New Data Reinforce Benefits Of Abbott's BurstDR™ Spinal Cord Stimulation For People Living With Chronic Pain

- Data from two recent studies presented at NANS 2019 demonstrate key benefits of BurstDR™ stimulation

- Microdosing BurstDR stimulation at lowest effective energy allows patients to manage their pain without the burden of recharging their devices

- Additional data further showed switching from other types of SCS therapies to Abbott's BurstDR stimulation significantly reduced pain and the need for opioid medication

ABBOTT PARK, Ill. and LAS VEGAS, Jan. 19, 2019 — Abbott today announced positive results from a new multicenter study of the company's BurstDR™ stimulation which showed that lower-energy, intermittent doses of BurstDR stimulation — known as "microdosing" — can provide pain relief that is just as effective as standard doses of BurstDR stimulation in people with chronic intractable pain.

The **B**urstDR micr**O**dosing stimu**L**ation in **D**e-novo patients (**BOLD**) study, presented at the 22nd Annual North American Neuromodulation Society (NANS) meeting, shows a potential way to prolong the battery life of a patient's spinal cord stimulation (SCS) device while offering optimal pain relief. The research may also provide a path toward ensuring lower-maintenance recharge-free SCS devices offer similar battery longevity as rechargeable SCS systems, which carry a higher burden for patients.

In a separate study called **BURST(able),** also presented at NANS 2019, data showed that patients who no longer received effective pain relief from their SCS therapy experienced restored pain control and reduced opioid dependency when they switched to an Abbott device offering the BurstDR waveform. Loss of pain relief is the most common cause for patients seeking an explant of their SCS system, and combatting this loss of efficacy addresses one of the key problems seen in long-term SCS therapy.

"BurstDR stimulation has been used clinically now for many years and these latest data indicate that we've just scratched the surface of what's possible," said Allen W. Burton, M.D., medical director of Abbott's Chronic Pain Therapies. "Our goal is to continue studying BurstDR stimulation to maximize its potential, even at extremely low doses, and allow people with chronic pain to live their best lives without the burden of recharging their devices and the fear of losing efficacy over time."

Approximately 1.5 billion people around the world are affected by chronic pain. SCS delivers a low-voltage electrical current through the spine to block the sensation of pain and offers an important alternative to opioid therapy. While traditional SCS systems produce therapeutic waveforms that are delivered at a consistent frequency and charge, Abbott's unique BurstDR stimulation works differently from other stimulation devices, utilizing proprietary technology to produce intermittent pulses — or bursts — designed to mimic the body's natural nerve impulse patterns. Abbott is the only company approved to offer BurstDR stimulation to patients in the U.S. and international markets.

Microdosing BurstDR Stimulation for Longer Pain Relief and Improved Battery Life

The (**BOLD**) study differentiates BurstDR stimulation from all other forms of stimulation in the ability to have proven effectiveness at low doses. Forty patients enrolled in the study started with a trial period using "microdosed" BurstDR stimulation before moving to an implanted device if they achieved at least a 50 percent reduction in pain. Physicians then determined the lowest effective dose of BurstDR stimulation that still delivered equivalent or improved pain relief compared to the patient's trial. Results from the study showed:

- 100 percent of patients experienced pain relief with less than 6 hours of battery use per day; and
- 43 percent of patients achieved pain relief with less than 2 hours of battery use per day.

"While stimulation with BurstDR has been shown to provide superior efficacy compared to traditional stimulation in previous studies, battery consumption is an important consideration for physicians as we look to maximize the life of the devices for our patients and control their pain," said Timothy Deer, M.D., DABPM, president and chief executive officer of The Spine and Nerve Center of the Virginias in Charleston, W. Va., and primary investigator of the trial. "This new data reinforces the benefits of BurstDR stimulation but also shows that microdosing BurstDR stimulation may help us extend device battery life for patients, which may help improve patient satisfaction with their SCS therapy."

BurstDR Therapy: An Improved SCS Option for Patients Battling Reduced Pain Relief

A non-industry sponsored, retrospective, multicenter study, **BURST(able)** evaluated patients who had experienced a loss of pain relief from their non-Abbott SCS systems and switched to an Abbott device offering BurstDR waveform. Following the surgical replacement of their new system, patients who had experienced minimal pain relief (24-26 percent) from competitive SCS systems reported:

- 60-70 percent reduction in their pain; and
- 41-52 percent reduction in their opiate consumption.

"As a pain specialist, one of the most difficult things to combat is patients developing a tolerance to their therapy and seeing SCS therapy lose efficacy over time," said Corey Hunter, M.D., interventional pain specialist at the Ainsworth Institute of Pain

Management, assistant clinical professor at Mount Sinai Hospital and primary investigator of the BURST(able) study. "Loss of efficacy often leads to patients reverting back to chronic opioid therapy or left with no good alternative therapy options. I'm encouraged to see that, by switching to Abbott's BurstDR stimulation, we can offer patients a neuromodulation treatment that is safe and effective while reducing reliance on opioid medication, regardless of their prior treatment."

For important safety information about BurstDR therapy, visit: abbott.com/isi.

About Abbott's Chronic Pain Portfolio

Chronic pain affects approximately 1.5 billion people worldwide. The condition can negatively impact personal relationships, work productivity and a person's daily routine. Abbott is a global leader in the development of chronic pain therapy solutions, offering radiofrequency therapy and spinal cord stimulation therapy solutions, including BurstDR stimulation, and stimulation of the dorsal root ganglion for the treatment of chronic pain.

About Abbott

At Abbott, we're committed to helping people live their best possible life through the power of health. For more than 125 years, we've brought new products and technologies to the world — in nutrition, diagnostics, medical devices and branded generic pharmaceuticals — that create more possibilities for more people at all stages of life. Today, 99,000 of us are working to help people live not just longer, but better, in the more than 150 countries we serve.

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