MUSC Handout
Descriptions For Members Of The Epilepsy Team & Glossary
AS AN ACADEMIC MEDICAL CENTER, MUSC offers benefits to the residents of South Carolina and beyond. The highly dedicated, professional team focuses on providing the most effective therapies available while also striving to develop new therapies within a highly active basic and clinical research program. These efforts are backed by facilities with the latest technology. This resource was developed to help patients understand more about their condition, treatment, or procedure. This handout is meant to be used as a guide to supplement your healthcare providers instructions. It is not intended to be used as a substitute for professional medical care. Only your physician can diagnose and treat a medical condition. Please consult your physician if you have any questions.

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**Attending:** a medical doctor (MD or OD) who has completed medical school, residency, and often a specialized fellowship

**Fellow:** a medical doctor (MD or OD) who has completed medical school and residency, and is in the process of getting extra, more specialized training in a particular area of medicine.

**Resident:** a medical doctor (MD or OD) who has completed medical school and is getting extra training in a broader area of medicine (such as internal medicine, family medicine, and/or general neurology). Most residencies in medicine are 3-4 years. Surgical residencies can last even longer.

**Neuropsychologist:** Neuropsychologists are licensed professionals within the field of psychology. Most have general training in psychology and a doctorate degree (PhD) with additional years of post-doctoral training in clinical neuropsychology. Psychologists have an advanced degree in psychology, although they are not a MD.

**Nurse Practitioner (NP-C):** A Registered Nurse who has completed Master’s level training in the diagnosis and treatment of medical problems. NP’s must successfully complete a national board exam in order to be licensed. To remain certified NP’s must complete a minimum number of hours in clinical practice and a certain number of continuing education hours. Alternatively, they may take a recertification exam every five years. Like Physician Assistants, the laws that govern what an NP can and cannot do are different in every state.

**Physician Assistant (PA-C):** A professional trained in the practice of medicine. Most PA’s have a Master’s Degree, and all have completed 2-3 years of training through a nationally accredited program, and have passed a national exam. PA’s must get 75 hours of continuing education every two years and pass a recertification exam every six years. Like Nurse Practitioners, the laws that govern what a PA can and cannot do are different in every state.
Speech Language Pathologist: Speech-language pathologists, sometimes called speech therapists, assess, diagnose, treat, and help to prevent disorders related to speech, fluency, voice, language, and swallowing. Speech language pathologists have a master’s degree and must pass a national examination. They must also complete continuing education courses for licensure renewal.

Registered Nurse: A professional who has graduated from an accredited school of nursing and is licensed by the State as a Registered Nurse (RN). RNs help provide patient education and coordinate patient care. RNs must complete a specific number of clinical hours and continuing education credits every two years to maintain state licensure.

Registered Dietitian: A professional who has earned at least a four year degree that meets national standards for training in dietetics. An “RD” must also complete a supervised practice in nutrition (usually 9 months-2 years), and have passed the national board exam.

Social Worker: A professional that holds a Bachelor’s or Master’s Degree and may be licensed or registered. Social Workers help individuals and families cope with issues related to their medical conditions. They help patients find resources and help with coordination of care.
GLOSSARY

**1.5T MRI:** A certain type of MRI that takes pictures of the brain; the “T” stands for Tesla.

**3T MRI:** A certain type of MRI that takes pictures of the brain. These pictures are a little sharper than the ones from 1.5T MRI’s; the “T” stands for Tesla.

**Absence seizure:** Seizures that look like brief episodes (usually only a few seconds) of staring, where the person does not know what is going on around them. There is no warning before seizure, and the person will be back to normal right away, as if nothing has happened. Some people used to call these “petit mals.”

**Adverse effect:** an unwanted effect from a medication or other treatment; a side effect.

**Ambulatory EEG monitoring:** EEG test done outside the hospital for 24-48 hours; the patient may walk around and carry on as usual while the EEG is recording.

**Americans with Disabilities Act:** civil rights law that makes it illegal to discriminate against people with disabilities; the act applies to employment, access to public places, and need for accommodation.

**Amygdala:** A small part of the brain that takes in the information, weighs its emotional meaning, and plan a proper response.

**Anticonvulsant:** a name for medicines that treat seizures. These medicines are also called antiepileptic drugs “AED”.

**Atonic seizure:** a type of seizure where the person will suddenly fall to the ground (also called “drop attacks”).

**Aura:** a warning before a seizure; there are many types of auras, and they can affect vision, taste, hearing, smell, emotions, and the way the body feels.

**Automatism:** automatic movements during a seizure; it may look like lip-smacking, chewing, or fumbling with the hands or fingers.
Brand-name drug: a medicine made by a certain company under a trademark-protected name; usually more expensive but also be more uniform in the amount of drug and the way it is made.

Catamenial: referring to menses or menstruation (a woman’s “period”). Catamenial seizures are seizures that get worse during menses.

Clonic: jerking or convulsions caused by muscle spasms.

Complex partial seizures: a seizure that involves only one part of the brain and impairs consciousness.

Computed Tomography (CT): a “CT scan” (also called a CAT scan), uses x-rays and computers to create pictures of the inside of the body. It is very good at finding bleeding or other urgent problems with the brain.

Convulsion: an older name for a tonic-clonic seizure.

Corpus callosum: nerve fibers that connect the two halves (“hemispheres”) of the brain; helps the two hemispheres communicate and share information.

Corpus callosotomy: a surgery that disconnects the two halves of the brain in order to reduce “atonic” and “tonic-clonic” seizures.

Cortical dysplasia: An area of the brain that did not develop normally. As a result there may be problems with the brain cells in this area and this may cause seizures.

Déjà vu: feeling as if one has lived through or experienced this moment before; may occur in people without medical problems or just before a seizure.

EEG (electroencephalogram): a test that records brainwaves and helps to detect epilepsy.

Electrode: a small disk that attaches to the head to send data to the EEG machine.

Encephalitis: inflammation of the brain (usually caused by a virus).
**Epilepsia partialis continua**: a seizure that does not stop by itself, and causes muscles to tighten or jerk (usually in the face, arm, or leg); usually the person does not lose awareness.

**Epilepsy**: a chronic disorder of the nervous system that causes seizures. The seizures may or may not include a change in awareness, strange movements, or behaviors.

**Epileptiform**: related to epilepsy.

**Epileptogenic**: causing epilepsy.

**Epileptologist**: a neurologist with special training in epilepsy.

**Febrile seizure**: seizure associated with high fever in children aged 3 months to 5 years, usually a tonic-clonic seizure; not harmful in most cases.

**Focal seizure**: Seizure that begins in one area of the brain (also called partial seizures).

**Focus**: the part of the brain where seizures start.

**Frontal lobe**: the largest part of the brain; extending from the forehead to behind the ear; it controls movement on the opposite side of the body (the left half of brain controls movement on the right side of the body and vice versa); also plays a role in complex thinking, controlling behavior, and speech.

**Generalized seizure**: seizure that involves both sides of the brain and causes tonic-clonic movements, absence, or atonic seizures.

**Generic drug**: a drug that is chemically identical to the related brand name drug; for example, lamotrigine is a generic drug used for Lamictal (the name brand); generics are usually less expensive, and often work just as well.

**Grand mal**: older term for a tonic-clonic or convulsive seizure.

**Hemianopsia**: a pattern of vision loss involving one half of the visual field.
Hemiparesis: weakness of one side of the body.

Hemiplegia: paralysis on one side of the body.

Hemispherectomy: a surgery to remove a side of brain (one hemisphere); today the surgery often disconnects one half of the brain instead of removing it.

Hippocampus: part of the brain that makes new memories and also helps with learning.

Hydrocephalus: a back up of fluid (cerebrospinal fluid) in the brain.

Hyperventilation: taking fast, deep breaths; may be done during EEG to see how fast breathing changes brainwaves.

Ictal: referring to the time during a sudden attack, such as a seizure or stroke.

Idiopathic: means the cause is not known.

Individuals with Disabilities Education Act (IDEA): a law that says handicapped children must get an appropriate education in the least limiting setting at no cost.

Infantile spasms: sudden jerk followed by stiffening; spasms usually begin between 3-12 months and usually stop by age 2-4 years, although other seizure types often develop; in some seizures, the arms are flung out as the body bends forward (“jackknife seizure”), but in others the movements are more subtle.

Interictal: the time between seizures.

Intractable: difficult to cure; for example, “intractable seizures” are difficult to control with medicine.

Investigational drug: a drug available only as part of a study because it hasn’t yet been approved by the FDA to be useful and/or safe.
Juvenile myoclonic epilepsy (JME): a primary generalized epilepsy syndrome, usually beginning between ages 5-17 years (but can “show up” later). People with JME may have myoclonic (muscle jerk) seizures and possibly also absence and tonic-clonic seizures.

Ketogenic diet: high fat, low carbohydrate diet used to control seizures.

Landau – Kleffner syndrome: childhood disorder with a drop in language skills and frequent epilepsy waves on the EEG.

Lennox – Gastaut syndrome: disorder that begins in childhood, with infantile spasms, delays or mental retardation, seizures that do not respond well to treatment, and a certain pattern on the EEG.

Lesion: in epilepsy to word “lesion” refers to a part of the brain that is not normal and may or may not cause a problem. This may be damage from an accident, a tumor, an abnormal blood vessel, or a part of the brain that didn’t develop correctly.

Lesionectomy: surgery to remove a brain lesion.

Lobe: a section of the cerebrum, which is the largest part of the brain. There are four lobes in each half of the cerebrum: frontal, temporal, parietal, and occipital.

Magnetic Resonance Imaging (MRI): a scan that uses magnets to take pictures of the inside of the body and the brain.

Magnetic Resonance Spectroscopy (MRS): a scan that gives information about the natural chemicals in the brain.

Magnetoencephalography (MEG): a test that measures brain activity and helps “track down” the areas where seizures start and can also show what different parts of the brain do.

Meningitis: an infection of the layers that cover the brain; a spinal tap (lumbar puncture) may show if the infection is caused by bacteria or a virus.
**Migraine:** a throbbing headache that is often greater on one side and worse with bright light or loud noises. Before a migraine the person might have a warning (an “aura”). During a migraine the person may feel sick to their stomach; in rare cases, weakness, language problems, or confusion may also be a problem during the headache.

**Myoclonic jerk:** brief muscle jerk; may involve muscles on one or both sides of the body; most people have these while sleeping or falling asleep, and they are only a problem if they happen at other times.

**Neurologist:** a doctor who has extra training in treating problems of the nervous system such as epilepsy, multiple sclerosis, or Parkinson’s disease.

**Neuron:** a single nerve cell; neurons are the building blocks of the nervous system; for example, the brain is made up of billions of neurons.

**Non-epileptic event (NEE):** an episode that looks like an epileptic seizure but does not result from abnormal brain electrical activity; these may be caused by psychological or emotional trauma. Since they are not actually seizures they usually do not respond to seizure medicine and should be treated with counseling and behavior therapy.

**Occipital:** the back part of the brain; needed for vision.

**Parietal lobe:** the top part of the brain; allows a person to understand what he or she is touching, tasting, smelling, as well as pain and temperature.

**Partial seizure:** a seizure that starts in one part of the brain.

**Petit mal:** older term for absence seizure; often used incorrectly to refer to any seizure that is not a convulsion.

**Photic stimulation:** to flash strobe lights in the eyes (which may be closed) of a person; used during the EEG to detect photosensitive epilepsy.

**Photosensitive epilepsy:** a type of epilepsy where certain lights can provoke seizures.
Positron emission tomography (PET): a scan that uses a special sugar to measure activity in the brain. The part of the brain that causes seizures may look dark if the person is not having a seizure during the scan, and bright if they are having a seizure. This test is most helpful in people who want surgery for temporal lobe epilepsy.

Postictal: refers to the period of time after a seizure; for example, if someone does not seem like themselves just after a seizure it is called a “postictal change.”

Psychogenic seizure (AKA “pseudoseizure”): an outdated name for non-epileptic event.

Refractory: a condition that does not respond easily to treatment.

Rolandic Epilepsy: an epilepsy syndrome of childhood. This is diagnosed by EEG, and many cases are easily controlled with medication. When it is easily controlled it is called “BenignRolandic Epilepsy,” because the majority of children with this type of epilepsy will outgrow it by the late teen years.

Seizure: a change in behavior, feelings, or movement that is caused by repeating, abnormal electrical discharges from brain cells.

Seizure threshold: minimal conditions that produce a seizure; in other words, the lower a person’s seizure threshold, the more likely they are to have a seizure.

Sharp wave: a pattern on EEGs that may be caused by epilepsy; some sharp waves are “benign” and are not related to seizures.

Simple partial seizure: an epileptic seizure that involves only part of the brain and does not change consciousness.

Single photon emission computed tomography (SPECT): a test that uses a special dye to measure blood flow in the brain; the dye must be injected as soon as a seizure starts, so this test is done in the hospital. A separate injection is given on a different day when the person is not having a seizure, so the results of the two tests can be compared.
**Sleep Myoclonus:** Non-epileptic jerking motions that may happen when asleep or falling asleep. These jerks are normal and are also called hypnagogic jerks. Myoclonus is only abnormal if it happens while waking up or when wide awake.

**Spike:** an EEG pattern that can be related to seizures; “benign” spikes are not associated with seizures.

**Status epilepticus:** a prolonged seizure (usually defined as lasting longer than 30 minutes) or a series of repeated seizures; a continuous state of seizure activity; may occur on almost any seizure type.

**Sturge – Weber syndrome:** a disorder of blood vessels in the skin, eyes, and brain; brain involvement may cause seizures.

**Symptomatic Epilepsy:** referring to a disorder with an identifiable cause; for example, severe head trauma can cause symptomatic epilepsy

**Syncope:** fainting.

**Temporal lobe seizure:** a simple or complex partial seizure that starts in the temporal lobe of the brain.

**Thalamus:** this is a deep brain structure that sends sensory and motor impulses between the rest of the brain and the body.

**Therapeutic blood level:** the amount of drug in the blood that controls seizures without troublesome side effects in most people.

**Tic:** repeated involuntary contractions of muscles; example: rapid head jerks or eye blinks common in Tourette's syndrome; tics may be under partial voluntary control, and are not epileptic.

**Todd's paralysis:** weakness for a short amount of time after a seizure; can refer to several temporary problems after seizures, such as short term loss of vision, feeling, or speech.

**Tonic seizure:** a seizure that causes stiffening; the seizure involves muscles on both sides of body and all/most of the brain.
**Tonic-clonic seizure**: a convulsion (loss of consciousness, falling, stiffening, and jerking; electrical discharges involves all or most of brain); this is another name for a “grand mal.”

**Trauma**: an injury or wound caused by outside force or violence.

**Tuberous sclerosis (TS)**: disease where benign tumors may affect the brain, eyes, skin, and other body parts; some people with this disease have mental retardation and seizures; this disease is always passed on to all children the person may have.

**Vagus nerve stimulator (VNS)**: a device that looks like a pacemaker. It is placed in a person’s chest and has a wire that connects to a nerve (the vagus nerve) so signals can be sent to the brain. These signals can help prevent and treat seizures.

**Video-EEG monitoring**: when a person’s brainwaves are recorded by an EEG machine at the same time the way they look (and what they are doing) is recorded on video. This is the best way to learn about seizures and where they come from in the brain.

**West’s syndrome**: a disorder with infantile spasms, mental retardation, and certain EEG pattern that begins before 1 year of age.