Diagnostic Coding for Epilepsy

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Clinicians commonly participate in three types of coding: (1) a code that characterizes the diagnosis of the patient, (2) a code that is intended for billing for evaluation and management (E/M coding), and (3) a code for a procedure, if performed. This discussion will focus on codes for diagnoses and procedures.

DIAGNOSTIC CODING: BACKGROUND

The diagnostic code set required by the Center for Medicare and Medicaid Services (CMS) and third-party payers for reimbursement is the International Classification of Diseases (ICD), administered in its primary form by the World Health Organization (WHO). In the United States, the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), released in 1979 is used, although International Classification of Diseases, 10th Revision (ICD-10) codes are used for death certificates. In addition to the necessity of the ICD code for reimbursement, these codes are used to assess the morbidity and mortality of diseases that directly influence public health policy, epidemiologic research, quality-of-care measures, and even emerging bioterrorism threats. For these reasons, accurate coding is an important physician obligation. Because of the expansion of medical knowledge in the past few decades, the codes provided by ICD-9 have proven to be inadequate. ICD-10 (released in 1994) was created to allow for greater diagnostic possibilities and is currently used in more than 100 countries around the world. The clinical modification of the 10th revision (ICD-10-CM) is scheduled to be implemented in the United States in October 2014.

STRUCTURES OF ICD-9-CM AND ICD-10-CM: A BRIEF OVERVIEW

ICD-9-CM characterizes disease entities with a 3-digit code followed by a decimal point and the possibility of 2 additional digits for greater specificity. Thus, 345 is the group for epilepsy and recurrent seizures, and the fourth digit (0 to 9) indicates the type of epilepsy or recurrent seizures (eg, generalized convulsive [345.1], grand mal status epilepticus [345.3], localization-related [345.4]). The fifth digit provides the opportunity to code if the seizure type or epilepsy is not intractable (0) or is intractable (1); for example, 345.11 is the code for generalized convulsive seizures that are intractable.
Much like when all possible phone numbers within an area code have been used, the coding possibilities within ICD-9-CM have been saturated, requiring an expansion to allow for new diagnoses. ICD-10-CM has a possibility of 7 digits, but the first place is always a letter—for example, R40 designates the episodic and paroxysmal disorders of which the epilepsies comprise a major component. The additional digits allow the coding of not only intractability, but also status epilepticus. Analogous to ICD-9-CM, the fourth digit indicates the type of episodic or paroxysmal disorder, the fifth digit codes for intractability (0 = not intractable, 1 = intractable), and the sixth digit codes for status epilepticus (1 = with status epilepticus, 9 = without status epilepticus). Thus, R40.311 is the code for idiopathic generalized epilepsy that is intractable and now presents with status epilepticus. If status epilepticus were not a current problem, the code would be R40.319. Note that a seventh digit is not used but is available should another component of epilepsy coding be desired in the future.

DIAGNOSIS, CLASSIFICATION, AND CODING

In this Continuum issue, Drs Berg and Millichap describe the distinctions between making a diagnosis for an individual patient and the manner in which that diagnosis relates to an existing classification system (see the article, “The 2010 Revised Classification of Seizures and Epilepsy”). The ICD classification of seizures and epilepsies adopted by the WHO is, in fact, derived from that provided by the International League Against Epilepsy (ILAE) in regard to both seizures and the epilepsies. This seems most appropriate, as the ILAE is the international voice of the expert epilepsy community. Thus, the partial seizures and the localization-related epilepsies referred to in the ICD-9 and ICD-10 have a direct correspondence to the ILAE 1981 and 1989 classifications, respectively. The dichotomy between partial and generalized seizures (ie, localization-related versus generalized epilepsies) persists and is the fundamental descriptor in both ICD-9 and ICD-10. The problem, as Berg and Millichap note, is that as knowledge has advanced, the codes derived from the classifications no longer accurately describe a large number of patients. For example, Dravet syndrome, a relatively common entity within pediatric epilepsy, is not really captured by the localization-related versus generalized ILAE classification/ICD coding schema, whereas alternative components such as causative gene mutation or seizure phenotypes are more descriptive. Therefore, clinicians need to be aware that what might be required for diagnostic coding may not represent the most accurate description of the patient as described by 2010 recommendations for revision of concepts and terminology related to seizures and epilepsies.1

CURRENT PROCEDURAL TERMINOLOGY

The codes used for procedure-related services are contained in the Current Procedural Terminology (CPT). This code set is owned by the American Medical Association (AMA) and access to it requires a license purchased from the AMA (in contrast to the ICD codes, which are free in the public domain from the National Center for Health Care Statistics (Coding Box 1). The CPT codes identify services that have been provided, such as an office evaluation or an EEG, which are then submitted with the ICD-9-CM code that identifies the diagnosis, such as seizures. The codes for neurology-related services are in Category I Evaluation and Management (99201-99499), whereas Category II
contains codes for performance measures, and Category III for emerging technologies. This discussion focuses on the codes related to electroencephalography (EEG [95803–96020]), as this is the most common procedure related to the diagnoses of paroxysmal events of unknown etiology, seizures, and epilepsies.

Coding Box 1 Useful Internet Tips for Coding

How to Access the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) for Personal Use
1. Visit www.cdc.gov/nchs/icd/icd9cm.htm,
2. Scroll down the page to ICD-9-CM Files via FTP.
3. Select 2011. This will bring up a list of files.
4. Dindex12.zip is a compressed file with all the ICD-9-CM codes listed alphabetically. Download.
5. Dtab12.zip is a compressed file with all the ICD-9-CM codes listed numerically. This file has the most useful information. Download.
6. Use Control F (PC) or Command F (Mac) to search for the code of interest.

How to Access the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) for Personal Use
2. Follow the same steps as above.

The good news with the above approach is that all the ICD-9-CM and ICD-10-CM codes may be accessed in their most recent revisions for free. The downside is that the extensive nature of the codes requires some time to find the one desired. A more direct strategy is to use the website provided by the Center for Medicare and Medicaid Services for performing a direct look-up of the disease entity in ICD-9-CM. The following website provides a complete list of relevant codes when the search term “epilepsy” is entered: www.cms.gov/medicare-coverage-database/staticpages/icd-9-code-lookup.aspx

Final Tip
Searching on the terms ICD-9-CM and ICD-10-CM in any browser yields several excellent free, online coding resources (eg, icd9cm.chrisendres.com; www.medilexicon.com/icd9codes.php; www.educus.com/Codes/ CodesSearch.aspx?AspxAutoDetectCookieSupport=1) that may be bookmarked for easy access on desktop, laptop, or tablet devices.

CASES
The epilepsy cases below are provided as examples of common clinical situations to illustrate ICD-9-CM, ICD-10-CM, and CPT coding. Note that the description of the seizures and epilepsies conforms to ICD-9-CM terminology, not the terminology suggested in the ILAE 2010 revision. The reader is advised to review the National Center for Health Statistics link for ICD-9-CM at www.cdc.gov/nchs/icd/icd9cm.htm to access the complete ICD-9-CM codes as well as a means for selecting only those diagnoses of interest. The ICD-9-CM
The code is bolded in the text below followed by a forward slash (/) and then the corresponding ICD-10-CM code, which is not bolded (ie, ICD-9-CM/ICD-10-CM). Note that the ICD-9-CM code will consist of all numbers and the ICD-10-CM code will start with a letter (G or R). Also, the sixth digit in ICD-10-CM can be 1 or 9, as noted above. This convention will also be used to designate the ICD-9-CM (in bold) and ICD-10-CM (not bolded) descriptions that will sometimes follow in parentheses. If only one description is in parentheses, the description has not changed from ICD-9-CM to ICD-10-CM.

The transformation from one code set to the other is accomplished by the General Equivalence Mappings (GEMs), a set of reference mappings relating one set of diagnoses to the other. A description of GEMs can be found on the Centers for Disease Control and Prevention’s homepage of ICD-10-CM at www.cdc.gov/nchs/icd/icd10cm.htm.

**Case 1**

**Scenario 1.** A 4-year-old boy is brought to the office by his parents with a chief complaint of “staring” episodes during which he seems to be “out of it,” according to his teachers. The remainder of the personal and family medical and developmental histories are noncontributory. What is the ICD-9-CM/ICD-10-CM code for this visit?

**Coding.** At this point, a neurologist may suspect that the patient is having either absence or complex partial seizures. However, there is not enough information from the clinical history to support those diagnoses. Therefore, the diagnostic code is: 780.02/R40.4 (Transient alteration of awareness).

**Scenario 2.** The parents of the boy in scenario 1 have seen the staring episodes (described as a “blank stare” with associated fluttering of the eyelids that last for 5 to 10 seconds) occur several times per hour. Hyperventilation elicits a typical event.

**Coding.** The patient’s normal developmental status and the additional information is enough to strongly indicate a diagnosis of childhood absence epilepsy. This would be included in ICD-9-CM as generalized nonconvulsive epilepsy without intractable epilepsy, hence the code 345.00/G40.309 (Generalized idiopathic epilepsy and epileptic syndromes, not intractable, without status epilepticus in ICD-10-CM). Since no medication has been tried, it is not pharmacoresistant. If medication were to be tried and fail in the future, the code 345.01/G40.319 would be appropriate to indicate intractability. As there is no mention of status epilepticus, the sixth digit in the ICD-10-CM code is 9.

When selecting a code, one needs to be sure that its application matches the official language provided in its description. For example, the code 345.0 has several defining clinical scenarios listed (eg, absences, minor epilepsy, petit mal, pykno-epilepsy, and akinetic and atonic seizures).

**Scenario 3.** Now assume that there is no more information than in scenario 1, but an EEG is done the next day. The recording runs for 45 minutes, but the patient does not fall asleep. The EEG reveals 3-Hz generalized spike-and-wave activity during which the patient did not remember
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several words that were presented. What is the CPT procedural code for the EEG and the ICD-9-CM/ICD-10-CM diagnostic code that would be attached to it?

Coding. The combination of the clinical history and the EEG makes the diagnosis of 345.00/G40.309 straightforward. The CPT procedural code would be 95812, as this indicates a recording 41 to 60 minutes in duration. The fact that the patient did not sleep is “trumped” by the duration of the recording. If the duration were less than 41 minutes during which awake and asleep states were recorded, the code would be 95819; if sleep were not achieved, it would be 95816.

Case 2

Scenario 1. A 27-year-old woman presents with a chief complaint of recurrent episodes of right upper extremity shaking. The remainder of her history and neurologic examination is noncontributory. What is the ICD-9-CM/ICD-10-CM code for this visit?

Coding. Although the history is suggestive of seizures, the neurologist is not ready to make a diagnosis of epilepsy before additional testing is conducted. Therefore, the most appropriate code is 780.39/R56.9, which includes “seizure not otherwise specified” and “fit not otherwise specified.”

Scenario 2. A 30-minute outpatient EEG is performed on the patient from scenario 1, which the neurologist interprets as showing sharp waves in the left central head region that increase during drowsiness and sleep. What is the CPT procedural code for the EEG and the ICD-9-CM/ICD-10-CM diagnostic code that would be attached to it?

Coding. The CPT code for the 30-minute EEG, awake and asleep, is 95919. The finding of the focal discharges in addition to the clinical history makes a diagnosis of simple partial seizures likely, hence the ICD-9-CM/ICD-10-CM diagnostic code 345.50/G40.109 (Localization-related (focal) (partial) epilepsy and epileptic syndromes with simple partial seizures, without intractable epilepsy/Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, without status epilepticus).

Scenario 3. The same patient’s seizures continue despite adequate trials of two appropriate antiepileptic drugs (AEDs) that are adjusted on multiple office visits. The patient is then admitted for video-EEG monitoring that reveals seizures characterized by staring and unresponsiveness in addition to right upper extremity clonic movement with ictal onset from C3. MRI demonstrates a 1 by 1 cm lesion on the T2-weighted sequences that is surgically removed with the assistance of intraoperative electrocorticography for recording the epileptogenic zone and stimulation to map motor function. What are the ICD-9-CM/ICD-10-CM and CPT codes associated with these events?

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Coding. The resistance of the simple partial seizures to pharmacotherapy changes the diagnostic code to reflect intractability—ie, 345.51/G40.119. The video-EEG monitoring session demonstrates complex partial seizures that are very likely to have occurred as an outpatient and are intractable to AEDs, thereby earning the code 345.41/G40.219 (Localization-related (focal) (partial) epilepsy and epileptic syndromes with complex partial seizures, with intractable epilepsy/Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, intractable, without status epilepticus). The video-EEG recording, assuming at least 16 channels and 24 hours are recorded, is coded as CPT 95951, the intraoperative recording as 95829, and the intraoperative stimulation as 95961. As with ICD coding, it is essential that the reports accompanying the CPT code provide adequate documentation of what was done and a clear description of the results.

Case 3

Scenario 1. An 87-year-old man with no history of seizures presents to the emergency department with episodes of whole body stiffening followed by rhythmic synchronous movements of his upper and lower extremities that have occurred repetitively over 45 minutes. The neurologist who sees him in the emergency department recommends additional AEDs, admission to the intensive care unit, and continuous video-EEG monitoring. At the time of this consultation, how would the diagnosis be coded?

Coding. Based on the clinical history and direct observation, the ICD-9-CM/ICD-10-CM code would be 345.3/G40.301 (Grand mal status epilepticus/Generalized idiopathic epilepsy and epileptic syndromes, not intractable, with status epilepticus).

Scenario 2. The next day the patient’s bilateral motor activity has ceased, but intermittent jerking at the right wrist is present. The video EEG reveals an ictal discharge at C3 time-locked with the right wrist clonic activity. How would the diagnosis and procedure be coded?

Coding. The continuous focal motor activity despite medication could now be coded as 345.70/G40.101 (Epilepsia partialis continua without mention of intractable epilepsy/Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, with status epilepticus). If the patient was known to have intractable epilepsy before the onset of this episode of status epilepticus, the code would have been 345.71/G40.111, with the 1 in the fifth-digit slots indicating intractable epilepsy and the 1 in the sixth-digit slot in the ICD-10-CM code indicating status epilepticus. The CPT code for the continuous video EEG would be 95951 for the first 24 hours.

Scenario 3. Forty-eight hours after admission all visible motor activity has ceased, the patient has been extubated, and no sedative medications

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have been given for 6 hours. The patient remains unresponsive, although his eyes open intermittently. The video EEG reveals continuous spike-and-wave discharges involving the left frontal, central, and temporal head regions. What is the ICD-9-CM/ICD-10-CM code for this situation?

Coding. The patient is having electrographic seizures, impairing consciousness, for which there is no clearly designated code. There are a number of options that include 345.70/G40.101 (Epilepsia partialis continua without mention of intractable epilepsy)/Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, with status epilepticus) and 345.80 (Other forms of epilepsy and recurrent seizures); the number of ICD-10-CM codes that could map to 345.80 include G40.101, G40.501, and G40.801 because of the greater range of options available in ICD-10-CM. If a generalized, synchronous epileptiform EEG pattern were associated with the unresponsiveness, 345.20/G40.301 (Petit mal status/Generalized idiopathic epilepsy and epileptic syndromes, not intractable, with status epilepticus) would be a possibility. However, like the other codes suggested, the usual semiology of the accompanying seizure (ie, a blank stare) is not present.

REFERENCES