Newly approved hearing-impaired device available at Rhode Island Hospital

Demand for hybrid cochlear implants continues to grow

PROVIDENCE – Nearly 3,000 Rhode Island adults have hearing loss so severe that the most powerful hearing aids on the market can't help them hear much. These adults have a new reason to seek reevaluation of their hearing loss: Hybrid cochlear implants, now available at Rhode Island Hospital. The device, approved by the Food and Drug Administration last year is a combination of a hearing aid and a traditional cochlear implant for those with some residual hearing function but not enough loss to be a traditional cochlear implant candidate.

"For persons with severe hearing loss, this new hybrid device can restore the ability to hear mid- and high-frequency sounds," said **BRIAN DUFF, MD**, chief of otolaryngology at Rhode Island Hospital. "For the 1.2 million Americans who suffer hearing loss that cannot be improved with hearing aids and who aren't eligible for traditional cochlear implants, this device brings new hope."

The Cochlear Nucleus Hybrid L24 Cochlear Implant System combines the functions of a traditional cochlear implant with a hearing aid. The device is surgically implanted through an opening in the mastoid bone into the cochlea (inner ear) and later calibrated by an audiologist.

Most patients who benefit from this type of implant have difficulty understanding speech or listening where high background noise impedes their ability to interact with others and remain independent. Fewer than six percent of potential cochlear implant candidates have one.

"Studies have shown that those with even a mild hearing loss, if left untreated, are twice as likely to develop dementia," said Dr. Duff. "Importantly, there's a 95 percent chance of the implant functioning effectively during the patient's lifetime."

The outpatient surgery takes approximately two hours. After a four-week healing period, the audiologist turns the device on and adjusts the levels to the comfort of the patient. Additional adjustments are performed as patients adapt to their listening environments. The devices can even sync with smartphones and iPods. ❖

Total Joint Center at Miriam launches quality improvement initiative

National database helps assess pain, function before and after joint replacement surgery

PROVIDENCE – The Total Joint Center at The Miriam Hospital has implemented a new data collection and analysis system that delivers real-time information on patients' pain and physical function. Known as the Function and Outcomes Research for Comparative Effectiveness in Total Joint Replacement (FORCE-TJR), this database registry enables Total Joint Center physicians to target the best methods for relieving pain and improving patients' activity and track and report functional patient outcomes.

"We care about our patients and how they are doing," said **JOHN FROEHLICH, MD**, program director of the Total Joint Center, "and by readily accessing this important patient assessment information – often direct from the patient – we will be better able to help them regain that sense of independence that is so important to them."

Developed by The University of Massachusetts Department of Orthopedics and Physical Rehabilitation, the FORCE-TJR system guides best total joint replacement surgical practices by ensuring primary joint replacement patients achieve optimal pain relief and functional gain with minimal adverse events and implant failures. The tool measures patient-reported outcome data, as well as surgeon performance, and rates hospitals against national standards. Protected data is collected largely from voluntary patient surveys. It includes patient-reported outcomes of pain, function, and other conditions that could impact a patient's individualized treatment plan, such as early post-operative adverse events and implant failures – and includes corrective measures to address them.

The benchmark database for FORCE-TJR includes a nationally representative sample of patients with complete outcomes from more than 85 percent of total joint replacement patients – more than any U.S. registry. Patient-reported data is augmented with clinical data, allowing surgeons to monitor patient progress and evaluate treatment effectiveness. The database also provides surgeons with comprehensive and comparative arthroplasty practice feedback to support quality improvement efforts.

FORCE-TJR originated in 2010 with an award from the Agency for Healthcare Research and Quality (AHRQ) and includes a national sample of U.S. patients and surgeons. As of 2015, more than 25,000 patients have been enrolled from more than 150 surgeons in 23 states. The unique AHRQ cohort forms the basis for clinical benchmarks in TJR outcomes and risk-adjustment models. In 2015, FORCE-TJR opened membership to additional surgeons and patients from members across the country and is currently enrolling new members.

"This is about quality of life for our patients," said **ROY AARON, MD**, director of research at The Total Joint Center at The Miriam Hospital, "and always seeking implementation of the newest best practices and standards of care that enable us to continue to deliver the highest quality of care to our patients." ❖