

January 13, 2022

New York Workers' Compensation Medical Treatment Guidelines for Elbow Injuries

A Training Module Developed by the Medical Director's Office

Medical Care

- Medical care and treatment required as a result of a work-related injury should be focused on restoring the patient's functional ability to perform their daily and work activities with a focus on return to work, while striving to restore the patient's health to its pre-injury status in so far as is feasible.
- Any medical provider rendering services to a workers' compensation patient must utilize the Workers' Compensation Board's New York Medical Treatment Guidelines (MTGs) as provided for with respect to all work-related injuries and/or illnesses.

Positive results are defined primarily as functional gains that can be objectively measured. Objective functional gains include, but are not limited to, positional tolerances, range of motion, strength, endurance, activities of daily living (ADL), cognition, psychological behavior, and efficiency/velocity measures that can be quantified. Subjective reports of pain and function may be considered and given relative weight when the pain has anatomic and physiologic correlation in proportion to the injury.

If a given treatment or modality is not producing positive results within a well-defined time frame, the provider should either modify or discontinue the treatment regime. The provider should evaluate the efficacy of the treatment or modality two to three weeks after the initial visit and three to four weeks thereafter. These time frames may be slightly longer in the context of conditions that are inherently mental health issues, and shorter for other non-musculoskeletal medical conditions (e.g., pulmonary, dermatologic etc.). Recognition that treatment failure is at times attributable to an incorrect diagnosis, a failure to respond should prompt the clinician to reconsider the diagnosis in the event of an unexpected poor response to an otherwise rational intervention.

Education of the patient and family, as well as the employer, insurer, policy makers and the community, should be a primary emphasis in the treatment of a work-related injury or illness. Practitioners should develop and implement effective educational strategies and skills. An education-based paradigm should always start with communication providing reassuring information to the patient. No treatment plan is complete without addressing issues of individual and/or group patient education as a means of facilitating self-management of symptoms and prevention of future injury.

Acuity

- Acute, subacute and chronic are generally defined as time frames for disease stages:
 - Acute Less than one month
 - Subacute One to three months, and
 - Chronic Longer than three months

■ Time Frames

- Diagnostic time frames for conducting diagnostic testing commence on the date of injury.
- Treatment time frames for specific interventions commence once treatments have been initiated, not on the date of injury.
- Clinical judgment may substantiate the need to accelerate or decelerate the time frames discussed in this training module.
- Specific durations of treatments and number of treatment visits (e.g., physical therapy/occupational therapy (PT/OT)) are beyond the scope of this training module and the provider should refer to the recommendations in the MTGs.

Delayed Recovery

For those patients who fail to make expected progress 6-12 weeks after an injury and whose subjective symptoms do not correlate with objective signs and tests, reexamination in order to confirm the accuracy of the diagnosis and reevaluation of the treatment program should be performed. When addressing a clinical issue that is not inherently a mental health issue, assessment for potential barriers to recovery (yellow flags/psychological issues) should be ongoing throughout the care of the patient. At 6-12 weeks, alternate treatment programs, including formal psychological or psychosocial evaluation should be considered. Clinicians must be vigilant for any pre-existing mental health issues or subsequent, consequential mental health issues that may be impacting recovery.

Delayed Recovery

■ For issues that are clearly and inherently mental health issues from the outset (i.e., when it is evident that there is an underlying, work-related, mental health disorder as part of the claim at issue), referral to a mental health provider can and should occur much sooner. Referrals to mental health providers for the evaluation and management of delayed recovery do not indicate or require the establishment of a psychiatric or psychological condition. The evaluation and management of delayed recovery does not require the establishment of a psychiatric or psychological claim.

Active Interventions

Active interventions emphasizing patient responsibility, such as therapeutic exercise and/or functional treatment, are generally emphasized over passive modalities, especially as treatment progresses. Generally, passive and palliative interventions are viewed as a means to facilitate progress in an active rehabilitation program with concomitant attainment of objective functional gains.

Diagnostic Imaging and Testing Procedures

- Clinical information obtained by history taking and physical examination should be the basis for selection of imaging procedures and interpretation of results.
- It may be of value to repeat diagnostic procedures (e.g., imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when clinically indicated, and post-operatively to follow the healing process.

Surgical Interventions

Consideration of surgery should be within the context of expected functional outcome. The concept of "cure" with respect to surgical treatment by itself is generally a misnomer. All operative interventions must be based upon positive correlation of clinical findings, clinical course, imaging, and other diagnostic tests.

Surgical Interventions

■ For surgery to be performed to treat pain, there must be clear correlation between the pain symptoms and objective evidence of its cause. In all cases, shared decision making with the patient is advised.

Pre-Authorization

All diagnostic imaging, testing procedures, non-surgical and surgical therapeutic procedures within the criteria of the MTGs and based on a correct application of the MTGs are considered authorized, with the exception of the procedures listed in section 324.3(1)(a) of Title 12 NYCRR.

Pre-Authorization

Second or subsequent procedures (the repeat performance of a surgical procedure due to failure of, or incomplete success from, the same surgical procedure performed earlier, if the *MTGs* do not specifically address multiple procedures) also require pre-authorization.

Personality/Psychological/Psychosocial Evaluations

In select patients, mental health evaluations are essential to make, secure or confirm a diagnosis. Of course, the extent and duration of evaluations and/or interventions by mental health professionals may vary, particularly based on whether: the underlying clinical issue in the claim is inherently a mental health issue; there is a mental health issue that is secondary or consequential to the medical injury or illness that is at issue in the claim in question; or there is a pre-existing, unrelated mental health issue that has been made worse by, and/or is impeding the recovery from the medical injury or illness that is at issue in the claim in question.

Personality/Psychological/Psychosocial Evaluations

- When assessing for a pre-existing, unrelated mental health issue that has been made worse by and/or is impeding the recovery from a work-related, medical injury or illness, then a one-time visit for initial psychiatric/psychological encounter should be sufficient, as care would normally be continued by the prior treating provider.
- If psychometric testing is indicated by findings in the initial encounter, time for such testing should not exceed an additional three hours of professional time.

Personality/Psychological/Psychosocial Evaluations

■ For conditions in which a mental health issue is a central part of the initial claim, or in which there is a mental health issue that is secondary or consequential to the work-related, medical injury or illness, that is part of the claim in question, then more extensive diagnostic and therapeutic interventions may be clinically indicated and are discussed in detail in the *MTGs* for such mental health conditions.

■ Functional Capacity Evaluation (FCE)

- Functional capacity evaluation is a comprehensive or more restricted evaluation of the various aspects of function as they relate to the patient's ability to return to work.
 - In most cases, the question of whether a patient can return to work can be answered without an FCE.
 - An FCE may be considered at time of maximum medical improvement (MMI), following reasonable prior attempts to return to full duty throughout course of treatment, when the treating physician is unable to make a clear determination on work status on case closure. An FCE is not indicated early during a treatment regime for any reason including one to support a therapeutic plan.

Functional Capacity Evaluation (FCE)

When an FCE is being used to determine return to a specific job site, the treating provider is responsible for understanding and considering the job duties. FCEs cannot be used in isolation to determine work restrictions. The authorized treating provider must interpret the FCE in light of the individual patient's presentation and medical and personal perceptions. FCEs should not be used as the sole criteria to diagnose malingering.

Functional Capacity Evaluation (FCE)

An FCE may be considered at time of MMI, following reasonable prior attempts to return to full duty throughout the course of treatment, when the treating provider is unable to make a clear determination on work status on case closure.

■ Return To Work

For purposes of the *MTGs*, return to work is defined as any work or duty that the patient is able to perform safely. It may not be the patient's regular work. Ascertaining a return-to-work status is part of medical care and should be included in the treatment and rehabilitation plan. It is normally addressed at every outpatient visit.

Return To Work

A description of the patient's status and task limitations is part of any treatment plan and should provide the basis for restriction of work activities when warranted. Early return to work should be a prime goal in treating occupational injuries. The emphasis within the *MTGs* is to move patients along a continuum of care and return to work, since the likelihood of returning an injured worker to work drops progressively the longer the worker has been out of work.

Return To Work

When returning to work at the patient's previous job task/setting is not feasible given the clinically determined restrictions on the patient's activities, inquiry should be made about modified duty work settings.

- The NY WC MTG for Elbow Injuries address common and potentially work-related elbow injuries. It encompasses assessment (including identification of "red flags" or indicators of potentially-serious injury or disease); diagnosis; diagnostic studies for identification of clinical pathology; work-relatedness; and management, including modified duty and activity, return to work, and an approach to delayed recovery.
 - Red flags include fracture, dislocation, infection, inflammation and other conditions.

History Taking and Physical Examination

 History taking and physical examination establish the foundation/basis for and dictate subsequent stages of diagnostic and therapeutic procedures. When findings of clinical evaluations and those of other diagnostic procedures are not consistent with each other, the objective clinical findings should have preference.

History of Present Injury

- Mechanism of injury: Details of symptom onset and progression, and symptoms that may arise from postural or functional accommodation to the elbow injury;
- Relationship to work: Statement of the probability that the illness or injury is work-related;
- Prior injuries: Previous occupational and non-occupational injuries to the same area including specific prior treatment;
- <u>Functional abilities:</u> Ability to perform job duties and activities of daily living;
 and
- Additional factors: Exacerbating and alleviating factors for symptoms.

Past History

- Past medical history includes, but is not limited to, neoplasm, gout, arthritis, and diabetes;
- Review of systems includes, but is not limited to, symptoms of rheumatologic, neurologic, endocrine, neoplastic, and other systemic diseases;
- Smoking history;
- Vocational and recreational pursuits;
- Prior imaging studies; and
- Past surgical history.

Physical Examination

- Examination of a joint should include the joint above and below the affected area, including the opposite side for comparison. Physical examination should include accepted tests and exam techniques applicable to the joint or area being examined, including:
 - Visual inspection; palpation; bilateral range of motion (active/passive); strength; joint stability; neurologic assessment.

Assessing Red Flags

Certain findings raise red flags—suspicions of potentially serious medical conditions. In the elbow, these findings or indicators may include: fracture, dislocation, infection or inflammation, tumor, tendon rupture and neurological or vascular compromise including compartment syndrome. Further evaluation/consultation or urgent/emergency intervention may be indicated, and the NY WC MTG for Elbow Injuries incorporate changes in clinical management triggered by the presence of red flags.

Diagnostic Criteria and Differential Diagnosis

For most cases presenting with true elbow disorders, diagnostic studies are usually not needed until after a period of conservative care and observation. Most elbow problems improve quickly once any red flags are ruled out. Routine testing, i.e., laboratory tests, plain-film radiographs of the elbow, or special imaging studies are not recommended during the first month of activity limitation except when a red flag that is noted on history or examination raises suspicion of a dangerous elbow condition or of referred pain.

Diagnostic Testing and Procedures

One diagnostic imaging procedure may provide the same or distinctive information as obtained by other procedures. Therefore, prudent choice of procedure(s) for a single diagnostic procedure, a complementary procedure in combination with other procedures(s), or a proper sequential order in multiple procedures will ensure maximum diagnostic accuracy, minimize adverse effect to patients and promote cost effectiveness by avoiding duplication or redundancy.

Diagnostic Testing and Procedures

It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g., imaging studies) during the course of care to reassess or stage the pathology when there is progression of symptoms or findings, prior to surgical interventions and therapeutic injections when warranted, and post-operatively to follow the healing process.

Diagnostic Testing and Procedures

- It is recognized that repeat imaging studies and other tests may be warranted by the clinical course and to follow the progress of treatment in some cases. It may be of value to repeat diagnostic procedures (e.g., imaging studies) during the course of care to:
 - Reassess or stage the pathology when there is progression of symptoms or findings,
 - Prior to surgical interventions and therapeutic injections when warranted, and
 - Post-operatively to follow the healing process.

Medications

- For most patients, generic ibuprofen, naproxen, or other older generation nonsteroidal anti-inflammatory drugs (NSAIDs) are recommended as first-line medications. Second-line medications should include one of the other generic medications. Acetaminophen (or the analog paracetamol) may be a reasonable alternative for these patients, although most evidence suggests acetaminophen is modestly less effective. There is evidence that NSAIDs are as effective for relief of pain as opioids (and tramadol) and less impairing.
- See also: NY WC MTG for Non-Acute Pain

Medication General Guidelines

- NSAIDs for patients at high risk of gastrointestinal bleeding
 - Recommended Concomitant use of cytoprotective classes of drugs: misoprostol, sucralfate, histamine Type 2 receptor blockers, and proton pump inhibitors for patients at high risk of gastrointestinal bleeding.
 - At-risk patients include those with a history of prior gastrointestinal bleeding, elderly, diabetics, and cigarette smokers.

Medication General Guidelines

- NSAIDs for patients at risk for cardiovascular adverse effects:
 - Recommended Acetaminophen or aspirin as the first-line therapy appear to be the safest regarding cardiovascular adverse.
 - Recommended If needed, NSAIDs that are non-selective are preferred over COX-2 specific drugs. In patients receiving low-dose aspirin for primary or secondary cardiovascular disease prevention, to minimize the potential for the NSAID to counteract the beneficial effects of aspirin, the NSAID should be taken at least 30 minutes after or eight hours before the daily aspirin.

Contusions

 A contusion is an injury of a part without a break in the skin and with a subcutaneous hemorrhage. It is an acute injury with bruising.

Contusions

- Treatments
 - **Recommended** Ice, compression and range of motion
 - Not Recommended Immobilization
 - Recommended NSAIDS and acetaminophen

Epicondylitis

 Lateral Epicondylitis (Tennis Elbow) causes soreness or pain on the outside of the upper arm near the elbow and is diagnosed based on a combination of lateral elbow pain plus tenderness to palpation. Most patients require no special testing provided red flags are absent.

Epicondylitis (Epicondylalgia)

- Medial Epicondylitis (Golfer's Elbow) affects the medial or inner aspect of the elbow and is sometimes thought to occur concomitantly with ulnar neuropathy at the elbow.
- Treatment of Medial Epicondylitis is analogous to Lateral Epicondylitis.

Epicondylalgia

- Treatments
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select post-operative Epicondylalgia patients for no more than one week.
 - Topical NSAIDs may be utilized for acute, chronic or post-operative Epicondylalgia.

Epicondylalgia

- Treatments
 - Ice, heat, PT/OT
 - Not Recommended Manipulation and mobilization, massage, magnets, extracorporeal shockwave, phonophoresis and low-level laser therapy, acupuncture for acute or post-operative patients, biofeedback.
 - Recommended Elbow bands, straps and braces.
 - Recommended For select, chronic patients, Iontophoresis, ultrasound, acupuncture for select chronic patients.

Epicondylalgia

- Treatments
 - Injections
 - Recommended In select patients, glucocorticosteroid and dry needling for subacute or chronic epicondylalgia.
 - Recommended Platelet rich plasma and autologous blood are recommended for chronic lateral epicondylalgia.

- Epicondylalgia
 - Surgery
 - Lateral Epicondylar Release
 - Recommended For treatment of chronic epicondylalgia.

Olecranon Bursitis

Olecranon bursitis is a condition associated with a generally painless effusion
of the olecranon bursa. Most patients are treated initially with soft elbow
padding, support or an ace wrap while avoiding elbow pressure. Septic
olecranon bursitis is either a complication of aseptic olecranon bursitis or a
direct consequence of trauma.

Olecranon Bursitis

- Diagnostic studies
 - There are no special studies for most cases of olecranon bursitis.
 - Recommended Fluid aspiration of swollen bursa if the bursa is thought to be infected.
 - Recommended X-ray to rule out osteomyelitis or joint effusion in cases of significant septic bursitis.

- Olecranon Bursitis
 - Recommended NSAIDs/APAP for pain
 - Not Recommended Injection therapies

Olecranon Bursitis

- Surgery
 - Surgery has been widely used to treat olecranon bursitis that has not responded to activity modifications and injections.
 - Recommended Surgical drainage for olecranon bursitis and surgical resection for chronic olecranon bursitis.

- Elbow Fractures (including Non-Displaced Radial Head Fracture)
 - Diagnostic Studies
 - Elbow fractures most commonly occur from falls.
 - Recommended X-rays that include two to three views.

- Elbow Fractures (including Non-Displaced Radial Head Fracture)
 - Medications
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select patients with pain from fracture or in the immediate post-operative period.

- Elbow Fractures (including Non-Displaced Radial Head Fracture)
 - Treatment
 - Recommended Casts and cast bracing for select elbow fractures, elbow slings for non-displaced and occult radial head fractures.
 - Recommended PT/OT is after cast removal.

- Elbow Fractures (including Non-Displaced Radial Head Fracture)
 - Surgery
 - Recommended Surgical fixation of displaced elbow fractures

Elbow Dislocations

- Dislocation of the elbow generally occurs as a result of significant, high force trauma and is diagnosed based on a combination of typical inciting event combined with deformity and inability to use the arm.
- Recommended X-rays to rule out fractures.
- Recommended General anesthesia to facilitate reduction in select patients.

Elbow Dislocations

- Pain medications including NSAIDs/APAP, as well as opioids may be required.
 Care should be taken to limit the duration of narcotic pain medications.
- Recommended Anesthetic Intra-articular injections for pre or post reduction pain.

Elbow Dislocations

- Surgery
 - Recommended For elbow joints that recurrently dislocate or are unstable after dislocation.
 - Recommended Posterior elbow splint and sling after reduction.

Elbow Sprains

- An isolated elbow sprain is relatively uncommon and is caused by a significant high-force trauma. Generally, a sprain is accompanied by other problems such as fracture, dislocation, or contusion.
- Recommended X-rays, at least two to three view to rule out fractures.
- Recommended Slings

Elbow Sprains

- Medications
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select patients with pain from sprain may be used short term, no longer than a week.

- Elbow Sprains
 - Recommended Slings for elbow sprains.

Biceps Tendinosis and Tears/Ruptures

• Biceps Tendinosis is a true muscle strain involving the muscle-tendon junction of the biceps brachii. Patients with severe or complete ruptures should be referred to a surgeon to evaluate the need for surgical repair. Other patients should receive treatment including activity limitations and pain management strategies generally centered on NSAIDS.

- Biceps Tendinosis and Tears/Ruptures
 - Diagnostic studies
 - **Recommended** X-rays, MRI, ultrasound.

Biceps Tendinosis and Tears/Ruptures

- Medications
 - **Recommended** NSAIDs/APAP for pain.
 - Recommended Opioids for select patients with pain from moderate to severe biceps tendinosis or ruptures particularly with nocturnal sleep disruption, as well as post-operatively. Opioids should be utilized for short duration only.

- Biceps Tendinosis and Tears/Ruptures
 - Recommended Strengthening exercises, Slings and splints.

- Biceps Tendinosis and Tears/Ruptures
 - Surgery
 - Recommended Surgical repair for distal biceps ruptures.

Triceps Tendinosis (or Tendinitis) and Tears/Ruptures

- Triceps tendinosis (or tendinitis) is a true muscle strain involving the muscletendon junction of the triceps. It is believed to be analogous to biceps tendinosis, including high force mechanism of injury.
- Triceps ruptures often require surgical repair.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - There are two common areas for entrapment of the ulnar nerve at the elbow, the condylar groove and immediately distal to the elbow joint in the cubital tunnel.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - Initial care involves seeking potential causal factors that can be changed.
 - Recommended That patients be taught to sleep with their elbows extended rather then flexed and to avoid hyper-flexed elbow postures at work.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - Diagnostic studies
 - Recommended Electromyogram/Nerve Conduction Study (EMG/NCS) in diagnosis and or preoperative assessment of ulnar neuropathies at the elbow.
 - Not Recommended Electrodiagnostic Studies (EDS) for initial evaluation, diagnostic ultrasound and MRI.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - Medications
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select post-operative patients.
 - Not Recommended Routine use of opioids for acute, subacute or chronic neuropathies.
 - Not Recommended Injections.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - Treatments
 - Recommended PT/OT, elbow and wrist splinting, ultrasound.
 - Not Recommended Magnets, acupuncture, biofeedback, manipulation and mobilization, massage, iontophoresis, phonophoresis, low-level laser therapy.

- Ulnar Neuropathies at the Elbow (including Condylar Groove Associated Ulnar Neuropathy and Cubital Tunnel Syndrome)
 - Surgery Surgical release for treatment of subacute or chronic ulnar neuropathies (decompression, anterior subcutaneous transposition and medial epicondylectomy).
 - Recommended For patients who fail non-operative treatment for subacute or chronic ulnar neuropathies or patients who have emergent or urgent indications (e.g., acute compression due to fracture, arthritides or compartment syndrome with unrelenting symptoms of nerve impairment).
 - Not Recommended Anterior submuscular transposition for the treatment of subacute or chronic ulnar neuropathies.

- Radial Nerve Entrapment (including Radial Tunnel Syndrome)
 - Radial nerve entrapment, particularly of the posterior interosseous branch of the radial nerve, causes proximal forearm aching and pain that persists despite presumably effective treatment.
 - In the absence of quality evidence for treatment of these radiculopathies, it is recommended that treatments for ulnar neuropathy at the elbow be followed.

- Radial Nerve Entrapment (including Radial Tunnel Syndrome)
 - Medications
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select post-operative patients.
 - Not Recommended Glucocorticosteroids, vitamins, lidocaine patches and opiates for acute, subacute, or chronic radial nerve entrapment pain.

- Radial Nerve Entrapment (including Radial Tunnel Syndrome)
 - Treatments
 - **Recommended** PT/OT, elbow and wrist splinting, ultrasound.
 - Not Recommended Magnets, acupuncture, biofeedback, manipulation and mobilization, massage, soft tissue massage, iontophoresis, phonophoresis, lowlevel laser therapy.

- Radial Nerve Entrapment (including Radial Tunnel Syndrome)
 - Surgery
 - Recommended Surgical release for treatment of subacute or chronic ulnar neuropathies.

- Pronator Syndrome (Median Neuropathies in the Forearm)
 - Pronator Syndrome involves median nerve entrapment under or within the pronator teres muscle in the proximal forearm. It causes pain in the flexor forearm and paresthesia similar to Carpal Tunnel Syndrome (CTS), which is the main consideration in the differential diagnosis.
 - Recommended Pronator Syndrome electrodiagnostic study for confirmation of Pronator Syndrome.

- Pronator Syndrome (Median Neuropathies in the Forearm)
 - Medications
 - Recommended NSAIDs/APAP for pain.
 - Recommended Opioids for select post-operative patients.
 - Not Recommended Glucocorticosterioids, vitamins, lidocaine patches and opiates for acute, subacute or chronic Pronator Syndrome.

- Pronator Syndrome (Median Neuropathies in the Forearm)
 - Treatments
 - Recommended Elbow and wrist splinting, therapeutic exercise, PT/OT, ultrasound.
 - Not Recommended Low-level laser therapy, acupuncture, biofeedback, manipulation and mobilization, massage, soft tissue massage, iontophoresis, phonophoresis.

- Pronator Syndrome (Median Neuropathies in the Forearm)
 - Surgery
 - Recommended Surgical release for treatment of subacute or chronic forearm median neuropathies, including Pronator Syndrome.

■ For additional questions, please email MTGTrainings@wcb.ny.gov.

Thank You