ICD-10-CM Coding
Developing Expertise in OMS Diagnosis Coding

Online Course
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About the Speaker

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Coding and billing decisions are personal choices to be made by individual oral and maxillofacial surgeons exercising their own professional judgment in each situation. The information provided to you in this course is intended for educational purposes only. In no event shall AAOMS be liable for any decision made or action taken or not taken by you or anyone else in reliance on the information contained in this course. For practice, financial, accounting, legal or other professional advice, you need to consult your own professional advisors.
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Introduction

International Classification of Disease, 10th Revision, Clinical Modification (ICD-10-CM)

This training manual reviews key ICD-10-CM coding and reporting guidelines that have been developed by the Centers for Medicare and Medicaid Services (CMS) and the National Center for Health Statistics (NCHS). Special emphasis is placed on guidelines that are different from those used in the ICD-9-CM.

The ICD-10-CM is a morbidity classification published by the United States for classifying diagnoses and reason for visits in all health care settings. The ICD-10-CM is based on the ICD-10, the statistical classification of disease published by the World Health Organization (WHO).

These ICD-10-CM guidelines have been approved by the four organizations that make up the Cooperating Parties for the ICD-9-CM.

- the American Hospital Association (AHA)
- the American Health Information Management Association (AHIMA)
- the Centers for Medicare and Medicaid Services (CMS), and
- the National Center for Health Statistics (NCHS)

Adherence to both the ICD-10-CM diagnosis coding guidelines is required under the Health Insurance Portability and Accountability Act (HIPAA). A joint effort between the healthcare provider and the coder is essential to achieve complete and accurate documentation, code assignment, and reporting of diagnoses and procedures. These guidelines have been developed to assist both the healthcare provider and the coder in identifying those diagnoses that are to be reported. The importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation, accurate coding cannot be achieved.
Many OMS-related diagnoses (formerly assigned to the Diseases of the Digestive System chapter in ICD-9-CM) have been reclassified to the Diseases of the Musculoskeletal System chapter in ICD-10-CM. This shift better represents the conditions and may help in proving medical necessity for payment purposes. The table below summarizes this change.

<table>
<thead>
<tr>
<th>Condition</th>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erupted, malpositioned teeth</td>
<td>524.30</td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
<tr>
<td><strong>Note:</strong> Impacted, malpositioned teeth remained in the Digestive System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dentofacial anomalies (i.e., hypoplasia, hyperplasia, macrogenia, malocclusion, TMJ disorders)</td>
<td>Entire Category 524</td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
<tr>
<td>Endosseous Dental Implant Failure</td>
<td>Subcategory 525.7</td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
<tr>
<td>Cysts</td>
<td>Category 526</td>
<td>Diseases of the Digestive System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(depending on type and location of cyst)</td>
</tr>
<tr>
<td>Alveolitis (dry socket)</td>
<td>526.5</td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
<tr>
<td>Exostosis</td>
<td>526.81</td>
<td>Diseases of the Musculoskeletal System</td>
</tr>
</tbody>
</table>
Laterality

One of the key enhancements to ICD-10-CM is the ability to identify laterally – left side, right side, or bilateral. Unfortunately, few OMS-related conditions were given these distinctions. For example, neither TMJ disorders nor facial fractures carry the left or right distinction. However, an injury to the skin of the cheek (i.e., laceration) does. No explanation can be provided to explain the inconsistency.
ICD-10-CM Conventions

Alphabetic Index Contents

The Alphabetic Index contains the following components:

- **Index to Diseases and Injuries** – Like ICD-9-CM, this index is comprised of main terms (arranged by condition, rather than an anatomic site) and subterms that allow for specificity in the assignment of codes.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrophy (Main Term)</td>
</tr>
<tr>
<td>adrenal (capsule) (gland)</td>
</tr>
<tr>
<td>primary (primary autoimmune)</td>
</tr>
<tr>
<td>alveolar process or ridge (edentulous)</td>
</tr>
</tbody>
</table>

- **Index of External Causes of Injury** – The Index of External Causes of Injury is structurally identical to that found in ICD-9-CM.
• **Table of Neoplasms** – The Table of Neoplasms is essentially the same as that seen in ICD-9-CM, as well. It lists neoplasms by anatomical site. And, for each site, there are six (6) possible codes reflecting behavior – malignant (3 columns), benign, of uncertain behavior, or unspecified nature.

• **Table of Drugs and Chemicals** – The Drugs Table of Drugs and Chemicals has undergone significant change from ICD-9-CM. It contains six (6) columns of code choices. There are four (4) poisoning columns, one (1) adverse effect column, and one (1) underdosing column.

### Tabular List

#### Overview

ICD-10-CM codes are arranged alphanumerically within the 21 separate chapters of the Tabular List of Diseases. These chapters reflect conditions associated with a specific body system or the nature of an injury or disease (i.e., Neoplasms, Injuries, Pregnancy, Newborns).

Classifications formerly considered supplemental codes in ICD-9-CM (i.e., V code and E codes) are now incorporated into the Tabular List and are considered an official component of ICD-10-CM.

Additional comparisons between the Tabular Lists of ICD-9-CM and ICD-10-CM are shown in the Table below.

<table>
<thead>
<tr>
<th>Point of Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ICD-9-CM V Codes are now Z Codes in ICD-10-CM</td>
</tr>
<tr>
<td>• ICD-9-CM E Codes are now V, W, X, and Y codes in ICD-10-CM</td>
</tr>
</tbody>
</table>

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## Format and Structural Differences

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 Chapters</td>
<td>21 Chapters</td>
</tr>
<tr>
<td>2 Supplemental Code Chapters</td>
<td></td>
</tr>
<tr>
<td>- V codes</td>
<td></td>
</tr>
<tr>
<td>- E codes</td>
<td></td>
</tr>
<tr>
<td>Structure</td>
<td>Structure</td>
</tr>
<tr>
<td>- Categories</td>
<td>- Categories</td>
</tr>
<tr>
<td>- Subcategories</td>
<td>- Subcategories</td>
</tr>
<tr>
<td>- Subclassifications</td>
<td>- Valid Codes</td>
</tr>
<tr>
<td>Code Length</td>
<td>Code Length</td>
</tr>
<tr>
<td>- 5 characters maximum</td>
<td>- 7 characters maximum</td>
</tr>
<tr>
<td>Code descriptors often printed in an abbreviated format</td>
<td>All code descriptors printed in their entirety</td>
</tr>
</tbody>
</table>

## Tabular List Structure

The Tabular List provides subdivisions consisting of the following components:

- **Chapters**: Groups of sections
- **Blocks**: Groups of categories
- **Categories**: Three (3) digit codes
  - **Note**: The first character will always be a letter.
- **Subcategories**: Four (4) to Seven (7) digit codes
  - **Note**: Any division beyond the category level is referred to as a subcategory. Characters will represent either numbers or letters.
- **Valid Code**: The final level of subdivision is called a valid code. Valid codes may be 3, 4, 5, 6, or 7 characters in length.
  - **Note**: The final character in a code will be either a number or a letter.
Placeholder Characters

Unlike ICD-9-CM, ICD-10-CM occasionally uses a placeholder character to allow for future expansion in that area of the coding book. This placeholder character will always be an “X”. A coder may be required to use a 5th character placeholder when a code requires 6 characters and no 5th character currently exists. The same can be seen in cases where a 7th character is required, but no 6th character currently exists.

In the example below, 6th characters are required, but 5th characters do not yet exist. Therefore, a placeholder must be used at the 5th character position.
7th Characters

Certain ICD-10-CM categories have been assigned 7th characters. The applicable 7th character is required for all codes within the category, OR as the notes in the Tabular List instruct. If a code that requires a 7th character is not 6 characters in length, one or more placeholder X must be used to fill in the empty characters.

While 7th character notes may appear anywhere in the Tabular List, the vast majority are located in two chapters.

- Chapter 19 – Injury, poisoning and certain other consequences of external causes
- Chapter 20 – External causes of morbidity
The most common 7th characters seen in Chapters 19 and 20 are explained below.

- **A** Initial encounter (used while patient is receiving active treatment for the injury)
  - Active treatment includes: surgical treatment, ED encounters, and evaluation and treatment by a **new** physician.
  - This character is also used for initial encounters for those patients who were delayed in seeking treatment

- **D** Subsequent encounter (used for encounters while a patient is receiving routine care for the injury during the healing or recovery phase)
  - Subsequent care includes: cast change or removal, removal of a fixation device, medication adjustment, and routine follow-up visits.

- **S** Sequela (used for complications or conditions that arise as a direct result of an injury)
  - See the Sequelae (Late effect) section of this training manual

**Note:** Traumatic fractures use a wider array of 7th characters.

---

### Example

<table>
<thead>
<tr>
<th>S07 Crushing injury of head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use additional code for all associated injuries, such as:</td>
</tr>
<tr>
<td>intracranial injuries (S06.-)</td>
</tr>
<tr>
<td>skull fractures (S02.-)</td>
</tr>
<tr>
<td>The appropriate 7th character is to be added to each code from category S07.</td>
</tr>
<tr>
<td>A initial encounter</td>
</tr>
<tr>
<td>D subsequent encounter</td>
</tr>
<tr>
<td>S sequel</td>
</tr>
<tr>
<td>S07.0 Crushing injury of face</td>
</tr>
<tr>
<td>S07.1 Crushing injury of skull</td>
</tr>
<tr>
<td>S07.8 Crushing injury of other parts of head</td>
</tr>
<tr>
<td>S07.9 Crushing injury of head, part unspecified</td>
</tr>
</tbody>
</table>

To make these codes valid, two (2) Xs must be added, serving as 5th and 6th character placeholders. (Example: S07.0xxA)
Exercise 1

Identify the structure level (category, subcategory, or valid code) for each of the following.

1. Code M26.10

2. Code S03

3. S02.401

4. Code K08.433

5. Code K05

6. Code D16.5

Excludes Notes

Excludes1

An Excludes1 note means “NOT CODED HERE!” An Excludes1 note indicates that the code excluded should never be used at the same time as the code printed above the Excludes1 note.

An Excludes1 note will be found when two conditions cannot occur together, such as a congenital form and an acquired form of the same condition. In this situation, the condition cannot be classified as both.
**Excludes2**

An Excludes2 note represents “Not included here”. An Excludes2 note indicates that the condition excluded is not part of the condition represented by the code above the Excludes2 note, but a patient may have both conditions at the same time.

When an Excludes2 note appears under a code, it is acceptable to use both the code and the excluded code together, when appropriate.

---

**Example**

<table>
<thead>
<tr>
<th>S02.3 Fracture of orbital floor</th>
<th>orbit NOS (S02.8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excludes 1</td>
<td></td>
</tr>
<tr>
<td>Excludes 2</td>
<td>orbital roof (S02.1-)</td>
</tr>
</tbody>
</table>

**Interpretations:**

1. Code S02.8 cannot be used with code S02.3
2. Codes from subcategory S02.1- can be used with code S02.3
General Coding Guidelines

Locating ICD-10-CM Codes

1. Identify the main term in the diagnosis.
2. Look up the main term in the Alphabetic Index.
3. Scan the subterms for specificity.
   
   Follow any cross references, as appropriate.
4. Locate the code in the Tabular List.
   
   A dash (-) at the end of an Alphabetic Index entry indicates that additional characters are required.
5. Determine the appropriateness of the code selection by reading all instructional notations in the Tabular List.
6. Assign the correct code.

Exercise 2

Assign code(s) for each of the following.

1. Mandibular retrognathia

2. Impacted malpositioned tooth

3. Maxillary frenum hypertrophy
4. Deviated nasal septum

5. Abscess in the left posterior bony mandibular area

6. Salivary gland retention cyst; the patient smokes cigarettes daily (dependent)

7. Tooth erosion

8. Alveolar hyperplasia of the mandible

9. Bilateral lip and hard palate cleft

10. Zygomatic hypoplasia

11. Odontoclasia

12. Acutely inflamed facial lymph node; streptococcal in nature

13. Acute and chronic gingivitis; the patient uses tobacco products daily

14. Partial loss of teeth – Class III - due to trauma
Combination Codes

ICD-10-CM provides more combination codes than ICD-9-CM. A combination code is a single code used to report:

- Two separate diagnoses
- A diagnosis with an associated secondary condition (manifestation)
- A diagnosis with an associated complication.

Assign only the combination code when that code fully describes the patient’s identified conditions or when the Alphabetic Index so directs. In the event the combination code lacks specificity in describing a manifestation or complication, an additional code should be assigned.

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic periodontal disease - The patient is a Type 2 diabetic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>250.80 (Diabetes with Specified Manifestation, Type II)</td>
<td>E11.630 (Type 2 diabetes mellitus with periodontal disease)</td>
</tr>
<tr>
<td>523.9 (Unspecified gingival and periodontal disease)</td>
<td></td>
</tr>
</tbody>
</table>

Laterality

For bilateral sites, the final character of the ICD-10-CM code indicates laterality. In addition to codes representing left and right, there is a code for “unspecified side” that should be assigned when the side is not identified in the medical record.

If no bilateral code is provided and the condition is bilateral, assign two separate codes representing both the left and right side.
Exercise 3

Assign code(s) for each of the following.

1. Osteoarthrosis, primary, of both ankles

2. Abscessed bursa of the right shoulder, growing Proteus

3. Rest pain due to arteriosclerosis in both lower legs

4. Fibrocystic disease of the left breast

5. Degenerative myopia, right eye

Note: Due to the limited number of OMS-related diagnoses affected by laterality codes, this exercise does not contain any OMS diagnoses.
Miscellaneous Diagnosis Guidelines
Unit 3

Neoplasms

Review of Neoplasm Table Columns

- **Malignant**
  - **Primary** – Primary malignancies represent the site of origin. If no evidence of a metastasis (or spread) is documented and only one site is referenced, a coder should assume the site documented is the site of origin.
  - **Secondary** – Secondary malignancies represent the site of spread or metastasis.
  - **In Situ** – In situ malignancies represent cases where the neoplasm is undergoing malignant changes, but still confined to the point of origin and has not yet invaded the surrounding normal tissue. Codes from this column should be assigned only if supported by a pathology report. Whether a malignancy is “in situ” or “primary” should not be decided by a coder.

- **Benign**
  Benign neoplasms are characterized as noninvasive and do not spread to distant sites. Coders should assign these codes when confirmed by a written pathology report and ICD-9-CM cross-reference.
Coders should not classify growths as a benign neoplasm, if a specific main term exists in the Alphabetic Index. These conditions include, but are not limited to:

<table>
<thead>
<tr>
<th>Adenosis</th>
<th>Goiter</th>
<th>Nodule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condylomata</td>
<td>Mass</td>
<td>Cyst</td>
</tr>
</tbody>
</table>

- **Uncertain Behavior**
  Neoplasms in which the ultimate behavior cannot be determined at the time the neoplasm is discovered are classified as “uncertain behavior”. The designation “uncertain behavior” should not be decided by a coder. The use of this column should only be based on a pathology report or an Alphabetic Index cross-reference.

- **Unspecified Behavior**
  Neoplasms in which the behavior is not specified are classified as “unspecified nature.” An example is a “tongue tumor.” The cross-references in the Alphabetic Index will provide guidance as to when to use this column.

**Locating Neoplasm Codes**

1. Refer to the main term (and subterm if necessary) in the Alphabetic Index representing the morphological type of the neoplasm.

   *Morphology – The form and structure of a neoplasm*

   Examples include:

<table>
<thead>
<tr>
<th>Fibroma</th>
<th>Carcinoma</th>
<th>Cementoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanoma</td>
<td>Sarcoma</td>
<td>Myoma</td>
</tr>
</tbody>
</table>
2. Once the entry representing the morphology has been found, scan the subterms to identify
the anatomical site affected.

3. If the anatomical site is not listed, refer to the cross reference that can be found at the
morphology entry.

   **Osteogenic sarcoma** – see also Neoplasm, bone, malignant

4. Turn to the Neoplasm Table (located in the Alphabetic Index at the main term “Neoplasm”) and find the entry representing the anatomic site.

5. Based on the cross-reference given from Step 3, assign the code from the appropriate column of the table.

<table>
<thead>
<tr>
<th><strong>Comparison At a Glance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICD-9-CM</strong></td>
</tr>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td>Neoplasm Table found in the Alphabetic Index, under the main term Neoplasm.</td>
</tr>
<tr>
<td><strong>Term Change</strong></td>
</tr>
<tr>
<td>The last column in the Neoplasm Table is “Unspecified”.</td>
</tr>
<tr>
<td><strong>Table Functionality</strong></td>
</tr>
<tr>
<td>No change.</td>
</tr>
</tbody>
</table>
Exercise 4

Assign code(s) for each of the following.

1. Basal cell carcinoma, external nose

2. Cementomas, maxillary

3. Malignant melanoma of skin of scalp

4. Osteogenic sarcoma of the mandible

5. Squamous cell carcinoma of the mandibular alveolar ridge

6. Malignant neoplasm of buccal mucosa; patient is dependent on chewing tobacco

7. Metastatic carcinoma of submandibular salivary gland to cervical lymph nodes
Injuries

Open Wounds

In ICD-9-CM, all forms of open wounds (i.e., lacerations, gunshot wounds, punctures) were grouped together. However, in ICD-10-CM distinction within this term has been made. Specifically, coders are given the following choices:

- Laceration, with or without foreign body
- Puncture wound with or without foreign body
- Open bite
- Unspecified open wound

Within these classifications, opportunity to show laterality is available.

Fractures

Open v. Closed Fractures

A fracture not specified as open or closed is coded to closed. Likewise, a fracture not indicated whether displaced or not displaced is coded to displaced.

Sequencing Multiple Fractures

When a patient experiences multiple fractures, the fracture codes are sequenced by severity of the fracture.
### Traumatic – 7th Characters

There are 16 possible 7th characters from which to choose when coding traumatic fractures. However, not every traumatic fracture carries each one of them. Instead, only those most applicable to a given fracture are provided.

#### Example

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>initial encounter for closed fracture</td>
</tr>
<tr>
<td>B</td>
<td>initial encounter for open fracture</td>
</tr>
<tr>
<td>D</td>
<td>subsequent encounter for fracture with routine healing</td>
</tr>
<tr>
<td>G</td>
<td>subsequent encounter for fracture with delayed healing</td>
</tr>
<tr>
<td>K</td>
<td>subsequent encounter for fracture with nonunion</td>
</tr>
<tr>
<td>S</td>
<td>sequela</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fracture of Mandible</th>
</tr>
</thead>
<tbody>
<tr>
<td>A initial encounter for closed fracture</td>
</tr>
<tr>
<td>B initial encounter for open fracture</td>
</tr>
<tr>
<td>D subsequent encounter for fracture with routine healing</td>
</tr>
<tr>
<td>G subsequent encounter for fracture with delayed healing</td>
</tr>
<tr>
<td>K subsequent encounter for fracture with nonunion</td>
</tr>
<tr>
<td>S sequela</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fracture of Radius (lower arm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A initial encounter for closed fracture</td>
</tr>
<tr>
<td>B initial encounter for open fracture type I or II OR initial encounter for open fracture NOS</td>
</tr>
<tr>
<td>C initial encounter for open fracture type IIIA, IIIB, or IIIC</td>
</tr>
<tr>
<td>D subsequent encounter for closed fracture with routine healing</td>
</tr>
<tr>
<td>E subsequent encounter for open fracture type I or II with routine healing</td>
</tr>
<tr>
<td>F subsequent encounter for open fracture type IIIA, IIIB, or IIIC with routine healing</td>
</tr>
<tr>
<td>G subsequent encounter for closed fracture with delayed healing</td>
</tr>
<tr>
<td>H subsequent encounter for open fracture type I or II with delayed healing</td>
</tr>
<tr>
<td>J subsequent encounter for open fracture type IIIA, IIIB, or IIIC with delayed healing</td>
</tr>
<tr>
<td>K subsequent encounter for closed fracture with nonunion</td>
</tr>
<tr>
<td>M subsequent encounter for open fracture type I or II with nonunion</td>
</tr>
<tr>
<td>N subsequent encounter for open fracture type IIIA, IIIB, or IIIC with nonunion</td>
</tr>
<tr>
<td>P subsequent encounter for closed fracture with malunion</td>
</tr>
<tr>
<td>Q subsequent encounter for open fracture type I or II with malunion</td>
</tr>
<tr>
<td>R subsequent encounter for open fracture type IIIA, IIIB, or IIIC with malunion</td>
</tr>
<tr>
<td>S sequela</td>
</tr>
</tbody>
</table>
When coding traumatic fractures, coders have the opportunity to identify the following.

1. Type (closed v. open)
2. Classification of Open Fracture
3. Status (normal healing, delayed healing, malunion, nonunion, sequela)

### Pathophysiology Review

The most commonly used classification system for open fractures was created by Ramon Gustilo. This system rates the size of the skin laceration, the degree of energy that was associated with the injury, and the degree of associated soft tissue or vascular damage.

<table>
<thead>
<tr>
<th>Type</th>
<th>Laceration</th>
<th>Energy</th>
<th>Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>&lt;1 cm laceration</td>
<td>Low energy</td>
<td>Minimum soft tissue damage – wound bed clean</td>
</tr>
<tr>
<td>Type II</td>
<td>&gt;1 cm laceration</td>
<td>Moderate energy</td>
<td>Moderate soft tissue damage – wound bed is moderately contaminated</td>
</tr>
<tr>
<td>Type IIIA</td>
<td>&gt;1 but &lt;10 cm laceration</td>
<td>High energy</td>
<td>Extensive soft tissue damage – wound bed contaminated – adequate soft tissue coverage of bone remaining</td>
</tr>
<tr>
<td>Type IIIB</td>
<td>&gt;10 cm laceration</td>
<td>High energy</td>
<td>Extensive soft tissue damage – inadequate soft tissue coverage of bone remaining – regional or free flap repair needed</td>
</tr>
<tr>
<td>Type IIIC</td>
<td>&gt;10 cm laceration</td>
<td>High energy</td>
<td>Extensive soft tissue damage – increased risk of amputation – major vascular injury</td>
</tr>
</tbody>
</table>
Pathological Fractures

Several pathological fracture codes exist in ICD-10-CM. These include:

M80- Osteoporosis with current pathological fracture
M84.4- Pathological fracture, not elsewhere classified
M84.5- Pathological fracture in neoplastic disease
   *Use an additional code to identify the specific neoplasm*
M84.6- Pathological fracture in other disease
   *Use an additional code to identify the underlying condition*

<table>
<thead>
<tr>
<th>Comparison At a Glance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICD-9-CM</strong></td>
</tr>
<tr>
<td><strong>Open Wounds - Types</strong></td>
</tr>
</tbody>
</table>
| **Open Wounds – Complicated** | - Wounds classified as uncomplicated or complicated.  
   - Presence of foreign body classified as a complicated wound |
| **Traumatic Fractures – Classification** | - Classified as closed or open.  
   - No ability to specify open fracture class. |
| **Traumatic Fractures – Healing Status** | - Routine healing v. delayed healing cannot be reflected in code assignment.  
   - Malunion and nonunion assigned separate codes. |
| **Pathological Fractures** | - Two codes required. One reflects the fracture and a second one reflects the underlying cause. |
| **Open Wounds - Types** | - Lacerations, punctures, and open bites are assigned specific codes. |
| **Open Wounds – Complicated** | - Terminology of uncomplicated/complicated not used.  
   - Presence of foreign body specifically reflected in code title. |
| **Traumatic Fractures - Classification** | - Classified as closed or open.  
   - Some open fractures classified by type. |
| **Traumatic Fractures – Healing Status** | - Routine healing and delayed healing is reflected in the 7th character.  
   - Malunion and nonunion is reflected in the 7th character. |
| **Pathological Fractures** | - One or two codes required, depending on the underlying cause of the fracture. |
Exercise 5

Assign code(s) for each of the following. Do not assign External Cause codes.

1. Patient’s left cheek (skin) was cut by broken glass during an assault at a bar

2. Contusion, right cheek

3. Laceration of forehead with imbedded gravel - follow-up visit

4. Laceration of soft palate

5. Skull fracture with extradural hemorrhage. Patient was unconscious for 2 hours because of the head trauma.

6. Dislocation of right TMJ

7. Depressed frontal bone fracture with cerebral contusion – no LOC

8. Fracture of the right mandible due to a benign neoplasm of bone

9. The patient underwent treatment for a fracture of the left mandibular ramus four weeks ago. He presents today for a routine follow-up examination.
Sequelae

Definition

A sequela (formerly known as a late effect) is a condition that results from a previous acute illness or injury that no longer exists.

- The original illness or injury has been cured or healed.
- The patient has a permanent life-long condition as a result of the previous condition.

Sequencing Sequelae Codes

1. **Principal Diagnosis (or First-Listed Diagnosis):** Code the residual (condition produced)

2. **Secondary Diagnosis:** Assign the late effect code that represents the cause of the original injury or condition. Late effect codes are found in the Alphabetic Index under the main term "Sequelae."

Practice Problem

Which of the following would be considered to be a late effect situation?

- 1. Malocclusion due to malunion of fracture
- 2. Facial dermatitis, following gunshot wound (GSW), 3 weeks ago
- 3. Facial nerve paralysis due to injury occurring during surgery 4 years ago
3. **Secondary Diagnosis:** If the causal condition was an injury, assign a “Sequelae” External Cause code from the Index of External Causes of Injury.

**Exception to Sequencing Rule** - An exception to this multiple code sequencing exists with late effects of cerebrovascular diseases. Category I69 (Sequelae of cerebrovascular diseases) has been assigned additional characters to indicate specific types of residuals related to sequelae of cerebrovascular diseases. As such, the life-long residual code and the “sequelae” code have been combined into one.

<table>
<thead>
<tr>
<th>Comparison At a Glance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICD-9-CM</strong></td>
</tr>
<tr>
<td><strong>Terminology</strong></td>
</tr>
<tr>
<td>• Concept called late effects.</td>
</tr>
<tr>
<td><strong>Number of Needed Codes</strong></td>
</tr>
<tr>
<td>• Late effect of CVA = 1 code</td>
</tr>
<tr>
<td>• Late effect of disease = 2 codes</td>
</tr>
<tr>
<td>• Late effect of injury = 3 codes</td>
</tr>
<tr>
<td><strong>Sequencing of Codes</strong></td>
</tr>
<tr>
<td>• First – Residual</td>
</tr>
<tr>
<td>• Second – Late effect code</td>
</tr>
<tr>
<td>• Third – Late effect external cause code</td>
</tr>
</tbody>
</table>

**Exercise 6**

Assign code(s) for each of the following.

1. Traumatic arthritis, right TMJ following old fracture of the mandible. The fracture occurred when falling down stairs. _______________
2. Fracture of the mandible, which took place 3 months ago – a result from a brawl (fist fight) – the fracture is still not healed

3. Hypoglossal nerve paralysis, which is due to a GSW to the head 10 years ago. The patient was a soldier shot during a war battle by enemy fire.

4. Muscle contracture due to frostbite

5. Ankylosis of jaw due to previous TB of the TMJ
Review the following scenarios and find the codes for each diagnosis.

1. A 14-year-old boy fell off his bike at a park and was seen in the emergency room by the OMS at the request of the ER physician. He broke (open) his maxillary central incisors causing an open alveolar fracture, has a 3 cm laceration inside of his upper lip, and a broken mandibular condyle on the right side.

   a. Fractured mandible
   b. Fractured maxilla
   c. Fractured tooth
   d. Lacerated lip

   Want a challenge? Assign the External Cause codes too.

   e. Fall from bicycle
   f. Occurring at a park
   g. Activity – riding a bike
   h. Employment status – leisure (for no income)
2. A 58-year-old Type I diabetic patient, who has used daily insulin injections for 5 years, presents with a Class IV complete edentulous mandible and maxilla due to periodontal disease. The periodontal disease is associated with the diabetes. Associated treatment will be done as an outpatient at the local hospital because the doctor is concerned about controlling his blood sugar.

a. Edentulism

b. Diabetes

c. Insulin Use in Type II Diabetes

3. A 23-year-old presents for definitive management of her “bad bite” for which she has been in braces for the last 22 months. The OMS states the diagnosis is maxillary deficiency with mandibular prognathism and mandibular hyperplasia.

a. Maxillary deficiency (hypoplasia)

b. Mandibular prognathism

c. Mandibular hyperplasia

4. A 19-year-old patient presents on referral from his orthodontist for evaluation and treatment. Eight months ago, he had an implant placed in the #30 site to replace a congenitally missing tooth. The implant is failing due to periodontal infection.

a. Failed implant
5. A 27-year-old patient is seen in the SICU following an MVA collision. The patient was the driver of a SUV that collided with a pickup truck on the highway. He is noted to have bilateral zygoma fractures, a maxillary anterior alveolar fracture, fracture of the mandibular symphysis (open into the mouth), bilateral mandibular angle fractures that communicate intraorally, and a deep jagged laceration of the right cheek measuring 4.5cm.

a. Fractured zygoma

b. Fractured maxilla

c. Fractured mandible (symphysis)

d. Fractured mandible (angle)

e. Lacerated cheek

Want a challenge? Assign the External Cause code too.

f. MVA collision between SUV and pickup truck

6. A 68-year-old man presents with a two-centimeter non-healing ulcerative lesion of the posterior tongue. The lesion is excised and the pathology report shows carcinoma. According to the patient’s history, he smoked for 40 years, but quit about 2 years ago.

a. Carcinoma of tongue

b. History of tobacco dependence
7. A 41-year-old male is referred for evaluation and treatment of severe swelling secondary to a periapical abscess with fistula involving the mandibular left first molar. The tooth is broken off at the gum line. The infection is so severe that the patient now has cellulitis (Group A Strep).

a. Periapical abscess
b. Cellulitis of face
c. Streptococcal organism
d. Fractured tooth

8. The patient, a 37-year-old male, is referred from his dentist for closure of a sinus communication that has persisted following extraction one year ago of his left maxillary first molar causing chronic maxillary sinus infections. The patient has persistent drainage from his left maxillary sinus and frequently gets oral liquids in his nose. The dentist has asked that a lingual frenectomy be considered since the patient is tongue-tied and has a hypertrophic frenum.

a. Dental sinus
b. Maxillary sinus infection
c. Tongue tied
d. Hypertrophic frenum
9. The patient presents with a large unsightly hypertrophic scar extending from the corner of her right eye down to the angle of her mandible. The scar developed following extensive injuries from an MVA 14 months ago in which she was thrown through the windshield (driver of vehicle). Scar contraction and muscle injuries have led to mechanical ptosis of her right upper and lower eyelids and cicatricial ectropion of the upper and lower eyelids.

a. Hypertrophic scar

b. Mechanical ptosis

c. Cicatricial ectropion

d. Cicatricial ectropion

e. Lacerated muscle (sequela)

f. Lacerated face (sequela)

Want a challenge? Assign the External Cause code too.

g. MVA with collision with stationary object
10. This 84-year-old female fell yesterday while going down her front steps at home (single family dwelling). As a result of her fall, she sprained her left wrist, lacerated her forehead, and fractured her mandibular symphysis.

a. Fractured mandible
b. Lacerated forehead
c. Sprained wrist

d. Fall down stairs
e. Occurring at home

Want a challenge? Assign the External Cause code too.
General Equivalence Mappings (GEM)

The General Equivalence Mappings (GEMs) are a tool – a translation dictionary – that can be used to convert data from ICD-9-CM to ICD-10-CM and vice versa. However, the GEMs are not a substitute for learning how to assign ICD-10-CM codes. In fact, attempting to use the GEMs to code an individual patient’s encounter would be inefficient. This is because the vaguer ICD-9-CM is associated with multiple ICD-10-CM codes. As such, the mappings simply provide a series of possible compromises rather than a mirror image of one code to an identical code in the other code set.

The GEMs were created by the Centers for Medicare and Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC). These agencies will maintain the GEMs with annual updates through 2016.

There are two types of maps. Mapping from ICD-10-CM codes back to ICD-9-CM codes is referred to as backward mapping. Mapping from ICD-9-CM codes to ICD-10-CM and PCS codes is referred to as forward mapping.
Reimbursement Mapping

In a response to requests by non-Medicare third party payers, CMS developed a more streamlined reimbursement mapping based on the GEMs. In these uni-directional mappings, one ICD-10 code is linked to one ICD-9 code. By creating these special mappings, insurance companies will be able to process an ICD-10 insurance claim with an ICD-9-based payment system. These mappings are considered temporary and are to simply assist legacy payment in systems in processing claims while newer computer systems are created that will process ICD-10 claims directly.

The Development Process

Following the application of backward GEMs, it was found that 95% of ICD-10 diagnosis codes translate to a single ICD-9 diagnosis code. This left approximately 3,500 ICD-10 diagnosis codes that required further review.

<table>
<thead>
<tr>
<th>Forward Mapping</th>
<th>Backward Mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source Code</strong> (ICD-9-CM)</td>
<td><strong>Target Code</strong> (ICD-10-CM)</td>
</tr>
<tr>
<td>524.00</td>
<td>M26.00</td>
</tr>
<tr>
<td>524.01</td>
<td>M26.01</td>
</tr>
<tr>
<td>524.02</td>
<td>M26.03</td>
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<tr>
<td>524.03</td>
<td>M26.02</td>
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<tr>
<td>524.04</td>
<td>M26.04</td>
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<td>524.05</td>
<td>M26.05</td>
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<td>524.06</td>
<td>M26.06</td>
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<td>524.07</td>
<td>M26.07</td>
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<tr>
<td>524.09</td>
<td>M26.09</td>
</tr>
<tr>
<td>524.10</td>
<td>M26.1</td>
</tr>
</tbody>
</table>
CMS’s goal was to identify the most commonly reported ICD-9-CM codes. To determine this, they used inpatient hospital frequency data, compiled from two sources. Approximately 35 million MedPAR (Medicare Provider Analysis and Review) records, dating from 2006 to 2009, were included. And the second data set contained approximately 12 million inpatient hospital records from the California Office of Statewide Health Planning and Development, dating from 2005 to 2008. This source was largely used to obtain obstetric and newborn data, which was not available in MedPAR data.

When the ICD-10 to ICD-9 GEM offered more than one translation, these two reference data sources were queried to find the most frequently reported ICD-9 code from the GEM alternative list. At the conclusion of the review, there was a clear dominant ICD-9 code for all queries with exception of about 300 diagnosis codes. In fact, the dominant ICD-9 code was often more than twice as frequent as any of the other code alternative.

This is evident in the asthma example below. It is clear that 493.01 is the dominant ICD-9 code. It appears 86% of the time in the MedPAR data and 99% of the time in California data.

<table>
<thead>
<tr>
<th>I-10 CM</th>
<th>I-10 Description</th>
<th>I-9 CM</th>
<th>I-9 Descriptions</th>
<th>MedPAR %</th>
<th>California %</th>
<th>Reimbursement Mapper</th>
</tr>
</thead>
<tbody>
<tr>
<td>J45.22</td>
<td>Mild intermittent asthma with status asthmaticus</td>
<td>493.01</td>
<td>Extrinsic Asthma with Status Asthmaticus</td>
<td>86%</td>
<td>99%</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>493.11</td>
<td>Intrinsic Asthma with Status Asthmaticus</td>
<td>14%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

But, dominance was not always so clearly identified. In fact, there were times when the Medicare reference data and the all-payer reference data from California disagreed. In other words, there
were some cases where the MedPAR frequency rate was very high, but the all-payer frequency rate was not – or vice versa. When this happened, the code with the highest Medicare frequency was selected – as long as it was a non-obstetric or non-newborn condition. If it was an obstetric or newborn case, the California data had priority. In the worst situations, a clear choice could still not be made. And, in these cases, a clinical review was required to make the final choice.

ICD-10 Implementation Timeline

<table>
<thead>
<tr>
<th>Actions</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inform physicians/staff of upcoming changes and the practice’s implementation plans (1 month)</td>
<td></td>
<td></td>
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<tr>
<td>Identify and establish an ICD-10 coordination manager for your practice (1 month)</td>
<td></td>
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<tr>
<td>Perform an impact assessment and identify potential changes to existing work flow and business processes (6 months)</td>
<td></td>
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<tr>
<td>• Collect information on current use of ICD-9 and a list of physicians and staff who need ICD-10 training. Staff training will most likely involve billing and other financial personnel, coding staff, clinicians, managements, and IT staff, if applicable.</td>
<td></td>
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<tr>
<td>• Evaluate the effect of ICD-10 on other planned or on-going projects (e.g., EHR adoption and Meaningful Use)</td>
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<tr>
<td>Determine business and technical implementation strategy (1 month)</td>
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<tr>
<td>Develop an implantation plan, including a memo/letter communicating the new system changes to staff (3 months)</td>
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<tr>
<td>Estimate and secure budget, including all costs associated with implementation such as software and software license costs, hardware procurement, and staff training costs (2 months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin internal system design and development (work with vendors as needed)</td>
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<td></td>
</tr>
<tr>
<td>Actions</td>
<td>Start Date</td>
<td>End Date</td>
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<tr>
<td>------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Seek resources from CMS, professional and membership organizations to help with transition</td>
<td></td>
<td></td>
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<tr>
<td>Contact systems vendors, clearinghouses, and/or billing services to assess their readiness for ICD-10 and evaluate current contracts (2 months)</td>
<td></td>
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</tr>
<tr>
<td>- Determine if systems vendors and/or clearinghouses/billing services will support changes to systems, supply a timeline and cost estimate for implementation changes, and identify when testing will occur</td>
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<tr>
<td>- Determine anticipated testing time and schedule</td>
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<tr>
<td>Educate staff on changes in documentation requirements</td>
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<tr>
<td><strong>Winter 2012</strong></td>
<td></td>
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<tr>
<td>Complete system design and development</td>
<td></td>
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</tr>
<tr>
<td>Continue to educate staff on changes in documentation requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start conducting internal testing. This must be a coordinated effort with internal coding, billing, and technical resources and vendor resources (9 months)</td>
<td></td>
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</tr>
<tr>
<td>Contact IT support personnel to begin implementing the ICD-10 project plan throughout 2013 until ICD-10 implementation. Actions steps include reviewing sample data reports, testing, and evaluating data for accuracy (11 months)</td>
<td></td>
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<tr>
<td><strong>Spring 2013</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continue to educate staff on changes in documentation requirements from health plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation.</td>
<td></td>
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<tr>
<td><strong>Summer 2013</strong></td>
<td></td>
<td></td>
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<tr>
<td>Continue to educate staff on changes in documentation requirements from health plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation</td>
<td></td>
<td></td>
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<tr>
<td>Complete internal testing</td>
<td></td>
<td></td>
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<tr>
<td><strong>Fall 2013</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete educating staff on changes in documentation requirements from health plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actions</td>
<td>Start Date</td>
<td>End Date</td>
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<tr>
<td>------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation.</td>
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</tr>
<tr>
<td>Begin external testing between practice, health plans, and other external business associates (10 months)</td>
<td></td>
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</tbody>
</table>

**Winter 2013**

<table>
<thead>
<tr>
<th>Actions</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation</td>
<td></td>
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</tr>
<tr>
<td>Continue external testing between practice, health plans, and other business associates</td>
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</table>

**Spring 2014**

<table>
<thead>
<tr>
<th>Actions</th>
<th>Start Date</th>
<th>End Date</th>
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</thead>
<tbody>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation</td>
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<td></td>
</tr>
<tr>
<td>Continue external testing between practice, health plans, and other business associates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct detailed ICD-10 training for coders (6 months – start by April)</td>
<td></td>
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</tbody>
</table>

**Summer 2014**

<table>
<thead>
<tr>
<th>Actions</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete external testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with vendor(s) to transition ICD-10 systems to full production</td>
<td></td>
<td></td>
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<tr>
<td>Continue training for coders, as needed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assure that IT support personnel are continuing to implement the ICD-10 project plan throughout 2013 until ICD-10 implementation.</td>
<td></td>
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</tbody>
</table>

**Fall 2014**

<table>
<thead>
<tr>
<th>Actions</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with vendor(s) to complete transition to ICD-10 systems to full production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete training for coders</td>
<td></td>
<td></td>
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</tbody>
</table>

**October 1, 2014:** ICD-10 system implementation for full compliance. ICD-9 will continue to be used for services provided before October 1, 2014.

Source: Centers for Medicare and Medicaid Services
Improving Clinical Documentation

One of the biggest challenges in ICD-10 implementation will be obtaining the needed clinical documentation to enable proper code assignment. It is essential that physicians and other clinicians be educated in ICD-10’s complexity in order to reduce the potential negative impact on revenue that can occur from inaccurate or incomplete documentation.

Key steps in improving clinical documentation include the following.

1. **Perform a documentation audit** – Randomly select 50+ encounters. Be sure to include each physician in the audit. Using only medical record documentation, assign ICD-10-CM codes to each case. Identify any circumstance in which the clinical documentation does not allow for specific ICD-10-CM code assignment. (see sample Audit Worksheet below)

2. **Analyze the impact on claims** – Using the information from Step 1, identify the providers or types of services provided that will offer the greatest opportunity or the greatest risk in terms of revenue impact.

3. **Implement physician education** – There is a basic coding principle. If it isn’t documented in the medical record, it can’t be coded. If it can’t be coded, it can’t be billed. Review with the physicians the findings from Steps 1 and 2. Adjusting clinical documentation practices will take time. Therefore, early education is critical.
ICD-10-CM Documentation Audit

Patient: ________________________________  Medical Record #: __________________________

Date of Encounter: ______________________  Physician: _______________________________

Date of Review: _________________________  Reviewer: ________________________________

Instructions:

Column 1: Write each of the patient’s diagnoses.

Column 2: Assign and enter an ICD-10-CM code for each diagnosis. The code should be assigned based on current medical record documentation only. If no ICD-10-CM code can be assigned (due to a lack of documentation), enter UC (unable to code).

Column 3: If a diagnosis code can be assigned, but a more specific code could have been assigned had more documentation been present, place a check in Column 3.

Column 4: Use Column 4 for explanatory notes (i.e., needed additional information to assign a more specific code).

<table>
<thead>
<tr>
<th></th>
<th>(1) Diagnosis</th>
<th>(2) Code</th>
<th>(3) More Specific?</th>
<th>(4) Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<td>6.</td>
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<tr>
<td>7.</td>
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<tr>
<td>8.</td>
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</tbody>
</table>

Additional Comments:
Explanations to answers are depicted as follows.

<table>
<thead>
<tr>
<th>Loss</th>
<th>teeth</th>
<th>complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Term</td>
<td>2nd Subterm</td>
<td>1st Subterm</td>
</tr>
</tbody>
</table>

Exercise 1

1. Valid Code
2. Category
3. Subcategory
4. Valid Code
5. Category
6. Valid Code

Exercise 2

1. M26.19
   **Retrognathia** (mandibular) (maxillary)

2. K01.1
   **Impacted, Impaction** | tooth, teeth

ICD-9-CM/ICD-10-CM Difference – Notice the difference in codes. A malpositioned tooth (fully erupted) is assigned M26.30 (coming from the Musculoskeletal Chapter). An impacted tooth (K01.1) comes from the Digestive System chapter.)
3. K13.0
Hypertrophy | frenum | lip

4. J34.2
Deviated | septum (nasal) (acquired)

5. M27.2
Abscess | bone | jaw (lower) (upper)

6. K11.6; F17.210
Cyst | retention | salivary gland or duct
Dependence | tobacco - see Dependence, drug, nicotine
  Dependence | drug | nicotine | cigarettes

7. K03.2
Erosion | teeth

8. M26.72
Hyperplasia | mandible | alveolar

9. Q37.0
Cleft | lip | bilateral | with cleft palate | hard

10. Q75.8
Hypoplasia | bone | face

11. K03.89
Odontoclasia

12. L04.0; B95.5
Inflammation | lymph node – see Lymphadenitis
  Lymphadenitis | acute | face
Infection | streptococcal | as cause of disease classified elsewhere

13. K05.00; K05.10; Z72.0
Gingivitis | acute
Gingivitis | chronic
Use | tobacco

14. K08.413
Loss | tooth, teeth – see Absence, teeth, acquired
  Absence | teeth | acquired | partial | due to | trauma | class III
Exercise 3

1. M19.071, M19.072
   Osteoarthritis  |  primary, ankle (right) – (left)

2. M71.011; B96.4
   Abscess  |  bursa  |  shoulder
   Infection  proteus  |  as cause of disease classified elsewhere

3. I70.223
   Arteriosclerosis  |  extremities  |  leg  |  bilateral  |  with  |  rest pain

4. N60.12
   Fibrocystic  |  disease  |  breast – see Mastopathy, cystic
   Mastopathy  |  cystic (left breast)

5. H44.21
   Myopia  |  degenerative – see Disorder, globe, degenerative, myopia
   Disorder  |  globe  |  degenerative  |  myopia (right)

Exercise 4

1. C44.311
   Carcinoma  |  basal cell – see also Neoplasm, skin, malignant
   Neoplasm  |  skin  |  nose (external) - see also Neoplasm, nose, skin
   Neoplasm  |  nose  |  skin  |  basal cell carcinoma

2. D16.4
   Cementoma – see Cyst, calcifying odontogenic
   Cyst  |  calcifying odontogenic  |  upper jaw

3. C43.4
   Melanoma  |  skin  |  scalp

4. C41.1
   Sarcoma  |  osteogenic - see also Neoplasm, bone, malignant
   Neoplasm  |  bone  |  mandible  |  malignant  |  primary

5. C03.1
   Carcinoma  - see also Neoplasm, by site, malignant
   Neoplasm  |  alveolar  |  ridge  |  carcinoma  |  lower
6. **C06.0; F17.220**  
*Neoplasm* | buccal | mucosa  
*Dependence* | tobacco – *see* Dependence, drug, nicotine  
*Dependence* | drug | nicotine | chewing tobacco

7. **C08.0; C77.0**  
*Carcinoma – see also Neoplasm, by site, malignant*  
*Neoplasm* | salivary gland | submandibular | malignant | primary  
*Neoplasm* | lymph gland or node | cervical | malignant | secondary

**Exercise 5**

1. **S01.412A**  
*Laceration* | cheek

2. **S00.83XA**  
*Contusion* | cheek

3. **S01.82XD**  
*Laceration* | forehead | with foreign body

4. **S01.512A**  
*Laceration* | palate – *see* Laceration, oral cavity  
*Laceration* | oral cavity

5. **S02.91XA; S06.4X3A**  
*Fracture, traumatic* | skull  
*Hemorrhage* | extradural – *see* Injury | intracranial | epidural hemorrhage  
*Injury* | intracranial | epidural hemorrhage

6. **S03.0XXA**  
*Dislocation* | temporomandibular joint

7. **S02.0XXA; S06.330A**  
*Fracture, traumatic* | frontal bone  
*Contusion* | cerebral

8. **M84.58XA; D16.5**  
*Fracture, pathological* | due to | neoplastic disease | skull  
*Neoplasm* | bone | mandible | benign

9. **S02.64XD**  
*Fracture, traumatic* | mandible | ramus
Practice Problem

1. Yes
2. No
3. No

Exercise 6

1. M12.58; S02.609S; W10.9XXS
   Arthritis | traumatic – see Arthropathy, traumatic
   Arthropathy | traumatic | specified joint NEC
   Fracture, traumatic | mandible | sequela
   Fall | from | stairs (from External Cause Alphabetic Index)

2. S02.609G; Y04.0XXD
   Fracture | mandible
   Assault | fight (hand) (fist) (from External Cause Alphabetic Index)

3. G52.3; S01.90XS; Y36.430S
   Paralysis | nerve | hypoglossal
   Wound, open | head
   Shooting | in war operations – see War operations
   War operations | firearms | discharge (from External Cause Alphabetic Index)

4. M62.48; T33.09XS; X31.XXXS
   Contracture | muscle | specified site NEC
   Frostbite | face
   Frostbite (from External Cause Alphabetic Index)

5. M26.61; B90.2
   Ankylosis | jaw
   Sequelae | tuberculosis | bones and joints
Section 4

1. S02.61XA; S02.42XB; S02.5XXB; S01.511A; V19.3XXA; V92.830; Y93.55; Y99.8
   Fracture, traumatic | mandible | condylar process
   Fracture, traumatic | maxilla | alveolus
   Fracture, traumatic | tooth
   Laceration | lip

   From the Alphabetic Index to External Causes (which are optional)

   Fall | from | vehicle – see Accident, transport
       Accident | transport | pedal cyclist | driver | nontraffic
   Place of occurrence | park (public)
   Activity | bike riding
   Status of external cause | recreation or sport not for income

2. K08.124; E11.630; Z79.4
   Edentulism – see Absence, teeth, acquired
       Absence | teeth | acquired | due to | periodontal disease | class IV
   Diabetes | Type II | with | periodontal disease
   Long-term drug therapy | insulin

3. M26.02; M26.19; M26.03
   Hypoplasia | maxilla
   Prognathism
   Hyperplasia | mandible

4. M27.62
   Failure | dental implant | due to | periodontal infection

5. S02.402A; S02.42XA; S02.66XB; S02.65XA; S01.411A; V43.53XA
   Fracture, traumatic | zygoma
   Fracture, traumatic | maxilla | alveolar
   Fracture, traumatic | mandible | symphysis
   Fracture, traumatic | mandible | angle
   Laceration | cheek

   From the Alphabetic Index to External Causes (which are optional)

   Accident | transport | sport utility vehicle – see Accident, transport, car occupant
           Accident | transport | car occupant | driver | collision (with) | pickup truck
6. C01; Z87.891
   Carcinoma - see Neoplasm, by site, malignant
   Neoplasm | tongue | posterior
   History | personal (of) | tobacco dependence

7. K04.6; L03.211; B95.0; S02.5XXA
   Abscess | periapical | with sinus
   Cellulitis | face
   Infection | streptococcal | as cause of disease classified elsewhere
   Fracture | tooth

8. K04.6; J32.0; Q38.1; K14.8
   Sinus | dental
   Sinusitis | maxillary
   Tongue | tie
   Hypertrophic | frenum

9. L91.0; H02.411; H02.112; H02.111; S09.12XS; S01.81XS; V47.52XS
   Scar | hypertrophic
   Ptosis | eyelid = see Blepharoptosis
   Blepharoptosis | mechanical
   Ectropion | eyelid | right | upper
   Ectropion | eyelid | right | lower
   Laceration | muscle – see Injury, muscle, by site, laceration
   Injury | muscle | head | laceration

There is a Use Additional Code note at S09 to also code open wounds from S01.

   Laceration | face – see Laceration, head, specified site
   Laceration | head | specified site

From the Alphabetic Index to External Causes (which is optional)

   Accident | transport | car occupant | driver | collision (with) | stationary object

10. S02.66XA; S01.81XA; S63.502A; W10.9XA; Y92.018A
   Fracture, traumatic | mandible | symphysis
   Laceration | forehead
   Sprain | wrist

From the Alphabetic Index to External Causes (which is optional)

   Fall | down | stairs
   Place of occurrence | residence | house | specified NEC