leading academic medical center in the Texas Medical Center® and four community hospitals serving the greater Houston area. Houston Methodist Hospital, the system's flagship, is consistently listed among U.S. News & World Report's best hospitals.