Diagnosis Coding for Newborn Complications and Congenital Disorders

Audio Seminar
August 19, 2004

Practical Tools for Seminar Learning
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Dr. Williamson has been a national speaker on topics that include HIPAA, Healthcare Compliance, Medical Coding, Prevention of Medical Errors, and Practice Management topics for professional organizations. He is a fellow of the American Academy of Pediatrics, and is a member of the American Medical Association, the American College of Physician Executives, the Florida Bar Health Law Division, and the Southern HIPAA Administrative Regional Process. Dr. Williamson is a Supreme Court Certified Dependency Mediator, and formally trained arbitrator and listed neutral with the American Arbitration Association.
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Introduction

A. Pregnancy

Gestation (Maturity)

• Premature (pre-term) live born infant delivered before 37 weeks from the first day of the last menstrual period (LMP)
• Term
• Post mature (post term) live born infant delivered after 42 weeks of gestation.

B. Birth Weight:

LBW  2500 grams or less at birth
VLBW  1500 grams or less at birth
ELBW  1000 grams or less at birth

AGA - Appropriate for gestational age
SGA - (IUGR) small for gestational age
LGA - Large for gestational age
C. Labor and Delivery type

D. Physical Examination
   - Apgar Score
   - Abnormalities

Congenital defects (anomalies) occur in 3-5% of infants

E. Neonatal Period - the first 4 weeks of life after birth.
   - Period I. Birth to <24 hours
   - Period II. 24 hours to 7 days
   - Period III. 7 days to 28 days

CASE #1

Male infant was born to a 30 y/o woman, gravida 1, para 0. The pregnancy was 38 weeks by dates and complicated by poorly controlled diabetes. The infant was delivered by C-section with Apgar scores of 5 and 7 at one and five minutes respectively.
Physical Findings:

- **General Appearance:**
  Birth weight 9# 15 oz.
  Large plump appearing infant at times tremulous and hyper-excitable.
- **HEENT:** WNL
- **Neck:** WNL
- **Lungs:** Tachypnea noted. Air exchange good. No rales. No wheezing.
- **Cardiac:** Harsh grade II-III/VI systolic murmur.
  Pulses in upper & lower extremities WNL
- **Abdomen:** WNL
- **Skin:** Pink
- **EXT:** WNL
- **GU:** WNL

Neurologic exam was physiologic except for the previously described tremulous & hyper-excitable symptoms.

Labs:

Initial serum glucose was reported to be 20 & the infant responded well to IV glucose. The IV was discontinued on day 2, once the infant stabilized and began taking oral feedings.

The serum calcium, magnesium, and remainder of glucose determinations were WNL. The serum bilirubin was elevated on day #2 requiring photo therapy.
**Radiology:**

- Chest X-ray: mild cardiomegaly otherwise WNL
- Cardiac Echo: VSD with mild cardiomegaly

**Diagnosis:**

1. Term male infant LGA
2. Infant of diabetic mother
3. Congenital heart disease, ventricular septal defect
4. Hyperbilirubinemia
Question - Case 1

Symptoms of an “infant of diabetic mother” may include macrosomia, transient tachypnea, polycythemia and endocrine disturbances.

With how many symptoms must a baby present to qualify for code 775.0, Syndrome of “infant of diabetic mother?”

1. Zero
2. One
3. Two or more

Code Assignment Case #1

- V30.01 Single liveborn infant, delivered in the hospital, by cesarean section
- 775.0 “Infant of a diabetic mother syndrome”
- 745.4 Ventricular septal defect (congenital)
- 774.6 Unspecified fetal and neonatal jaundice
CASE #2

Female infant born at 39 weeks gestation to a 41 y/o woman, gravida 4, para 2, Ab 1 by vaginal delivery. Apgar scores were 8 and 8 at one and five minutes respectively. The pregnancy and maternal history was unremarkable except for the advanced maternal age.

Physical Findings:

- General appearance:
  Birth weight 6# 10 oz.
  Alert, pink, in no apparent distress
- HEENT: The head is microcephlic with flat occiput. Anterior fontanelle soft and flat.
  - Eyes: upslanting palpebral fissures with prominent epicanthal folds. Iris speckling is noted.
  - Ears: appear small, prominent & low set.
  - Nose: appears small with a flat nasal bridge; large protruding tongue is noted.
Physical Findings:

- Neck: loose folds are noted in posterior neck
- Chest: WNL
- Lungs: Clear
- CV: harsh systolic murmur grade II-III/VI among the left sternal border.
- Abdomen: benign
- Extremities: hands are broad in appearance with short phalanges bilateral simian creases noted. Feet: wide gap between first and second toes.
- GU: normal female genitalia
- Neuro: mild to moderate generated hypotonia remainder physiologic

Diagnosis:

1. Term female infant, appropriate for gestational age
2. Probable Down’s Syndrome, chromosomal karyotype pending.
Question - Case #2

The diagnostic statement by the physician includes “Probable Down’s Syndrome.” Because this baby presents with so many symptoms of Down’s, would it be appropriate to code Down’s Syndrome as confirmed on the physician’s claim?

1. Yes
2. No

Code Assignment - Case #2

- V30.00 Single liveborn, born in hospital, delivered vaginally
- 757.2 Simian crease
- 754.0 Congenital musculoskeletal deformities of skull, face, jaw
- 779.89 Other specified conditions originating in the perinatal period (Hypotonia)
- 761.8 Other specified maternal complications of pregnancy (maternal age)
- 785.2 Heart murmur
CASE #3

Female infant born at 39 weeks gestation to a 20 y/o woman gravida 2, para 1 by vaginal delivery. Apgar scores were 6 and 7 at one and five minutes respectively. The maternal history was remarkable for what she described as moderate alcohol use during the first 7 months of the pregnancy. She denied any other substance abuse.

Physical Findings:

**General appearance:**
- Birth weight 4# 3 oz
- Alert infant appearing small for gestational age, no acute distress.

**HEENT:** Anterior fontanelle soft

**Eyes:** Short palpebral fissures with prominent epicanthal folds

**Ent:** Maxillary hypoplasia, micrognathia and very thin appearing upper lip
Physical Findings:

- Neck: WNL
- Chest: WNL
- Lungs: Clear
- Cardiac: Grade II/VI systolic murmur, at lower left sternal border. Pulses in upper and lower extremities WNL.
- Abdomen: WNL
- GU: WNL female genitalia
- Neuro: WNL

Diagnosis:

1. Term female infant small for gestational age.
2. Probable fetal alcohol syndrome.
3. Ventricular septal defect.
Question - Case #3

Maxillary hypoplasia, a symptom of fetal alcohol syndrome, is identified in this infant. This is coded as:

1. 754.0
2. 524.03
3. Both 754.0 and 524.03

Coding - Case #3

- V30.00 Single liveborn infant, born in hospital, vaginally
- 764.08 Light for dates
- 524.03 Maxillary hypoplasia
- 743.63 Epicanthal fold
- 744.89 Other anomalies of face and neck
- 745.4 Ventricular septal defect
CASE #4

A male infant was delivered at 40 weeks gestation to a 27 y/o gravida 2, para 1, woman. Pregnancy was reported to be unremarkable. Labor was prolonged, and there was significant cephalopelvic disproportion and associated dystonia. Delivery was vaginal, requiring forceps. Apgars were 8 and 9 at one and five minutes respectively.

Physical Findings:

General appearance:
  Birth Weight 8# 0 oz.
  Alert term infant, no apparent distress.

HEENT:
  Head: marked molding of the head with left parietal swelling, and bruising noted. Nontender, no evidence of depressed skull fracture on palpation.
  Eyes: Sclera & Conj: bilateral sub conjunctival hemorrhages noted. Bilateral red reflex positive. No eye discharge.
  Ent: WNL
  Neck: WNL
**Physical Findings:**

- Chest/ lungs: WNL
- Cardiac: WNL
- Abdomen: WNL
- GU: WNL
- Skin: significant bruising of the face & head with associated petechiae limited to face and head. Remainder of skin pink, no rashes.
- Extremities: left clavicular fracture noted. Full range of motion of upper and lower extremities.
- Neurological: WNL for age

**Labs:**

- CBC WNL
- ABO studies negative
- Bilirubin day #2 elevated requiring photo therapy
**Radiology:**

X-ray skull: non depressed skull fracture left parietal with soft tissue swelling.

X-ray clavicle: non displaced fracture of left clavicle.

**Diagnosis:**

1. Term male infant, appropriate for gestational age
2. Left cephalhematoma with associated non depressed skull fracture
3. Non displaced fracture of left clavicle
4. Physiologic jaundice
Question - Case #4

Left cephalhematoma with associated non depressed skull fracture is coded as:

1. 803.21
2. 767.3
3. 803.21 and 767.19
4. 767.3 and 767.1

Coding Case #4

- V30.00 Single liveborn, born in hospital, vaginally
- 767.3 Birth trauma, fracture of skull
- 767.19 Cephalhematoma
- 767.2 Fracture of clavicle
- 763.1 Cephalopelvic disproportion affecting fetus or newborn
- 763.2 Forceps delivery
- 774.6 Physiological jaundice
Summary

1. The principle diagnosis for newborns (V3X.XX) identifies the number of fetuses, place of birth and type of delivery.

2. Syndromes are comprised of multiple signs and symptoms. It is not necessary for every sign and symptom to be present; however, the physician must document the syndrome.

3. Always check for terminology “affecting fetus or newborn” when using the alphabetic index.

4. Code maternal conditions when they affect the health and/or management of the newborn.
Audience Questions

Audio Seminar Discussion

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Appendix

Apgar Score.................................................................20
Ballard Score..............................................................21
Continuing Education Credit and Compliance Sign-in Form
Certificate of Attendance
The Apgar score is determined by evaluating the newborn baby on five simple criteria on a scale from zero to two and summing up the five values thus obtained. The resulting Apgar score ranges from zero to 10.

<table>
<thead>
<tr>
<th>The five criteria of the Apgar score</th>
<th>Score 0</th>
<th>Score 1</th>
<th>Score 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart rate</strong></td>
<td>absent</td>
<td>&lt;100</td>
<td>&gt;100</td>
</tr>
<tr>
<td><strong>Respiration</strong></td>
<td>absent</td>
<td>weak or irregular</td>
<td>strong</td>
</tr>
<tr>
<td><strong>Muscle tone</strong></td>
<td>none</td>
<td>some flexion</td>
<td>active movement</td>
</tr>
<tr>
<td><strong>Reflex irritability</strong></td>
<td>no response to stimulation</td>
<td>grimace/feeble cry when stimulated</td>
<td>sneeze/cough/pulls away when stimulated</td>
</tr>
<tr>
<td><strong>Skin color</strong></td>
<td>blue all over</td>
<td>blue at extremities</td>
<td>normal</td>
</tr>
</tbody>
</table>

The test is generally done at 1 and 5 minutes after birth, and may be repeated later if the score is, and remains, low. Scores below 3 are generally regarded as critically low, with 4 - 7 fairly low and over 7 generally normal.

- Low scores at the one minute test may require medical attention, but are not an indication of longer term problems, particularly if there is an improvement by the stage of the five minute test. If the Apgar score remains below 3 at later times such as 10, 15, or 30 minutes, there is a risk that the child will suffer longer term neurological damage.


### Neuromuscular Maturity

<table>
<thead>
<tr>
<th>Score</th>
<th>−1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Square window (wrist)</strong></td>
<td>&gt;90°</td>
<td>90°</td>
<td>60°</td>
<td>45°</td>
<td>30°</td>
<td>0°</td>
<td>![Posture Image]</td>
</tr>
<tr>
<td><strong>Arm recoil</strong></td>
<td>180°</td>
<td>140°~180°</td>
<td>110°~140°</td>
<td>90°~110°</td>
<td>&lt;90°</td>
<td>![Posture Image]</td>
<td>![Posture Image]</td>
</tr>
<tr>
<td><strong>Popliteal angle</strong></td>
<td>180°</td>
<td>160°</td>
<td>140°</td>
<td>120°</td>
<td>100°</td>
<td>90°</td>
<td>&lt;90°</td>
</tr>
<tr>
<td><strong>Heel to ear</strong></td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
<td>![Heel Image]</td>
</tr>
</tbody>
</table>

### Physical Maturity

<table>
<thead>
<tr>
<th>Skin</th>
<th>Sticky, friable, transparent</th>
<th>Gelatinous, red, translucent</th>
<th>Smooth, pink; visible veins</th>
<th>Superficial peeling and/or rash; few veins</th>
<th>Cracking, pale areas; rare veins</th>
<th>Parchment, deep cracking; no vessels</th>
<th>Leathery, cracked, wrinkled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanugo</td>
<td>None</td>
<td>Sparse</td>
<td>Abundant</td>
<td>Thinning</td>
<td>Bald areas</td>
<td>Mostly bald</td>
<td></td>
</tr>
<tr>
<td><strong>Plantar surface</strong></td>
<td>Heel-toe 40~50 mm: −1</td>
<td>&gt; 50 mm, no crease</td>
<td>Faint red marks</td>
<td>Anterior transverse crease only</td>
<td>Creases anterior ½</td>
<td>Creases over entire sole</td>
<td></td>
</tr>
<tr>
<td><strong>Breast</strong></td>
<td>Imperceptible</td>
<td>Barely perceptible</td>
<td>Flat areola, no bud</td>
<td>Stippled areola, 1~2 mm bud</td>
<td>Raised areola, 3~4 mm bud</td>
<td>Full areola, 5~10 mm bud</td>
<td></td>
</tr>
<tr>
<td><strong>Eye/Ear</strong></td>
<td>Lids fused loosely: −1</td>
<td>Lids open; pinna flat, stays folded</td>
<td>Slightly curved pinna; soft; slow recoil</td>
<td>Well curved pinna; soft but ready recoil</td>
<td>Formed and firm, instant recoil</td>
<td>Thick cartilage, ear stiff</td>
<td></td>
</tr>
<tr>
<td><strong>Genitals (male)</strong></td>
<td>Scrotum flat, smooth</td>
<td>Scrotum empty, faint rugae</td>
<td>Testes in upper canal, rare rugae</td>
<td>Testes descending, few rugae</td>
<td>Testes down, good rugae</td>
<td>Tastes pendulous, deep rugae</td>
<td></td>
</tr>
<tr>
<td><strong>Genitals (female)</strong></td>
<td>Clitoris prominent, labia flat</td>
<td>Clitoris prominent, small labia minora</td>
<td>Clitoris prominent, enlarging minora</td>
<td>Majora and minora equally prominent</td>
<td>Majora large, minora small</td>
<td>Majora over clitoris and minora</td>
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### Maturity Rating

<table>
<thead>
<tr>
<th>Score</th>
<th>Weeks</th>
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<tbody>
<tr>
<td>−10</td>
<td>20</td>
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<tr>
<td>−5</td>
<td>22</td>
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<td>0</td>
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<td>50</td>
<td>44</td>
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Project Manager
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