2008 Colorado Update

Medical Treatment Guidelines Update: Shoulder and Thoracic Outlet Syndrome

Statutory and Regulatory Changes

Presented by Dr. Kathryn Mueller
Professor, Univ. of Co Denver
Medical Director, Div of Workers Compensation
Claimant election for *Change of Physician*

- One unchallenged opportunity
- Claimant to give notice requesting change
  (form provided by Division)
- Within 90 days of DOI and *before* MMI
- New doctor must be on ‘employer’s list’
- ATP will receive notice; transfer of care cannot pose a health risk to claimant
Responsibility of current / original ATP:

- Continue to treat claimant until first appointment with new doctor
- Release all medical records to new doctor
  - 7 calendar days after receiving request for records from new doctor
Responsibilities of New Doctor:

- Presumed to accept patient unless submits a written refusal (5 days)
- Should request records from original ATP (if not already received)
- Shall try to avoid any “unnecessary duplication of medical services.”
S.B. 08-241:

What are the changes?

Prior Work-Related Injury (current injury post-7/1/08): Allows apportionment of impairment when a previous work-related injury to the same body part resulted in an award or settlement (Colo. or other state).

Current, total impairment rating may be reduced by the previous impairment rating to the same body part as established by the award or settlement.
Prior non-work-related injury (current injury post 7/1/08): Allows apportionment of impairment based on a non-work related medical impairment to the same body part, when the injury was

- Identified and
- Treated and
- Independently disabling at the time of the current workplace injury
For claims with DOIs after 7/1/08, consider:

- Was the prior injury (**to the same body part**) work-related or non-work-related
  - If work-related, identify the previous impairment using records, or establish a prior rating (as previously taught)
  - If non-work-related, consider whether the previous injury was independently disabling at the time of the current injury (If not, you may not apportion)
Rule 16

Rule 16-3 “Required Use of The Medical Treatment Guidelines AND PAYMENT FOR SERVICE” modified:

“A payer may not dictate the type or duration of medical treatment. Nor may a payer apply its own internal guidelines or other standards for medical treatment if they conflict with Rule 17 and its exhibits.”
Rule 16

Rule 16-10(E) “Contest of a Request for Prior Authorization” adds a new paragraph:

Failure of the payer to timely comply in full with the requirements of Rule 16-10(A) or (B) shall be deemed authorization for payment of the requested treatment unless:

■ (1) A hearing is requested within the time prescribed for responding as set forth in Rule 16-10(A) or (B), and
■ (2) The requesting provider is notified that the request is being contested and the matter is going to hearing.”
Significant Adopted Changes to Rule 18 “Medical Fee Schedule”
Effective: 1/1/09
Rule 18-1&2

Updated “incorporated by reference” documents

- 2008 edition of the “Relative Values for Physicians” (RVP) from the 2007 edition
- Version 26 of the “Medicare Severity Diagnosis Related Groups (MS-DRG) Definitions Manual” from version 25
## Rule 18-4 Conversion Factors

<table>
<thead>
<tr>
<th>Section</th>
<th>Effective 1/1/08</th>
<th>Effective 1/1/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>$7.56</td>
<td>$7.56</td>
</tr>
<tr>
<td><strong>E&amp;M</strong></td>
<td>$8.47</td>
<td>$8.81</td>
</tr>
<tr>
<td>PM&amp;R</td>
<td>$5.57</td>
<td>$5.57</td>
</tr>
<tr>
<td>Anes.</td>
<td>$48.89</td>
<td>$49.87</td>
</tr>
<tr>
<td>X-Code</td>
<td>$37.69</td>
<td>$38.07</td>
</tr>
<tr>
<td>Surgery</td>
<td>$90.97</td>
<td>$92.79</td>
</tr>
<tr>
<td>Radiology</td>
<td>$17.26</td>
<td>$17.43</td>
</tr>
<tr>
<td>Pathology</td>
<td>$12.99</td>
<td>$12.99</td>
</tr>
</tbody>
</table>
New DoWC Code Format

- **Alpha numeric**
  - Begins with a “Z”
  - 3 numbers following “Z”

- **All previous DoWC codes were replaced with the new codes**

- **Several new DoWC codes were added due to necessity.**

- **Go to INTERPRETIVE BULLETIN 13 for previous DoWC codes crossed walked to new codes.**
New Paragraph #2:

- **If the individual interdisciplinary rehabilitation professionals bill separately for an interdisciplinary rehabilitation program:**
  - Use applicable CPT® codes
  - Participation in an interdisciplinary rehabilitation program allows use of frequencies and durations from medical treatment guidelines
Modified the first sentence in paragraph (a):

“A licensed psychologist (PsyD, PhD, EdD) is reimbursed a maximum of 100% of the medical fee listed in the RVP©.”

Deleted paragraph (d) - for all CNS assessments and tests use the RVP relative value units (96101-96120 CPT® codes)
Re-wrote paragraph (d)(1) and (2):

(1) The provider shall submit a treatment plan including expected frequency and duration of treatment. If requested by the provider, the payer will prior authorize payment for the treatment plan services or shall identify any concerns including those based on the reasonableness or necessity.

(2) If the frequency and duration is expected to exceed the medical treatment guidelines recommendation, prior authorization is required.
Paragraph (1) was modified:

- If 50% of the time spent for an E&M visit is disability counseling or coordination of care, the time can determine the level of E&M service.

- Documented telephonic or on-line communication time with the patient or other healthcare providers 1 day prior to or 7 days following the E&M visit may be included in the total time.
Paragraph 2 second sentence was modified:

“… counseling shall be completely documented in the medical records, including but not limited to, the amount of time spent with the injured worker and the specifics of the discussion as it relates to the individual patient. “
Rule 18-5(I)(4) Evaluation and Management (E&M)

Treating physician telephone or on-line services may be billed if:

- (A) performed more than 1 day prior to related E&M office visit, or
- (B) performed more than 7 days following a related E&M office visit,
- (C) when the medical records/documentation specifies all the following:
  - (1) amount of time and date
  - (2) patient, family member, or healthcare provider talked to and
  - (3) specifics of the discussion and/or decision made during the communication.
Rule 18-5(I)(6) Face to Face or Telephonic (E&M)

- **Non-treating physician with employer, claim representative or any attorney to provide a medical opinion on a case**
  - Z601 Without a written report — $65 per 15 minutes
  - Z755 With a written report - $325 per hour under special reports

- **Treating physician SAMM conference**
  - Must be 15 minutes at least
  - Must have a report signed by physician
Rule 18-6(A) – SAMM conference

(b) A report or written record shall include the following:

- (1) Who was present and their role at the meeting
- (2) Purpose of meeting
- (3) A brief statement of recommendations and actions at the conclusion of the meeting
- (4) Time documented (both start and end times)
- (5) Billing Code DoWC Z701
  - $75.00 per 15 minutes for attending meeting and preparing report (no travel time or mileage is separately payable) Fee includes the cost of the report for all parties, including the injured worker.
Fee increases

- 99455 Authorized Treating Physician Providing Primary Care:
  - 1.5 hrs with a maximum fee not to exceed $343.59

- 99456 Referral Level II Accredited Authorized Physician
  - 2.5 hrs with a maximum fee not to exceed $660.75
Paragraph (3) is new: Completion of additional forms requested by a payer or employer paid by the requesting party.

Forms requiring 15 minutes or less of a physician time shall be billed pursuant to A&B below.

A. Billing code Z754
B. Maximum fee is $42.00 per form completion

Forms requiring more than 15 minutes as a Special Report.
Guidelines - Thoracic Outlet Syndrome

**Occupational TOS** - a relatively uncommon disorder and other disorders with similar symptomatology need to be ruled out.

May be caused by workplace factors, such as jobs requiring repetitive activities of the upper extremities with forward head and shoulder postures.
Thoracic Outlet Syndrome (TOS)

Four types of the thoracic outlet syndrome:

- **Two vascular types** - subclavian vein or artery pathology;
- **True or classic neurogenic** - chronic lower trunk brachial plexopathy diagnosed by positive electro diagnostic testing, usually unilateral, predominantly affects women.
- **Non-specific neurogenic** (also called disputed) TOS- diagnosed based on upper or lower trunk brachial plexus symptoms.
Producative Physical Findings -

**Elevated Arm Stress Test (EAST)**

- Performed with the arms abducted and shoulders externally rotated to 90 degrees with elbows bent to 90 degrees for 3 minutes;
- Repetitively open and close fists reproduces upper extremity symptoms
- In an asymptomatic population approximately 35% experience paresthesia.
Posture related, provocative brachial tests

- Head Tilting
- Military posture or costoclavicular maneuver
  - Shoulders depressed and pulled backward in an exaggerated position.
  - Approximately 15% of asymptomatic individuals report paresthesia with this test.
Non-specific Physical Exam
Tests – may indicate other Dxs

- Neck rotation may be restricted indicating cervical pathology
- Upper Limb Tension test – provocative test
  - May be positive for cervical radiculopathy, brachial plexus pathology, or other peripheral nerve pathology
  - Performance and interpretation of this test requires specific training and experience
  - Negative response to the upper limb tension test
    - the diagnosis of neurogenic TOS unlikely
    - investigate other diagnoses.
Physical Exam – Other Tests

-Continued-

- Rotator cuff/acromioclavicular (AC) joint tenderness suggests rotator cuff, biceps tendonitis or AC joint disease.
- Trapezius muscle, shoulder girdle muscle tenderness suggests a myofascial component.
- Drooping shoulders may be secondary to nerve injuries, spinal accessory, long thoracic or other nerve injury. Treatment should focus on therapy for the nerve injury.
Follow-up Diagnostic Imaging & Testing Procedures

- Cervical computed Axial Tomography or Magnetic Resonance Imaging (CT/MRI) should not be routinely performed for TOS.

- Electromyography/Nerve Conduction Velocities (EMG/NCV)
  - Primarily to R/O other nerve entrapment syndromes or to establish true neurogenic TOS.
  - Consider when symptoms present for 3 months or if the patient has failed 8 weeks of conservative therapy.
  - Criteria for TOS provided in Guideline
Initial Treatment Recommendations:

- Vascular cases – most require immediate management
- Cases of “non-specific” treated conservatively for a minimum of 3 months.
- Treatment:
  - patient education
  - jobsite alterations (especially if job activities are related to symptoms),
  - neuromuscular education to emphasis proper breathing techniques and posture, nerve gliding and core body therapeutic exercise.
Jobsite evaluation should be done early in all non-traumatic cases.

Repetition alone is not a risk factor, unless combined with postures.

Work activities need to be modified early in treatment to avoid further exposure to risk factors.
True or Classic Neurogenic TOS:

Clinical: at least two consistent clinical signs plus symptoms consistent with TOS (refer Section D, Initial Diagnostic Procedures).

Neurophysiologic: meets criteria for neurogenic TOS (refer to Section E, Follow-up Diagnostic Imaging and Testing Procedures).
Non-specific Neurogenic TOS (also called disputed):

Clinical: at least three consistent clinical signs plus symptoms consistent with TOS - refer to discussion in (Section D). Initial Diagnostic Procedures and alternative diagnoses have been explored and tests are negative.

Neurophysiologic: may have normal EMG/NCV or a pattern not meeting criteria in EMG section.
Surgical Indications

**Early surgical intervention**

- Documented EMG/NCV evidence of nerve compression with sensory loss and weakness or
- Acute subclavian vein thrombosis or arterial thrombosis; or
- Subclavian artery aneurysm or stenosis secondary to a cervical or anomalous rib (note: this condition is almost never work related).
Surgical Indications - After failed conservative therapy - fulfill the following criteria:

- True neurogenic or non-specific TOS: see criteria in the preceding subsection; and

- A positive upper limb tension test; and

- Failed 3 months of active participation in non-operative therapy including worksite changes; and

- Disabling symptoms interfering with work, recreation, normal daily activities, sleep; and

- Pre-surgical psychiatric or psychological clearance demonstrating motivation and long-term commitment without psychological contraindications for surgery.
Shoulder Practice Guidelines

[Images depicting shoulder anatomy and SLAP lesion]
Surgical Indications –Continued–

An individual may need surgery to increase activities of daily living and/or return to work in a different job.

It is critically important that all other pathology, especially shoulder disorders, be treated prior to surgical intervention for TOS.

Patients should be strongly encouraged to stop smoking and provided with appropriate counseling.
Shoulder Injury
Initial Diagnostic Procedures

Physical Examination should include:

- Elbow and neck
- Both shoulders
  - To compare asymptomatic and symptomatic sides; and
  - To identify individuals with non-pathological joint laxity or degenerative rotator cuff pathology.
Specific Shoulder Tests

- More than one test is needed to make a diagnosis.
- Physical examination may be non-specific secondary to multi-faceted pathology.
- Some tests may be positive for more than one condition.
- Physician is encouraged to document the specific patient response, rather than report test is “positive”.
Shoulder Injury
Initial Diagnostic Procedures
-Continued-

Functional assessment

- Assess the patient’s functional skills initially & periodically during treatment.
- Initial exam forms the baseline.
- Assessment helps physician and patient determine progress.
- A number of functional scales are available.
- Validate positive historical information with physical exam.
Examples of Functional Activities

- Interference with sleep;
- Difficulty getting dressed or combing or washing hair;
- Ability to shower or bath and dry oneself;
- Ability to carry a tray of food across a room with both hands;
- Ability to reach high shelves with the affected shoulder;
- Difficulty with any other activities including sports and work activities;
- Concerns about putting on overhead clothing; and
- Concerns that a specific activity might cause the shoulder to “go out”.
Follow-up Diagnostic Imaging & Testing Procedures

X-ray

- Acromial morphology should not be used to assess the likelihood of rotator cuff pathology.
- Up to 40% of asymptomatic adults may have a Type II acromion.
- Acromial morphology should not be considered an indication for acromioplasty.
Impingement Syndrome

**Description/Definition:** A collection of symptoms, not a pathologic diagnosis. Results from the encroachment of the acromion, coracoacromial ligament, coracoid process, and/or AC joint on the rotator cuff mechanism as the shoulder moves.

**Occupational Relationship:** Repetitive overuse of the upper extremity, often seen with constant overhead motion.
Impingement Syndrome
Non-operative Treatment

Define the contributing factors such as shoulder stiffness, humeral head depressor weakness (rotator cuff fiber failure), posterior capsular tightness and subacromial crowding, AC joint arthritis, muscle imbalance, and postural dysfunction.

Benefits may be achieved through therapeutic interventions. They should include ROM, active therapies, and home exercise program.
Impingement Syndrome

Some evidence that manual therapy at a frequency of 3 X per week for 4 weeks increases function and decreases pain.

Patients may return to work without overhead activities and lifting with involved are. An evaluation of the jobsite may be necessary.

Medications

Subacromial space injections under significant pressure should be avoided. Injections should be minimized for patients under 30 years of age.
Impingement Syndrome

F. Surgical Indications

- When functional deficits interfere with activities of daily living and/or job duties after 3 to 6 months of active patient participation in non-operative therapy.

- Prior to surgical intervention, the patient and treating physician should identify functional operative goals and the likelihood of achieving improved ability to perform activities of daily living or work activities.
Impingement Syndrome
Surgery

- **Patient should agree to comply with the pre- and post-operative treatment plan including home exercise.**

- **Provider should be especially careful to make sure the patient understands the amount of post-operative therapy required and the length of partial and full disability expected post-operatively.**
Partial coracoacromial ligament release, and an acromioplasty, as well as, repair of associated pathology.

An acromioplasty is not always necessary as an adjunct to rotator cuff repair.

Some evidence that patients with a full-thickness rotator cuff tear and Type II acromions do not show appreciable benefit from subacromial decompression.
Coplaning of the clavicle

It is an acceptable procedure

Studies are conflicting regarding possible pain sequelae at the acromioclavicular joint as a consequence of the procedure.

In cases with extensive rotator cuff repair, preservation of the coraco-acromial ligament is recommended to maintain joint stability.
Rotator Cuff Tear

Occupational Relationship

1. Sudden trauma to the shoulder such as breaking a fall using an overhead railing or an outstretched arm; or
2. Chronic overuse with repetitive overhead motion or heavy lifting; or
3. Moderate lifting in de-conditioned workers.
Rotator Cuff Tear

-Continued-

- Commonly co-exist with other shoulder abnormalities
  - impingement
  - AC joint arthritis
  - bicep tendon ruptures
  - calcifying tendonitis
  - older patients with glenohumeral instability, bursitis, and labral tears
- Full-thickness tears - usually apparent from the drop arm test or weakness with elevation.
Rotator Cuff Tear
Surgical Indications

May be indicated when functional deficits interfere with activities of daily living and/or job duties after 6 to 12 weeks of active patient participation.

- **For a partial tear** - usually 6 to 12 weeks.
- **For full-thickness tears** - early surgical intervention produces better surgical outcome due to healthier tissues and better ROM prior to and after surgery. Patients may need pre-operative therapy to increase ROM.
Rotator Cuff Tear Surgery

- Full-thickness tears in individuals less than 60 should generally be repaired.
- Surgery for partial thickness tears has variable results
  - Debridement should be performed early in younger active patients
  - Many patients over 65 have partial tears
- Decision to repair a full rotator cuff tear depends on
  - length of time since in injury
  - the amount of muscle or tendon retracted
  - level of fatty infiltration
  - quality of the tendon.
- Procedures may include biceps tendon repair and shaving of the humeral tuberosity.
Rotator Cuff Tear
G. Operative Procedures

- Arthroscopic or open debridement and/or repair. In some cases, partial coracoacromial ligament release, and/or anterior acromioplasty.

- Acromioplasty is not always necessary as an adjunct to rotator cuff repair. There is some evidence that patients with a full-thickness rotator cuff tear and Type II acromions do not show appreciable benefit from subacromial decompression.

- Coplaning of the clavicle is an acceptable procedure.
Distal clavicular resection is not recommended for patients without AC joint pain.

In cases with extensive rotator cuff tear, preservation of the coracoacromial ligament is recommended to prevent instability.

Arthroscopic laser treatment is not recommended.
Rotator Cuff Tear
Post-Op

Restrictions should be evaluated every 4 to 6 weeks during post-operative recovery. Return to full-duty too early in the course of tendon recovery increases the likelihood or recurrent, symptomatic tears.

Animal models estimate that the infraspinatus tendon regains only 30% of strength at 6 weeks, 50% at 3 months, and 80% at 6 months. Return to any significant lifting early in the course of recovery may result in failure of the surgery and/or recurrent tears.
Superior Labrum Anterior & Posterior (SLAP) Lesions

**Description/Definition**

- **Type I** - fraying of the superior labral edge without detachment of the labrum.
- **Type II** - detachment of the biceps anchor from the glenoid, may be anterior; posterior; or anterior and posterior.
- **Type III** - bucket handle tear of superior labrum only with biceps tendon and rest of superior labrum stable attached
- **Type IV** - bucket handle tear in Type III with extension of into the biceps tendon.
Superior Labrum Anterior & Posterior (SLAP) Lesions

History may include:

- Symptoms with overhead throwing motions;
- Dislocation subluxation, or subjective sense of instability;
- Poorly localized shoulder pain exacerbated by overhead activities;
- Catching locking popping or snapping;
- Subtle instability.
Superior Labrum Anterior &
Posterior (SLAP) Lesions

Mechanisms of Injury

- Occupational Relationship:
  - Compression injury such as
    - fall on an outstretched arm with shoulder in forward flexion and abduction or
    - direct blow to the glenohumeral joint;
  - Traction injury such as
    - repetitive overhead throwing,
    - attempting to break a fall from a height, and
    - sudden pull when losing hold of a heavy object;
Superior Labrum Anterior & Posterior (SLAP) Lesions

Mechanisms of injury

3) *Driver of an automobile who is rear ended;*

4) *Repetitive overhead motions with force such as pitching, or*

5) *A fall on adducted arm with upward force directed on elbow.*

6) *In some cases no mechanism of injury can be identified.*
Superior Labrum Anterior & Posterior (SLAP) Lesions

C. Physical Exam

No one test or combination of tests has been shown to have acceptable sensitivity, specificity or positive predictive values for diagnosing SLAP lesion.

Sensitivity and specificity are relatively low for individual tests and combinations.
Superior Labrum Anterior & Posterior (SLAP) Lesions

Decision to operate should **not** be based on physical examination alone.

- Speed Test
- Yergason’s Test
- Active Compression (O’Brien) Test
- Jobe Relocation Test
- Crank Test
- Anterior Apprehension Maneuver
(SLAP) Lesions

Diagnostic Testing

i. Radiographs- Useful for identifying other sources of abnormalities.

ii. Magnetic resonance imaging with arthrogram MRA - highest reported accuracy for diagnosis and classification of SLAP lesions; however, difficult to differentiate Type II lesions, from normal anatomic variants and asymptomatic age related changes

iii. Arthroscopic evaluation - most definitive diagnostic test.
Superior Labrum Anterior & Posterior (SLAP) Lesions

**E. Non-operative Treatment**

SLAP lesions are associated with other pathology such as rotator cuff tears, Bankart lesions, joint instability, biceps tendon tears, and supraspinatus tears.

Refer to the treatment protocols for these conditions.
There is a significant amount of normal anatomic variation of the superior glenoid labrum and origin of the long head of the biceps tendon. Differentiation between normal variation and pathology is imperative. The physician should identify other shoulder pathology if any exists and follow the appropriate surgical indications.

An arthroscopic exam should be performed in conjunction with the primary surgical procedures and an appropriate repair performed if necessary.
Superior Labrum Anterior & Posterior (SLAP) Lesions

When no additional pathology is identified at least 3 months of non-operative management with active patient participation and functional limitations and/or instability significantly affecting activities of daily living work duties.

Prior to surgical intervention the patient should also understand that

1) non-operative treatment is an acceptable option
2) a potential complication of the surgery is shoulder stiffness with pain and possibly decreased function.