A deeper look at common disorders treated at Richmond State Hospital with an eye for understanding their unique needs, building empathy, and maintaining patient rapport.
Understanding Seizure Disorders

A discussion for all direct care staff on how to recognize the signs and symptoms of various seizure presentations and how to prevent injury
The Epilepsy Foundation defines a seizure as “a sudden surge of electrical activity in the brain.”
Think of neurons in the brain as electrical wires that make circuits:

- Some neurons excite messages and some neurons inhibit/stop messages.
So if there is a disruption of the balance between neurons that excite vs. inhibit, there is disruption of messaging.

- Essentially, you have a short circuit. The computer crashes.
As you can see, the cortex (skin) of the brain has many different parts, each controlling some aspect of what makes you “You!”
Wait there’s more! This is what’s INSIDE the brain (subcortical) and it controls more primitive functions of your body like breathing and fear.
What is a “Seizure”?

You can have a seizure in any part of your brain...
What is a “Seizure”?

...and when you do, the function of that part of the brain is affected and doesn’t work properly.
Seizures are not rare!

- 1 out of 10 people will have a single isolated seizure at some point in their life.
- 1 in 26 people will develop epilepsy at some point in their life.

Shafer, P and Sirven J. Online epilepsy statistics, Epilepsy Foundation, October 2013
A seizure can start in one location and cause one set of symptoms, but then zap and short-circuit another part of the brain (or even the whole brain) for a whole other set of problems. This causes the different types of seizures...
Types of Seizures

- Partial—a seizure that affects initially only one localized part of the brain
  - Simple Partial
  - Complex Partial
- Generalized—if the seizure spreads across both hemispheres
Generalized

- When people think of what a seizure looks like, they usually think of these.
- Causes loss of consciousness in the patient.
- Often presents as a tonic-clonic seizure (see next slide).
- Because all the muscles of the body contract at once, including the muscles of breathing, it sounds like the person is crying out at first, and may even turn blue in the face.
Types of Seizures

- **Simple Partial Seizures**
  - Focal—only a small part of the brain is affected
  - Patients remain conscious
  - Can spread to other areas of the brain and become complex partial or generalized seizures
Simple Partial Seizures

- Motor—change in muscle activity
- Sensory—changes in visual, olfactory, tactile, audio sensations
- Autonomic—changes to automatic body functions
- Psychic—changes to how people thinks, feels and experiences the environment
Motor Seizures

- Originate in the primary motor cortex
- Variety of different presentations
  - Jerking of a finger
  - Stiffening of a body part
  - Can be on one side of body or both sides
  - Weakness
  - Uncoordinated complex movements affecting laughter, speech, writing
Motor Seizures Continued…

- “Jacksonian March”—a simple focal seizure spreads from the distal part of a limb toward the same side of the face.
  - Often begins in fingers
  - Experienced by patient as tingling or “waves” when the fingers are touched
  - Spreads to hand, then arm, until it reaches the face
  - At this point, patient may then have sudden head or eye movements, lip smacking, grimacing
Simple Partial Seizures

- **Sensory Seizures**
  - **Auditory**
    - Hearing sounds that are NOT there
    - Clicking, ringing, a person’s voice
    - Distortion of volume of sound that IS there
      - Air condition hum is loud and maddening
      - Someone speaking may sound muffled
Simple Partial Seizures

- **Sensory Seizures Continued…**
  - **Visual**
    - Originate in the occipital cortex
    - Seeing light spots, people in the room that aren’t there, distortions
  - **Smell**
    - Smell of burning leaves, tar, perfume
  - **Sensation**
    - Pain, burning, pins and needles, numbness, feeling like they are floating
Simple Partial Seizures

- Autonomic Seizures
  - GI disturbance like upset stomach, queeziness
  - Chest pain
  - Headache
  - Rapid heart rate
  - Rapid breathing
  - Uncontrolled sweating
  - Goosebumps
Psychic Seizures

- Poor memory
- Slurred or garbled speech
- Word-finding difficulty
- Trouble understanding speech or writing
- Sudden emotions like anger, fear, sadness, happiness with no outside influence
- Hypersexuality
- "Déjà vu" (feels like they’ve experienced something before when they haven’t)
- "Jamais vu" (feels like they’ve never experienced it before when it should be familiar)
Partial Seizures and Psychiatry

- YOU, the audience, should be experiencing déjà vu at this point!
- Doesn’t this all sound strangely familiar?
Partial Seizures and Psychiatry

- These seizures have shared features of other disorders we see
  - Anxiety/Panic attacks
  - Psychosis
  - Mood disorders
  - Impulse Control Problems
  - Behavioral Problems
Partial Seizures and Psychiatry

- **Seizures during sleep**
  - If a patient has a seizure during sleep, it usually has onset during REM
  - The patient may partially awaken and act out the dream while engaging in the environment normally
  - Real persons and objects may be distorted
  - Patient will assimilate hallucinations and delusions in their communication
Complex Partial Seizures

- Seizure affects a larger part of the hemisphere than a simple partial seizure.
- Often preceded by a simple partial seizure (aura).
- Can lead to loss of consciousness:
  - Once consciousness is impaired, the patient may have automatisms.
    - Lip smacking
    - Chewing
    - Swallowing
Complex Partial Seizures

- Though consciousness is impaired, the patient may be able to perform routine tasks!
  - This means you may see the patient walking around and never know they are having a seizure
  - The patient may do seemingly odd but purposeful behaviors like wandering into rooms or lowering to the floor
Causes are typically unknown in 70% of cases but can include:

- Low oxygen during birth
- Head injuries
- Brain tumors
- Genetic conditions that cause brain injury
- Infections
- Stroke
- Abnormal level of substances like glucose or sodium
Causes and Triggers for Seizures

- **Triggers**
  - Heavy alcohol use
  - Stimulant use such as cocaine or NDMA
  - Non-compliance with medications
  - Reflex seizures
Causes and Triggers of Seizures

- **Reflex Seizures**
  - Can occur in response to stimulation, both sensory and emotional
    - Light
      - Photosensitive epilepsy is most common form of reflex seizure
    - Hot water
    - Music
    - Television
    - Emotional stress
    - Laughter
    - Startling
    - Reading
    - Sexual activity

Yes, even things like hot water, reading, and bathing can cause seizures...
The so-called “bathing” epilepsy seems to be triggered by the tactile stimulation from hot water and not just the heat itself, since there is little to no reports that saunas or furnaces have caused seizures.

Seizures triggered by sexual orgasm have been rare in literature until a series of case studies published in 2006:

- All cases but one were female
- All but one experienced complex partial seizures
- EEG discharges were localized to the right hemisphere in majority of cases, which may reflect this area as a crucial neurologic center for sexual functioning
- Underlying lesions reported included
  - Hippocampal sclerosis
  - Focal cortical dysplasia
  - Astrocytoma
  - Scarring after traumatic-brain-injury (TBI)

A reflex seizure is caused by a particular environmental or psychic trigger that impacts the same areas of the brain that process that stimulus. For example, stress releases hormones that affect parts of the brain that process emotions.
Unit milieu in a State Hospital can be stressful for anyone, but could trigger seizures in an epileptic.

Some patients with epilepsy at RSH also carry diagnoses like schizophrenia or borderline personality that cause preconceived notions about behavior we see.

But if the patient has partial seizures, you may see an increase in “bizarre” behaviors when unit acuity is high. So don’t assume the patient is acting out.
Causes and Triggers of Seizures

- Try to place folks with uncontrolled epilepsy in less acute units if appropriate.
- Focus on daily routine, exercise, relaxation and leisure techniques.
- Limit patient napping during the day to encourage normal sleep pattern at night.
Causes and Triggers of Seizures

- Photosensitive seizures
Photosensitive Seizures

- Most common reflex seizure but occurs in only 1/4000 of the population.
- Gained attention in 1997 in Japan when more than 600 children were admitted to the hospital from provoked seizures after watching Pokemon.
Causes and Triggers of Seizures

This is one frame from the so called “seizure” episode of Pokemon.
Photosensitive Seizures Continued…

- The frequency or speed of flashing light that is most likely to cause seizures varies from person to person.
- Generally, flashing lights most likely to trigger seizures are between the frequency of 3 to 30 Hertz.
- Peak seizure triggering occurs between 15 and 20 Hertz.
- Triggering of seizures above 60 Hertz is rare.
Photosensitive Seizures Continued…

Computer monitors continually refresh and repaint the screen image. The refresh rate is expressed in flashes per second (Hertz).

Computer screens should have a refresher rate of greater than 73 Hertz to lower seizure risk.

Flat screen LCDs do NOT use a refresher rate technique, so should have minimal to no risk of triggering seizures.

However, this does not account for the flashes that occur with abrupt changes of color or screen images.
Photosensitive Seizures Continued…

- Fluorescent lights can also trigger seizures
- Unfortunately, these lights are no longer restricted to office or retail environments
- “Energy-saving bulbs” are really just fluorescent tubes wrapped up in a bulb, but operate at such high frequencies (10-20 kHz) that they should not induce seizures if functioning properly

According to a report by the Epilepsy Foundation, self-induction is thought to be overestimated and NOT willful.

In a study of 442 patients ages 0 through 15 years, only 1.3% had self-induced seizures.

Strategies included

- Repetitive blinking in front of a bright light source
- Quickly changing television channels
- Playing video games purposefully close to the screen
- Looking at inductive patterns

*Panayiotopoulos, CP (2005) The epileptic syndromes*
Causes and Triggers of Seizures
No evidence that those with higher intelligence have a lower tendency to self-stimulate. Perhaps they just have better strategies to not get caught…

However, the compulsive behavior may be from the seizure activity itself, not willful.

BOTTOM LINE: Never assume conscious or willful behavior in an epileptic!
To make matters more confusing, you have to be able to tell the difference between epilepsy, primary psychiatric diagnoses, and…

“PSEUDO-seizures”!
Pseudoseizures (PNES)

- Defined as episodic altered behavior that superficially resemble epileptic seizures but lack the expected EEG epileptic changes.

Ettinger et al. 1999
Pseudoseizures (PNES)

- Can be the expression of psychogenic OR organic processes.
- Can mimic all types of seizures we’ve discussed.
- Key feature is that there seems to be no abnormal electrical discharge to cause the seizure.
  - Therefore, another term for it is “non-epileptic seizures.”
Pseudoseizures (PNES)

- MOTIVATION is the key controversy surrounding PNES...

...Is the patient doing it on purpose or not?
Pseudoseizure

Conversion, Somatization
a psychiatric condition that results in a neurological complaint or symptom, without any underlying neurological cause.

Factitious disorder
(a Somatoform Disorder)
a condition where patients intentionally fake disease, or intentionally cause disease in order to play the ‘patient role’.
characterized by patients frequently feigning illness to obtain attention, sympathy, or other emotional feedback

Malingering
the intentional faking or creating of illness in order to obtain secondary gain (e.g. workers compensation, disability payments, avoiding work or jail time, pain medication, etc.)

# Pseudoseizure

<table>
<thead>
<tr>
<th>Conversion, Somatization</th>
<th>Factitious disorder</th>
<th>Malingering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Px unaware of psychogenic nature of symptoms &amp; motivation of their production [1]</td>
<td>Px recognize the spells are self-induced, but not the reason for doing so</td>
<td>Conscious awareness of production of symptoms &amp; underlying motivation</td>
</tr>
<tr>
<td>Unintentional, due to emotional stressors, no ‘gain’ to the patient [2]</td>
<td>Intentional, primary or ‘emotional’ gain</td>
<td>Intentional, secondary and often monetary gain</td>
</tr>
</tbody>
</table>

Assuming motivation is a tricky business for even psychiatrists and psychologists, so we all must be careful to divorce ourselves from any assumptions.

Deciding whether a patient’s behavior is conscious or not is always based to some extent on a clinician’s subjective interpretation.

Engel and Pedley, Epilepsy: A Comprehensive Textbook, 2nd Ed, 2008
10% of patients with psychogenic non-epileptic seizures also have epilepsy.

PNES is NOT necessarily voluntary or “made-up.”
The Challenge

The decision whether a patient's seizures belong in the domain of epilepsy or nonepileptic events may have to be based on various sets of criteria + EEG data.

The distinction between epilepsy and nonepilepsy cannot always be made with complete confidence, and the physician working in this field must be able to tolerate some degree of uncertainty.

Epileptic and nonepileptic seizures also may coexist.

Engel & Pedley, Epilepsy: A Comprehensive Textbook, 2nd Ed, 2008
Pseudoseizures (PNES)

Risk factors

- Age
  - Epilepsy: Bimodal age curve
  - PNES: Inverse unimodal age curve where 70% are between 20 and 40 years old
- Obesity
- Chronic pain, anxiety, PTSD
  - Example: high incidence of male veterans
Pseudoseizures (PNES)

- Developmental insult
- Trauma
- Inherited Factors

Psychic Stress becomes greater than coping capacity

PNES
Triggers of PNES episodes can be similar to those that trigger an exacerbation of a psychiatric episode or an epileptic seizure.
A Johns Hopkins study showed that three groups of participants (those with PNES, those with epilepsy, and "healthy" subjects) experienced the same levels of stress but had different perceptions and reactions to stress.

Brandt J., et al., Symptoms that mimic epilepsy linked to stress, poor coping skills April 10, 2012, Johns Hopkins online posting
In the study, the PNES patients tended to:

- Use negative coping methods
  - denial
  - mental disengagement
- Be less likely to develop a course of action to deal with their stressors

Brandt J., et al., Symptoms that mimic epilepsy linked to stress, poor coping skills April 10, 2012, Johns Hopkins online posting
The Personality Assessment Inventory (PAI) is a self-report questionnaire that has been used to detect personality problems in adults. It has been tried to see if patients with PNES have certain characteristics to look out for.
The PAI of PNES, epilepsy, and normal subjects were compared.

PNES and epilepsy had more complaints of anxiety, depression, and general health concerns.

PNES had more PHYSICAL symptoms of anxiety and depression, as well as more unusual health concerns.
Some seizures mimic features of PNES

- Gelastic seizures (caused by hypothalamic tumors)
  - The “laughing seizure”
  - Can look faked or “forced” due to muscle contraction
  - Aura looks like a panic attack or even just a startled facial appearance
  - EEG is usually normal
- Frontal lobe seizures (caused by the uhhh…)
  - Unusual pelvic thrusting and bicycling movements
  - EEG during the seizure often appears normal

Pseudoseizures (PNES)

Real Case Study:
- 45 year old woman has had 5 years of recurrent amnesia with confused behavior, usually in the evenings. Inexplicably traveled to New Mexico and told police she was lost. She was treated with multiple seizure medications which did not help. Her problems started after cardiac valve replacement. She had 5 days of video EEG monitoring with one episode of altered awareness, but EEG remained normal. Her anticonvulsants were stopped and she had no further episodes. She was diagnosed with PNES.

A female patient at RSH that has been diagnosed with bipolar and borderline personality disorder has also been diagnosed with pseudoseizures by a neurologist after normal cortical EEG.

Patient has a significant physical and sexual trauma history since age 8 years old.

She has poor frustration tolerance and limited ability to delay gratification—she wants what she wants NOW, no matter what the staff are doing.
She has episodes of “spacing out” with eyes open when the staff try limit-setting techniques when she makes her constant demands.

She will occasionally answer simple sentences. She can be standing or walking when it happens. She claims to have no memory of the event, though knows “something happened.”

Staff report that she typically has a “seizure” only when she is frustrated or emotional, though review of the nursing reports show that patient often is found unresponsive after taking a shower.
Patient is already being treated with Depakote ER 2000 mg a day, but it seems to not help at all. Neurologist tells the psychiatrist that he has no further recommendations.

Patient remains on 1:1 precautions for frequent falls, though the patient rarely injures herself and is usually seen lowering herself to the floor.
What information is missing in this scenario? What else would you like to know?
What information is missing in this scenario? What else would you like to know?

- Was the EEG a 20 minute EEG, a sleep-deprived EEG, or prolonged monitoring?
- What were the limit-setting techniques and what were they for?
  - Trying to change someone’s behavior can be stressful for a patient and can induce seizures
  - Is it appropriate to set limits on someone having seizures?
- Do the symptoms support the clinical diagnosis of PNES?
So how can you tell a seizure from a psychiatric condition?
Partial Seizures: Key Features

- Usually last less than 2 minutes
- After the seizure, the person tends to proceed as if nothing happened—may have very little memory of the event, unlike PNES.
- Often have a bad headache and keep rubbing nose after the event, which is usually not spontaneously seen in PNES.
- If the simple partial seizure is an aura for a stronger seizure, loss of consciousness may follow.

Generalized Seizures: Key Features

- Loss of consciousness
- Tongue biting or accidental injury is common
- May be incontinent, but not always
- Muscle movements are rhythmically contracting and relaxing (tonic-clonic), not undulating or snake-like.
- Mouth is almost NEVER closed during the tonic phase.
- Head is fixed in place, not swinging side to side.
- Limb movements are synchronized, not thrashing about.

Reuber M. and Elger C. Epilepsy and Behavior (2008) 4, 205-216
Pseudoseizures: Key Features

- Normal pupil response to light if examined during an episode.
- No elevated heart rate if you measure pulse as patient goes into episode.
- Body may remain limp/flaccid for a long period of time which does not occur in epileptic seizures.
- Usually does not occur during sleep.
- Usually lasts longer than epileptic seizure.
- Waxing and waning pattern.
- Closed eyelids during PNES, very rare in epileptic seizures.

32 year old male with a family history of anxiety has “attacks” of fear, racing heart, sweating, and feeling that he will suffocate, lasting up to a half hour.

Symptoms began 1 year ago but now have increased in frequency to three times a week.

Attacks occur spontaneously but can be brought on by driving. Two years ago, he was in a motor vehicle accident with a concussion.

He had two episodes of loss of consciousness (LOC) in the past 3 months.

Ativan helps abort the attacks.

EEG and MRI negative.
## How can you tell what this patient has?

<table>
<thead>
<tr>
<th>EPILEPTIC SEIZURE</th>
<th>PANIC ATTACKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aura may gradually precede</td>
<td>Abrupt onset</td>
</tr>
<tr>
<td>Tend to last only two minutes or so</td>
<td>Tend to last 10-30 minutes</td>
</tr>
<tr>
<td>May have lip smacking/chewing</td>
<td>No automatisms</td>
</tr>
<tr>
<td>Usually associated with history of LOC</td>
<td>Patients with primary psych condition usually do not have a history of LOC</td>
</tr>
<tr>
<td>May or may not have family or personal history of psychiatric conditions</td>
<td>Usually have a significant family or personal history of psychiatric conditions</td>
</tr>
<tr>
<td>The “attacks” will respond to an agent that treats seizures, not antidepressants</td>
<td>The “attacks” may respond to both benzodiazepines and/or antidepressants</td>
</tr>
<tr>
<td>Confusion after the seizure is common.</td>
<td>Confusion is not typical after the attack</td>
</tr>
</tbody>
</table>
### EPILEPTIC SEIZURE
- Aura may gradually precede
- Tend to last only two minutes or so
- Injury is possible
- May have lip smacking/chewing
- Usually associated with history of LOC
- May or may not have family or personal history of psychiatric conditions
- The “attacks” will respond to an agent that treats seizures, not antidepressants

### PSEUDOSEIZURES
- Aura is usually headache or “pseudosleep.”
- Longer or variable duration and tends to wax and wane in severity as the “attack” progresses
- Injury is uncommon
- No automatisms
- Strong history of physical or sexual trauma
- Tends to have no confusion after the event
- Response has little correlation to type of to anti-seizure agents or antidepressants
A simple partial seizure does NOT lead to loss of consciousness!

- Therefore, because a person is fully alert and able to interact, you can’t assume that a seizure is not taking place.
Brain imaging can support, but NOT CONFIRM, a diagnosis!

- Up to 30% of patients with PNES showed brain abnormalities (most often non-specified gliosis) on MRI.
- Patients with PNES and patients with epileptic seizures can BOTH have NORMAL MRI findings.
- MRI does not help doctors tell what kind of episode the patient is having.
How can you tell what this patient has?

- Physician can try an anticonvulsant on this patient, not an SSRI or tricyclic.
- Labs can be useful to rule out toxic causes
  - Hyponatremia
  - Hypoglycemia
- Prolactin and CK not very useful because they are insensitive tests.
- Get Video/EEG monitoring
The Electroencephalogram (EEG)
The 20 minute EEG is the standard diagnostic tool for diagnosing epilepsy. EEG measures electrical activity of brain neurons in the cortex (the “skin” of the brain).

Epilepsy is caused by abnormal electrical activity which can be detected by EEG.

But...
40% of patients with actual epilepsy have a normal EEG.

- Technical errors
  - Moving too much
  - Taking meds that may treat seizures
  - Not eating before the test
  - Dirty or oily hair or the use of hair care products

- Reading errors
  - Inexperienced neurophysiologist
  - Lack of previous EEGs or neurology records
  - Lack of information provided by the referring physician

- Inherent errors (see the next slide)

Why do EEGs miss epilepsy?

- EEGs only take a snapshot of the brain in time.
  - A person may not have abnormal activity at the time the “picture” was taken.
- This may be because partial seizures may involve only SUBCORTICAL regions (beneath the “skin” of the brain) which the EEG may not pick up.
- The incidence of missing an abnormality drops to 8% with a series of EEGs with activating procedures, particularly sleep.

Therefore, without further work-up, EEGs may be unremarkable even during active seizures and patients with partial seizures may be incorrectly diagnosed with a primary psychiatric condition.

- Because electrical abnormalities are more likely to occur during the transition from wakefulness to sleep, a sleep-deprived EEG can be useful.
- Showing the patient flashing lights or having them hyperventilate may also help bring out the seizure.
- Video/EEG neurotelemetry gives you monitoring, not a snapshot, and so is much more accurate for ruling out epilepsy.
An effective way to diagnose epilepsy is EEG-video monitoring.

- Patients are video-recorded with constant EEG readings for hours up to seven days.
- If a behavior believed to be related to a seizure is recorded on video, the corresponding EEG readings to that time can be evaluated.
- Discrepancies between what was recorded on video and on EEG may indicate a “non-epileptic seizure.”
Drawbacks to EEG-video monitoring:

- Only works if the seizure occurs frequently enough.
- If the seizures are occurring less than several times a week, the seizures can still be missed.
MYTHS

What the public and even clinicians sometimes think about PNES, epileptic seizures, and psychiatric conditions
Pseudoseizures are often triggered by stress or emotional disturbance, but epileptic seizures are not.
Pseudoseizures are often triggered by stress or emotional disturbance, but epileptic seizures are not.

- Reflex seizures can be caused by stress and any number of emotional and physical triggers.
Myth #2

- EEG readings are normal when taken before and during an episode of PNES/psychiatric conditions and not in epileptic seizures.
EEG readings are normal when taken before and during an episode of PNES/psychiatric conditions and not in epileptic seizures.

- Remember, EEG readings can look normal even with active seizures, especially if the seizure involves only subcortical brain structures or does not occur during the course of extended EEG monitoring.
Myth #3

- Patients having an episode of a psychiatric condition or PNES can respond to you during the episode.
Patients having an episode of a psychiatric condition or PNES can respond to you during the episode.

- If a person is having a partial seizure, he or she can still respond to you and the environment.
Bladder incontinence and tongue biting occur only in epileptic seizures.
Bladder incontinence and tongue biting occur only in epileptic seizures

- Actually, the incidence of one or both of the symptoms is equal in both PNES and epileptic seizures

Suggestions for Direct Care

- Epilepsy Foundation’s First Aid for Complex Partial Seizures
  - Do not restrain the person.
  - Remove dangerous objects from the person's path.
  - Calmly direct the person to sit down and guide him or her from dangerous situations. Use force only in an emergency to protect the person from immediate harm, such as walking in front of an oncoming car.
  - Observe, but do not approach, a person who appears angry or combative.
  - Remain with the person until he or she is fully alert.
First Aid for Seizures
(Complex partial, psychomotor, temporal lobe)

1. Recognize common symptoms

- Blank staring
- Chewing
- Fumbling
- Wandering
- Shaking
- Confused speech

2. Follow first aid steps

- Don’t grab hold
- Explain to others
- Block hazards
- You’ll be okay.
- Speak calmly
- Track time, remain nearby...
- ...until seizure ends
Pseudoseizures are still abnormal behaviors brought about by a stressor, just like “real” seizures.

- Try to identify patient triggers.
- Speak with Nursing Supervisors about how you can help patient avoid triggers.
- If you are assigned to seizure precautions, recognize when the patient is at risk for having an episode so you can be vigilant to prevent a fall or injury.
DOCUMENT, DOCUMENT, DOCUMENT!

• “True” epilepsy can look like just about anything and can be missed by Neurologic exam.
• Physicians cannot make accurate treatment decisions without all the data.
• Hopefully, this presentation has alerted you to the fact that anything a patient does is good data.
• If you are assigned to seizure precautions, document everything you saw before, during, and after the episode.
Take-home points

- Do not make diagnostic statements if you are not a licensed independent practitioner.
- Do not write “patient had tonic-clonic seizure this shift.”
- But you CAN and SHOULD report whether or not there was any lip-smacking, eye blinking, or other behavioral signs before the seizure.
- And you CAN and SHOULD report whether the patient lost consciousness, if the limbs were limp or contracted, if patient was flailing or jerking rhythmically, etc.
You never really can be certain if the behavior is psychological or neurological.

- Assume it’s both and treat the patient with dignity and respect.
- Follow the basic Epilepsy Foundation first aid rules to assure safety and comfort.
- Very little intervention or “limit-setting” is needed.
Thank You!!!!!