GLOSSARY OF TERMS

- **Adjunctive Therapy**: A treatment option that is prescribed for use in combination with other treatment options; also referred to as “add on” therapy.

- **AEDs**: Antiepileptic Drugs are prescribed to treat seizures associated with epilepsy. There are approximately 20 AEDs currently available worldwide.

- **AspireHC®**: The AspireHC generator represents the fifth generation of VNS Therapy technology and was FDA approved in February 2011. This product incorporates special features and functionality for the benefit of patients and their physicians, including enhanced battery life, electronics and features that simplify programming. The AspireHC is particularly beneficial for patients that require higher stimulation parameters.

- **Ketogenic diet**: A high-fat, low-carbohydrate, highly regimented diet sometimes prescribed to treat drug-resistant epilepsy. Typically prescribed to treat children between the ages of one and twelve who have seizures that are hard to control, the diet causes the body to burn fat for energy instead of glucose (a state called ketosis). The diet has enabled some children to have fewer seizures and others to stop having seizures altogether. However, the diet is difficult to continue long-term.

- **Modified Atkins diet**: A diet similar to the traditional ketogenic diet except there are no restrictions on proteins, fluids or calories; nor it does not start in the hospital or with fasting.

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**Refractory or Drug-Resistant Epilepsy:** Epilepsy is considered refractory, or drug-resistant, when seizures are not adequately controlled by antiepileptic drug therapy or when intolerable side effects from drug therapy prevent patients from continuing with treatment. One study shows that once an AED is unsuccessful controlling seizures, the chances of successful treatment with subsequent AEDs are significantly reduced. In 2009, the International League Against Epilepsy (ILAE) published a consensus statement defining drug resistant epilepsy as “failure of adequate trials of two tolerated and appropriately chosen and used AED schedules... to achieve sustained freedom.”

**Seizures:** A change in function related to abnormal electrical activity in the brain. Intermittent bursts of electrical energy sometimes interrupt the normal flow of electrical impulses between nerve cells. This interruption can affect consciousness, muscle control, bodily movements or sensations. Seizures are classified in the following two types:

- **Partial Seizures:** Partial seizures start in a particular area or areas of the brain.

- **Generalized Seizure:** The source of a primary generalized seizure cannot be identified. They appear to involve the whole brain from the beginning.

**SUDEP:** Sudden Unexplained Death in Epilepsy, a death for which no cause can be found except for the individual having had a history of epilepsy.

**Vagus Nerve:** The vagus nerve is a cranial nerve and serves as one of the primary communication pathways between the body and the brain. It has both motor and sensory functions.

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Vagus Nerve Stimulation Therapy (VNS Therapy®): The VNS Therapy system, manufactured by Cyberonics, Inc., Houston, Texas, is indicated in the U.S. for use as an adjunctive therapy in reducing the frequency of seizures in adults and adolescents over 12 years of age with partial onset seizures, which are refractory to antiepileptic medications. Available in Europe since 1994 and United States Food & Drug Administration (FDA)-approved in 1997, VNS Therapy is the only device-based treatment approved for epilepsy. VNS Therapy consists of an implanted pacemaker-like device that delivers mild, intermittently pulsed signals to the patient’s left vagus nerve, which then activates various areas of the brain. Roughly the size of a small watch and weighing less than one ounce, the generator is typically implanted in the patient’s left chest area. A thin thread-like wire, attached to the generator, runs under the skin to the left vagus nerve in the neck. The device is programmed via an external telemetric wand and special software to stimulate the vagus nerve at regular intervals, 24 hours a day. In the European Union, VNS Therapy is approved for use as an adjunctive therapy in reducing the frequency of seizures in patients whose epileptic disorder is dominated by partial seizures (with or without secondary generalization) or generalized seizures that are refractory to antiepileptic medications.

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