

**CHAPTER 6**  
**NERVOUS SYSTEM**  
**G00-G99**

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# LEARNING OUTCOMES

After studying this chapter you should be able to:

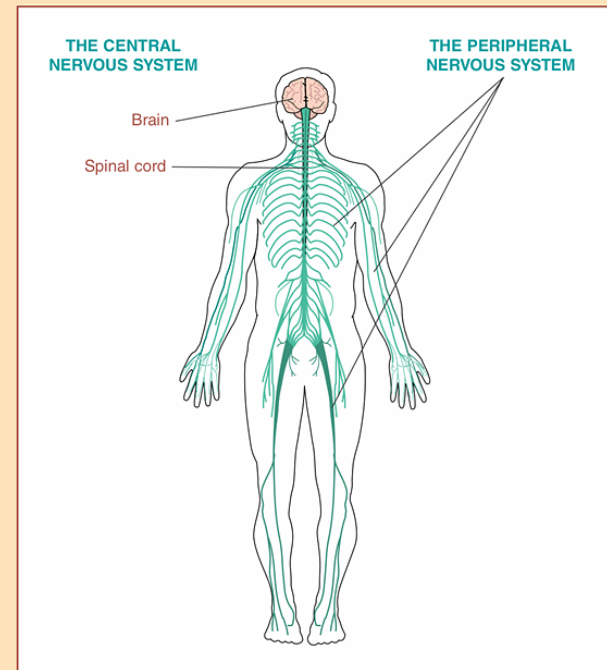
- Explain the difference between the central and peripheral nervous systems and locate the two areas in the ICD-10-CM.
  - **Central nervous system** (G00-G47; G80-G99)  
the brain and spinal cord
  - **Peripheral nervous system** (G50-G73)  
all elements of the nervous system except the brain and spinal cord
- Understand how to code for pain.
- Explain what is needed before a code of epilepsy is assigned.
- Code for a variety of conditions of the nervous system.

# Nervous System

The nervous system is complex and difficult to comprehend, thinking of it as a **two-level system** may help to simplify the coding process:

- **Central nervous system**  
(brain and spinal cord)
- **Peripheral nervous system**  
(all other neural elements in the rest of the body)

FIGURE 18.1 The Nervous System



# Disorders of the Central Nervous System

**G00-G47**

**G80-G99**

# Parkinson's Disease

Parkinson's disease, also known as parkinsonism, is a chronic, progressive disorder of the central nervous system characterized by a fine, slowly spreading involuntary tremor, postural instability, and muscle weakness and rigidity.

**Primary Parkinson's disease** is assigned to code **G20**.

| ICD-9   | ICD-10                         |
|---|--------------------------------|
| <b>332.0</b> Paralysis agitans<br>(Parkinson's disease) | <b>G20</b> Parkinson's disease |

# Secondary Parkinsonism G21

Secondary Parkinson's disease is often an adverse effect of the therapeutic use of medication, in which case a code from category G21 followed by code for medication causing the adverse effect:

| <b>G21.0</b><br><b>Malignant</b> | <b>G21.1</b><br><b>Other Drug Induced</b> | <b>G21.2</b><br><b>Due to other external agents</b> | <b>G21.3</b><br><b>Post encephalitic</b> | <b>G21.4</b><br><b>Vascular</b> | <b>G21.8</b><br><b>Other</b> | <b>G21.9</b><br><b>Unspecified</b> |
|----------------------------------|---|---|--|---------------------------------|------------------------------|------------------------------------|
| 5 <sup>th</sup> Character:       | 5 <sup>th</sup> Character:                | 5 <sup>th</sup> Character:                          | 5 <sup>th</sup> Character:               | 5 <sup>th</sup> Character:      | 5 <sup>th</sup> Character:   | 5 <sup>th</sup> Character:         |
| None                             | 1 Neuroleptic induced                     | None  | None                                     | None                            | None                         | None                               |
|                                  | 9 Other drug induced                      |   |  |                                 |                              |                                    |

# Secondary Diagnosis Codes for Adverse Effects of Medication

Codes found in Chapter 19, Injury, Poisoning and other consequences of external causes

**T43.0** - Adverse effects/underdosing of tricyclic & tetracyclic antidepressants

**T43.1** - Adverse effects/underdosing of monoamine-oxidase-inhibitor antidepressants

**T43.2** - Adverse effects/underdosing of other & unspecified of antidepressants

**T43.3** - Adverse effects/underdosing of phenothiazine antipsychotics & neuroleptics

**T43.4** - Adverse effects/underdosing of butyrophenone & thiothixene neuroleptics

**T43.5** - Adverse effects/underdosing of other & unspec. antipsychotics & neuroleptics

**T43.6** - Adverse effects/underdosing of psychostimulants

**T43.8** - Adverse effects/underdosing of other psychotropic drugs

**T43.9** - Adverse effects/underdosing of unspecified of psychotropic drugs

# Alzheimer's Disease

Alzheimer's disease is a process of progressive atrophy involving the degeneration of nerve cells. This degeneration leads to mental changes that range from subtle intellectual impairment to dementia with loss of cognitive functions and failure of memory.

- Alzheimer's disease is coded to category G30 and is further subdivided to specify:
  - early onset (G30.0)
  - late onset (G30.1)
  - other (G30.8)
  - unspecified (G30.9)
- When associated dementia is present, code **F02.8-**, **Dementia in conditions classified elsewhere**, is assigned as an additional diagnosis.

For example:

- G30.9 Alzheimer's disease [without any mention of dementia]
- G30.1 + F02.81 Dementia with behavioral disturbance due to late onset Alzheimer's disease



# Alzheimer's Disease

| ICD-9                            | ICD-10  |
|----------------------------------|---|
| <b>331.0</b> Alzheimer's disease | <b>G30.0</b> Alzheimer's disease with early onset |
|                                  | <b>G30.1</b> Alzheimer's disease with late onset  |
|                                  | <b>G30.8</b> Other Alzheimer's disease            |
|                                  | <b>G30.9</b> Alzheimer's disease, unspecified     |

| ICD-9   | ICD-10  |
|---|---|
| <b>294.11</b> Dementia in conditions classified elsewhere with behavioral disturbance (manifestation) | <b>F02.81</b> Dementia in other diseases classified elsewhere with behavioral disturbance |

# EPILEPSY /SEIZURES

Epilepsy is a paroxysmal disorder of cerebral function characterized by recurrent seizures. Coders **must not** assume, however, that any diagnostic statement describing convulsions or seizures should be coded to epilepsy; these conditions also occur in a number of other diseases, such as:

- brain tumor
- cerebrovascular accident
- alcoholism
- electrolyte imbalance
- febrile conditions
- Grand mal seizures, for example, can be due to causes other than epilepsy

## **Remember!**

Because a diagnosis of epilepsy can have serious legal and personal implications for the patient, such as the inability to obtain a driver's license, a code for epilepsy **must not** be assigned unless the physician clearly identifies the condition as such in the diagnostic statement.

# Epilepsy

ICD-10 classifies epilepsy to category G40. 0 to G40.5 as follows:

- G40.0- Localization-related idiopathic with **seizures of localized onset**
- G40.1- Localization-related symptomatic with **simple partial seizures**
- G40.2- Localization-related symptomatic with **complex partial seizures**
- G40.3- **Generalized** idiopathic
- G40.A- **Absence** epileptic syndrome
- G40.B- **Juvenile myoclonic** epilepsy
- G40.4- **Other generalized** epilepsy
- G40.5- Epileptic seizures related to **external causes**

## 5<sup>th</sup> Character

0: not intractable

1: intractable

## 6<sup>th</sup> Character

1: with status epilepticus

9: without status epilepticus

# Seizures/Chapter 18

## Symptoms, signs and abnormal clinical and laboratory findings

| ICD-9   | ICD-10                                |
|---|---------------------------------------|
| <b>780.31</b> Febrile convulsions (simple), unspecified | <b>R56.00</b> Simple febrile seizure  |
| <b>780.32</b> Complex febrile convulsions               | <b>R56.01</b> Complex febrile seizure |
| <b>780.33</b> Post traumatic seizures                   | <b>R56.1</b> Post traumatic seizures  |
| <b>780.39</b> Convulsions                               | <b>R56.9</b> Unspecified convulsions  |

# Coding Examples #1

Code the following diagnoses.

1. Parkinson's disease
2. Generalized idiopathic epilepsy, not intractable, with status epilepticus
3. Localization-related symptomatic with simple partial seizures
4. Febrile convulsions , simple
5. Alzheimer's disease, early onset, with behavioral disturbances

# Answer Key #1

1. Parkinson's disease: **G20**
2. Generalized idiopathic epilepsy, not intractable, with status epilepticus **G40.301**
3. Localization-related symptomatic with simple partial seizures : **G40.109**
4. Febrile convulsions , simple: **R56.00**
5. Alzheimer's disease, early onset, with behavioral disturbances : **G30.0 and F02.81**

# HEADACHE AND MIGRAINE

- A diagnosis of headache without any further specificity is classified to chapter 18 of ICD-10-CM and coded to **R51, Headache**.
- Migraines are classified to category G43, while specific headaches are classified to category G44, Other headache syndromes, in chapter 6, Diseases of the Nervous System.
- Migraine is a neurological syndrome characterized by altered bodily perceptions, severe headaches, and nausea and vomiting.
- Approximately one-third of people who suffer from migraine headaches perceive an aura--unusual visual, olfactory, or other sensory experiences that signal the migraine will soon occur.
- The following terms are considered equivalent to intractable:
  - pharmacoresistant
  - pharmacologically resistant
  - treatment resistant
  - refractory (medically)
  - poorly controlled

# Migraine

ICD-10-CM classifies migraines to category G43 as follows:

- G43.0- Migraine **without aura**
- G43.1- Migraine **with aura**
- G43.4- **Hemiplegic** migraine
- G43.5- **Persistent** migraine **aura without cerebral infarction**
- G43.6- **Persistent** migraine **aura with cerebral infarction**
- G43.7- **Chronic** migraine **without aura**
- G43.A- **Cyclical** vomiting
- G43.B- **Ophthalmoplegic** migraine
- G43.C- **Periodic headache** syndromes in child or adult
- G43.D- **Abdominal** migraine
- G43.8- **Other** migraine
- G43.9- Migraine, **unspecified**

## 5<sup>th</sup> Characters:

**0: Not Intractable**

**1: Intractable**

## 6<sup>th</sup> Characters:

**1: With status migrainosus**

**9: Without status migrainosus**



# Other headache syndromes

Specific headaches are classified in chapter 6 of ICD-10-CM under other headache syndromes (category G44) as follows:

- **G44.0-** Cluster headaches and other trigeminal autonomic cephalgias
- **G44.1-** Vascular headache, not elsewhere classified
- **G44.2-** Tension-type headache
- **G44.3-** Posttraumatic headache

## Subcategories G44.0 - G44.3

6<sup>th</sup> Characters:

1: Intractable

9: Not Intractable

- **G44.4-** Drug-induced headache, not elsewhere classified
- **G44.5-** Complicated headache syndromes
- **G44.8-** Other specific headache syndromes

## Subcategories G44.4-G44.8

Are only specified to the 5<sup>th</sup> character;  
see tabular for specific code selections

# Transient cerebral ischemic attacks and related syndromes

- **G45.0** Vertebro-basilar artery syndrome
- **G45.1** Carotid artery syndrome (hemispheric)
- **G45.2** Multiple and bilateral precerebral artery syndromes
- **G45.3** Amaurosis fugax
- **G45.4** Transient global amnesia
- **G45.8** Other transient cerebral ischemic attacks and related syndromes
- **G45.9** Transient cerebral ischemic attack, unspecified
  - Spasm of cerebral artery
  - TIA
  - Transient cerebral ischemia NOS

# Narcolepsy

**Narcolepsy is a chronic neurological disorder characterized by the inability to regulate sleep and wakefulness normally.**

Symptoms are:

- excessive daytime sleepiness
- sleep paralysis (paralysis upon falling asleep or waking up)
- cataplexy (sudden, brief episodes of paralysis or muscle weakness)
- vivid hallucinations (vivid dreamlike images that occur at sleep onset)
- disturbed nighttime sleep
- leg jerks
- nightmares
- frequent awakenings

| <b>G47.41 Narcolepsy</b>   | <b>G47.42 Narcolepsy in conditions classified elsewhere</b> |
|----------------------------|---|
| 6 <sup>th</sup> Character: | 6 <sup>th</sup> Character:                                  |
| 1- with cataplexy          | 1- with cataplexy   |
| 9- without cataplexy       | 9- without cataplexy  |

# HEMIPLEGIA/HEMIPARESIS

Hemiplegia is paralysis of one side of the body. It is classified to category G81, with a fifth character to indicate the side affected and whether the affected side is:

- Dominant
- Nondominant

- When information is not available regarding whether the affected side is dominant or nondominant, and when the classification does not provide a default, code selection is as follows:
- For ambidextrous patients, the default should be dominant
- If the **left side is affected; the default is non-dominant**
- If the **right side is affected; the default is dominant**
- This guideline applies to codes from category:
  - G81** Hemiplegia and hemiparesis  
and for subcategories
  - G83.1** Monoplegia of lower limb
  - G83.2** Monoplegia of upper limb
  - G83.3** Monoplegia unspecified

# HEMIPLÉGIA/HEMIPARESIS

- Hemiplegia occurring in connection with a cerebrovascular accident (CVA) often clears quickly and is sometimes called a transient hemiplegia.
- Hemiplegia is not inherent to an acute CVA; therefore, a code from category G81, Hemiplegia and hemiparesis, is assigned as an additional code when it occurs. Even if it resolves without treatment, it affects the patient's care.
- Any neurologic deficits caused by CVA should be reported even when they have resolved at the time of discharge.
- When the patient is admitted at a later time with hemiplegia and hemiparesis due to sequela of cerebrovascular disease, a code from category I69 is assigned to indicate that the condition is a late effect of a CVA.

# HEMIPLÉGIA/HEMIPIRESIS

Examples of appropriate coding for hemiplegia:

- Cerebral thrombosis with transient right hemiplegia that has cleared by discharge; **I66.9 + G81.91**
- Hemiplegia of left dominant side due to previous CVA; **I69.352**

# Postoperative Pain

- Post-operative pain is classified into subcategories:
  - G89.1 Acute pain
  - G89.2 Chronic pain
- Depending on whether the pain is acute or chronic. The default for post-operative pain not specified as acute or chronic is the code for the acute form.
- Postoperative pain associated with a specific postoperative complication (such as painful wire sutures) or associated with devices, implants, or grafts left in a surgical site (such as a painful hip prosthesis) is assigned to the appropriate code(s) found in chapter 19 of ICD-10-CM, Injury, Poisoning, and Certain Other Consequences of External Causes. A code from category G89 is assigned as an additional code to identify acute or chronic pain (G89.18 or G89.28).

# Postoperative Pain

- Postoperative pain may be reported as the principal or first-listed diagnosis when the reason for the encounter or admission is postoperative pain control/management.
- Postoperative pain may be reported as a secondary diagnosis code when a patient presents for outpatient surgery and develops an unusual or inordinate amount of postoperative pain.
- Please note that routine or expected postoperative pain immediately after surgery should not be coded.



# ENCEPHALOPATHY

- Encephalopathy is a general term used to describe any disorder of cerebral function. It is a very broad term and in most cases will be preceded by various terms describing the reason, cause, or special conditions leading to the brain disorder.
- It is important to carefully note these additional terms, as they will affect code assignment. More than 150 different terms modify or precede "encephalopathy" in the medical literature, not all of them are classified to chapter 6 of ICD-10-CM. Some of the more common encephalopathies are noted below:

|                                   |               |
|-----------------------------------|---------------|
| <i>Anoxic encephalopathy</i>      | <b>G93.1</b>  |
| <i>Alcoholic encephalopathy</i>   | <b>G31.2</b>  |
| <i>Hepatic encephalopathy</i>     | <b>K72.90</b> |
| <i>Metabolic encephalopathy</i>   | <b>G93.41</b> |
| <i>Toxic encephalopathy</i>       | <b>G92</b>    |
| <i>Wernicke's encephalopathy</i>  | <b>E51.2</b>  |
| <i>Unspecified encephalopathy</i> | <b>E93.40</b> |

# Coding Examples #2

Code the following diagnoses.

1. Chronic intractable tension-type headache
2. Cerebrovascular accident with left-sided hemiparesis
3. Persistent migraine, intractable, without status migrainosus
4. Metabolic encephalopathy
5. Toxic metabolic encephalopathy

# Answer Key #2

1. Chronic intractable tension-type headache: **G44.221**
2. Cerebrovascular accident with left-sided hemiparesis: **I63.9 and G81.94**
3. Persistent migraine, intractable, without status migrainosus: **G43.519**
4. Metabolic encephalopathy: **G93.41**
5. Toxic metabolic encephalopathy: **G92**

# Disorders of the Peripheral Nervous System

**G50- G73**

# DISORDERS OF THE PERIPHERAL NERVOUS SYSTEM

- Disorders of the peripheral nervous system are classified to categories **G50** through **G73** according to the condition and the nerves involved.
- Many codes in this section are manifestations of other diseases and are assigned as additional codes, with the underlying condition listed first.

# CARPAL/TARSAL TUNNEL

| ICD-9                                | ICD-10   |
|--------------------------------------|--|
| <b>354.00</b> Carpal tunnel syndrome | <b>G56.00</b> Carpal tunnel syndrome, unspecified upper limb |
|                                      | <b>G56.01</b> Carpal tunnel syndrome, right upper limb       |
|                                      | <b>G56.02</b> Carpal tunnel syndrome, left upper limb        |

| ICD-9                               | ICD-10   |
|-------------------------------------|--|
| <b>355.5</b> Tarsal tunnel syndrome | <b>G57.50</b> Tarsal tunnel syndrome, unspecified lower limb |
|                                     | <b>G57.51</b> Tarsal tunnel syndrome, right lower limb       |
|                                     | <b>G57.52</b> Tarsal tunnel syndrome, left lower limb        |

# COMMON NEUROLOGICAL DX

| ICD-9        | DESCRIPTION                    | ICD-10        | GETTING THERE                                    |
|--------------|--------------------------------|---------------|--|
| <b>341.9</b> | CNS Demyelination              | <b>G37.-</b>  | Demyelination, CNS                               |
| <b>724.4</b> | Radiculopathy, lumbosacral     | <b>M54.17</b> | Neuritis, lumbosacral                            |
| <b>729.1</b> | Myalgia                        | <b>M79.1</b>  | Myalgia  |
| <b>340</b>   | Multiple Sclerosis (MS)        | <b>G35</b>    | Sclerosis, multiple                              |
| <b>355.9</b> | Mononeuritis, unspecified site | <b>G58.9</b>  | Mononeuritis                                     |
| <b>323.9</b> | Encephalitis, unspecified      | <b>G04.90</b> | Encephalitis                                     |
| <b>354.2</b> | Lesion, ulnar nerve            | <b>G56.20</b> | Lesion, nerve, ulnar                             |
| <b>723.4</b> | Brachial neuritis              | <b>M54.12</b> | Neuritis, brachial – see radiculopathy, cervical |

# Coding Examples #3

1. Amyloid polyneuropathy
2. Morton's neuroma. 3-4 and 4-5 interspaces, left foot
3. Tardy palsy due to entrapment of right ulnar nerve
4. Peripheral polyneuritis, severe, due to chronic alcoholism
5. Nutritional polyneuropathy
6. Tic douloureux



# Answer Key # 3

1. Amyloid polyneuropathy: **E85.1 and G63**
2. Morton's neuroma. 3-4 and 4-5 interspaces, left foot: **G57.62**
3. Tardy palsy due to entrapment of right ulnar nerve: **G56.21**
4. Peripheral polyneuritis, severe, due to chronic alcoholism: **G62.1 and F10.20**
5. Nutritional polyneuropathy: **E63.9 and G63**
6. Tic douloureux: **G50.0**