Coding for pediatric spine deformity procedures

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Coding for pediatric spine deformity procedures follows similar coding principles to adult spine cases. The major difference is the use of the spinal deformity codes and osteotomy codes in cases of severe scoliosis or congenital kyphosis. Laminectomy/discectomy are typically performed in conjunction with either the insertion of implants or osteotomy procedures and should not be included as a separate code.

A clearly dictated operative note defining the components of the procedure as well as the roles of co-surgeons or assistant surgeons is key to accurate coding of pediatric spine deformity procedures.

**Key components**

The following are common components of pediatric spine procedures:

- **Spine deformity:** Anterior and/or posterior arthrodesis (fusion) or kyphectomy
- **Instrumentation** (anterior and/or posterior, pelvic fixation)
- **Grafts** (allo/autografts, interbody cages)

The following concomitant procedures are sometimes performed:

- **Osteotomy** (Smith Peterson or pedicle subtraction)
- Exploration of fusion; and removal and reinsertion of instrumentation.

**Spine deformity**

Whether the surgeon performs fusion or kyphectomy to correct spine deformity, the correct Current Procedural Terminology (CPT) code depends on the number of segments involved in the procedure. Table 1 shows CPT codes for anterior and posterior fusion (arthrodesis) procedures and kyphectomy for correction of spinal deformities.

In arthrodesis, the correct CPT code is based on the number of segments fused (2 segments = 1 fused level). For example, if the surgeon dictates anterior fusion of T2-T3 (three segments—T2-T3, T3-T4, T4-T5), the appropriate code is 22810.

A similar approach is used for coding posterior fusion procedures for correction of spinal deformities. Because the correct CPT code to use is based on the number of segments fused, posterior fusion of T4-T7 (three segments—T4-T5, T5-T6, T6-T7) would require the use of code 22800. Dictation reflecting posterior fusion of T4-T12 (eight segments—T4-T5, T5-T6, T6-T7, T7-T8, T8-T9, T9-T10, T10-T11, T11-T12) would require the use of code 22802. Fusion that extends for 13 or more segments (such as T4-L5) is reported using code 22804.

Kyphectomy is a procedure usually performed on myelomeningocele patients to allow correction and stabilization of the deformity, decreased skin problems, increased pulmonary function, and improved sitting balance. Two CPT codes exist to describe this procedure: 22818 is used if 1 or 2 segments are involved, such as a procedure performed at T12; 22819 is used if 3 or more segments (such as T12, L1, L2) are involved. Because CPT code 22819 includes the work defined by CPT code 22818, the two codes would not be reported at the same session.

**Secondary procedures**

Osteotomy codes are reported when a portion of the vertebral segment is cut and removed in preparation for spinal realignment. Unlike fusion codes, which require two vertebral segments to report a one-level fusion, osteotomy codes are reported for each vertebral segment where the procedure is performed.

Osteotomy codes are differentiated by spinal region (cervical, thoracic, or lumbar).

Because osteotomy procedures include laminectomy and disectomy at the same segment, these procedures are not reported separately at the same level.

Osteotomy procedures may be reported in addition to the fusion procedures when performed and documented. Table 2 shows osteotomy codes.

For example, a primary pedicle subtraction osteotomy at T7 would be coded using 22206; the same primary procedure performed at L1 would be coded using 22207. If the surgeon performed a pedicle subtraction osteotomy at T7 and T8, the surgeon would report 22206 and 22208. If the surgeon crosses anatomic locations, the surgeon reports one primary procedure code and the remaining osteotomies are reported with the add-on code.

CPT codes 22210, 22212, 22214, and 22216 are commonly used to report posterior osteotomy or Smith Peterson osteotomies in the spine. These codes are also reported per each vertebral segment and are differentiated by the region of the spine (cervical, thoracic, or lumbar).

**Table 1: Coding for Spinal Deformity**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>22808</td>
<td>Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments</td>
</tr>
<tr>
<td>22810</td>
<td>Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments</td>
</tr>
<tr>
<td>22812</td>
<td>Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments</td>
</tr>
<tr>
<td>22800</td>
<td>Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments</td>
</tr>
<tr>
<td>22802</td>
<td>Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments</td>
</tr>
<tr>
<td>22804</td>
<td>Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments</td>
</tr>
<tr>
<td>22818</td>
<td>Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); single or 2 segments</td>
</tr>
<tr>
<td>22819</td>
<td>Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); 3 or more segments</td>
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**Instrumentation**

The third key component is instrumentation. Instrumentation codes are selected based on the number of segments spanned, the approach (anterior or posterior), or pelvic fixation. In 2008, the status of instrumentation codes was changed from modifier 51 exempt codes to add-on codes. Refer to the AMA CPT Manual for a full listing of primary procedures (CPT codes) to which instrumentation codes may be added. Table 3 shows instrumentation codes.

For example, an anterior cervical plate placed from C3-C5.