

## **Medtronic TYRX(TM) Neuro Absorbable Antibacterial Envelope now Available for Use with Implantable Neurostimulators**

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**DUBLIN - October 8, 2015** - Medtronic plc (NYSE: MDT) today announced the first implants of the TYRX(TM) Absorbable Antibacterial Envelope with Medtronic Deep Brain Stimulation (DBS) systems. The implants were conducted by Francisco Ponce, M.D., director, Barrow Center for Neuromodulation, at the Barrow Neurological Institute in Phoenix. Medtronic recently received FDA clearance for the TYRX Neuro Absorbable Antibacterial Envelope for use with implantable neurostimulators (INS), and the product is now commercially available across the United States as an option for use with all DBS systems. In the coming months, Medtronic also plans to make the TYRX Absorbable Antibacterial Envelope available as an option for use with implantable neurostimulators to treat chronic pain and bladder and bowel control disorders.

The TYRX Absorbable Antibacterial Envelope is a mesh envelope that securely holds an INS or cardiac implantable electronic device (CIED). It is designed to stabilize the device after implantation while releasing two antimicrobial agents, minocycline and rifampin, over a minimum of seven days to help prevent surgical-site infections, which are associated with substantial morbidity, mortality and cost.

"The TYRX Neuro Absorbable Antibacterial Envelope is a much needed and long awaited solution to the risk of infection related to implantable neurostimulators. It is going to be the standard of care in my practice," said Dr. Ponce. "I am excited about this technology and the potential clinical and economic benefits it may offer our patients, our practice, and the healthcare system."

The TYRX Absorbable Antibacterial Envelope is fully absorbed by the body approximately nine weeks after implantation. The TYRX Absorbable Antibacterial Envelope is FDA-cleared for use with CIEDs (pacemakers, implantable cardioverter-defibrillators, and cardiac resynchronization therapy devices), and INS systems (deep brain stimulators, sacral nerve stimulators, spinal cord stimulators and vagus nerve stimulators), and has received CE Mark for use with CIEDs. Medtronic acquired U.S.-based TYRX in January 2014.

"Medtronic is committed to providing technologies that improve patient outcomes," said Lothar Krinke, vice president and general manager of the Brain Modulation business at Medtronic. "Reducing the risk of infection is very important as patients and their physicians consider DBS as a treatment option."

"Extensive data has been collected on the clinical efficacy and economic value of the TYRX antibacterial envelope with implanted cardiac devices, and we are now pleased the envelope can be used for patients receiving neuromodulation devices, including those for deep brain stimulation," said Rebecca Seidel, general manager of the Infection Control business, part of the Cardiac Rhythm and Heart Failure division at Medtronic.

Medtronic developed and leads the field of neuromodulation, the targeted and regulated delivery of electrical pulses and pharmaceuticals to specific sites in the nervous system. The company's Neuromodulation business includes medical systems for the management of chronic pain, movement disorders, severe spasticity and urologic and gastrointestinal disorders.

### **About Medtronic DBS Therapy**

Medtronic DBS Therapy is currently approved in many locations around the world, including Europe and the United States, for the treatment of the disabling symptoms of essential tremor, advanced Parkinson's disease, and chronic intractable primary dystonia, for which approval in the United States is under a Humanitarian Device Exemption (HDE).

Medtronic DBS Therapy is also approved for the treatment of severe, treatment-resistant obsessive-compulsive disorder in the European Union and Australia, and in the United States under an HDE. Additionally, the therapy is approved to treat medically refractory epilepsy in regions including Europe, Australia, Canada, and several countries within Latin America and Asia. More than 135,000 people have received Medtronic DBS Therapy since it was first introduced more than 25 years ago.

### **About Medtronic**

Medtronic plc ([www.medtronic.com](http://www.medtronic.com)), headquartered in Dublin, Ireland, is among the world's largest medical technology, services and solutions companies - alleviating pain, restoring health and extending life for millions of people around the world. Medtronic employs more than 85,000 people worldwide, serving physicians, hospitals and patients in more than 160 countries. The company is focused on collaborating with stakeholders around the world to take healthcare Further, Together.

**Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on file with the Securities and Exchange Commission. Actual results may differ materially from anticipated results.**

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