Artificial Disc Replacement, Cervical

I. Description

Anterior cervical discectomy and fusion (ACDF) is currently considered the definitive surgical treatment for symptomatic single-level degenerative disc disease (DDD) of the cervical spine. The goals of ACDF are to relieve pressure on the spinal nerves (decompression) and to restore spinal column alignment and stability. Resolution of pain and neurological symptoms may be expected in more than 80% to 100% of ACDF patients.

ACDF involves an anterolateral surgical approach, decompression of the affected spinal level, discectomy, and emplacement of either autograft or allograft bone in the prepared intervertebral space to stimulate healing and eventual fusion between the vertebral endplates. A metal anterior cervical plate is attached to the adjoining vertebral bodies to stabilize the fusion site, maintain neck lordosis, and reduce the need for prolonged postoperative brace application that is needed following ACDF without an anterior plate.

Artificial intervertebral disc arthroplasty (AIDA) is proposed as an alternative to ACDF for patients with symptomatic cervical DDD. Disc arthroplasty and ACDF for single-level disease have very similar surgical indications, primarily unremitting pain due to radiculopathy or myelopathy, weakness in the extremities, or paresthesia.

In AIDA, an artificial disc device is secured in the prepared intervertebral space rather than bone. An anterior plate is not placed to stabilize the adjacent vertebrae, and postsurgical external orthosis is usually not required. The surgical procedure and perioperative complications of AIDA are nearly identical to those of anterior fusion. It is hypothesized that AIDA maintains anatomical disk space height, normal segmental lordosis, and physiological motion patterns at the index and adjacent cervical levels. This procedure has been proposed to reduce the risk of adjacent-level DDD above or below a fusion site, and has been the major rationale driving device development and use. However, while biomechanical modeling studies have suggested that altered adjacent segment kinematics following fusion may lead to adjacent-level DDD, the clinical relevance of these changes has not been established.

The FDA has thus far approved only the Mobi-C intervertebral disc replacement device for surgical disc replacement at two levels. Studies are on-going and showing positive outcomes.
II. Criteria/Guidelines
   A. Cervical intervertebral disc replacement or spinal arthroplasty is covered (subject to Limitations and Administrative Guidelines) when performed at one level or two contiguous levels in individuals with symptomatic cervical degenerative disc disease (e.g., when radicular neck and/or arm pain and/or functional/neurological deficit) or herniated disc when all of the following criteria are met:
   1. An FDA-approved device (e.g., Prestige ST Cervical Disc, Bryan Cervical Disc, and ProDisc-C Total Disc Replacement, Mobi-C is the only FDA-approved device for 2 levels) is used; and
   2. Confirmed by radiologic studies (e.g., CT, MRI, x-rays); and
   3. The operative level is C3 to C7; and
   4. The procedure is performed in a skeletally mature individual; and
   5. At least six weeks of physician monitored/supervised conservative management has been tried and failed which includes all of the following components:
      a. Exercise, including core stabilization exercises; and
      b. Nonsteroidal and/or medication (unless contraindicated); and
      c. Physical therapy, including passive and active treatment modalities; and
      d. Activity/lifestyle modification

III. Limitations
   A. Artificial intervertebral disc replacement is not covered for any other indications except for those listed above (e.g. lumbar).
   B. Cervical artificial disc replacement at one level combined with cervical spinal fusion at another level (adjacent or non-adjacent) is not covered as it has not been shown in the scientific literature to improve health care outcomes.

IV. Administrative Guidelines
   A. Precertification is not required. Documentation supporting the medical necessity should be legible, maintained in the patient's medical record and must be made available to HMSA upon request. HMSA reserves the right to perform retrospective review using the above criteria to validate if services rendered met payment determination criteria.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>22856</td>
<td>Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical</td>
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<tr>
<td>22861</td>
<td>Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical</td>
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<tr>
<td>22864</td>
<td>Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical</td>
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<tr>
<td>0095T</td>
<td>Removal of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical</td>
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Artificial Disc Replacement, Cervical

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<tr>
<th>CPT Code</th>
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<tr>
<td>0098T</td>
<td>Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical</td>
</tr>
<tr>
<td>22858</td>
<td>Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection); second level cervical</td>
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**Codes that do not meet payment determination criteria:**

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<tr>
<td>0375T</td>
<td>Total disc arthroplasty (artificial disc) anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection), cervical, three or more levels.</td>
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**V. Important Reminder**

The purpose of this Medical Policy is to provide a guide to coverage. This Medical Policy is not intended to dictate to providers how to practice medicine. Nothing in this Medical Policy is intended to discourage or prohibit providing other medical advice or treatment deemed appropriate by the treating physician.

Benefit determinations are subject to applicable member contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control.

This Medical Policy has been developed through consideration of the medical necessity criteria under Hawaii’s Patients’ Bill of Rights and Responsibilities Act (Hawaii Revised Statutes §432E-1.4), generally accepted standards of medical practice and review of medical literature and government approval status. HMSA determined that services not covered under this Medical Policy will not be medically necessary under Hawaii law in most cases. If a treating physician disagrees with HMSA’s determination as to medical necessity in a given case, the physician may request that HMSA consider the application of this Medical Policy to the case at issue.

**VI. References**


