

## Clinical overview

### Definitions

- **Seizure:** A sudden alteration of behavior due to a temporary change in the electrical functioning of the brain that may briefly affect a patient's consciousness, movements or sensations.<sup>1</sup>
- **Convulsion:** An uncontrollable shaking that is rapid and rhythmic, with the muscles contracting and relaxing repeatedly.<sup>2</sup>
- **Idiopathic:** Arising spontaneously or from an obscure or unknown cause.<sup>3</sup>
- **Provoked seizure (aka acute symptomatic seizure):** A seizure from a physical cause such as an acute medical illness or trauma that begins before the seizure. It could also be related to a substance or event the body is responding to or withdrawing from.<sup>4</sup>
- **Epilepsy (or seizure disorder):** A condition of recurrent unprovoked seizures. Epilepsy is usually diagnosed after a person has had at least two seizures that were not caused by some known medical condition.<sup>1</sup>
- **Intractable epilepsy:** Epilepsy that does not respond to treatment.<sup>1</sup>
- **Status epilepticus:** A potentially life-threatening state in which a person experiences an abnormally prolonged seizure (any seizure lasting longer than five minutes) or does not fully regain consciousness between recurring seizures. This condition represents a medical emergency.<sup>5</sup>

### Causes/risk factors<sup>6</sup>

The cause of seizures may be idiopathic. A listing of provoked causes of seizures is lengthy and could include complications of almost any disease process. Some common causes may include:

- Brain injury or stroke
- Electrolyte disturbances such as hypoglycemia, hyponatremia, etc.
- Acute toxic effects or withdrawal syndromes, such as antidepressants, ethanol, etc.

### Types of seizures/signs and symptoms<sup>4</sup>

Seizures classify into two main types; partial or generalized:

1. **Partial seizures** (also known as focal, local or localization-related seizures) occur in just one part of the brain. They are frequently described by the area of the brain where they originate (e.g., focal frontal lobe seizure).
  - **Simple partial seizure** – The person remains conscious but has altered emotions or sensations, such as sudden and unexplainable feelings of joy, anger, sadness, etc., or the person may hear, smell, taste, see or feel things that are not real.
  - **Complex partial seizure** – The person experiences altered or loss of consciousness, displaying strange, repetitious behaviors, such as blinks, twitches, mouth movements, etc. The person may experience auras (sensations that warn of an impending seizure).

**Note:** International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) requires the provider to specify whether "partial" means simple partial seizure or complex partial seizure. There is no coding path in the ICD-10-CM manual for "partial seizure" with no further specification.

2. **Generalized seizures** These seizures affect both sides of the brain or groups of cells on both sides of the brain at the same time. Includes seizure types like:

- **Absence seizures** (previously petit mal) – brief loss of consciousness, staring, subtle body movements
- **Myoclonic seizures** – jerks or twitches of the extremities
- **Atonic seizures** – loss of muscle tone with sudden collapse or falling down
- **Tonic-clonic seizures** (previously grand mal) – most intense symptoms, including loss of consciousness, stiffening and jerking of the body, loss of bladder control

### Diagnostic tools<sup>1</sup>

- Medical history and physical exam
- Blood tests to check for metabolic imbalances or nontherapeutic medication levels
- Electroencephalogram (EEG), computerized tomography (CT) scan, positron emission tomography (PET) scan, magnetic resonance imaging (MRI) and single-photon emission computed tomography (SPECT)

### Treatment<sup>1</sup>

- Antiepileptic medications
- Diet therapy
- Surgical procedures, such as implantation of vagus nerve or brain stimulator

## Best documentation practices for healthcare providers

### Subjective<sup>7</sup>

- The History of Present Illness (HPI) sets the background for the patient’s presenting problem, from when first diagnosed until this encounter.
- May include Review of Systems (ROS), Past, Family, and/or Social History (PFSH), Active Problems List.
- Document the presence or absence of any current patient-reported symptoms of seizures/seizure disorders/epilepsy (e.g., altered emotions or sensations, altered or loss of consciousness, displaying strange, repetitious behaviors, such as blinks, twitches, mouth movements; auras; stiffening and jerking of the body or loss of bladder control, etc.).

### Objective<sup>7</sup>

Document any objective data to include physical exam findings (e.g., post-ictal [period immediately following a seizure] which can include confusion, drowsiness, or fatigue, along with potential post-ictal hemiparesis or aphasia; in addition, there might be signs of injuries related to falls during seizures, such as tongue bites, lacerations, or bruises, etc.) and related diagnostic testing results (tumors, bleeding, cysts, and scar tissue, vascular malformations, as well as functional changes in brain activity, etc.).

### Assessment

- Document the particular type of seizure(s), seizure disorder or epilepsy to the highest level of specificity with all appropriate descriptors (e.g., generalized idiopathic, symptomatic, intractable, clonic, partial complex, etc.).
- Include the current status of seizures, seizure disorder or epilepsy (stable, controlled on medication, improved, worsening, historical with no recurrence, etc.) and complications (with or without status epilepticus)
- Contributing factors (seizures related to alcohol, drugs, sleep deprivation, etc.)

### Plan<sup>7</sup>

- Document a clear and concise treatment plan for the disorder(s) (e.g., diet therapy, surgical procedures, etc.).
- Document details of referral and consultation requests, orders for evaluation or testing, and medications prescribed with clear linkage to the diagnosis.
- Address any additional steps being taken to treat the patient.

## ICD-10-CM coding tips

- The terms “seizures” and “epilepsy” are sometimes used interchangeably; however, they are not the same. Seizures or convulsions that are **not identified** as epilepsy or as a seizure disorder classify to category R56, which appears in the ICD-10-CM manual under Chapter 18 – Symptoms, Signs and Abnormal Clinical and Laboratory Findings. Some of the terms that classify to the sign/symptom category R56 are:<sup>8</sup>

Convulsion disorder	Recurrent convulsions
Fit NOS	Seizure(s) (convulsive) NOS
- Coders should not assign R56.9, Unspecified convulsions, for patients experiencing *seizure disorders* or *recurrent seizures*.
- Category G40 appears in the ICD-10-CM manual under Chapter 6 – Diseases of the Nervous System. Some of the terms that classify to the **epilepsy** and **recurrent seizures** category G40 are:

Seizure disorder	Epileptic seizure(s)
Epileptic attack	Epileptic fit
Epileptic convulsion(s)	Epilepsy
- When coding epileptic syndromes, coders should note that seizure(s)/epileptic disorders noted by the provider as treatment – or medication-resistant, refractory, or poorly controlled – should be coded to intractable. The following terms are to be considered equivalent to intractable:

Pharmacoresistant (pharmacologically resistant)	Treatment resistant
Refractory (medically)	Poorly controlled
- Recurrent seizures and unspecified seizure disorders, when not reported as intractable, should be coded to G40.909.
- Some of the terms that classify to the epilepsy and recurrent seizures category G40 are:

Seizure disorder	Epileptic convulsion(s)	Epileptic fit
Epileptic attack	Epileptic seizure(s)	Epilepsy

### Post-traumatic seizures/post-traumatic epilepsy

A post-traumatic seizure is an initial or recurrent seizure that occurs during the acute phase following a traumatic brain injury and has no other known cause.

- “Early post-traumatic seizures” are seizures that occur within one week of the initial trauma and are considered to be provoked (i.e., they have an immediately identifiable cause that is a direct result of the injury).
- Post-traumatic seizures code to R56.1, which ***Excludes 1*** post-traumatic epilepsy (G40.-).
- “Post-traumatic epilepsy,” by contrast, is characterized by late seizures that occur more than a week after initial trauma.
  - Late seizures are considered to be unprovoked.
  - For post-traumatic epilepsy, assign the appropriate epilepsy code based on the documented description followed by the appropriate code to report the traumatic condition with sequela.

### Anti-seizure and anti-epileptic medications

- Many anti-seizure and anti-epileptic medications are used to treat conditions other than epilepsy or seizures. Coders cannot assume drugs classified as anti-seizure or anti-epileptic medications are being used

to treat seizures or epilepsy when the linkage between the medication and diagnosis is not clearly documented in the medical record.

- As previously noted, many patients on maintenance therapy with anti-seizure and anti-epileptic medications achieve long-term seizure-free status. Documentation that a patient on maintenance drug therapy has been seizure-free for an extended period does not mean the patient no longer has epilepsy or a seizure disorder.

## Coding examples

Example 1	
<b>Medical record documentation</b>	<p>Patient is a 72-year-old female presenting for evaluation of chronic conditions. Patient states her conditions are stable and that she is doing well. Patient needs refills on her medications. The patient's Past Medical History includes "seizures" and postmenopausal status. Upon exam, the patient's vital signs were pulse 76, respirations 16 and BP 126/82; Physical Exam was unremarkable, with the examination being documented as being within defined limits.</p> <p>Assessment/Plan: Hypertension, hyperlipidemia, migraine headaches. Labs ordered. Continue Topamax® and have patient return to clinic in 6 months (sooner if needed).</p>
<b>ICD-10-CM codes</b>	<ul style="list-style-type: none"> <li>• <b>I10</b> Essential (primary) hypertension</li> <li>• <b>E78.5</b> Hyperlipidemia, unspecified</li> <li>• <b>G43.909</b> Migraine, unspecified, not intractable, without status migrainosus</li> <li>• <b>Z78.0</b> Asymptomatic menopausal state</li> </ul>
<b>Rationale</b>	<p>No code is assigned for seizures, as this diagnosis is documented as a historical condition and is not supported as current. Topamax is an anti-seizure medication, but it is not linked to any particular diagnosis. Further, Topamax can be used to treat migraine headaches – a diagnosis documented in the assessment.</p>
Example 2	
<b>Medical record documentation</b>	<p>Presents with seizure disorder. Diagnosed with epilepsy in 1995. Patient reports no seizure activity for several years and takes Dilantin® as prescribed. Patient recently got driver's license back and resumed driving. The Review of Systems and Physical Exam were negative and completely within normal limits.</p> <p>Assessment: Seizures: stable. Continue current medication.</p> <p>Plan: Refill Dilantin – indication: seizures. Reminded patient not to take antacids or drink alcohol while taking Dilantin. Return in three months. Will send records to Dr. Brown (neurology) for annual appointment.</p>
<b>ICD-10-CM code</b>	<ul style="list-style-type: none"> <li>• <b>G40.909</b> Epilepsy, unspecified, not intractable, without status epilepticus</li> </ul>
<b>Rationale</b>	<p>Review of the record in its entirety supports the patient has a history of epilepsy (also documented as seizure disorder) that is currently controlled with medications.</p>

Example 3	
Medical record documentation	<p>62-year-old female presented this morning to the outpatient surgery unit for a laparoscopic cholecystectomy. In the post-anesthesia recovery area, she exhibited slurred speech and confusion, followed by a generalized seizure. Slurred speech and confusion lasted about two minutes and then cleared. Patient denies and nursing staff reports no further neurological symptoms or seizure activity. Neurological exam is within normal limits. CT scan of the head returned with no significant abnormalities noted.</p> <p>Assessment: Transient ischemic attack with associated seizure</p> <p>Plan: Carotid ultrasound ordered</p>
ICD-10-CM codes	<ul style="list-style-type: none"> <li>• <b>G45.9</b> Transient cerebral ischemic attack, unspecified</li> <li>• <b>R56.9</b> Unspecified convulsions</li> </ul>
Rationale	When the diagnosis is stated only in terms of convulsion or seizure without any further identification of the cause, code R56.9, Unspecified convulsions, should be assigned. <sup>8</sup>

### References

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