DPH ICD-10 IMPLEMENTATION PROJECT

ICD-10-CM CODING TRAINING WORKBOOK

FOR CHILDREN’S DEVELOPMENTAL SERVICES AGENCIES

WBS 2.5
Version 2.0
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## Change History

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<td>Sarah Brooks</td>
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</tr>
<tr>
<td>H50-H52</td>
<td>Disorders of ocular muscles, binocular movement, accommodation and refraction</td>
</tr>
<tr>
<td>H53-H54</td>
<td>Visual disturbances and blindness</td>
</tr>
<tr>
<td>H55-H57</td>
<td>Other disorders of eye and adnexa</td>
</tr>
</tbody>
</table>
2.8 Chapter 8 - Diseases of the ear and mastoid process (H60-H95)

<table>
<thead>
<tr>
<th>H60-H62</th>
<th>Diseases of external ear</th>
<th>H90-H94</th>
<th>Other disorders of ear</th>
</tr>
</thead>
<tbody>
<tr>
<td>H65-H75</td>
<td>Diseases of middle ear and mastoid</td>
<td>H95</td>
<td>Intraoperative and postprocedural complications and disorders of ear and mastoid process, not elsewhere classified</td>
</tr>
<tr>
<td>H80-H83</td>
<td>Diseases of inner ear</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.9 Chapter 9 – Diseases of the circulatory system (I00-I99)

<table>
<thead>
<tr>
<th>I00-I02</th>
<th>Acute rheumatic fever</th>
<th>I10-I15</th>
<th>Hypertensive diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>I05-I09</td>
<td>Chronic rheumatic heart diseases</td>
<td>I10-I15</td>
<td>Hypertensive diseases</td>
</tr>
<tr>
<td>I10-I15</td>
<td>Hypertensive diseases</td>
<td>I170-I79</td>
<td>Diseases of arteries, arterioles and capillaries</td>
</tr>
<tr>
<td>I20-I25</td>
<td>Ischemic heart diseases</td>
<td>I180-I89</td>
<td>Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified</td>
</tr>
<tr>
<td>I26-I28</td>
<td>Pulmonary heart disease and diseases of pulmonary circulation</td>
<td>I195-I99</td>
<td>Other and unspecified disorders of the circulatory system</td>
</tr>
</tbody>
</table>
### 2.10 Chapter 10 – Diseases of the respiratory system (J00-J99)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J00-J06</td>
<td>Acute upper respiratory infections</td>
</tr>
<tr>
<td>J09-J18</td>
<td>Influenza and pneumonia</td>
</tr>
<tr>
<td>J20-J22</td>
<td>Other acute lower respiratory infections</td>
</tr>
<tr>
<td>J30-K39</td>
<td>Other diseases of upper respiratory tract</td>
</tr>
<tr>
<td>J40-J47</td>
<td>Chronic lower respiratory diseases</td>
</tr>
<tr>
<td>J60-J70</td>
<td>Lung diseases due to external agents</td>
</tr>
<tr>
<td>J80-J84</td>
<td>Other respiratory diseases principally affecting the interstitium</td>
</tr>
<tr>
<td>J85-J86</td>
<td>Suppurative and necrotic conditions of the lower respiratory tract</td>
</tr>
<tr>
<td>J90-J94</td>
<td>Other diseases of the pleura</td>
</tr>
<tr>
<td>J95</td>
<td>Intraoperative and postprocedural complications and disorders of respiratory system, not elsewhere classified</td>
</tr>
<tr>
<td>J96-J99</td>
<td>Other diseases of the respiratory system</td>
</tr>
</tbody>
</table>

### 2.11 Chapter 11 – Diseases of the digestive system (K00-K95)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K00-K14</td>
<td>Diseases of oral cavity and salivary glands</td>
</tr>
<tr>
<td>K20-K31</td>
<td>Diseases of esophagus, stomach and duodenum</td>
</tr>
<tr>
<td>K35-K38</td>
<td>Diseases of appendix</td>
</tr>
<tr>
<td>K40-K46</td>
<td>Hernia</td>
</tr>
<tr>
<td>K50-K52</td>
<td>Noninfective enteritis and colitis</td>
</tr>
<tr>
<td>K55-K64</td>
<td>Other diseases of intestines</td>
</tr>
<tr>
<td>K65-K68</td>
<td>Diseases of peritoneum and retroperitoneum</td>
</tr>
<tr>
<td>K70-K77</td>
<td>Diseases of liver</td>
</tr>
<tr>
<td>K80-K87</td>
<td>Disorders of gallbladder, biliary tract and pancreas</td>
</tr>
<tr>
<td>K90-K95</td>
<td>Other diseases of the digestive system</td>
</tr>
</tbody>
</table>
### 2.12 Chapter 12 – Diseases of the skin and subcutaneous tissue (L00-L99)

<table>
<thead>
<tr>
<th>L00-L08</th>
<th>Infections of the skin and subcutaneous tissue</th>
<th>L55-L59</th>
<th>Radiation-related disorders of the skin and subcutaneous tissue</th>
</tr>
</thead>
<tbody>
<tr>
<td>L10-L14</td>
<td>Bullous disorders</td>
<td>L60-L75</td>
<td>Disorders of skin appendages</td>
</tr>
<tr>
<td>L20-L30</td>
<td>Dermatitis and eczema</td>
<td>L76</td>
<td>Intraoperative and postprocedural complications of skin and subcutaneous tissue</td>
</tr>
<tr>
<td>L40-L45</td>
<td>Papulosquamous disorders</td>
<td>L80-L99</td>
<td>Other disorders of the skin and subcutaneous tissue</td>
</tr>
<tr>
<td>L49-L54</td>
<td>Urticaria and erythema</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2.13 Chapter 13 – Diseases of the musculoskeletal system and connective tissue (M00-M99)

<table>
<thead>
<tr>
<th>M00-M02</th>
<th>Infectious arthropathies</th>
<th>M60-M63</th>
<th>Disorders of muscles</th>
</tr>
</thead>
<tbody>
<tr>
<td>M05-M14</td>
<td>Inflammatory polyarthropathies</td>
<td>M65-M67</td>
<td>Disorders of synovium and tendon</td>
</tr>
<tr>
<td>M15-M19</td>
<td>Osteoarthritis</td>
<td>M70-M79</td>
<td>Other soft tissue disorders</td>
</tr>
<tr>
<td>M20-M25</td>
<td>Other joint disorders</td>
<td>M80-M85</td>
<td>Disorders of bone density and structure</td>
</tr>
<tr>
<td>M26-M27</td>
<td>Dentofacial anomalies [including malocclusion] and other disorders of jaw</td>
<td>M86-M90</td>
<td>Other osteopathies</td>
</tr>
<tr>
<td>M30-M36</td>
<td>Systemic connective tissue disorders</td>
<td>M91-M94</td>
<td>Chondropathies</td>
</tr>
<tr>
<td>M40-M43</td>
<td>Deforming dorsopathies</td>
<td>M95</td>
<td>Other disorders of the musculoskeletal system and connective tissue</td>
</tr>
</tbody>
</table>

15
<table>
<thead>
<tr>
<th>M45-M49 Spondylopathies</th>
<th>M96 Intraoperative and postprocedural complications and disorders of musculoskeletal system, not elsewhere classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>M50-M54 Other dorsopathies</td>
<td>M99 Biomechanical lesions, not elsewhere classified</td>
</tr>
</tbody>
</table>

### 2.14 Chapter 14 – Diseases of the genitourinary system (N00-N99)

<table>
<thead>
<tr>
<th>N00-N08 Glomerular diseases</th>
<th>N40-N53 Diseases of male genital organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>N10-N16 Renal tubulo-interstitial diseases</td>
<td>N60-N65 Disorders of breast</td>
</tr>
<tr>
<td>N17-N19 Acute kidney failure and chronic kidney disease</td>
<td>N70-N77 Inflammatory diseases of female pelvic organs</td>
</tr>
<tr>
<td>N20-N23 Urolithiasis</td>
<td>N80-N98 Noninflammatory disorders of female genital tract</td>
</tr>
<tr>
<td>N25-N29 Other disorders of kidney and ureter</td>
<td>N99 Intraoperative and postprocedural complications and disorders of genitourinary system, not elsewhere classified</td>
</tr>
<tr>
<td>N30-N39 Other diseases of the urinary system</td>
<td></td>
</tr>
</tbody>
</table>

...
### 2.15 Chapter 15 – Pregnancy, childbirth and the puerperium (O00-O9A)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O00-O08</td>
<td>Pregnancy with abortive outcome</td>
<td>O60-O77</td>
<td>Complications of labor and delivery</td>
</tr>
<tr>
<td>O09</td>
<td>Supervision of high risk pregnancy</td>
<td>O80-O82</td>
<td>Encounter for delivery</td>
</tr>
<tr>
<td>O10-O16</td>
<td>Edema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium</td>
<td>O85-O92</td>
<td>Complications predominantly related to the puerperium</td>
</tr>
<tr>
<td>O20-O29</td>
<td>Other maternal disorders predominantly related to pregnancy</td>
<td>O94-O9A</td>
<td>Other obstetric conditions, not elsewhere classified</td>
</tr>
<tr>
<td>O30-O48</td>
<td>Maternal care related to the fetus and amniotic cavity and possible delivery problems</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2.16 Chapter 16 – Certain conditions originating in the perinatal period (P00-P96)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P00-P04</td>
<td>Newborn affected by maternal factors and by complications of pregnancy, labor, and delivery</td>
<td>P50-P61</td>
<td>Hemorrhagic and hematological disorders of newborn</td>
</tr>
<tr>
<td>P05-P08</td>
<td>Disorders of newborn related to length of gestation and fetal growth</td>
<td>P70-P74</td>
<td>Transitory endocrine and metabolic disorders specific to newborn</td>
</tr>
<tr>
<td>P09</td>
<td>Abnormal findings on neonatal screening</td>
<td>P76-P78</td>
<td>Digestive system disorders of newborn</td>
</tr>
<tr>
<td>P10-P15</td>
<td>Birth trauma</td>
<td>P80-P83</td>
<td>Conditions involving the integument and temperature regulation of newborn</td>
</tr>
</tbody>
</table>


### 2.17 Chapter 17 – Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)

<table>
<thead>
<tr>
<th>Q00-Q07</th>
<th>Q00-Q07 Congenital malformations of the nervous system</th>
<th>Q50-Q56</th>
<th>Q50-Q56 Congenital malformations of genital organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q10-Q18</td>
<td>Q10-Q18 Congenital malformations of eye, ear, face and neck</td>
<td>Q60-Q64</td>
<td>Q60-Q64 Congenital malformations of the urinary system</td>
</tr>
<tr>
<td>Q20-Q28</td>
<td>Q20-Q28 Congenital malformations of the circulatory system</td>
<td>Q65-Q79</td>
<td>Q65-Q79 Congenital malformations and deformations of the musculoskeletal system</td>
</tr>
<tr>
<td>Q30-Q34</td>
<td>Q30-Q34 Congenital malformations of the respiratory system</td>
<td>Q80-Q89</td>
<td>Q80-Q89 Other congenital malformations</td>
</tr>
<tr>
<td>Q35-Q37</td>
<td>Q35-Q37 Cleft lip and cleft palate</td>
<td>Q90-Q99</td>
<td>Q90-Q99 Chromosomal abnormalities, not elsewhere classified</td>
</tr>
<tr>
<td>Q38-Q45</td>
<td>Q38-Q45 Other congenital malformations of the digestive system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2.18 Chapter 18 – Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R00-R09</td>
<td>Symptoms and signs involving the circulatory and respiratory systems</td>
</tr>
<tr>
<td>R10-R19</td>
<td>Symptoms and signs involving the digestive system and abdomen</td>
</tr>
<tr>
<td>R20-R23</td>
<td>Symptoms and signs involving the skin and subcutaneous tissue</td>
</tr>
<tr>
<td>R25-R29</td>
<td>Symptoms and signs involving the nervous and musculoskeletal systems</td>
</tr>
<tr>
<td>R30-R39</td>
<td>Symptoms and signs involving the genitourinary system</td>
</tr>
<tr>
<td>R40-R46</td>
<td>Symptoms and signs involving cognition, perception, emotional state and behavior</td>
</tr>
<tr>
<td>R47-R49</td>
<td>Symptoms and signs involving speech and voice</td>
</tr>
<tr>
<td>R50-R69</td>
<td>General symptoms and signs</td>
</tr>
<tr>
<td>R70-R79</td>
<td>Abnormal findings on examination of blood, without diagnosis</td>
</tr>
<tr>
<td>R80-R82</td>
<td>Abnormal findings on examination of urine, without diagnosis</td>
</tr>
<tr>
<td>R83-R89</td>
<td>Abnormal findings on examination of other body fluids, substances and tissues, without diagnosis</td>
</tr>
<tr>
<td>R90-R94</td>
<td>Abnormal findings on diagnostic imaging and in function studies, without diagnosis</td>
</tr>
<tr>
<td>R97</td>
<td>Abnormal tumor markers</td>
</tr>
<tr>
<td>R99</td>
<td>Ill-defined and unknown cause of mortality</td>
</tr>
</tbody>
</table>
### 2.19 Chapter 19 – Injury, poisoning, and certain other consequences of external causes (S00-T88)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S00-S09</td>
<td>Injuries to the head</td>
<td>T15-T19</td>
<td>Effects of foreign body entering through natural orifice</td>
</tr>
<tr>
<td>S10-S19</td>
<td>Injuries to the neck</td>
<td>T20-T32</td>
<td>Burns and corrosions</td>
</tr>
<tr>
<td>S20-S29</td>
<td>Injuries to the thorax</td>
<td>T20-T25</td>
<td>Burns and corrosions of external body surface, specified by site</td>
</tr>
<tr>
<td>S30-S39</td>
<td>Injuries to the abdomen, lower back, lumbar spine, pelvis and external genitals</td>
<td>T26-T28</td>
<td>Burns and corrosions confined to eye and internal organs</td>
</tr>
<tr>
<td>S40-S49</td>
<td>Injuries to the shoulder and upper arm</td>
<td>T30-T32</td>
<td>Burns and corrosions of multiple and unspecified body regions</td>
</tr>
<tr>
<td>S50-S59</td>
<td>Injuries to the elbow and forearm</td>
<td>T33-T34</td>
<td>Frostbite</td>
</tr>
<tr>
<td>S60-S69</td>
<td>Injuries to the wrist, hand and fingers</td>
<td>T36-T50</td>
<td>Poisoning by, adverse effect of and underdosing of drugs, medicaments and biological substances</td>
</tr>
<tr>
<td>S70-S79</td>
<td>Injuries to the hip and thigh</td>
<td>T51-T6</td>
<td>Toxic effects of substances chiefly nonmedicinal as to source</td>
</tr>
<tr>
<td>S80-S89</td>
<td>Injuries to the knee and lower leg</td>
<td>T66-T78</td>
<td>Other and unspecified effects of external causes</td>
</tr>
<tr>
<td>S90-S99</td>
<td>Injuries to the ankle and foot</td>
<td>T79</td>
<td>Certain early complications of trauma</td>
</tr>
<tr>
<td>T07</td>
<td>Injuries involving multiple body regions</td>
<td>T80-T88</td>
<td>Complications of surgical and medical care, not elsewhere classified</td>
</tr>
<tr>
<td>T14</td>
<td>Injury of unspecified body region</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2.20 Chapter 20 – External Causes of Morbidity (V01-Y99)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V00-X58</td>
<td>Accidents</td>
<td>V70-V79</td>
<td>Bus occupant injured in transport accident</td>
</tr>
<tr>
<td>V00-V99</td>
<td>Transport accidents</td>
<td>V80-V89</td>
<td>Other land transport accidents</td>
</tr>
<tr>
<td>V00-V09</td>
<td>Pedestrian injured in transport accident</td>
<td>V90-V94</td>
<td>Water transport accidents</td>
</tr>
<tr>
<td>V10-V19</td>
<td>Pedal cycle rider injured in transport accident</td>
<td>V95-V97</td>
<td>Air and space transport accidents</td>
</tr>
<tr>
<td>V20-V29</td>
<td>Motorcycle rider injured in transport accident</td>
<td>V98-V99</td>
<td>Other and unspecified transport accidents</td>
</tr>
<tr>
<td>V30-V39</td>
<td>Occupant of three-wheeled motor vehicle injured in transport accident</td>
<td>W00-X58</td>
<td>Other external causes of accidental injury</td>
</tr>
<tr>
<td>V40-V49</td>
<td>Car occupant injured in transport accident</td>
<td>W00-W19</td>
<td>Slipping, tripping, stumbling and falls</td>
</tr>
<tr>
<td>V50-V59</td>
<td>Occupant of pick-up truck or van injured in transport accident</td>
<td>W20-W49</td>
<td>Exposure to inanimate mechanical forces</td>
</tr>
<tr>
<td>V60-V69</td>
<td>Occupant of heavy transport vehicle injured in transport accident</td>
<td>W50-W64</td>
<td>Exposure to animate mechanical forces</td>
</tr>
</tbody>
</table>
## 2.21 Chapter 21 – Factors influencing health status and contact with health services (Z00-Z99)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z00-Z13</td>
<td>Persons encountering health services for examinations</td>
</tr>
<tr>
<td>Z14-Z15</td>
<td>Genetic carrier and genetic susceptibility to disease</td>
</tr>
<tr>
<td>Z16</td>
<td>Resistance to antimicrobial drugs</td>
</tr>
<tr>
<td>Z17</td>
<td>Estrogen receptor status</td>
</tr>
<tr>
<td>Z18</td>
<td>Retained foreign body fragments</td>
</tr>
<tr>
<td>Z20-Z28</td>
<td>Persons with potential health hazards related to communicable diseases</td>
</tr>
<tr>
<td>Z30-Z39</td>
<td>Persons encountering health services in circumstances related to reproduction</td>
</tr>
<tr>
<td>Z40-Z53</td>
<td>Encounters for other specific health care</td>
</tr>
<tr>
<td>Z55-Z65</td>
<td>Persons with potential health hazards related to socioeconomic and psychosocial circumstances</td>
</tr>
<tr>
<td>Z66</td>
<td>Do not resuscitate status</td>
</tr>
<tr>
<td>Z67</td>
<td>Blood type</td>
</tr>
<tr>
<td>Z68</td>
<td>Body mass index (BMI)</td>
</tr>
<tr>
<td>Z69-Z76</td>
<td>Persons encountering health services in other circumstances</td>
</tr>
<tr>
<td>Z77-Z99</td>
<td>Persons with potential health hazards related to family and personal history and certain conditions influencing health status</td>
</tr>
</tbody>
</table>


3. **Unit 1 – General Overview**

### 3.1 Unit 1: Review Questions

1. The World Health Organization (WHO) version of ICD-10 has not been implemented in the United States
   - True  
   - False

2. The 2nd and 3rd characters of a code are always numeric
   - True  
   - False

3. 315.8 is a valid code in ICD-10-CM
   - True  
   - False

4. Code extensions are always the 7th character
   - True  
   - False

5. Dummy placeholders are used when you have no clue what character to use
   - True  
   - False

6. All codes in ICD-10-CM include full code titles
   - True  
   - False

7. ICD-10-PCS codes will replace CPT coding
   - True  
   - False
8. Outpatient claims submitted after October 1, 2015 must contain ICD-10-CM codes
   - [ ] True
   - [ ] False

9. GEMs are a crosswalk between ICD-9-CM/ICD-10-CM
   - [ ] True
   - [ ] False
3.2 Unit 1: Crossword Puzzle

Refer to questions on following page
<table>
<thead>
<tr>
<th>ACROSS</th>
<th>DOWN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ICD-9-CM codes will not be accepted for services provided on or after ________1, 2015</td>
<td>2. True or False: Dummy placeholders are necessary to ensure the accuracy of certain codes</td>
</tr>
<tr>
<td>3. In ICD-10-CM, codes longer than ________ characters always have a decimal point before the next character</td>
<td>4. With regard to healthcare claims transactions, how many code sets will be implemented in the US on Oct.1, 2015</td>
</tr>
<tr>
<td>6. ICD-10-PCS procedure codes will not replace _____ codes for outpatient procedures</td>
<td>5. ICD-10-CM is required for any covered entities that must comply with ________</td>
</tr>
<tr>
<td>8. The first digit of an ICD-10-CM diagnosis code is always a ________</td>
<td>7. Is there a grace period for the use of ICD-9-CM codes submitted after the ICD-10-CM compliance date?</td>
</tr>
<tr>
<td>10. ICD-10 is a ____________ coding system implemented by the World Health Organization in 1993 to replace ICD-9</td>
<td>9. True or False: All ICD-10-CM codes are 7 characters</td>
</tr>
<tr>
<td>11. ICD-10-CM codes can have a maximum of ________ characters</td>
<td>12. The United States will be the ____ industrialized country to adopt ICD-10 for morbidity reporting</td>
</tr>
<tr>
<td>15. ICD-10-CM is the Tenth Revision of the International Classification of Diseases, and replaced ____________</td>
<td>13. The National Center for Health Statistics under the ____ is responsible for the development and maintenance of ICD-10-CM</td>
</tr>
<tr>
<td></td>
<td>14. <em>ICD-10-CM Official Guidelines for Coding and Reporting</em> is a set of rules developed by ___ that complement the official conventions and instructions provided within the ICD-10-CM</td>
</tr>
</tbody>
</table>
4. Unit 2 – Using the ICD-10-CM Code Book/Online Version

4.1 Unit 2: Review Questions

1. NEC means “not elsewhere coded”
   [ ] True  [ ] False

2. Terms that appear in parentheses must appear in the diagnostic statement being coded
   [ ] True  [ ] False

3. AnExcludes2 note represents Not Coded Here
   [ ] True  [ ] False

4. The point dash (.-) symbol indicates that the code is incomplete
   [ ] True  [ ] False

5. A symptom can never be the first-listed diagnosis
   [ ] True  [ ] False

6. Instructional notes never appear at the beginning of a Chapter
   [ ] True  [ ] False

7. For outpatients, Possible and Rule out diagnoses are coded
   [ ] True  [ ] False
8. For all codes that contain laterality, bilateral is always one of the options

[ ] True  [ ] False

4.2 Unit 2: Coding Exercise

A 2-year old female is referred to the CDSA with concerns about language development. She is diagnosed as follows: **Speech and language developmental delay disorder due to hearing loss which occurred as a result of a traumatic subdural hematoma at age 6 months following a car accident.**

- What was the primary reason for the visit?

- What is the main word you will use to look up the primary reason?

- What other problems need to be coded?

- What indexes do you need to use to determine code selection?
4.3 Unit 2: Coding Exercises

<table>
<thead>
<tr>
<th>#</th>
<th>Diagnoses</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Speech and language developmental delay disorder due to hearing loss</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Microcephaly</td>
<td></td>
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<tr>
<td>3</td>
<td>Receptive Language Disorder</td>
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<tr>
<td>4</td>
<td>Delayed Milestones</td>
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<td>5</td>
<td>Lack of Coordination</td>
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<td>6</td>
<td>Down’s Syndrome</td>
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<tr>
<td>7</td>
<td>Autistic Disorder, Active State</td>
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<tr>
<td>8</td>
<td>1-year old child with Failure to Thrive</td>
<td></td>
</tr>
</tbody>
</table>
5. Unit 3 – Using the CDSA Common Diagnosis Reference List

5.1 Unit 3: CDSA Common Diagnosis Reference List

CDSA Common Dx Reference List v3.2.x

Please note that the Common Diagnosis Reference List is a dynamic document that may be updated periodically. The most recent version of the list will be sent to the CDSAs as it is updated.

5.2 Unit 3: Review Questions

1. CDSAs are required to use the CDSA Common Diagnosis Reference List.

   [ ] True    [ ] False

2. CDSAs may modify the structure of the CDSA Common Diagnosis Reference List.

   [ ] True    [ ] False

3. The CDSA Common Diagnosis Reference List was developed by a workgroup composed of clinical staff representing various CDSAs including 2 pediatricians.

   [ ] True    [ ] False

4. The CDSA Common Diagnosis Reference List has all of the information needed for coding diagnoses so the ICD-10-CM code book can be thrown away.

   [ ] True    [ ] False
5. There must be supporting evidence in the client record documentation before assigning a diagnosis.

- True
- False

5.3 Unit 3: Coding Exercises

<table>
<thead>
<tr>
<th>#</th>
<th>Scenario/Diagnosis</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18 month old boy referred to CDSA by his family with concerns about overall development. Reportedly not showing interest in toys typical for his age. He is eating well, but is a messy eater with a tendency to play in his food. He uses a few words for items he likes- “ball” and “juice”. He was described as clumsy and “heavy handed” as he likes to hit toys and objects. The family’s primary concern is with his overall development. On examination, some milestone delays are noted. Further evaluation is needed.</td>
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<td>2</td>
<td>32 month old boy referred to CDSA by DSS. Primary concern is behavior. According to mother, child is very disorganized and shows limited attention to adults and verbal instructions. He is very active during meal times and will not sit at table to eat. He is reported to frequently become aggressive when interacting with peers. Frequently uses inappropriate language and acts out adult actions he has observed.</td>
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<td>3</td>
<td>2 month old male with cleft palate involving both the soft and hard palate, with bilateral cleft lip.</td>
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<td>4</td>
<td>Service Coordinator goes out to do an intake visit (T1017HI) on a two year old referred by parent due to concerns about language. Permission to bill Medicaid along with other intake paper work completed but parent does not follow through with any additional appointments.</td>
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<tr>
<td>#</td>
<td>Scenario/ Diagnosis</td>
<td>Answer</td>
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<td>5</td>
<td>30-month old child referred for a developmental assessment to gain more information</td>
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<td>about developmental profile and ascertain if additional services need to be</td>
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<td>implemented to assist in achieving desired outcomes. Child has been enrolled in</td>
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<td>NC ITP for 11 months for developmental delays. Results of standardized testing</td>
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<td>found significant global developmental delays including a disordered communication</td>
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<td>profile. In addition, qualitative concerns regarding pragmatic language, social</td>
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<td></td>
<td>interactions, and restricted play skills were also noted. Child’s profile was</td>
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<td>consistent with the diagnosis of autism.</td>
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<td>6</td>
<td>21 month old girl is referred to the CDSA by her family with concerns about</td>
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<td>language development. She was not using gestures and no use of words was</td>
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<td>observed during testing. She would vocalize to protest and request. Her</td>
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<td>comprehension appeared in the overall average range for her age. She</td>
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<td>demonstrated low muscle tone and decreased trunk stability. Previous fine and</td>
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<td>gross motor testing reported significant motor delays. Adaptive scores were</td>
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<td>within the low average range. Some oral motor weakness was also noted as well as</td>
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<td>poor lip closure when chewing. The family’s primary concern is</td>
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<td>communication and would like to focus outcomes on this area. The child was seen</td>
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<td>by the EISC and an educational diagnostician. An appointment has been made with</td>
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<td>a speech therapist.</td>
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<td>7</td>
<td>Fifteen (15) month old girl referred by the pediatrician due to a concern with</td>
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<td>overall development. She was the 1080 grams (approximately 2 pounds 6 ounces)</td>
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<td>product of a twin gestation, preterm pregnancy. She, (“twin A”) was born at</td>
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<td>27 4/7 weeks gestation via a C-section delivery to a 19 year old gravid three</td>
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<td>at Carolinas Medical Center which is located in Charlotte, NC. Prenatal</td>
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<td></td>
<td>complications included twin gestation, maternal cigarette use, and vaginal</td>
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<td>bleeding. The apgar scores at the time of delivery were 6 and 7 at one and five</td>
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<tr>
<td></td>
<td>minutes, respectively. She was hospitalized in the Neonatal Intensive Care Unit</td>
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<td>from 10-10-12 through 11-26-12. Neonatal</td>
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<td>#</td>
<td>Scenario/Diagnosis</td>
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<td></td>
<td>complications included prematurity, respiratory distress syndrome, apnea, anemia, and hyperbilirubinemia/jaundice. Cranial ultrasounds on 10-18-12 and 11-23-12 were ‘normal’—showing no sign of intraventricular hemorrhage or PVL/periventricular leukomalacia. She received a ‘low average’ score of 42 on a TIMPS developmental screening while in the NICU. She passed the newborn hearing assessment on 11-21-12. She has had a history of the following childhood ailments/conditions: feeding problems/’spitting’ in early infancy, upper respiratory infection, rhinitis, and rash. She was hospitalized January 2013 due to RSV/bronchiolitis. She currently has no known allergies. She is not taking any medications on a routine/daily basis at this particular time. The immunizations were not up to date as of January 2014.</td>
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<td>8</td>
<td>Twenty one (21) month old male referred due to a speech/language delay. He was the 7 pounds product of a term pregnancy, born via a vaginal delivery. Prenatal complications included an elevation in maternal blood pressure. No significant neonatal complications were reported. Child has a history of the following childhood ailments/conditions: ear infections, upper respiratory infection, ‘asthma’, and weight loss. Child currently has no known allergies. He has been prescribed the medication albuterol for management of wheezing/’asthma’ symptoms. The immunizations are currently up to date.</td>
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<tr>
<td>9</td>
<td>26 month old male was referred by his mother with concerns about delayed language development. He was born at 34 weeks’ gestation weighing 1600 grams (small for gestational age). He has been healthy child except for recurrent ear infections requiring tube placement at 14 months of age. Mrs. B reported that the doctor has prescribed PediaSure to improve his weight gain, which has been “borderline” his whole life. No medical records were available for review on the date of evaluation. Developmental testing results were age-appropriate in all domains, including low-average communication skills.</td>
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<tr>
<td>#</td>
<td>Scenario/Diagnosis</td>
<td>Answer</td>
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</tbody>
</table>
| 10 | **1 yr/7mons**  
Eligibility: Established Condition  
(Prematurity, Cerebral Palsy)  
Medical Information:  
According to the records obtained from The Children's Clinic, child was born at 26 weeks and has had trouble eating and gaining weight since birth. She received a feeding tube at 10 mons of age. She has been followed by The Feeding Clinic since then and recently, the recommendation has been made for her to begin to try some soft foods by spoon. Child has a shunt because of hydrocephalus. She was also without oxygen for a period of time at birth. Child was diagnosed with spastic quadriplegia by The Children's Clinic. Child passed her newborn hearing screen and her eyes are being monitored because of the prematurity, but thus far, her medical team does not have any concerns for vision and hearing. Child does not move very much on her own. The family sees that she wants to be with them and would like her to be more independent in getting around. Child screams, cries, and can make a few sounds. It seems like they are purposeful but it's hard to know what she wants. The family wants help with ways to help her communicate. Child is up frequently at night. The family would like to get some respite so that they can get caught up on their sleep. Parents would like to go back to work but need a childcare provider who can adequately care for child's needs and who they can be comfortable with. Because of the diagnoses of prematurity and cerebral palsy confirmed through medical records, Child meets eligibility criteria based on established condition(s). The following information demonstrates how the diagnosis adversely affects her development. |        |
<p>| 11 | Child is a 25–day-old referred to the CDSA for seizures and hypoxic ischemic encephalopathy. He was a product of a term gestation delivered vaginally. PT evaluated him during the hospital stay and he was discharged with normal tone and state of consciousness. He went home feeding on maternal breast milk and Enfamil 20 kcal/ounce. He has fed well with no concerns and takes 2-3 ounces per feeding every 3 hours. There |        |</p>
<table>
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<th>#</th>
<th>Scenario/Diagnosis</th>
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<tbody>
<tr>
<td>10</td>
<td>are no problems with sleep patterns; he slept for 4 hours during the night last night. He has been well, takes no medications, and is growing well. Child’s developmental skills are testing at the average levels for his age but his motor patterns are demonstrating hypertonicity in the lower extremities which could interfere with future acquisition of motor skills.</td>
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<tr>
<td>12</td>
<td>Two (2) year old male referred due to hearing loss. History indicates he was the 7 pounds 9 ounces product of a term pregnancy, born at 39 4/7 weeks gestation via a vaginal delivery. Prenatal complications included maternal preeclampsia. Neonatal complications included fever which was treated with intravenous antibiotics over 48 hours. He received a ‘refer’ result on the newborn hearing assessment; however no information on follow-up at that time is available. A hearing assessment completed via the BAER method on 11-21-13 revealed ‘sensorineural hearing loss severe/profound’ of the left ear; ‘sensorineural hearing loss severe’ of the right ear. It was indicated at that time that he was referred to Beginnings, a genetics specialist, and the CDSA for further assessment/evaluation, support, and services.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>6-month old male initially seen last week for delays in motor functions. During the assessment, multiple bruises on buttocks and external genitalia were identified. DSS was contacted for suspected child abuse, physical &amp; sexual. The mother and child are seen today in follow-up to the suspected abuse. The mother confirms that the biological father has been physically abusing the child.</td>
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</tr>
<tr>
<td>14</td>
<td>A four-month-old is referred by the pediatrician with concerns about developmental delays and a suspected diagnosis of neurofibromatosis. The pediatrician had observed café au lait spots on the child’s skin and referred to a neurologist for the final diagnosis. The mother states that she has NF and the maternal grandmother does as well. At the time of the eligibility evaluation the mother stated that the child was recently seen by</td>
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<td>#</td>
<td>Scenario/Diagnosis</td>
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<tr>
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<td>the neurologist and diagnosed with neurofibromatosis. However the CDSA do still not have records to document the diagnosis. Results of the evaluation indicated that infant has significant delays in cognitive and gross motor skills. A physical examination was not completed at the eligibility evaluation.</td>
<td></td>
</tr>
</tbody>
</table>

6.1 Unit 4, Part 1: Review Questions

1. A status code is distinct from a history code
   - True   - False

2. If a Z code is used, a CPT procedure code is not necessary
   - True   - False

3. Z28.3, Underimmunization status is used when some of a child’s immunizations are delinquent
   - True   - False

4. History codes are acceptable on any medical record regardless of the reason for visit
   - True   - False

5. The 1st time you see a child with spina bifida, you will code the encounter as a Screening
   - True   - False

6. Codes for signs and symptoms are not reported in addition to a related definitive diagnosis
   - True   - False
7. ICD-10-CM contains a number of combination codes that identify both the definitive diagnosis and common symptoms of that diagnosis

☐ True  ☐ False

8. If a condition originates in the perinatal period and continues throughout the life of the client, the perinatal code should continue to be used regardless of client’s age

☐ True  ☐ False

9. When both birth weight and gestational age are available code one or the other but not both

☐ True  ☐ False

10. When a malformation/deformation/or chromosomal abnormality does not have a unique code assignment, do not assign additional code(s) for any manifestations that may be present

☐ True  ☐ False

11. Codes from Chapter 17 cannot be used after a client reaches age 18

☐ True  ☐ False
## 6.2 Unit 4, Part 1: Coding Exercises

<table>
<thead>
<tr>
<th>#</th>
<th>Scenario/Diagnosis</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17-month old male referred for medical and physical therapy evaluations. Child was enrolled in the ITP a couple of months earlier due to developmental delays. Parents note that child’s joints seem to pop a lot and he doesn’t seem strong. He has a history of torticollis and plagiocephaly for which he has already been prescribed a molding helmet. Child has some difficulty chewing food. Results of today’s physical therapy evaluation determined that child continues to have mild delays in his gross motor development with more significant difficulties noted in his stationary and object manipulation skills as compared to his locomotion abilities. In addition, low-normal muscle tone was noted. Besides the obvious torticollis and plagiocephaly, resultant mandibular asymmetry has created a significant malocclusion of his bite. Further consultation with a craniofacial specialist is warranted and PT is warranted.</td>
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<tr>
<td>2</td>
<td>Dystonic cerebral palsy</td>
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<tr>
<td>3</td>
<td>Meningitis due to E.coli</td>
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<tr>
<td>4</td>
<td>Spinal Muscular Atrophy</td>
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<tr>
<td>5</td>
<td>9-month old girl who was born prematurely at 32 weeks gestation. History of reflux, slow weight gain, head tilt to left. Referred for concern of delayed gross motor skills. Physical exam significant for occipital-parietal flattening on the right side (plagiocephaly) and mild torticollis. Review of systems and clinical observation show difficulties with spoon feedings. Evaluation notable for mild gross motor and fine motor delays.</td>
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<td>6</td>
<td>Almost 3-month old male born prematurely at 29 weeks gestation who was referred for concerns with extensor</td>
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<td>Scenario/ Diagnosis</td>
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<tr>
<td>7</td>
<td>30 month old male referred by his maternal aunt (guardian) due to behavioral concerns. He has several tantrums every day which often include hitting, biting and spitting. He frequently breaks toys or household items. He has been expelled from two day care centers in the past 6 months. Aunt feels that he understands verbal directions but just chooses to ignore rules. He was placed with his grandmother after birth, but she developed health issues necessitating transfer to his aunt’s custody when he was 16 months old. Aunt reported that he was an early walker (at 9 months) and that he now is very hyperactive. It takes him two hours to settle down to sleep at night, and he must watch TV from the bed. The pediatrician told her he is overweight, although eats very poorly, preferring instead to drink 10-12 cups of Kool-Aid, soda or sweet tea daily. He often wheezes when he gets colds, but the nebulizer machine he used to use for inhaled medicines has been misplaced. Medical records were not available. Developmental testing showed above-average gross motor skills, below-average social/emotional and communication skills (scores in the high 70s-low 80s) and average fine motor, cognitive and adaptive skills. Behavioral observations included an increased activity level, low frustration tolerance and both passive and active non-compliance at times. He</td>
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<td>threw test items at the examiner when she refused to allow him access to the test kit. The biological mother has a history of mental health issues and substance abuse with positive drug screen at delivery.</td>
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</tbody>
</table>
| 8  | Visit 1: A six week old infant is referred to Children’s Developmental Services Agency with bilateral cleft lip and clefting of both the hard and soft palate. She has difficulties with latching on and subsequent loss of volume during feedings. Switching to a Habermann feeder has been somewhat effective, but she continues to lose volume. During the pregnancy, the child’s mother was in active treatment at a local methadone clinic where she was compliant with medication management and was enrolled in the program throughout the pregnancy. Ultrasounds during the pregnancy revealed the congenital defects that the child was subsequently born with.  
Visit 2: Since being discharged home, the child has been slowly weaned from methadone orally. Unfortunately, a combination of feeding difficulties as noted above with associated somnolence due to methadone management has led to lack of expected weight gain resulting in failure to thrive. |        |

7.1 Unit 4, Part 2: Review Questions

1. Before coding HIV positive, there must be a positive serology or culture for HIV in the client’s record
   - [ ] True
   - [ ] False

2. If the documentation states the client has AIDS, always code B20, HIV disease
   - [ ] True
   - [ ] False

3. All neoplasms are coded in Chapter 2
   - [ ] True
   - [ ] False

4. Only one Diabetes Mellitus code can be assigned for each encounter
   - [ ] True
   - [ ] False

5. Code Z79.4, Long-term (current) use of insulin, is always used for all 5 categories of Diabetes Mellitus
   - [ ] True
   - [ ] False

6. Most codes in Chapter 7, Diseases of the Eye and Adnexa, include anatomic site and/or laterality
   - [ ] True
   - [ ] False
7. If a 3 year old male falls down the steps and breaks a leg, the fracture will be coded from Chapter 13, Diseases of the Musculoskeletal System and Connective Tissue

[ ] True  [ ] False

8. For adverse effects due to drugs or chemicals, always begin with the Table of Drugs and Chemicals

[ ] True  [ ] False

9. The Table of Drugs and Chemicals is used to identify Chapter 20 codes

[ ] True  [ ] False

### 7.2 Unit 4, Part 2: Coding Exercises

<table>
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<tr>
<th>#</th>
<th>Scenario/Diagnosis</th>
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<tbody>
<tr>
<td>1</td>
<td>30-month old girl born full term but whose birth weight demonstrated intrauterine growth restriction. She was referred for a developmental assessment given concerns about expressive language and feeding difficulties. Child has a history of failure to thrive. She continued to have feeding difficulties but demonstrated stable weight gain. Acid reflux was diagnosed and medication was prescribed. Delayed gastric emptying was also diagnosed and medication was prescribed for that. Child has continued to resist some feedings and demonstrates a very poor appetite even if she is willing to accept the first bite. Assessment demonstrated significant delay in expressive language, mild delays in fine motor skills, receptive language, and overall cognitive skills. Volume limiting (self) was observed during mealtime but no oral-motor dysfunction was noted.</td>
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<td>#</td>
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<tr>
<td>2</td>
<td>2 yr old with Ullrich-Turner Syndrome was started on Androgen 3 days ago and is seen today for a rash that started out on face and stomach and has spread to arms and back. The mother reports no other changes in the child’s diet or environmental factors so the Androgen was discontinued due to the adverse effect from the medication. The child developed AIDS in utero, has juvenile diabetes mellitus and insulin is administered via an insulin pump, and moderate nonproliferative diabetic retinopathy. The child will undergo surgery for a brain stem glioma in one week.</td>
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<tr>
<td>3</td>
<td>21-month old male born full-term and perinatal period was uncomplicated other than poor feeding. Subsequent concerns about visual tracking arose and imaging studies demonstrated abnormalities with central nervous system. He has been diagnosed with obstructive hydrocephalus, cortical blindness, strabismus, feeding difficulties, oropharyngeal dysphagia, and developmental delays. Child has undergone placement of VP-shunt and strabismus surgery.</td>
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<tr>
<td>4</td>
<td>8-month old girl enrolled in the NC ITP with establishing condition of unilateral sensorineural hearing loss. She failed her newborn hearing screening x2 and was referred to UNC for an ABR. An MRI was performed and MOC reports that some “brain damage” was noted. She stated that she has been told that it was possibly due to a virus such as CMV. Child was already receiving direct PT for gross motor delays. Evaluation report noted low muscle tone too. Upon enrollment, review of medical records indicates mild-to-moderate hearing loss in right ear along with MRI findings of encephalomalacia involving of white matter in the anterior temporal lobes as well as mildly hypoplastic cerebellar vermis. Child noted to have probable delayed motor skills upon enrollment.</td>
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<tr>
<td>5</td>
<td>30 month old girl is being seen by physical therapist for complications of stroke. Therapist is working on ambulation with assistive technology.</td>
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<td>6</td>
<td>4 month old girl with Trisomy 21 with large ventricular septal defect, poor weight gain and exhibiting signs of mild congestive heart failure. Home visit done to assess developmental status and impact of medical conditions on development. Child has demonstrated increased respiratory rate, increased fatigue with feedings, and poor weight gain. Child also has noted hypotonia. Gross motor milestones are delayed.</td>
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<tr>
<td>7</td>
<td>23-month old who had a neuroblastoma surgically removed and now has a diagnosis of Opsoclonus-Myclonus Syndrome. She receives IV-IG (Intravenous-immunoglobulin) treatments every 3 weeks. She was referred in July due to mobility and equilibrium concerns (she went from being able to walk and run to a very unsteady walk). Her symptoms continued to progress and she went from crawling to being barley able to move at all. Since her surgery (removal of the neuroblastoma -August), she has made progress regaining skills and now moves around her home, with the assistance of AFOS and theratogs, by crawling, pulling to stand and cruising around the furniture. She has notable trembling of her body and nystagmus which causes her some difficulties with using a spoon and/or fork. Her development is impacted in all areas.</td>
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</tbody>
</table>
8. Training Evaluation

Please complete the Training Evaluation Form for each Unit that you complete. Completed evaluations are to be submitted either via e-mail or US Mail to:

Qiudi.Wang@dhhs.nc.gov

Qiudi Wang
5605 Six Forks Rd
Raleigh, NC  27609
9. Resource Materials

9.1 Coding Steps

Below is the process to follow when looking up codes. It is essential to use both the Alphabetic Index and Tabular List when locating and assigning a code. The Alphabetic Index does not always provide the full code. Selection of the full code, including laterality and any applicable 7th character can only be done in the Tabular List. Even if a dash is not included at the Alphabetic Index entry, it is necessary to refer to the Tabular List to verify if a 7th character is required.

A. Locate the main term in the Alphabetic Index
   a. For Chest Cold, Look up “Cold” then go down list to find “Chest”

B. Scan the main term entry for any instructional notes
   a. “see Bronchitis” so look up “Bronchitis”

C. In the diagnosis being coded, identify any terms that modify the main term
   a. Nothing under “Bronchitis J40” relates back to Chest Cold

D. Follow any cross-reference notes

E. Always verify the code in the Tabular List
   a. **Never** begin code searches using Tabular List – may lead to coding errors
   b. Go to J40 in the Tabular

F. Follow any instructional notes
   a. Do any of the instructions apply to Chest Cold?

G. Select the code
   a. J40 is the correct code
9.2 Coding Tips – Dominant/ Nondominant

For codes that specify laterality with dominant or nondominant, and the classification system does not indicate 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

9.1 CDSA Common Diagnosis Reference List

Please note that the Common Diagnosis Reference List is a dynamic document that may be updated periodically. The most recent version of the list will be sent to the CDSAs as it is updated.

9.2 Documentation Tips: Diabetes

Diabetes documentation and coding will need to include:

- Types or causes of diabetes:
  - Type 1 (Category E10)
  - Type 2 (Category E11)
  - Due to drugs or chemicals (Category E09)
  - Due to underlying condition (Category E08)
  - Other specified diabetes (Category E13)
- Body system complications related to diabetes, such as kidney or neurological complications
- Combination codes include diabetes and the manifestation
- Specific complications, such as:
  - Chronic kidney disease
  - Foot ulcer
  - Hypoglycemia without coma
- If diabetes mellitus is due to the surgical removal of all or part of the pancreas (postpancreatectomy)
  - Assign code E89.1, Postprocedural hypoinsulinemia as first-listed
o Assign secondary code from category E13, Other specified Diabetes Mellitus
o Assign secondary code from subcategory Z90.41-, Acquired absence of pancreas
o Assign secondary code for long term insulin use, Z79.4

- Controlled and Uncontrolled are no longer a factor in Diabetes Mellitus code selection
  - Uncontrolled is now coded Diabetes Mellitus (by type) with hyperglycemia

### 9.3 Documentation Tips – Asthma

- Clarify the relationship between COPD, bronchitis, and asthma
  - ICD-10-CM distinguishes between uncomplicated cases and those in exacerbation
    - Acute exacerbation is a worsening or decompensation of a chronic condition
    - An acute exacerbation is not equivalent to an infection superimposed on a chronic condition
- An additional code can be used regarding exposure to or use of tobacco
- Incorporate the following scales into documentation templates or queries
  - The National Heart, Lung, and Blood Institute (NHLBI) asthma severity classification scale accounts for the progressive nature of asthma by measuring it across the dimensions of types of symptoms and lung function
    - Mild intermittent
    - Mild persistent
    - Moderate persistent
    - Severe persistent
# 9.4 NHLBI Asthma Severity Classification Scale

<table>
<thead>
<tr>
<th>Type of Asthma</th>
<th>Symptoms</th>
<th>Nighttime Symptoms</th>
<th>Lung Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe persistent</td>
<td>• Continual symptoms</td>
<td>Frequent</td>
<td>• FEV\textsubscript{1} or PEF ≤ 60% predicted</td>
</tr>
<tr>
<td></td>
<td>• Limited physical activity</td>
<td></td>
<td>• PEF variability &gt; 30%</td>
</tr>
<tr>
<td></td>
<td>• Frequent exacerbations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate persistent</td>
<td>• Daily symptoms</td>
<td>&gt; 1time/week</td>
<td>• FEV\textsubscript{1} or PEF 60-80% predicted</td>
</tr>
<tr>
<td></td>
<td>• Daily use of inhaled short-acting beta\textsubscript{2}-agonist</td>
<td></td>
<td>• PEF variability &gt; 30%</td>
</tr>
<tr>
<td></td>
<td>• Exacerbation of affect activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Exacerbation ≥ 2 times/week ≥ 1 day(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild persistent</td>
<td>• Symptoms &gt; 2 times/week but &lt; 1 time/day</td>
<td>&gt; 2 times/month</td>
<td>• FEV\textsubscript{1} or PEF ≥ 80% predicted</td>
</tr>
<tr>
<td></td>
<td>• Exacerbation may affect activity</td>
<td></td>
<td>• PEF variability 20-30%</td>
</tr>
<tr>
<td>Mild intermittent</td>
<td>• Symptoms ≤ 2 times/week</td>
<td>≤ 2 times/month</td>
<td>• FEV\textsubscript{1} or PEF ≥ 80% predicted</td>
</tr>
<tr>
<td></td>
<td>• Asymptomatic and normal PEF between exacerbations</td>
<td></td>
<td>• PEF variability &lt; 20%</td>
</tr>
<tr>
<td></td>
<td>• Exacerbations of varying intensity are brief (a few hours to a few days)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FEV\textsubscript{1} = The maximal amount of air a person can forcefully exhale over one second accounting for the variables of height, weight, and race used to denote the degree of obstruction with asthma

PEF= Peak Expiratory Flow is the maximum flow of expelled air during expiration following full inspiration (big breath in and then big breath out)

Source: National Heart, Lung, and Blood Institute - [http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm](http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm)
9.5 Injury Coding Tips

- Initial encounters generally require four secondary codes from Chapter 20
  - External cause codes – utilize 7th character extension
    - Initial encounter (A)
    - Subsequent encounter (D)
    - Sequelae (S)
      - Example: X11.xxxA Contact with hot tap water
  - Place of Occurrence – initial encounter only
    - Example: Y92.210 Daycare center as the place of occurrence of the external cause
  - Activity Code – initial encounter only
    - Example: Y93.D9 Activity, involving arts and handcrafts
  - External Cause Status – initial encounter only
    - Example: Y99.8 Other external cause status (includes Student activity)

9.6 Documenting Autism in ICD-10

Documenting Autism in ICD-10

Written by Kathy Pride, CPC, RHIT, CCS-P

Comedian Jerry Seinfeld shocked the nation recently when he announced he “might be on the autism spectrum” and subsequently created an uproar in the autism community.

Many have viewed his statement as a play for attention and as an insult to those who are severely autistic. However, one must look at the context of the statement before rushing to judgment. Mr. Seinfeld did not claim to have autism; his reflective words implied he may have what John Elder Robison referred to in a recent article in *Psychology Today* as the Broader Autism Phenotype (BAP)—people who have traits of autism, but not to the degree that they would be diagnosed autistic. According to Robison, millions of people are in this BAP group.

What do we know about autism? According to the National Institutes of Health, autism spectrum disorder (ASD) is a range of complex neurodevelopment disorders,
characterized by social impairments, communication difficulties, and restricted, repetitive, and stereotyped patterns of behavior. Autistic disorder, sometimes called autism or classical ASD, is the most severe form of ASD, while other conditions along the spectrum include a milder form known as Asperger syndrome, and childhood disintegrative disorder and pervasive developmental disorder not otherwise specified (usually referred to as PDD-NOS). Although ASD varies significantly in character and severity, it occurs in all ethnic and socioeconomic groups and affects every age group. Experts estimate that one out of 88 children aged eight will have an ASD (Centers for Disease Control and Prevention: Morbidity and Mortality Weekly Report, March 30, 2012). Males are four times more likely to have an ASD than females. Children whose language skills regress early in life (before age three) appear to have a higher than normal risk of developing epilepsy or seizure-like brain activity.

To date, scientists still are not certain as to what causes autism; therefore, there is no cure. Research findings suggest that both genetics and environment play a role.

Studies have found patients with autism have irregularities in several regions of the brain. The theory that parental practices are responsible for autism has long been disproved. In addition, many studies have been conducted to determine if vaccines are a possible cause of autism; however, as of 2010, none of the studies have linked autism to vaccines.

Because there is no cure for autism, therapy and behavioral interventions are designed to remedy specific symptoms and can provide substantial improvement in social development and language skills. Other forms of treatment include medications for treatment of symptoms such as anxiety, depression, or obsessive-compulsive disorder, and antipsychotic medications to treat severe behavioral problems.

Seizures are treated with anticonvulsant drugs, and medications used to treat attention deficit disorder are effective to help decrease impulsivity and hyperactivity in autistic patients.

So how do we code autism in ICD-10-CM? First, looking up autism in the ICD-10-CM index leads the coder to the Mental, Behavioral, and Neurodevelopmental Disorder Chapter with a default code of **F84.0 – Autistic Disorder**. The essential modifier under the main term, atypical, leads the coder to **F84.9 Pervasive developmental disorder, unspecified**. Asperger’s syndrome is coded **F84.5 Asperger’s Syndrome**. Coding guidelines for category **F84** advises the coder to use additional code(s) to identify any associated medical condition and intellectual disabilities.

Associated medical conditions and/or symptoms of autism vary from patient to patient. Coding for some of the more common associated medical conditions and intellectual disabilities include:

**Over- or under-reaction to certain sights, sounds, smells, textures, and tastes**
For example, some may dislike or show discomfort from a light touch or the feel of clothes on their skin; experience pain from certain sounds, like a vacuum cleaner, a ringing telephone, or a sudden storm; sometimes they will cover their ears and scream, or have no reaction to intense cold or pain. Researchers are trying to determine if these unusual reactions are related to differences in integrating multiple types of information from the senses. Based on the physician’s findings and documentation, the following codes may be appropriate to use for some of the symptoms:

- R20.0 – Anesthesia of skin
- R20.1 – Hypoesthesia of skin
- R20.2 – Paresthesia of skin (Formiation, Pins and Needles, Tingling skin)
- R20.3 – Hyperesthesia
- R20.8 – Other disturbances of skin sensation
- H93.231 – Hyperacusis, right ear
- H93.232 – Hyperacusis, left ear
- H93.233 – Hyperacusis, bilateral
- H93.239 – Hyperacusis, unspecified ear

Sleep problems

Children with ASD tend to have problems falling asleep or staying asleep, or have other sleep problems. These problems make it harder for them to pay attention, reduce their ability to function, and lead to poor behavior. In addition, parents of children with ASD and sleep problems tend to report greater family stress and poorer overall health among themselves.

- G47.0 – Insomnia
- F51.05 – Insomnia due to a mental disorder
- G47.01 – Insomnia due to a medical condition; code also associated medical condition

Intellectual disability

Many children with ASD have some degree of intellectual disability. When tested, some areas of ability may be normal, while others—especially cognitive (thinking) and language abilities—may be relatively weak. For example, a child with ASD may do well on tasks related to sight (such as putting a puzzle together) but may not do as well on language-based problem-solving tasks.

Some children with ASD (such as those formerly diagnosed with Asperger’s syndrome) often have average or above-average language skills and do not show delays in cognitive ability or speech.

- F70 – Mild intellectual disabilities (IQ level 50-55 to approximately 70, Mild mental subnormality)
- F71 – Moderate intellectual disabilities (IQ level 35-40 to approximately 50-55, Moderate mental subnormality)
- F72 – Severe intellectual disabilities (IQ level 20-25 to approximately 35-40, Severe mental subnormality)
- F73 – Profound intellectual disabilities (IQ level below 20-25, Profound mental subnormality)
- F78 – Other intellectual disabilities
- F79 – Unspecified intellectual disabilities (Mental Deficiency NOS, Mental subnormality NOS)

Seizures

One in four children with ASD has seizures, often starting either in early childhood or during the teen years. Seizures, caused by abnormal electrical activity in the brain, can result in

- G40.909 – Epilepsy, unspecified, not intractable, without status epilepticus (includes Seizure disorder NOS and Recurrent seizures NOS)

Fragile X syndrome

Fragile X syndrome is a genetic disorder and is the most common form of inherited intellectual disability, causing symptoms similar to ASD. The name refers to one part of the X chromosome that has a defective piece that appears pinched and fragile when viewed with a microscope. Fragile X syndrome results from a change, called a mutation, on a single gene. This mutation, in effect, turns off the gene. Some people may have only a small mutation and not show any symptoms, while others have a larger mutation and more severe symptoms.

Around one in three children who have Fragile X syndrome also meet the diagnostic criteria for ASD, and about one in 25 children diagnosed with ASD have the mutation that causes Fragile X syndrome

- Q99.2 – Fragile X chromosome

Gastrointestinal problems

Some studies have reported that children with ASD seem to have more GI symptoms, but these findings may not apply to all children with ASD. For example, a recent study found that children with ASD may not have underlying GI problems, but that their behavior may create GI symptoms—for example, a child who insists on eating only certain foods may not get enough fiber or fluids in his or her diet, which leads to constipation.

- K59.00 – Constipation
- R10 – R19 – Symptoms involving the digestive system and abdomen
About the Author

Kathy Pride, CPC, RHIT, CCS-P, is vice president of professional services for Panacea Healthcare Solutions. Kathy has extensive experience in management, project implementation, coding, billing, physician documentation improvement, compliance audits and education. She is also an approved ICD-10 Trainer through the American Health Information Management Association (AHIMA) and a previous member of the AAPC National Advisory Board (1998 – 2000).

9.7 Clinical Documentation for Autistic Patients

Autism – Clinical Documentation for Autistic Patients: Self-Care vs. Right Reimbursement

Written by Ellen VanBuskirk

I have written several articles for ICD10monitor over the years as we as an industry grapple with ICD-10 compliance. Like many of you, I have become a bit ICD-10-weary, but I have found a new breath of energy in the topic of autism and ICD-10.

Autism is a vague diagnosis to many, and the fact that there is a spectrum of symptoms complicates the clinical picture, and thus could complicate how ICD is applied. I am not going to attempt to be an expert on how to code a complicated diagnosis like autism, but I want to present the importance of the diagnosis to the 1-88 or 1-66 families of children, whichever statistic one chooses. I think it is important to look at where the World Health Organization (WHO) placed the ICD-10 code for autism more than 10 years ago, when the I-10 code was developed. It was a part of the mental health disorders, not a neurological diagnosis. ICD-10 was endorsed by the 43rd World Health Assembly in May 1990 and came into use in WHO member states as of 1994.

Obviously, there has been considerable research, and it continues today around the cause and symptoms and treatment for the children properly diagnosed with autism. Thus, it is critical to ensure the clinical record is documented in detail so the proper ICD-10/Diagnostic and Statistical Manual (DSM) codes are applied.

DSM defines a clinical picture that will require a comprehensive documented record to define autism:

Autism Spectrum Disorder
An individual must meet criteria A, B, C, and D:
A. Persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays, and manifest by all three of the following:

1. Deficits in social-emotional reciprocity, ranging from abnormal social approach and failure of normal back-and-forth conversation through reduced sharing of interests, emotions, and affect, and response to total lack of initiation of social interaction.

2. Deficits in nonverbal communicative behaviors used for social interaction, ranging from poorly integrated verbal and nonverbal communication, through abnormalities in eye contact and body language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.

3. Deficits in developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers); ranging from difficulties adjusting behavior to suit different social contexts through difficulties in sharing imaginative play and in making friends to an apparent absence of interest in people.

B. Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least two of the following:

1. Stereotyped or repetitive speech, motor movements, or use of objects (such as simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases).

2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change (such as motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes).

3. Highly restricted, fixated interests that are abnormal in intensity or focus (such as strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).

4. Hyper-or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment (such as apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects).

C. Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities).

D. Symptoms together limit and impair everyday functioning.
I would argue the detail required for autism is vast and the skill needed for medical records review and code assignment requires a knowledge level greater than may be needed for other processes. The results of an inaccurate or inappropriate code applied are far-reaching, and could prevent a child and family from receiving opportunity for treatment and acceptance into the right program geared to the level of need. A child with special needs may not get access to care, as the services are already stretched beyond capacity and only paying customers get into ABA programs and social therapy groups, and receive special help in schools. They cannot get access to providers like dentists for routine dental care for special need patients, ophthalmologists for vision exams, and the list is long.

Autistic kids and adults are not behavioral or social misfits; they have a neurological deficit with a range of symptoms. Treatment is costly and often falls through the cracks. We as a nation have done poorly with meeting the needs of neurologically low-functioning people. This is not a short-term issue, but as the children are often diagnosed before the age of five and will continue to need many different modalities of treatment until end of life, one inappropriate code could make the difference that would resound over their lifetime.

So, understanding the clinical documentation, understanding the clinical picture for this huge population of our world (as this is not limited to the U.S.) could make a difference of this population being able to achieve self-care, with access to the right level of medical and mental health services. Unlike much of the clinical documentation, we directly correlate the right code to the right reimbursement level. ICD/DSM for the diagnosis is more about the correlation between attaining treatment from a very narrow segment of providers willing and able to treat the diagnosis of autism and the child receiving educational support to gain some level of success, which is important to many with the diagnosis.

The family commitment is great for families of the autistic child, who frequently are the only advocates a child may have, and having the appropriate diagnosis in the medical and school record can either open doors or lock them.

About the Author

Ellen VanBuskirk is the national director of healthcare practice with Slalom Consulting and has held executive positions in provider, payer, and managed care organizations. She started her career in clinical delivery with an expertise in emergency medicine. Ellen brings her expertise of working for many years on the U.K. National Health Service Modernization Program, as well as her experience of working on global and domestic healthcare program change for her clients.
9.8 Body Mass Index - Children

Body Mass Index 2 to 20 years

To calculate BMI:

- Kilograms and meters: weight (kg) / [height (m)]²
- Pounds and inches: weight (lb) / [height (in)]² x 703

GIRLS

90th percentile cut-points

<table>
<thead>
<tr>
<th>AGE</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>21.3</td>
</tr>
<tr>
<td>6</td>
<td>23.0</td>
</tr>
<tr>
<td>7</td>
<td>24.6</td>
</tr>
<tr>
<td>8</td>
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<td>9</td>
<td>28.2</td>
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<td>16</td>
<td>39.1</td>
</tr>
<tr>
<td>17</td>
<td>40.8</td>
</tr>
</tbody>
</table>

From: National Institute for Children's Healthcare Quality (www.nichq.org)

Color coding of the 2000 CDC BMI charts by UNC's Department of Pediatrics and Center for Health Promotion and Disease Prevention (CDC Cooperative agreement U48-DP-000039) for research and clinical purposes.
10. Crossword Puzzles

10.1 ENT Crossword Puzzle

Refer to questions on following page
Across

5. Ringing in one or both ears due to aging or noise exposure damage
9. Middle ear infection
11. "Voice box"; involved in phonation, breathing & protecting the trachea from food/liquid aspiration; houses the vocal cords
12. Thin/leaf-like cartilaginous structure at the root of the tongue & in front of the larynx; it folds backwards covering the larynx to prevent food/liquid from entering the trachea & lungs during the act of swallowing
13. "Ossicular auditus"; small bones of the middle ear made up of stapes, incus & malleus
15. Difficulty in swallowing; may be associated with pain
17. Partition of bone & cartilage between the nasal cavities
19. "Stirrup"
21. Collection of lymphoid tissue (pair) located at the rear of the throat; acts as filters to bacteria & other germs to prevent infection
23. "Eardrum"; cone-shaped membrane separating the external ear from the middle ear; transmits vibration of sound waves
26. "Anvil"
28. Two pairs of mucomembranous folds in the larynx involve in voice production; upper pair=false, lower pair=true
30. Mass of soft tissue behind the nasal cavity; part of the immune system; present at birth & childhood but disappears in adulthood (in most people)
32. Type of skin cyst (epidermal inclusion cyst) in the middle ear &/or mastoid process caused by birth defect or more commonly a complication of chronic ear infection; benign condition
33. Disorder of the inner ear; common symptoms include tinnitus, vertigo, pain and hearing loss; affects only one ear - no known cause
34. Nosebleeds; common condition due to breakage of tiny blood vessels in the nose; due to trauma, congestion from allergy, sinus infection or colds
35. Inflammation of the inner ear; usually occurring after an upper respiratory infection or bacterial ear infection

Down

1. Three tiny circular tubes/ducts (lateral/superior/posterior) in the inner ear containing fluid (endolymph); helps maintain balance & equilibrium
2. Cranial Nerve 8
3. Inflammation & irritation of the nasal mucous membrane; common symptoms are stuffy & runny nose & post-nasal drip; triggered by an allergen-i.e. pollen;
4. Inflammation of the tonsils caused by an infection
6. "Nostril"; one of the external openings to the nasal cavity in the nose which allows air to flow through the cavities to the pharynx
7. Benign, slow-growing on the nerve that connects the ear to the brain; symptoms include hearing loss, vertigo & tinnitus
8. Outer ear/auricle; ridged cartilage, funnels sound to the external auditory canal

10. Most common ear problem due to age

14. Connected system of hollow cavities in the skull; normally empty except for a thin layer of mucus; types include maxillary, frontal, ethmoid & sphenoid

16. "Swimmer's ear"; outer ear infection

18. Central part of the osseous labyrinth, oval in shape; inner organ for balance & equilibrium; houses the utricle & saccule

20. Shell-shaped structure containing receptor (hair) cells; divided into compartments by membranes (basilar & Reissner's)

22. Protruding soft, painless, non-cancerous growth in the lining of the nose or sinus; arise from inflammation in the nose & often related to allergies; large & multiple ones lead to breathing problems & infection; recurs even when treated

24. Built up of earwax in the ear canal leading to hearing loss, pain or dizziness

25. Sensory organ of hearing

27. Horse/harsh sound that occurs when one is sleeping due to partially obstructed breathing; may indicate serious health condition; common in overweight & older people

29. "Hammer"

31. Roof of the mouth; consist of anterior bony (hard) portion & posterior muscular (soft) portion; separates the oral cavity from the nasal cavity
10.2 Nervous System Crossword Puzzle

Refer to questions on following page
Clues for the Nervous System Crossword Puzzle

Across

4. Brain disorder causing recurring seizures (convulsions); causes include illnesses, brain injury, abnormal brain development, or unknown etiology

6. Continuation of the brain located within the vertebral canal, protected by the vertebral column; composed of gray matter (made up of neurons) & white matter (composed of nerve cells)

7. Autonomic nervous system sometimes referred to as the “rest & digest” system

8. Found in the cerebrum composed of the thalamus, hypothalamus, amygdala, & hippocampus

13. Inherited nerve disorder affecting the brain; most common symptoms are dementia & difficulty controlling movements (chorea)

15. Gland located in the Third Ventricle; secretes hormones including melatonin that regulates the sleep-wake cycle of the body

16. Activation of this autonomic nervous system results in “fight or flight” response causing the release of norepinephrine, adrenaline, & cortisol

17. Number (pair) of spinal nerves

21. Swelling/bulging of a weak area in the wall of a cerebral artery; most common location is at the Circle of Willis

22. Lobe of the brain for interpretation of language & words, spatial & visual perception

25. Hollow-filled cavities (2 Lateral, 1 Third, 1 Fourth) found in the brain & brainstem, filled with CSF

28. Protective covering of the brain & spinal cord composed of 3 layers: dura mater, arachnoid mater, & pia mater

29. Division of Nervous System primarily composed of spinal nerves, cranial nerves, & autonomic nervous system

31. Inflammation of the lining surrounding the brain & spinal cord, usually due to an infection

33. Brain infarction; due to sudden interruption of the blood flow & oxygen to an area of the brain (by a blood clot or bleeding)

35. Lobe of the brain for visual processing (color, light & movement)

38. Ribbon-like structure located in the ventricles, responsible for producing CSF

39. “Paralysis agitans”; progressive disorder of the nervous system affecting movement; s/s include rigidity, changes in speech & gait, tremor (most obvious sign)

40. Made up of 3 parts: midbrain, medulla oblongata, & pons; connects the cerebrum to the spinal cord; contains centers for autonomic functions- i.e. breathing, BP, HR, digestion

Down

1. Irreversible, progressive disease slowly destroying memory & other important mental functions

2. Bilaterally symmetric, soft gelatinous structure composed of cerebrum (cerebral cortex), cerebellum, & brainstem

3. Collection of 5 nuclei (caudate nucleus, putamen, globus pallidus, subthalamic nuclei, & substantia nigra) located on either side of the brain; controls cognition, movement coordination, & voluntary movement
5. Bleeding occurs within the brain; traumatic or non-traumatic causes

9. "Pachymeninx"; outermost, toughest & most fibrous layer of the meninges

10. Inflammation of the brain tissue, usually from an infection

11. Number (pair) of cranial nerves

12. Clear, colorless fluid produced by the choroid plexus inside the ventricles that flows within & around the brain & spinal cord to cushion from injury

14. Bleeding between the dura & skull

18. "Water in the brain"; abnormal increase in the amount of CSF in the brain

19. Lobe of the brain contains the "Wernicke's Area" (understanding language); also for memory & hearing

20. Horseshoe-shaped structure located within the temporal lobe responsible for consolidating new memories, emotional responses, & spatial orientation

23. "Cerebral arterial circle"; anastomotic system of arteries in the cerebral area located at the inferior side of the brain

24. Loss of intellectual function & social skills severe enough to interfere with the person's daily life

26. Division of Nervous System primarily composed of brain & spinal cord

27. Swelling of the brain tissue due to injury or electrolyte imbalance

30. Thick band of nerve connecting both sides of the cerebral hemispheres

32. Nerve cell; serves as the chemical communication in the brain, conduct impulses & responds to stimuli

34. "Master gland"; located at the base of the skull (sella tursica) which secretes hormones that regulate other endocrine glands of the body

36. Inflammation & collection of pus, immune cells & other material in the brain, usually due to a bacterial or fungal infection

37. Lobe of the brain contains the "Broca's Area"; responsible for problem solving, judgment, emotion, speech, personality & behavior, emotions
10.3 Childhood Illnesses and Diseases Crossword Puzzle

Refer to questions on following page

CHILDOOD ILLNESSES AND DISEASES
ACROSS

2. Exanthem subitum; Sixth Disease; 3-day fever
4. Irritation and swelling of the liver; most common in children is the “infectious” (type A)
7. “School sores;” blisters with pus on face, neck, and hands; very contagious; caused by staph or strep bacteria
10. Syndrome manifested by fever, blisters/sores in palms, foot, & inside of mouth; Coxsackie A & enterovirus 71 are most common causes
12. Pediculosis infestation
14. Scarletina; rash has “sandpapered feel;” strawberry tongue
16. Also known as “acute coryza, nasopharyngitis, or rhinopharyngitis;” most commonly caused by rhinovirus
17. Chickenpox
19. Laryngotracheobronchitis; characterized by breathing difficulty and “barking” cough
20. Rare condition involving inflammation of blood vessels; “infantile polyarteritis;” “mucocutaneous lymph node syndrome”
22. Throat pain; common symptom of acute pharyngitis
23. Infection of the membranes covering the brain and spinal cord; classic symptoms are headache, neck stiffness and photophobia

DOWN

1. Inflammation of airways triggered by breathing allergens; characterized by wheezing, cough, shortness of breath and chest tightness
3. Fifth Disease; “slapped cheeks”
5. Bacterial disease causing a cough with “whooping sound”
6. Autoimmune destruction of B-cells of the pancreas; insulin-dependent, juvenile onset
8. Rare but serious condition affecting brain and liver; associated with aspirin use during a viral illness
9. Easily-spread skin disease caused by very small type of mite; colloquially known the “seven year itch”
11. Seasonal Influenza
13. Infection from resistant strains of bacteria called Staphylococcus aureus; high risk of contact in day care centers, playgrounds, and other school-setting
15. Painful swelling of salivary glands; “epidemic parotitis”
18. Dental cavities; tooth decay
21. Childhood hyperkinesis; characterized by inattention, hyperactivity, and impulsivity
10.4 Anatomy of the Eye and Common Disorders
Crossword Puzzle

Refer to questions on following page
Across

1. Tough outer coat that protects the entire eyeball
4. Depression at the center of the macula; point of greatest visual activity
5. "Lazy eye"
7. Chamber located at the back of the eye's interior containing the vitreous humor
9. Increase pressure inside the eye causing reduction in the vision
11. Colored part of the eye; responsible for regulating the amount of light entering the eye
13. Double vision
14. Portion at the center of retina that processes sharp, clear vision
15. Farsightedness
17. Tiny spots/specks that floats across the visual field
20. Tender red bump on the edge of the eyelid due to a bacterial infection
22. Inflammation/infection of cornea
23. Transparent structure which focuses light rays into the retina
24. Light sensitive nerve cells (rods & cons) located in the retina
26. Clouding of the lens preventing passage of light
27. Iritis
28. "Curtain falling over the eye"-most serious retinal symptom leads to blindness

Down

2. Chamber located in the front section of the eye's interior containing the aqueous humor
3. "Pink eye"
6. Error of refraction causing an inability to properly focus light into the retina
8. Light-sensitive layer of tissue (nerve cells) lining the back of the eye
10. Layer behind the retina containing blood vessels that nourishes the retina
12. Located above the lens producing aqueous humor
16. Inflammation of a blocked meibomian gland
18. A complication of diabetes damaging blood vessels in the eyes
19. Clear, dome-shaped surface covering front of the eye
21. Dark center/opening in the middle of iris through which light passes to the back of the eye
25. A blind or dark spot in the visual field
10.5 Congestive Heart Failure Crossword Puzzle

Refer to questions on following page

Congestive Heart Failure

[Crossword puzzle with questions and answers]

www.CrosswordWeaver.com
ACROSS

3 Another term for fatigue, it is a sign of mild CHF  
6 A lifestyle risk factor for CHF that is one of the most serious public health issues of the 21st century  
7 This pumps blood to the lungs  
9 A common blood thinner  
10 Generic for Furosemide, a common diuretic  
11 This type of heart scan is a test for CHF  
13 A common beta-blocker for those with CHF  
17 A metabolic disease characterized by high blood sugar that is a CHF risk factor  
19 This type of abuse is a lifestyle factor for CHF  
21 Indicates urinary output, this profile is a test for CHF  
22 This type of scan maybe performed to evaluate for CHF  
24 Collection of fluid inside the abdomen, a symptom of severe CHF  
25 Appearing yellow, it is a physical finding of CHF  
26 Another term for angina, it is a sign of serious CHF  

DOWN

1 These remove excess fluids from the body  
2 Having an extremely low body mass, it is a sign of moderate CHF  
4 These inhibitors help the heart work efficiently  
5 This is the main form of treatment for CHF  
8 Abnormal heart beats, a sign of serious CHF  
12 This difficulty is a symptom of severe CHF  
14 High _____ is a risk factor for CHF  
15 Its generic name is enalapril, a common ACE inhibitor  
16 This type of pulse is a physical finding of CHF  
18 This therapy may be used to treat CHF  
20 This cessation is always a recommendation  
23 This atrium receives oxygen poor blood
10.6 Lower Extremities Crossword Puzzle

Refer to questions on following page
ACROSS
3 This ligament reinforces the posterior aspect of the hip joint attaching to the ischium and femur
7 The ligament that travels from the outer surface of the femur to the fibula
8 The muscles that attach to the posterior surface of the large flat area of the pelvis
14 The abdominus muscle known as the six-pack
16 The number of large bones that connect to form the pelvis
18 Short for anterior cruciate ligament
21 The shin bone
22 Muscle that flexes the knee joint
25 This ligament runs along the inner surface of the femur and tibia
26 Membrane that provides nourishment to the knee joint capsule
27 The gluteus muscle of the upper buttock
28 Another name for knee cartilage
30 A quad muscle that flexes the hip and straightens the knee

DOWN
1 The thigh bone
2 The outer shin bone
4 This cartilage at the head of the femur and acetabulum allow the joint to move smoothly
5 The kneecap
6 A muscle across the thing that assists in movement
9 The oblique muscles at the sides of the stomach
10 The ligament travels from the posterior surface of the tibia to the anterior surface of the femur
11 Along with the femur this forms the hip joint
12 Close to the top of the femur, these two protrusions function for muscle attachment
13 The hip joint is a ball and _____ joint
15 The long groin muscle which helps adduct the hip
17 The ligament that forms a cross in the middle of the knee joint
19 Four muscles that attach interiorly to the tibial tuberosity of the shin
20 The part of the femur which articulates with the pelvis
23 The largest gluteus muscle
24 The largest joint in the body
29 A group of three muscles also known as the adductor muscles
10.7 Gastrointestinal Crossword Puzzle

Refer to questions on following page

Gastrointestinal Puzzle
ACROSS

4 Absorbs B12 in the small intestine
6 An infection of the small intestine caused by the bacteria Vibrio Cholerea
8 Appears to be a unified organ, but is often divided into two parts
12 An acute viral hemorrhagic disease transmitted by female mosquitoes
15 Popularly known as beaver fever
19 An autoimmune disease of the small intestine
20 A hormone released in the GI tract
21 Then number of feet in an adult males GI tract
22 Attaches the vermiform appendix
23 An inflammation of the pancreas

DOWN

1 The number of hours after a meal for the stomach to dump 50% of contents into the intestine
2 An inflammation of the pouches on the outside of the colon
3 The gastrointestinal tract includes the intestines and ______
5 Also known as the stomach flu
6 A disease also known as regional enteritis
7 An inflammation of the appendix
9 A form of colitis that involves large open sores within the colon
10 The GI tract made up of the esophagus, stomach and duodenum
11 Its main function is to absorb water
13 The most common ulcer of the digestive tract
14 A malignant neoplasm
16 The ligament of _____ is used to divide the upper and lower GI tracts
17 The GI tract releases ______ to regulate the digestive process
18 Midsection of the intestine
10.8  Anatomy and Common Problems of the Skin
Crossword Puzzle

Refer to questions on following page
**Across**

1. Small & usually painless skin growth caused by type of virus called HPV
2. "Lamellar corpuscle;" mechanoreceptor responsible for sensitivity to touch/vibration & pressure
3. Form of dermatitis/inflammation causing an itchy rash; "Atopic dermatitis" (to boil over) most common form
4. "Horned or corneal layer;" outermost layer of the epidermis providing vital barrier function
5. Touch receptors located near the skin surface; "Tactile corpuscle"
6. Upper/outer, nonvascular, nonsensitive layer of the skin made up of squamous cells, basal cells, and melanocytes
7. Tubular infolding of the epidermis containing root of a hair
8. Coiled tubular subcutaneous gland that secretes sweat; "Sudoriferous gland"
9. "Subcutis;" innermost and thickest layer of the skin containing nerves, blood vessels, and fibroblasts; cushions the body and regulates skin and body temperature
10. "Basal layer;" deepest layer of the epidermis, providing germinal cells for regeneration

**Down**

1. Very common skin condition characterized by (a) redness on nose, cheeks, forehead, and chin; (b) small visible blood vessels on the face; (c) bumps/pimples on the face; (d) watery, irritated eyes
2. Most dangerous type of skin cancer; begins in a mole or other pigmented tissue such as the eyes
3. Microscopic band of muscle tissue connecting a hair follicle to the dermis; contraction causes the hair to stand on end
4. Gland that secretes oily/waxy matter ("sebum") that lubricates and waterproofs the skin
5. Most common form of skin cancer that begins in the basal cell; appears as shiny, pearly nodule; almost never metastasizes
6. Chronic skin problem which causes cells to grow too quickly resulting in thick, white, silvery or red patches
7. "Dermatophytosis;" skin infection caused by fungus, easily spread from person to person
8. Occurs when hair follicles become plugged with oil and dead skin cells
9. Non-melanoma type of skin cancer; earliest form is called "Bowen's Disease"
10. Inflammation of the skin
11. "Urticaria;" sudden outbreak of swollen, itchy, pale red bumps/plaques resulting from allergic or non-allergic cause
12. "Zona;" painful skin rash with blisters caused by varicella zoster virus, usually appearing as a band/strip or small area on one side of the body or face
13. Specialized skin cells that produce skin-darkening pigment (melanin), located in the bottom layer of the epidermis
14. Chronic scalp condition marked by itching and flaking of the skin; shedding of dead skin all from the scalp
15. Inner layer of the skin containing blood and lymph vessels, hair follicles, sweat and sebaceous glands
11. Answers: Unit 1 – General Overview

11.1 Unit 1: Review Questions

1. False (Since 1999, the US has used ICD-10 for mortality reporting – death certificates. When ICD-10-CM is implemented, the US will use this for morbidity reporting – diseases or causes of illness)

2. False (Second is always numeric; 3-7 can be alpha or numeric)

3. False – does not begin with an alpha character

4. True (such as A=initial encounter)

5. False (Used as the 5th character for certain 6 character codes thus providing for future expansion; Used when a code has less than 6 characters and a 7th character extension is required - the ‘x’ is assigned for all characters less than 6 in order to meet the requirement of coding to the highest level of specificity)

6. True except for code extensions

7. False – in the outpatient settings, CPT will continue to be used for procedure coding. ICD-10-PCS is for inpatient procedures only.

8. False – if date of service on the claim is prior to 10/1/15, ICD-9-CM codes must be used

9. False – there is not a 1 to 1 crosswalk between the 2 versions
11.2 Unit 1: Crossword Puzzle

12. T

11. S

  E

  V

  E

  N

  T

  L

  A

  S

  W

  O

  B

  E

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  C

  P

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  A

  M

  D

  I

  A

  G

  N

  O

  S

  T

  I

  C

  D

  9

  C

  M
12. **Answers: Unit 2 – Using the ICD-10-CM Code Book/Online Version**

### 12.1 Unit 2: Review Questions

1. False - NEC means not elsewhere classified
2. False – Terms that are in parentheses are nonessential modifiers – they provide additional information about the main term and do not affect code assignment
3. False (Excludes1 means not coded here; Excludes2 means if the client has both conditions, you can code both)
4. True – the point dash symbol indicates the code is incomplete
5. False – Symptoms can be first-listed when a diagnosis has not been established/confirmed by the clinician
6. False – there may be instructional notes at the beginning of a chapter that apply to the entire Chapter
7. False – Possible, probable or rule out diagnoses are not coded in outpatient settings; that rule is different for inpatients
8. False – if bilateral is not indicated and the condition is on the right and left, use both codes

### 12.2 Unit 2: Coding Exercise

A 2-year old female is referred to the CDSA with concerns about language development. She is diagnosed as follows: *Speech and language developmental delay disorder due to hearing loss which occurred as a result of a traumatic subdural hematoma at age 6 months following a car accident.*

- What was the primary reason for the visit? *Speech and language developmental delay*

- What is the main word you will use to look up the primary reason? The best main word is ‘delay’. If you use ‘development’, it refers you to delayed speech but does not address hearing loss. Looking up ‘speech’ does not provide the specificity you are looking for.
• What other problems need to be coded? **Hearing loss, Traumatic subdural hematoma sequelae, Car Accident**

• What indexes do you need to use to determine code selection? **Alphabetic Index and Index to External Causes**

• Code the scenario: **F80.4, H91.90, S06.5x9S, V49.9xxS**

  Explanation: Go to Delay, development, speech or language, due to hearing loss takes you to F80.4; go to tabular and verify F80.4. There is an instructional note to Code Also type of hearing loss. Go to Loss, Hearing and there is a note to See also Deafness. Under Deafness, since you have no more specificity in the diagnosis, it takes you to H91.9-. In tabular, you have to choose H91.90 – Unspecified Hearing Loss, Unspecified Ear since that is all the information you have. More specific documentation related to hearing loss could be coded to higher level of specificity. Since the hearing loss was due to a traumatic subdural hematoma which is an injury, the developmental delay is a sequelae of the hematoma. Look up hematoma, subdural (traumatic) and you are referred to Injury, intracranial, subdural which leads you to code S06.5x-. When you look this up in the tabular, you have to choose S06.5x9 which is Traumatic subdural hemorrhage NOS since you do not have more detailed information. If you are using a code book, there should be an indicator that a 7th character code extension is required. Since you are not seeing the client for treatment of the hematoma but rather a consequence of the injury, you will use ‘S’ for Sequelae. Also, since this is an injury and you know it was the result of a car accident, you need to code the external cause. To do this, you go to the Index of External Causes and look up ‘Accident’, car – it refers you to Accident, transport, car occupant which lists code V49.9. When you look that up in the tabular, there is an indication that a code extension is required which will also be sequelae so the code is V49.9xxS.

### 12.3 Unit 2: Additional Coding Exercises

1. **F80.4, H91.90** Go to Delay, development, speech or language, due to hearing loss takes you to F80.4; go to tabular and verify F80.4. There is an instructional note to Code Also type of hearing loss. Go to Loss, Hearing and there is a note to See also Deafness. Under Deafness, since you have no more specificity in the dx, it takes you to H91.9-. In tabular, you have to
choose H91.90 – Unspecified Hearing Loss, Unspecified Ear. More specific documentation related to hearing loss could be coded to higher level of specificity.

2. **Q02** Go to Microcephalus, Microcephaly. Verify in tabular. NOTE: This code falls under Congenital Malformations of the Nervous System but this may not be congenital – need to verify with clinician.

3. **F80.2** Go to Disorder, Language, receptive – Tabular is Mixed receptive-expressive language disorder. To ensure accuracy of code, go to clinician for more specifics.

4. **R62.0** Go to Delay, milestone. Code verified in Tabular – Excludes1 notes N/A

5. **R27.9** Go to Lack, coordination. Tabular – Unspecified lack of coordination. Go to clinician to see if more specific information is available.

6. **Q90.9** Go to Syndrome, Down (instructional note-see also Down Syndrome; if you go there, there are a list of more specific types) Q90.9 is Down Syndrome, unspecified. Since that is all we know, go with that.

7. **F84.0** Go to Disorder, autistic. In tabular, it is Autistic Disorder but no choices related to active state. There is an Instructional note: Use additional code to identify any associated medical condition and intellectual disabilities. Go to clinician to see if more information is available.

8. **R62.51** Go to Failure, to thrive (child over 28 days old). Verify in Tabular
13. **Answers: Unit 3 – Using the CDSA Common Diagnosis Reference List**

### 13.1 Unit 3: Review Questions

1. False - CDSAs are encouraged to use this resource in order to achieve more uniformity in coding across the CDSAs.

2. True – However, CDSAs are encouraged to create new spreadsheets and leave the existing spreadsheets in tact. This will give staff multiple options for using the workbook.

3. True

4. False – the CDSA Common Diagnosis Reference List is a guide but does not replace the ICD-10-CM code book. For example, there are some conditions wherein an ICD-10-CM code is not provided and staff is instructed to consult a physician for the correct diagnosis.

5. True

### 13.2 Unit 3: Coding Exercises

1. **R62.0** – Delayed milestone in childhood

2. **F91.9** – Behavior concerns, NOS

3. **Q37.4** – Cleft hard and soft palate with bilateral cleft lip

4. **R62.0** – Delayed milestone in childhood

5. **F84.0** – Autistic disorder; **F88** – Other disorders of psychological development (Note: in alpha index, Delay, development, global); **F80.9** – Developmental disorder of speech and language (Note: if documentation is consistent with mixed receptive-expressive language disorder, then could use F80.2)

6. **F80.9** – Developmental disorder of speech and language, unspecified; **F82** – Specific developmental disorder of motor function; **R63.3** – Feeding difficulties/problem; **P94.2** - Hypotonia.

7. **R62.0** - Delayed milestones in childhood; **P07.14** - Other low birth weight newborn, 1000-1249 grams; **P07.26** - Extreme immaturity of newborn, gestational age 27 completed weeks; **Z28.3** – Underimmunization status
8. **F80.9** – Developmental disorder, speech and language, unspecified

9. **Code TBD** - Ideal code would be Z00.12 which includes: Encounter for development testing of infant or child. Excellent description of CDSA initial visits & 6th digit added to clarify with or without abnormal findings; however, use of this code is a billing issue since primary care physicians use this for well visits and there is a limitation on the # of well visits during a year. Other possibilities: Z03.89 – Encounter for observation for other suspected diseases and conditions ruled out; Z71.1 – Person with feared health complaint in whom no diagnosis is made; Z13.4 - Encounter for screening for certain developmental disorders in childhood (says screening and CDSAs do not do screenings (e.g., screening mammogram in asymptomatic person). After discussion with MEDICAID, will include in Testing with NCTracks; **P07.16** – Other low birth weight newborn, 1500-1749 grams; **P07.37** – Preterm newborn, gestational age 34 completed weeks

10. **G80.0** – Spastic quadriplegic cerebral palsy; **P07.25** – Extreme immaturity of newborn, gestational age 26 completed weeks; **P92.8** – other feeding problems of newborn; **G91.9** – Hydrocephalus, unspecified; **Z98.2** – Presence of cerebrospinal fluid drainage device

11. **P91.60** Hypoxic Ischemic Encephalopathy; **P94.1** Congenital hypertonia; **G40.909** Epilepsy, unspecified, not intractable, without status epilepticus

12. **H90.3** – Sensorineural hearing loss, bilateral

13. **T74.12xA** – child physical abuse confirmed, initial encounter; **T76.22xA** – child sexual abuse, suspected, initial encounter; **S30.0xxA** – Contusion of lower back and pelvis, initial encounter; **S30.201A** – Contusion of unspecified external genital organs, male, initial encounter; **Y07.11** – biological father is perpetrator; **F82** – Specific developmental disorder of motor function

14. **F82** – Specific developmental disorder of motor function; **F88** – Other disorders of psychological development (NOTE: Neurofibromatosis (NF) is not documented in the available information and therefore should not be coded until there is supporting evidence. Once the records are received, NF would be added to the list and would become the primary diagnosis since it falls in the established condition category.)

14.1 Unit 4, Part 1: Review Questions

1. True - A status code is distinct from a history code; The history code indicates that the patient no longer has the condition

2. False – CPT procedure codes are always required for each encounter

3. True - Includes delinquent or lapsed immunization schedule status

4. True - History codes are acceptable on any medical record regardless of the reason for visit; A history of an illness, even if no longer present, is important information that may alter the type of treatment ordered

5. False - Screening is used when you are testing or evaluating seemingly well individuals so early detection and treatment can be provided if necessary. Since the child has an established diagnosis, screening would not be appropriate

6. False - Codes for signs and symptoms may be reported in addition to a related definitive diagnosis - When the sign or symptom is not routinely associated with that diagnosis, such as the various signs and symptoms associated with complex syndromes; The definitive diagnosis code should be sequenced before the symptom code

7. True - ICD-10-CM contains a number of combination codes that identify both the definitive diagnosis and common symptoms of that diagnosis; When using one of these combination codes, an additional code should not be assigned for the symptom

8. True – As long as the documentation specifies that the condition was present in the perinatal period

9. False - When both birth weight and gestational age are available, two codes from category P07 should be assigned; Sequence the code for birth weight
before the code for gestational age. NOTE: There are codes related to light for gestational age and small for gestational age. Light refers to the infant’s weight while small refers to the infant’s size (including head, body & weight).

10. False – do assign codes for manifestations unless the manifestation is inherent in the code

11. False - Codes from Chapter 17 may be used throughout the life of the client

### 14.1 Unit 4, Part 1: Coding Exercises

1. **F82** – Specific developmental disorder of motor function; **Q68.0** - Congenital deformity of sternocleidomastoid muscle (Congenital (sternomastoid) torticollis); **M95.2** – Plagiocephaly; **M26.4** – Malocclusion, unspecified; **P94.2** - Hypotonia

2. **G80.3**

3. **G00.8** – Other bacterial meningitis including Meningitis due to Escherichia coli; **B96.20** – E.coli as cause of diseases classified elsewhere

4. **G12.9**

5. **F82** Mild gross and fine motor delays; **M95.2** Plagiocephaly; **Q68.0** Torticollis; **R63.3** – Feed difficulties/problem (elderly) (infant); **Z87.19** – Personal history of other diseases of the digestive system (do not code the reflux as active (K21.9) since documentation states history of reflux); **P07.35** – Pre-term newborn, gestational age 32 completed weeks (only use this code if supported by documentation; codes from category P07 can be used for a child or adult who was premature or had a low birth weight as a newborn, and this is affecting the client’s current health status; if reason for the encounter is a perinatal condition, the code from chapter 16 should be first-listed);

6. **M95.2** Plagiocephaly; ; **Z86.61** – Personal History of Meningitis; **P07.32** – Preterm newborn, gestational age 29 completed weeks (only use this code if supported by documentation; codes from category P07 can be used for a child or adult who was premature or had a low birth weight as a newborn,
and this is affecting the client’s current health status; if reason for the encounter is a perinatal condition, the code from chapter 16 should be first-listed)

7. **F91.9** – Conduct disorder, unspecified; **Z81.3** – Family history of other psychoactive substance abuse and dependence; **Z81.8** – Family history of other mental and behavioral disorders

8. **Visit 1**: **Q37.4** – Cleft hard and soft palate with bilateral cleft lip; **R63.3** – Feeding difficulties; **P04.49** – Newborn (suspected to be) affected by maternal use of other drugs of addiction.
   
   **Visit 2**: **R62.51** – Failure to thrive; **P96.2** – Withdrawal symptoms from therapeutic use of drugs in newborn; **Q37.4** – Cleft hard and soft palate with bilateral cleft lip; **R63.3** – Feeding difficulties; **R40.0** – Somnolence; **P04.49** – Newborn (suspected to be) affected by maternal use of other drugs of addiction

15.1 **Unit 4, Part 2: Review Questions**

1. False - Confirmation does not require documentation of positive serology or culture for HIV; Provider’s statement that client is HIV positive, or has an HIV-related illness, is sufficient

2. True - B20 Human immunodeficiency virus [HIV] disease; Includes: acquired immune deficiency syndrome [AIDS], AIDS-related complex [ARC], HIV infection, symptomatic.

3. True

4. False – As many codes within a particular category as are necessary to describe all of the complications of the disease may be used; They should be sequenced based on the reason for a particular encounter; Assign as many codes from categories E08 – E13 as needed to identify all of the associated conditions that a client has

5. False - Do not use for Type 1 Diabetes since use is implied by type; for other 4 categories, only use if client uses insulin long-term

6. True

7. False – Acute injuries such as fractures will be coded from Chapter 19, Injury, Poisoning and Certain Other Consequences of External Causes.

8. False – Alphabetic Index will guide you

9. False – Begin your search at the Index to External Causes – do not have to refer to Alphabetic Index
15.2  Unit 4, Part 2: Coding Exercises

1. **F80.2** – mixed receptive-expressive language disorder; **F82** – Specific developmental disorder of motor function; **G31.84** – Mild cognitive impairment, so stated; **P05.9** – Newborn affected by slow intrauterine growth, unspecified (Note: Remember, these codes can continue to be used for any perinatal conditions that persist throughout the life of the client); **R63.0** – Loss of appetite (this seems to fit rather than **R63.3** – Feed difficulties/problem (elderly) (infant) since it states very poor appetite and self-volume limiting); **K21.9** – Gastro-esophageal reflux disease without esophagitis (Note: ICD-9 has a reflux code to use without diagnosing whether or not the child has esophagitis. ICD-10 only has two choices, with or without esophagitis. This complicates the diagnostic process.); **K30** – Functional dyspepsia (In Alpha index, look up ‘Delay’/’gastric emptying’); NOTE: There is a history of Failure to thrive – no history code for this. Do not want to use **R62.51**, Failure to thrive (child) since she has had a stable weight gain. (Not clear from scenario if GERD and gastric emptying are resolved. If so, could use **Z87.19** – Personal history of other diseases of the digestive system.)

2. **R21** – Rash and other nonspecific skin eruption (see code first note at beginning of block T36-T50); **T38.7x5A** – Adverse effect of androgens and anabolic congeners, initial encounter (since it is the first visit for the adverse reaction); **Q87.1** – Congenital malformation syndromes predominantly associated with short stature; **B20** – HIV Disease (AIDS); **E10.339** – Type 1 Diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema (Note: DO NOT code **Z79.4** for long term insulin use since this is Type 1); **C71.7** – Malignant neoplasm of brain stem

3. **G91.1** – Obstructive Hydrocephalus; **H47.619** – Cortical blindness, unspecified side of brain (documentation needs to specify which side of brain for more definitive diagnosis); **H50.9** – Unspecified strabismus (Note: Client had Strabismus surgery but there is no indication if the strabismus is fully corrected. If it is corrected, would code **Z87.720**, Personal history of (corrected) congenital malformations of eye); **R63.3** – Feed difficulties/problem (elderly) (infant); **R13.12** – Dysphagia, oropharyngeal phase; **F88** – Developmental delay; **Z98.2** – Presence of cerebrospinal fluid drainage device; **Z98.89** – Other specified postprocedural states
4. **H90.41** – Sensorineural hearing loss, unilateral, right ear, with unrestricted hearing on the contralateral side (Note: documentation does not confirm that left ear is normal so assumption is made that left ear is OK. Other option is H90.5 – Unspecified sensorineural hearing loss); **Q04.8** – Other specified congenital malformation of brain. (Note: Q04.8 can be justified since the vermis is hypoplastic); **Q04.3** – Other reduction deformities of brain; **P94.2** – Hypotonia); NOTE: (Note: documentation states probable delayed motor skills; probable conditions are not coded.

5. **Z51.89** – Encounter for other specified aftercare (Note: Aftercare codes are used when the initial treatment phase of a condition, for example a stroke, is over and the client requires continued care. If the client is being seen for some type of aftercare, such as PT, the aftercare code would be first-listed and then in most cases, you would provide a secondary diagnosis to describe the resolving condition or sequelae. In the example of the stroke, you would code Sequelae of the stroke) **I69.30** – Unspecified sequela of cerebral infarction (I69.3- is Sequelae of stroke NOS) (Note: Under category I69.3, there are very specific diagnoses that may have applied in this case but the documentation does not provide any details.) **R29.91** – Unspecified symptoms and signs involving the musculoskeletal system (Note: With better documentation, may have been able to assign a more specific code – even R26.9, Unspecified abnormalities of gait and mobility would have been more specific and provide better justification for the CPT codes that may have been used)

6. **Q90.9** – Down syndrome, unspecified (Trisomy 21 NOS); **Q21.0** – Ventricular septal defect; **I50.9** – Heart failure, unspecified (Note: If documentation had stated this condition was present in perinatal period, would use P29.0, Neonatal cardiac failure); **R63.3** – Feed difficulties/problem (elderly) (infant); **R63.6** – Underweight (Note: BMI is reported for children age 2-20 so N/A for 4 month old); **R53.83** – Other fatigue; **R62.0** – Delayed milestone in childhood (Delayed attainment of expected physiological developmental stage); **P94.2**, Hypotonia

7. **F88** - Other disorders of psychological development (Includes: Developmental agnosia); **G25.3** – Myoclonus; **H55.00** – Unspecified Nystagmus; **Z85.848** – Personal history of malignant neoplasm of other parts of nervous tissue
16. Crossword Puzzle Answers

16.1 ENT Crossword Puzzle
Across

5. TINNITUS—Ringing in one or both ears due to aging or noise exposure damage
9. OTITIS MEDIA—Middle ear infection
11. LARYNX—"Voice box"; involved in phonation, breathing & protecting the trachea from food/liquid aspiration; houses the vocal cords
12. EPIGLOTTIS—Thin/leaf-like cartilaginous structure at the root of the tongue & in front of the larynx; it folds backwards covering the larynx to prevent food/liquid from entering the trachea & lungs during the act of swallowing
13. AUDITORY OSSICLES—"Ossicula auditus"; small bones of the middle ear made up of stapes, incus & malleus
15. DYSPHAGIA—Difficulty in swallowing; may be associated with pain
17. NASAL SEPTUM—Partition of bone & cartilage between the nasal cavities
19. STAPES—"Stirrup"
21. TONSIL—Collection of lymphoid tissue (pair) located at the rear of the throat; acts as filters to bacteria & other germs to prevent infection
23. TYMPANIC MEMBRANE—"Eardrum"; cone-shaped membrane separating the external ear from the middle ear; transmits vibration of sound waves
26. INCUS—"Anvil"
28. VOCAL CORDS—Two pairs of mucomembranous folds in the larynx involve in voice production; upper pair=false, lower pair=true
30. ADENOID—Mass of soft tissue behind the nasal cavity; part of the immune system; present at birth & childhood but disappears in adulthood (in most people)
32. CHOLESTEATOMA—Type of skin cyst (epidermal inclusion cyst) in the middle ear &/or mastoid process caused by birth defect or more commonly a complication of chronic ear infection; benign condition
33. MENIERES DISEASE—Disorder of the inner ear; common symptoms include tinnitus, vertigo, pain & hearing loss; affects only one ear; no known cause
34. EPISTAXIS—Nosebleeds; common condition due to breakage of tiny blood vessels in the nose; due to trauma, congestion from allergy, sinus infection or colds
35. LABYRINTHITIS—Inflammation of the inner ear; usually occurring after an upper respiratory infection or bacterial ear infection

Down

1. SEMICIRCULAR CANAL—Three tiny circular tubes/ducts (lateral/superior/posterior) in the inner ear containing fluid (endolymph); helps maintain balance & equilibrium
2. VESTIBULO COCHLEAR—Cranial Nerve 8
3. RHINITIS—Inflammation & irritation of the nasal mucous membrane; common symptoms are stuffy & runny nose & post-nasal drip; triggered by an allergen—i.e. pollen
4. TONSILLITIS—Inflammation of the tonsils caused by an infection
6. **NARIS**—“Nostril”; one of the external openings to the nasal cavity in the nose which allows air to flow through the cavities to the pharynx

7. **ACOUSTICNUROMA**—Benign, slow-growing tumor of the nerve that connects the ear to the brain; symptoms include hearing loss, vertigo & tinnitus

8. **PINNA**—Outer ear/auricle; ridged cartilage, funnels sound to the external auditory canal

10. **PRESBYCUSIS**—Most common ear problem due to age

14. **SINUSES**—Connected system of hollow cavities in the skull; normally empty except for a thin layer of mucus; types include maxillary, frontal, ethmoid, & sphenoid

16. **OTITISEXTERNA**—“Swimmer's ear”; outer ear infection

18. **VESTIBULE**—Central part of the osseous labyrinth, oval in shape; inner organ for balance & equilibrium; houses the utricle & saccule

20. **COCHLEA**—Shell-shaped structure containing receptor (hair) cells; divided into compartments by membranes (Basiar & Reissner’s)

22. **NASALPOLYPS**—Protruding soft, painless, non-cancerous growth in the lining of the nose or sinus; arise from inflammation in the nose & often related to allergies; large & multiple ones lead to breathing problems & infection; recurs even when treated

24. **CERUMENIMPACTION**—Build-up of earwax in the ear canal leading to hearing loss, pain or dizziness

25. **ORGANOFCORTI**—Sensory organ of hearing

27. **SNORING**—Horse/harsh sound that occurs when one is sleeping due to partially obstructed breathing; may indicate serious health condition; common in overweight & older people

29. **MALLEUS**—“Hammer”

31. **PALATE**—Roof of the mouth; consist of anterior bony (hard) portion & posterior muscular (soft) portion; separates the oral cavity from the nasal cavity
16.2 Nervous System Crossword Puzzle

Nervous System Crossword Puzzle Answer Key

ALZHEIMER

BASAL GANGLIA

SPINAL CORD

PARASYMPATHETIC

SYMPATHETIC

HUNTINGTON DISEASE

POOR

POCR

PARietalОР

BRAINSTEM

PARKINSON DISEASE

BRAINSTEM

BRAINSTEM

PARASympathetic

LIMBIC SYSTEM

BASAL GANGLIA

SPINAL CORD

PARASYMPATHETIC

SYMPATHETIC

HUNTINGTON DISEASE

POOR

POCR

PARietalОР

BRAINSTEM

PARKINSON DISEASE

BRAINSTEM

BRAINSTEM
Across

4. EPILEPSY—Brain disorder causing recurring seizures (convulsions); causes include illnesses, brain injury, abnormal brain development, or unknown etiology

6. SPINALCord—Continuation of the brain located within the vertebral canal, protected by the vertebral column; composed of gray matter (made up of neurons) & white matter (composed of nerve cells)

7. PARASYMPATHETIC—Autonomic nervous system sometimes referred to as the “rest & digest” system

8. LIMBICSYSTEM—Found in the cerebrum composed of the thalamus, hypothalamus, amygdala, & hippocampus

13. HUNTINGTONDISEASE—Inherited nerve disorder affecting the brain; most common symptoms are dementia & difficulty controlling movements (chorea)

15. PINEAL—Gland located in the Third Ventricle; secretes hormones including melatonin that regulates the sleep-wake cycle of the body

16. SYMPATHETIC—Activation of this autonomic nervous system results in “fight or flight” response causing the release of norepinephrine, adrenaline, & cortisol

17. THIRTYONE—Number (pair) of spinal nerves

21. ANEURYSM—Swelling/bulging of a weak area in the wall of a cerebral artery; most common location is at the Circle of Willis

22. PARIETAL—Lobe of the brain for interpretation of language & words, spatial & visual perception

25. CEREBRALVENTRICLEs—Hollow-filled cavities (2 Lateral, 1 Third, 1 Fourth) found in the brain & brainstem, filled with CSF

28. MENINGES—Protective covering of the brain & spinal cord composed of 3 layers: dura mater, arachnoid mater, & pia mater

29. PERIPHERAL—Division of Nervous System primarily composed of spinal nerves, cranial nerves, & autonomic nervous system

31. Meningitis—inflammation of the lining surrounding the brain & spinal cord, usually due to an infection

33. STROKE—Brain infarction; due to sudden interruption of the blood flow & oxygen to an area of the brain (by a blood clot or bleeding)

35. OCCIPITAL—Lobe of the brain for visual processing (color, light & movement)

38. CHOROIDPLEXUS—Ribbon-like structure located in the ventricles, responsible for producing CSF

39. PARKINSONSDISEASE—“Paralysis agitans”; progressive disorder of the nervous system affecting movement; s/s include rigidity, changes in speech & gait, tremor (most obvious sign)

40. BRAINSTEM—Made up of 3 parts: midbrain, medulla oblongata, & pons; connects the cerebrum to the spinal cord; contains centers for autonomic functions—i.e. breathing, BP, HR, digestion

Down

1. ALZHEIMERSDISEASE—Irreversible, progressive disease slowly destroying memory & other important mental functions

2. BRAIN—Bilaterally symmetric, soft gelatinous structure composed of cerebrum (cerebral cortex), cerebellum, & brainstem

3. BASALGANGLIA—Collection of 5 nuclei (caudate nucleus, putamen, globus pallidus, subthalamic nuclei, & substantia nigra) located on either side of the brain; controls cognition, movement coordination, & voluntary movement
5. **INTRACEREBRAL HEMORRHAGE**—Bleeding occurs within the brain; traumatic or non-traumatic causes

9. **DURAMATER**—"Pachymeninx"; outermost, toughest & most fibrous layer of the meninges

10. **ENCEPHALITIS**—Inflammation of the brain tissue, usually from an infection

11. **TWELVE**—Number (pair) of cranial nerves

12. **CEREBROSPINAL FLUID**—Clear, colorless fluid produced by the choroid plexus inside the ventricles that flows within & around the brain & spinal cord to cushion from injury

14. **EPIDURAL HEMATOMA**—Bleeding between the dura & skull

18. **HYDROCEPHALUS**—"Water in the brain"; abnormal increase in the amount of CSF in the brain

19. **TEMPORAL**—Lobe of the brain contains the "Wernicke's Area" (understanding language); also for memory & hearing

20. **HIPPOCAMPUS**—Horseshoe-shaped structure located within the temporal lobe responsible for consolidating new memories, emotional responses, & spatial orientation

23. **CIRCLE OF WILLIS**—"Cerebral arterial circle"; anastomotic system of arteries in the cerebral area located at the inferior side of the brain

24. **DEMENTIA**—Loss of intellectual function & social skills severe enough to interfere with the person's daily life

26. **CENTRAL**—Division of Nervous System primarily composed of brain & spinal cord

27. **CEREBRAL EDEMA**—Swelling of the brain tissue due to injury or electrolyte imbalance 30. **CORPUS CALLOSUM**—Thick band of nerve connecting both sides of the cerebral hemispheres

32. **NEURON**—Nerve cell; serves as the chemical communication in the brain, conduct impulses & responds to stimuli

34. **PITUITARY**—"Master gland"; located at the base of the skull (sella turcica) which secretes hormones that regulate other endocrine glands of the body

36. **ABSCESS**—Inflammation & collection of pus, immune cells & other material in the brain, usually due to a bacterial or fungal infection

37. **FRONTAL**—Lobe of the brain contains the "Broca's Area"; responsible for problem solving, judgment, emotion, speech, personality & behavior, emotions
16.3 Childhood Illnesses and Diseases Crossword Puzzle

ACROSS
2. Roseola
4. Hepatitis
7. Impetigo
10. Hand-Foot-Mouth Disease
12. Lice
14. Scarlet Fever
16. Colds
17. Varicella
19. Croup
20. Kawasaki Disease
21. Sore Throat
23. Meningitis

DOWN
1. Asthma
3. Erythema Infectiosum
5. Pertussis
6. DM I (for Diabetes Mellitus Type I)
8. Reye’s Syndrome
9. Scabies
11. Flu
13. MRSA
15. Mumps
18. Caries
21. ADHD

Crossword puzzle prepared by Maria A. Reed, CCA, CPC, CPC-H
16.4 Anatomy of the Eye and Common Disorders
Crossword Puzzle

ACROSS
1. SCLERA
2. POSTERIOR
3. FOVEA
4. GLEAUCOMA
5. IRIS
6. MACULA
7. HYPEROPIA
8. CHLOROPLAST
9. FLOATERS
10. STYE
11. KERATITIS
12. LENS
13. PHOTORECEPTORS
14. CATARACT
15. UVEITIS
16. RETINAL DETACHMENT

DOWN
1. AMBLYOPIA
2. CICATRI
3. DIPLOPIA
4. INO
5. CILIA
6. YB
7. C
8. H
9. AL
10. CO
11. IN
12. I
13. I
14. I
15. I
16. I
17. I
18. I
19. I
20. I
21. I
22. I
23. I
24. I
25. I
26. I
27. I
28. I

[Image of crossword puzzle with clues and answers]
Across

1. **SCLERA**—Tough outer coat that protects the entire eyeball
4. **FOVEA**—Depression at the center of the macula; point of greatest visual activity
5. **AMBLYOPIA**—"Lazy eye"
7. **POSTERIOR**—Chamber located at the back of the eye's interior containing the vitreous humor
9. **GLAUCOMA**—Increase pressure inside the eye causing reduction in the vision
11. **IRIS**—Colored part of the eye; responsible for regulating the amount of light entering the eye
13. **DIPLOPIA**—Double vision
14. **MACULA**—Portion at the center of retina that processes sharp, clear vision
15. **HYPEROPIA**—Farsightedness
17. **FLOATERS**—Tiny spots/specks that floats across the visual field
20. **STYE**—Tender red bump on the edge of the eyelid due to a bacterial infection
22. **KERATITIS**—Inflammation/infection of cornea
23. **LENS**—Transparent structure which focuses light rays into the retina
24. **PHOTORECEPTORS**—Light sensitive nerve cells (rods & cons) located in the retina
26. **CATARACT**—Clouding of the lens preventing passage of light
27. **UVEITIS**—Iritis
28. **RETINALDETACHMENT**—"Curtain falling over the eye"-most serious retinal symptom leads to blindness

Down

2. **ANTERIOR**—Chamber located in the front section of the eye's interior containing the aqueous humor
3. **CONJUNCTIVITIS**—"Pink eye"
6. **ASTIGMATISM**—Error of refraction causing an inability to properly focus light into the retina
8. **RETINA**—Light-sensitive layer of tissue (nerve cells) lining the back of the eye
10. **CHOROID**—Layer behind the retina containing blood vessels that nourishes the retina
12. **CILIARYBODY**—Located above the lens producing aqueous humor
16. **CHALAZION**—Inflammation of a blocked meibomian gland
18. **RETINOPATHY**—A complication of diabetes damaging blood vessels in the eyes
19. **CORNEA**—Clear, dome-shaped surface covering front of the eye
21. **PUPIL**—Dark center/opening in the middle of iris through which light passes to the back of the eye
25. **SCOTOMA**—A blind or dark spot in the visual field
16.5 Congestive Heart Failure Crossword Puzzle

Solution:

MALAISE
CU
VENTRICLE
PT
LASIX
LC
PS
I
PT
IT
A
T
ON
ASCITES
G
H
CHEST PAIN

AN
OBESITY
RE
I
X
COUMADIN
IA
A
THALLIUM

LOPRESSOR
EN
O
ALCOHOL
SPE
CE
R

DIABETES
OS
KIDNEY
MRI
ST

G
E
K
JAUNDICE
N
R

G
L
16.6 Lower Extremities Crossword Puzzle

Lower Extremities

Solution:

```
F  F
E  I  S  C  H  I  O  F  E  M  O  R  A  L
M  B  Y
P  U  U  A  S  L  A  T  E  R  A  L  G  L  U  T  E  A  L  S
E  P
A  T  A  I  R  T  X  O
C  E  S  N  T  R  E  C  T  U  S
E  L  O  G  E  T  W  O  A  O  E  E  T
T  L  C  R  R  N  C  R  E
A  A  K  A  C  L  Q  I  T  H  N  R
B  E  C  U  U  E  A  A  I
U  H  T  I  B  I  A  H  A  M  S  T  R  I  N  G  L  O
U  L  E  L  D  I  T  R
U  A  M  I  K  R  O  E
M  E  D  I  A  L  S  Y  N  O  V  I  A  L  R  R
X  E  C  M  I  N  I  M  U  S  E  M  E  N  I  S  C  I
G  M  P  R  E  C  T  U  S  F  E  M  O  R  I  S
O  S
I
N
```
16.7 Gastrointestinal Crossword Puzzle

Gastrointestinal Puzzle

Solution:

Solution:

CHOLERA A

HMEPA

RATER

OCHIR

S

DILEUM

V

DUODENUM

CLRP

CTP

YELLOWFEVER

IER

NOCR

DIN

AUL

CTL

GIARDIASIS

ITHV

TH

CEIO

GASTRIN

CECUM

CECUM

M

PANCREATITIS

TWENTY
16.8 Anatomy and Common Problems of the Skin Crossword Puzzle

EclipseCrossword.com
Anatomy and Common Problems of the Skin
Crossword Puzzle Answer Key

Across
1. WART—Small & usu. painless skin growth caused by some type of virus called HPV
3. PACINIANCORPUSCLE—“Lamellar corpuscle”; mechanoreceptor responsible for sensitivity to touch/vibration & pressure
9. ECZEMA—Form of dermatitis/inflammation causing an itchy rash; “Atopic dermatitis” (to boil over) most common form
10. STRATUMCORNEUM—“Horned or corneal layer”; outermost layer of the epidermis providing vital barrier function
14. MEISSNERSCORPUSCLE—Touch receptors located near the skin surface; “Tactile corpuscle”
17. EPIDERMIS—Upper/outer, nonvascular, nonsensitive layer of the skin made up of squamous cells, basal cells, & melanocytes
21. HAIRFOLLICLE—Tubular infolding of the epidermis containing root of a hair
22. SWEATGLAND—Coiled tubular subcutaneous gland that secretes sweat; “Sudoriferous gland”
24. HYPODERMIS—“Subcutis”; innermost & thickest layer of the skin containing nerves, blood vessels, & fibroblasts; cushions the body & regulates skin & body temperature
25. STRATUMGERMINATIVUM—“Basal layer”; deepest layer of the epidermis, providing germinal cells for regeneration

Down
2. ROSACEA—Very common skin condition characterized by (a) redness on nose, cheeks, forehead, & chin; (b) small visible blood vessels on the face; (c) bumps/pimples on the face; & (d) watery, irritated eyes
4. MELANOMA—Most dangerous type of skin cancer; begins in a mole or other pigmented tissue—i.e., eyes
5. ARRECTORPILI—Microscopic band of muscle tissue connecting a hair follicle to the dermis; contraction causes the hair to stand on end
6. SEBACEOUSGLAND—Gland that secretes oily/waxy matter (“sebum”) that lubricates & waterproofs the skin
7. BASALCELLCARCINOMA—Most common form of skin cancer that begins in the basal cell; appears as shiny, pearly nodule; almost never metastasizes
8. PSORIASIS—Chronic skin problem which causes cells to grow too quickly resulting in thick, white, silvery or red patches
11. RINGWORM—“Dermatophytosis”; skin infection caused by fungus, easily spread from person to person
12. **ACNE**—Occurs when hair follicles become plugged with oil & dead skin cells

13. **SQUAMOUSCELLCARCINOMA**—Non-melanoma type of skin cancer; earliest form is called "Bowen's Disease"

15. **DERMATITIS**—Inflammation of the skin

16. **HIVES**—"Urticaria"; sudden outbreak of swollen, itchy, pale red bumps/plaques resulting from allergic or non-allergic cause

18. **SHINGLES**—"Zona"; painful skin rash with blisters caused by varicella zoster virus, usually appearing as a band/strip or small area on one side of the body or face

19. **MELANOCYTES**—Specialized skin cells that produce skin-darkening pigment (melanin), located in the bottom layer of the epidermis

20. **DANDRUFF**—Chronic scalp condition marked by itching & flaking of the skin; shedding of dead skin all from the scalp

23. **DERMIS**—Inner layer of the skin containing blood & lymph vessels, hair follicles, sweat & sebaceous glands
End of Document