Executive Summary

In a proactive effort to combat medical fraud, the National Insurance Crime Bureau (NICB) has prepared the following report on manipulation under anesthesia (MUA). The report will be an overview of MUA in relation to treatment, the use and validity of MUA, and its impact on the insurance industry.

The aim of this ForeCAST report is to identify for insurance professionals the history, use, and potential fraud related to the procedure known as manipulation under anesthesia (MUA). Manipulation under anesthesia is spinal and skeletal manipulation that is performed while the patient is under anesthesia (Blue Cross of Idaho 2010). The anesthesia is provided by a board certified anesthesiologist, or a medical physician, depending on state laws. The manipulation is performed by a chiropractor or certified physician.

Many medical and health related organizations have labeled MUA procedures as investigational, not medically necessary, questionable, potentially dangerous to patients, or experimental (Aetna 2010, Cigna 2009, United Healthcare 2010, NHCAA and CIGNA 2008). Fraud is also reportedly wide spread in the use and practice of MUA. A prominent MUA supporter, Dr. Robert Gordon, estimates that 20% - 40% of all MUA procedures are unnecessary, overbilled, or performed wrong (LaMendola 2009). There are however, some generally accepted uses for MUA, such as its use in relieving ‘frozen shoulder’ and other similar joint related issues after surgery (United Healthcare 2010, Blue Cross of Idaho 2010). Insurance professionals and independent medical examiners reviewing MUA related claims should look for NICB identified indicators of fraud and review clinical justifications for MUA by organizations such as the National Association of MUA Physicians.

SECTION 1: MUA Overview

Procedure

Manipulation under anesthesia is spinal and skeletal manipulation that is performed while the patient is under anesthesia. It consists of a series of mobilization, stretching, and traction procedures to the spine and extremities performed while the patient receives anesthesia, usually general anesthesia or moderate sedation (Blue Cross of Idaho 2010). After the anesthesia has been applied, manipulations and adjustments, that would have been difficult or impossible to perform without anesthesia, are completed. The anesthesia is provided by a board certified anesthesiologist, or the medical physician, depending on state laws.

Access the link below to view a video of MUA being performed:
MUA Procedure Video
The manipulation procedure(s) are applied by a certified chiropractic physician or medical doctor. MUA is usually performed in one to three day, out-patient sessions, each usually lasting less than 15 minutes (International MUA Academy of Physicians 2006). It is estimated that only 3% to 10% of all chiropractic patients may be suitable candidates for MUA (Cremata, et al. 2005).

**History**

MUA was developed in the early twentieth century as a specialized manipulative procedure and became more common in the 1980’s, gaining recognition by professional medical and chiropractic organizations (National Association of MUA Physicians 2009). Several state chiropractic and medical boards allow MUA to be performed by both medical doctors and chiropractors (Hill and Yamamura 2007). However, a recent court decision in Texas overturned a ruling by the Texas Board of Chiropractic Examiners that allowed chiropractors to perform MUA (Roser 2010). Insurance professionals should consult state medical and chiropractic boards for further information on the performance of MUA by chiropractors.

**SECTION 2: Use of MUA**

Identifying the recommended clinical justifications for any medical procedure is important to both consumers and insurance companies. This knowledge can help insurance professionals identify questionable claims and help protect consumers from potentially un-necessary procedures. The National Association of MUA Physicians (NAMUAP) has created a list of recommend clinical justifications for MUA practitioners. By reviewing this information insurance professionals and independent medical examiners (IME) can identify potential legitimate uses, and possibly red flags regarding MUA. NAMUAP lists the following as clinical justifications for MUA:

**Clinical Justification for Manipulation under Anesthesia**

*By the National Association of MUA Physicians (2009)*

- The patient has responded favorably to conservative, non-invasive chiropractic and medical treatments, but continues to experience intractable pain and/or biomechanical dysfunction
- Sufficient care has been rendered prior to recommending MUA (standard is 2-6 weeks)
- Manipulative procedures have been utilized in the clinical setting during the 2-6 week period prior to recommending MUA.
- The patient’s level of reproduced pain interferes with lifestyle. (Sleep, daily functional activities, work habits, etc.)
- When medical pain management parameters for immediate acute care protocols are met, and if it is recommended by the medical pain management specialist, the MUA procedure can be used in conjunction with medical pain management for treatment of acute pain.
- Diagnosed conditions must fall within the recognized categories of conditions responsive to MUA. The following disorders are classified as acceptable conditions for utilization of manipulation under anesthesia:
  - Patients whereby manipulation of the spine or other articulations is the treatment of choice, however, the patient’s pain threshold inhibits the effectiveness of conservative manipulation.
  - Patients whereby manipulation of the spine or other articulations is the treatment of choice, however, due to the involuntary contraction of the supporting tissues (splinting mechanism), patient treatment is delayed or may be prolonged.
  - Patients whereby manipulation of the spine or other articulations is the treatment of choice, however, due to the extent of the injury mechanism, conservative manipulation has been minimally effective in 2-6 weeks of care and a greater degree of movement of the affected joint(s) is needed.
  - Patients whereby manipulation of the spine or other articulations is the treatment of choice by the physician, however, due to the chronicity of the problem and/or the fibrous tissue adhesions present, conservative manipulation is incomplete.
  - When the patient is considered for spinal disc surgery, MUA is an alternative and/or an interim treatment and may be used as a therapeutic and/or diagnostic tool in the overall consideration of the patient’s condition.
NAMUAP has also drafted protocols for additional aspects of the MUA procedure. The protocols can be found at http://www.namuap.org/ under the Policy and Ethics section. Insurance fraud professionals with specific questions concerning the use of MUA should contact an IME.

SECTION 3: MUA Effectiveness and Risks

Although some clinical studies have concluded that MUA is an effective treatment for back and joint pain in certain patients, very few of the studies involved randomized controlled clinical trials (Blue Cross of Idaho 2010). As a result, most health insurance companies and organizations have labeled MUA procedures as investigational, not medically necessary, questionable, potentially dangerous to patients, or experimental, including; Aetna, American Society of Anesthesiologists, Blue Cross of Idaho, Blue Cross Blue Shield of North Carolina and Tennessee, Cigna, and United Healthcare. Medicare has not published a national coverage decision related to MUA as of October 2010.

Serious risks to patients can be associated with MUA (Cigna 2009) such as:

- Vertebrobasilar accidents (disruption to brains blood supply)
- Disk herniation
- Progression to Cauda Equina Syndrome (compression of the nerves in the lower portion of the spinal cord)
- Paralysis
- Vertebral Fracture

A March 2009 article in the South Florida Sun-Sentinel detailed the potential risks to patients during MUA. In one example a 33 year Florida man with diabetes went into cardiac arrest after undergoing MUA on his legs, hips, spine, shoulders, arms, and neck. Florida State officials barred the clinic that performed the procedure from seeing patients, due to “improper oxygen procedures and other violations” (LaMendola 2009).

Many professionals in the health insurance industry regard MUA as a procedure that is questionable. However, various health insurance companies and organizations do recognize the effectiveness of MUA in treating some conditions, specifically those related to conditions that may develop in some patients after surgery. Shown below are some generally accepted MUA uses (United Healthcare 2010, Blue Cross of Idaho 2010):

- Elbow joint for arthrofibrosis following elbow surgery or fracture
- Knee joint for arthrofibrosis following total knee arthroplasty, knee surgery, or fracture
- Pelvis for acute traumatic fracture or dislocation
- Shoulder joint for adhesive capsulitis (e.g. frozen shoulder)

SECTION 4: MUA Misuse

MUA can be a costly procedure with reimbursement rates often exceeding $100,000 over the course of treatment (NHCAA and CIGNA 2008). Misuse in billing and treatment is also common; prominent MUA supporter, Dr. Robert Gordon, estimates that 20% - 40% of all MUA procedures are unnecessary, overbilled, or performed wrong (LaMendola 2009). Some common reasons for referral listed in MUA related questionable claims (QC) are: Medical Provider, Excessive Treatment, Billing for Services Not Rendered, and Unbundling/Upcoding.
In addition to the reasons for referral, analysis of NICB QCs indicates that medical providers performing MUA often bill excessively for additional treatments prior to the MUA with total bills often exceeding $100,000. To aid the identification of potentially fraudulent MUA’s the NICB has identified several indicators of fraud or misuse:

- The medical professional performs or recommends MUA before the start of conservative treatment.
- The medical professional performs or recommends MUA for multiple individuals involved in the same accident.
- MUA is performed or recommended after a low impact collision.
- The medical professional has a history of performing or recommending MUA on most patients regardless of the diagnosis.
- The MUA procedure is performed by an unqualified individual or at an un-licensed facility.
- Medical provider’s surgical notes are identical for every MUA patient.
- Manipulation of areas during MUA not related to specified area of concern identified by diagnostics.

The billing history of physicians performing MUA should be carefully examined if any of the indicators listed above are present. Insurance professionals should use an IME to determine the medical necessity of an MUA procedure.

**SECTION 5: Conclusion**

Although conclusive evidence as to the safety and efficacy of MUA is lacking (excluding certain uses such the treatment of “frozen shoulder”) (Cigna 2009), many chiropractors and physicians continue to perform the procedure. This can result in devastating consequences for unsuspecting and uninformed patients; such as, paralysis, disk herniation, and vertebral fracture (LaMendola 2009, CIGNA 2009).

Utilizing their knowledge in the field, as well the information contained in this and other NICB reports insurance professionals can affect a positive outcome. By properly reviewing suspect claims involving MUA, red flags can be identified, unnecessary risks to patients and consumers can be avoided, and fraud can be reduced.

With a coordinated effort by insurance professionals, law enforcement, and the public, a difference can be made in the fight against fraudulent use of MUA. Reducing fraudulent MUA related claims will help protect the public from medical professionals that prey on injured individuals and help reduce the costs associated with insurance fraud; a cost we all share.
### Appendix 1: CPT Codes Associated with MUA

The American Medical Association (AMA) has issued the following CPT codes in relation to MUA (American Medical Association 2010):

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Description</th>
<th>Medicare Reimbursement Rate</th>
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</thead>
<tbody>
<tr>
<td>21073</td>
<td>Manipulation of temporomandibular joint(s) (TMJ), therapeutic, requiring an anesthesia service (i.e., general or monitored anesthesia care)</td>
<td>Non-Facility: $390.36 Facility: $268.90</td>
</tr>
<tr>
<td>22505</td>
<td>Manipulation of spine requiring anesthesia, any region</td>
<td>Non-Facility: $126.32 Facility: $126.32</td>
</tr>
<tr>
<td>23655</td>
<td>Closed treatment of shoulder dislocation, with manipulation; requiring anesthesia</td>
<td>Non-Facility: $404.01 Facility: $404.01</td>
</tr>
<tr>
<td>23700</td>
<td>Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded)</td>
<td>Non-Facility: $206.51 Facility: $206.51</td>
</tr>
<tr>
<td>24300</td>
<td>Manipulation, elbow, under anesthesia</td>
<td>Non-Facility: $410.82 Facility: $410.82</td>
</tr>
<tr>
<td>25259</td>
<td>Manipulation, wrist, under anesthesia</td>
<td>Non-Facility: $412.81 Facility: $412.81</td>
</tr>
<tr>
<td>25675</td>
<td>Closed treatment of distal radioulnar dislocation with manipulation</td>
<td>Non-Facility: $441.26 Facility: $409.00</td>
</tr>
<tr>
<td>26340</td>
<td>Manipulation, finger joint, under anesthesia, each joint</td>
<td>Non-Facility: $328.14 Facility: $328.14</td>
</tr>
<tr>
<td>26675</td>
<td>Closed treatment of carpalmetacarpal dislocation, other than thumb, with manipulation, each joint, requiring anesthesia</td>
<td>Non-Facility: $453.24 Facility: $420.98</td>
</tr>
<tr>
<td>26705</td>
<td>Closed treatment of metacarpophalangeal dislocation, single, with manipulation; requiring anesthesia</td>
<td>Non-Facility: $413.95 Facility: $382.49</td>
</tr>
<tr>
<td>26775</td>
<td>Closed treatment of interphalangeal joint dislocation, single, with manipulation; requiring anesthesia</td>
<td>Non-Facility: $384.19 Facility: $348.35</td>
</tr>
<tr>
<td>27194</td>
<td>Closed treatment of pelvic ring fracture, dislocation, diastasis or subluxation, with manipulation, requiring more than local anesthesia</td>
<td>Non-Facility: $747.16 Facility: $747.16</td>
</tr>
<tr>
<td>27275</td>
<td>Manipulation hip joint, requiring general anesthesia</td>
<td>Non-Facility: $187.28 Facility: $187.28</td>
</tr>
<tr>
<td>27570</td>
<td>Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices)</td>
<td>Non-Facility: $156.02 Facility: $156.02</td>
</tr>
<tr>
<td>27860</td>
<td>Manipulation of ankle under general anesthesia (includes application of traction or other fixation apparatus)</td>
<td>Non-Facility: $187.53 Facility: $187.53</td>
</tr>
</tbody>
</table>
Appendix 2: Bibliography


