



## Extraspinal Manual Therapy Interventions

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### Policy Statement

Optum\* by OptumHealth Care Solutions, LLC considers extraspinal manual therapy proven and medically necessary, when all of the following conditions are met:

- Health plan benefit coverage criteria are satisfied
- The patient has a diagnosed health condition/disorder for which extraspinal manual therapy techniques are clinically appropriate and not contraindicated
- Skilled care services are warranted
- The patient healthcare record documents manual therapy (manipulation or mobilization) of an extremity joint or joints directly related to the diagnosis

Optum considers extraspinal manual therapy services to be unproven and not medically necessary for the treatment of:

- Spinal disorders e.g., neck pain, low back pain
- Temporomandibular joint dysfunction/pain

### Purpose

This policy serves as the criterion for peer-reviewed decisions concerning extraspinal manual therapy for the treatment of musculoskeletal disorders.

This policy also serves as a resource for peer-to-peer interactions in describing the position of Optum on the application of extraspinal manual therapy for musculoskeletal disorders.

### Scope

In-scope:

All in and out of network programs (exclusive of Medicare and Medicaid products for chiropractic) involving all provider types, where utilization review determinations are rendered for extraspinal manual therapy services in the treatment of musculoskeletal disorders.

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Out-of-scope:

- extraspinal manual therapy for the treatment of nonmusculoskeletal disorders
- visceral manual therapy
- manipulation under anesthesia

### Key Policy Question

*Is there sufficient research evidence of the efficacy of extraspinal manual therapy intervention, either as a combined or monotherapy, to conclude this intervention is an appropriate therapeutic option for a specific patient population suffering from musculoskeletal disorders?*

### Definitions

The following definitions apply to this policy:

- **Musculoskeletal Disorders (MSDs):** Are injuries or conditions originating from joints, muscles, ligaments, discs, or other soft tissues in the spine or limbs, which produce clinically relevant symptoms (e.g., pain, numbness, etc.) and functional limitations (e.g., inability to perform daily activities). The diagnosis of MSDs is reported using valid ICD-10 diagnostic codes.
- **Manual Therapy:** A clinical approach utilizing skilled, specific hands-on techniques, including but not limited to manipulation/mobilization, used by the clinician to diagnose and treat soft tissues and joint structures for the purpose of modulating pain; increasing range of motion (ROM); reducing or eliminating soft tissue inflammation; inducing relaxation; improving contractile and non-contractile tissue repair, extensibility, and/or stability; facilitating movement; and improving function.
- **Extraspinal Manual Therapy –** The application of manipulation or mobilization to joints or surrounding soft-tissues other than those of the spine, i.e., shoulder, elbow, wrist/hand/finger, hip, knee, ankle/foot/toe.
- **Mobilization/Manipulation –** Skilled passive movements to the joints and/or related soft tissues that are applied at varying speeds and amplitudes, including a small-velocity and high-amplitude therapeutic movement.<sup>1</sup>
- **Thrust joint manipulation (TJM) –** High-velocity/low-amplitude therapeutic movements within or at the end of range of motion.<sup>2</sup>

### Background

Manual therapy is a clinical approach utilizing skilled, specific active and/or passive hands-on techniques, in order to diagnose and treat soft tissues and joint structures in the trunk, neck, jaw, and extremities. The aims of manual therapy include modulating pain; increasing range of motion (ROM); reducing or eliminating soft tissue inflammation; inducing relaxation; improving contractile and non-contractile tissue repair, extensibility, and/or stability; facilitating movement; and improving function. Manual therapy techniques include but are not limited to: soft issue mobilization, joint mobilization and manipulation, manual lymphatic drainage, manual traction, craniosacral therapy, myofascial release, and neural gliding techniques.

Manual therapy techniques are commonly used to manage musculoskeletal injuries.<sup>3</sup> Broadly, the evidence appears to support clinically significant benefits for manual therapy directed at extremity joints, when compared to passive (sham, placebo, no treatment) or other active interventions (usual care, exercise, physiologic modalities, injections, acupuncture).<sup>4,5</sup> However, confidence in the estimates of effects for various conditions is regarded as low due to a scarcity of studies, conflicting results, and clinical heterogeneity.<sup>6</sup> Future research publications are likely to impact the estimates of effect, as well as facilitate more confident judgments about evidence-based policy decisions.

## Evidence Review

### Evidence Selection

A qualitative literature review was conducted in accordance with guidance provided by the Cochrane Back and Neck Group.<sup>7</sup> Databases searched included MEDLINE, EMASE, ChiroACCESS (MANTIS), and The Index to Chiropractic Literature. Evidence identified from hand searches of bibliographies and other documents, primarily texts and non-indexed studies, was also included in the literature review.

Studies were included if they represented recently published systematic reviews with or without meta-analysis, and randomized controlled trials (RCTs) that were not assessed in any systematic review. Studies were included if they evaluated participants diagnosed with a musculoskeletal disorder who received one or more manual therapies, either alone or as part of an intervention package, directed at an extraspinal region (as defined by Current Procedural Terminology Coding)<sup>8</sup> and patient-important outcomes (pain, function, global effect) were assessed. Primary studies using nonexperimental research designs, commentaries, physiologic/anatomic studies, and narrative review articles were excluded. Studies were excluded if manual therapy treatment was solely delivered to spinal (including lumbo-pelvic) articulations or extraspinal manual therapy was not explicitly described. Extraspinal manual therapy treatment for nonmusculoskeletal disorders (e.g., visceral manual therapy) was also excluded, as this topic is addressed in policy 342. (see related policies)

### Upper Extremity Disorders

#### Shoulder Disorders:

An updated literature search for recently published evidence syntheses that assessed the efficacy of manual therapy for a range of musculoskeletal shoulder disorders identified six systematic reviews, with three including meta-analyses.

Manual therapy including manipulation directed at the shoulder complex was found to be efficacious in the immediate and short-term for pain and to a lesser degree for function. Shoulder disorders evaluated included rotator cuff disease,<sup>9,10</sup> subacromial impingement syndrome,<sup>9,12</sup> and adhesive capsulitis.<sup>13</sup> In contrast, Page, et al. (2017) did not find significant benefit in longer-term outcomes (up to 22-weeks) with manual therapy for rotator cuff disease.<sup>14</sup>

#### Elbow, Wrist and Hand Disorders:

Seven systematic reviews (two included meta-analysis) and a single recently published RCT were retrieved in a literature search. Most reviews included both RCTs and nonrandomized studies of interventions. Lateral epicondylitis (epicondylalgia, tendinopathy) and carpal tunnel syndrome were the most common diagnoses included in the reviews. Various forms of manual therapy techniques (thrust manipulation, joint/soft-tissue mobilization) were included in the reviews. In aggregate, the evidence provides limited support for elbow and wrist manual therapy for pain and function, in particular over the short-term.

Five systematic reviews assessed the efficacy of manipulation or mobilization for elbow lateral epicondyle pain disorders.<sup>3,15-18</sup> Collectively, mobilization and manipulation techniques directed at the elbow were more beneficial than comparison groups at clinically improving pain in the short term (<3 months) and intermediate term (up to 6-months). Mobilization appeared to be more beneficial than control groups at improving grip strength in the short term. Comparators included corticosteroid injection, exercise, physical modalities, sham, placebo, and no treatment. The body of evidence was limited to relatively few studies that were largely of low quality.

A single systematic review of manual therapy concluded that neural mobilization might be an appropriate intervention when used to complement standard conservative care for carpal tunnel syndrome.<sup>19</sup> Wolney, et al. (2016) conducted a RCT investigating the efficacy of joint and soft-tissue mobilizations for carpal tunnel syndrome.<sup>20</sup> The results showed a clinically significant difference between groups favoring mobilization for pain. The between-group difference was not clinically relevant for function.

### **Lower Extremity Disorders**

Nine systematic reviews, with 6 including meta-analysis, and a single recently published RCT were identified in a literature search. These studies encompassed a range of common lower extremity musculoskeletal disorders including hip osteoarthritis (OA), knee OA, patellofemoral pain syndrome, ankle sprains, and plantar heel pain. The efficacy of various manual therapies including manipulation and mobilization techniques was evaluated in comparison to both passive controls and active interventions. Overall, there is modest evidence supporting the efficacy of manipulative therapy alone or as part of a combined approach for the treatment of lower extremity musculoskeletal disorders.

#### **Hip Osteoarthritis:**

Three systematic reviews with meta-analyses evaluated the efficacy of various manual therapies including manipulation and mobilization techniques for the treatment of adults diagnosed with hip OA.<sup>21-23</sup> Beumer, et al. (2016) compared the addition of manual therapy with aquatic or land-based exercise vs. exercise alone.<sup>21</sup> There was no discernable benefit for any outcome (pain, function) associated with the addition of manual therapy to the exercise regime. The authors did not describe the type of manual therapy, making judgments about manipulative therapy uncertain. In particular, for hip joint OA it appears that higher magnitudes of manipulative force are associated with better outcomes eg, increased range of motion.<sup>24</sup> Another systematic review and meta-analysis assessed various manual therapy techniques alone or in combination with other interventions in comparison with inert and active controls.<sup>22</sup> There was low quality evidence that manual therapy, including manipulative therapy was beneficial for pain and physical function immediately post-treatment and at follow-up assessments. An earlier systematic review and meta-analysis conducted by Wang, et al. (2015) did not find any evidence that manual therapy benefits the patients at short-, intermediate- or long-term follow-up.<sup>23</sup> However, confidence in the estimates of effects was limited by the sparse availability of primary research.

#### **Knee Disorders:**

The efficacy of manual therapies including manipulation and mobilization techniques for individuals diagnosed with knee OA was described in three systematic reviews with meta-analyses and a single RCT, which was not included in any of the reviews. Anwer, et al. (2018) found that osteopathic manipulative treatment (OMT) along with exercise compared with exercise therapy alone provided short-term benefits in reducing pain, improving function, and physical performance.<sup>25</sup> Another systematic review with meta-analysis, which included both RCTs and nonrandomized studies of interventions, concluded manual therapy was beneficial for pain and physical function immediately post-treatment and at up to 2-years later.<sup>26</sup> Xu, et al. (2016) conducted a systematic review and meta-analysis of different manual therapies, when used a singular interventions for knee OA.<sup>27</sup> The findings suggested that manual therapy was an effective complementary and alternative treatment for knee OA pain, stiffness, and physical function. A RCT investigated the efficacy of knee mobilization in patients with knee OA.<sup>28</sup> Participants receiving

mobilization therapy showed significant improvements in pain levels, function, range of motion, and strength compared to those receiving electrotherapy after 4-weeks. These effects were also observed at the one-year follow-up.

Espí-López, et al. (2017) conducted a systematic review to evaluate the efficacy of manual therapy, including manipulation, combined with other conventional physical therapy modalities for the treatment of adults diagnosed with patellofemoral pain syndrome.<sup>29</sup> For outcomes measured from 3-weeks through 4-months, manual therapy showed benefit as a treatment option to alleviate pain and improve function of the knee.

#### **Ankle and Foot Disorders:**

The efficacy of ankle or talocrural manipulation for the treatment of individuals diagnosed with an inversion ankle sprain was the subject of a systematic review.<sup>30</sup> Thrust joint manipulation appeared to be effective in improving dorsiflexion range of motion, self-reported function, and pain after inversion ankle sprain.

In a systematic review, Pollack, et al. (2018) reported on the efficacy of manual therapy (soft-tissue and joint mobilization) for persons diagnosed with plantar heel pain.<sup>31</sup> Soft tissue mobilization was found to be an effective modality in the treatment of plantar heel pain when compared to exercise, steroid injection, physiologic modalities (ultrasound), and sham therapy. The effectiveness of joint mobilizations was unclear.

#### **Spinal Disorders**

A meta-analysis determined there was no statistical or clinically relevant benefit (i.e., reductions in either pain or disability) with the addition of hip-targeted manual therapy interventions for patients with LBP.<sup>32</sup>

#### **Temporomandibular Joint (TMJ) Disorders**

A systematic literature search identified two systematic reviews with meta-analysis,<sup>33,34</sup> an additional three systematic reviews,<sup>35-37</sup> and two RCTs<sup>38,39</sup> that were not included in any evidence synthesis.

The individual studies investigated the treatment of participants with different temporomandibular dysfunction (TMD) diagnostic classifications (arthrogenous, myogenous, mixed) using a range of manual therapy (MT) interventions including manipulation of the jaw and cervical spine, with or without exercise, in comparison to passive and active interventions. The reviews and one of two RCTs reported results favoring manipulative therapy for the outcomes of pain intensity, maximal mouth opening (MMO) and pressure pain threshold (PPT), typically over the short-term (<3 months follow-up). Most of the individual studies were judged to have a high or unclear risk of bias (RoB). In particular, most studies did not satisfy critical indicators of methodological risk of bias (likely to over-estimate beneficial treatment effects) such as randomization, allocation concealment, blinding and intention-to-treat analyses. Additionally, it was uncertain if sample size was adequate for most of the included studies and clinical significance was not routinely described. Therefore, the data in the reviews should be interpreted carefully.

Four of the systematic reviews had one or more critical flaws along with other methodologic weaknesses, and could not be relied on to provide an accurate and comprehensive summary of the available studies. [Appendix] Adelizzi, et al. (2016)<sup>35</sup> was rated as being of critically low quality due to limitations in reporting the research questions and inclusion criteria for the review, uncertainty about the comprehensiveness of the literature search strategy, and methods used to assess RoB in non-randomized studies of interventions (NRSI). Calixtre, et al. (2015)<sup>37</sup> was judged to be of low quality due to a critical flaw regarding the accuracy of the results. The analysis (Tables 4 and 5) reported absolute changes

incorrectly, as effect sizes, and further compounded the error by interpreting the magnitude of results using Cohen's d criteria. Non-critical weaknesses were identified increasing the risk of selection and funding bias. The systematic review authored by Braun de Castro, et al.(2018)<sup>36</sup> contained several critical methodologic flaws relating to the development of the review, the approach used to identify and extract study data, and the failure to incorporate the role of study bias into the analysis. A systematic review with meta-analysis (Martins, et al; 2016)<sup>33</sup> was deemed to be of critically low quality. There were critical flaws pertaining to the literature search strategy and the statistical methods used to interpret the meta-analytic results, which likely over-estimated the effects of manipulative therapy for pain intensity and MMO.

The systematic review and meta-analysis conducted by Armijo-Olivo, et al. (2016)<sup>34</sup> was rated as moderate overall quality. A detailed assessment of the review showed that for pain intensity manual therapy interventions including manipulative therapy, when used as a monotherapy, did not achieve clinically relevant outcomes. Further, it was not possible to distinguish the effects on pain intensity with manual therapy when combined with exercise interventions. Over the short-term, manual therapy demonstrated potentially clinically meaningful benefit concerning MMO. Manual therapy alone (6 RCTs) showed mixed results for individuals diagnosed as having mixed (arthrogenous and myogenous) TMD.

A RCT conducted by Corum, et al. (2018)<sup>38</sup> was not included in any of the evidence syntheses. As with previous trials on the topic, the study had a high RoB due to significant flaws concerning treatment allocation, blinding and failure to include all participants in the analysis. Also, there were concerns about the potential for bias due to compliance with the intervention and avoidance of co-interventions. Further, the treatment arms did not permit conclusions about the discrete effects of manual therapy on pain and MMO. Additionally, the statistical approach did not allow for judgments about clinical relevance and precision.

Another RCT that was not assessed in the included reviews was performed by Brochado, et al. (2018).<sup>39</sup> The authors investigated the comparative effectiveness of photobiomodulation (laser therapy) and manual therapy alone or combined. Outcomes measured included pain intensity, MMO, psychosocial aspects, and anxiety symptoms of TMD patients. While all groups improved across the measured outcomes, the change in mean scores did not differ significantly between groups during the 90-day evaluation time.

In summary, the current body of evidence regarding the efficacy of MT for TMD consists of generally promising results across patient-important outcomes. However, confidence in the estimates of effect is limited by the low quality of evidence, uncertainty about clinical relevance, and durability of outcomes.

### Coding Information

Note: The Current Procedural Terminology (CPT) codes listed in this policy may not be all inclusive and are for reference purposes only. The listing of a service code in this policy does not imply that the service described by the code is a covered or non-covered health service. Coverage is determined by the member's benefit document.

Code	Description
98943	Chiropractic manipulative treatment (CMT); extraspinal, one or more regions
97140	Manual therapy techniques (e.g., mobilization/ manipulation, manual lymphatic drainage, manual traction), one or more regions, each 15 minutes

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## Appendix

### Quality Assessment of Included Systematic Reviews Using AMSTAR 2\*

Quality Assessment Item	Adelizzi [35]	Armijo-Olivo [34]	Calixtre [37]	Braun de Castro [36]	Martins [33]
Did the research questions and inclusion criteria for the review include the components of PICO?	No	Yes	Yes	No	Yes
Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	No <sup>a</sup>	Yes	No <sup>e</sup>	No	Partial yes
Did the review authors explain their selection of the study designs for inclusion in the review?	Yes	No	No	No	No
Did the review authors use a comprehensive literature search strategy?	No	Yes	Partial yes	No	No
Did the review authors perform study selection in duplicate?	No	Yes	Yes	No	Yes
Did the review authors perform data extraction in duplicate?	Yes	Yes	Yes	No	Yes
Did the review authors provide a list of excluded studies and justify the exclusions?	No	No	No	No	No
Did the review authors describe the included studies in adequate detail?	Partial yes	Yes	Partial yes	Yes	Partial yes
Did the review authors use a satisfactory technique for assessing the RoB in individual RCTs that were included in the review?	Yes	Yes	Yes	Yes	Partial yes
Did the review authors use a satisfactory technique for assessing the RoB in individual NRSI that were included in the review?	No <sup>b</sup>	N/A	N/A	Yes	N/A
Did the review authors report on the sources of funding for the studies included in the review?	Yes	No	No	No	No
If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results for RCTs?	N/A	Yes	N/A	N/A	No <sup>h</sup>
If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results for NRSI?	N/A	N/A	N/A	N/A	N/A
If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N/A	N/A <sup>d</sup>	N/A	N/A	N/A <sup>i</sup>
Did the review authors account for RoB in individual studies when interpreting/discussing the results of the review?	No	Yes	Yes	No	No <sup>j</sup>
Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	No	Yes	Yes	No	Yes
If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N/A	No	N/A	N/A	Yes
Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	No	Yes	Yes	Yes	Yes
<b>Rating overall confidence in the results of the review</b>	Critically low <sup>c</sup>	Moderate	Low <sup>f</sup>	Critically low <sup>g</sup>	Critically low <sup>k</sup>

Legend: PICO = population, intervention, comparator, outcome; NRSI = nonrandomized studies of an intervention; RoB = risk of bias

\* Source: Shea BJ, Reeves BC, Wells G, et al. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ*. 2017 Sep 21;358:j4008.

## Rating overall confidence in the results of the review

**High** - Zero or one non-critical weakness: The systematic review provides an accurate and comprehensive summary of the results of the available studies that address the question of interest.

**Moderate** - More than one non-critical weakness: The systematic review has more than one weakness, but no critical flaws. It may provide an accurate summary of the results of the available studies that were included in the review.

**Low** - One critical flaw with or without non-critical weaknesses: The review has a critical flaw and may not provide an accurate and comprehensive summary of the available studies that address the question of interest.

**Critically low** - More than one critical flaw with or without non-critical weaknesses: The review has more than one critical flaw and should not be relied on to provide an accurate and comprehensive summary of the available studies.

Note: Multiple non-critical weaknesses may diminish confidence in the review and it may be appropriate to move the overall appraisal down from moderate to low confidence

## Rationale:

- a. All elements for a “partial yes” were present in the published review; however, a registered protocol could not be identified.
- b. RoB for NRSI was assessed using a tool (PEDro) that is specific for RCTs
- c. Critical flaws pertaining to PICO, search strategy, and RoB assessment [NRSI]
- d. All studies had either unclear or high RoB; Too few studies to perform meta-regression
- e. All the elements to satisfy “partial yes” were present in the published review; however, a registered protocol could not be identified.
- f. Critical flaw regarding the accuracy of the results. The analysis (Tables 4 and 5) reported absolute changes incorrectly as effect sizes and further compounded the error by interpreting the magnitude of results using Cohen's d criteria. Non-critical flaws regarding the search strategy, inclusion/exclusion of studies, and reporting of funding sources of selected studies.
- g. Critical flaws involving the clinical question; identification, selection, and data extraction of the included studies; and consideration of study limitations in the analysis.
- h. The results of pooled data for pain (Figure 3) appropriately used MD (mean difference); however, the interpretation was based on an incorrect application of effect size (should be the absolute difference and minimal clinically important difference).
- i. The three studies included in the meta-analysis had identical RoB assessments
- j. Not relevant as all studies were judged to have a low RoB
- k. Critical flaws pertaining to the literature search strategy and methods used to interpret the meta-analytic results



## Utilization Management Policy

### Policy History/Revision Information

Date	Action/Description
5/26/2004	Original effective date
1/2005	Annual review completed
3/2006	Annual review completed
4/2007	Annual review completed
4/10/2008	Annual review completed
11/11/2008	Policy header rebranded, "OptumHealth Care Solutions – Physical Health"
1/15/2009	Policy placed into new format
4/30/2009	Annual review completed
1/14/2010	Policy revised. Augmented literature extraction; GRADE appraisal scheme applied; Policy statement revised to describe specific disorders; Plain Language Summary appended
4/08/2010	Annual review completed
10/26/2010	Policy rebranded to "OptumHealth Care Solutions, Inc. (OptumHealth)"
1/27/2011	The <i>Wrist and Hand Disorders</i> portion of the Background section was updated to reflect additional evidence. Tables 1 and 4 were revised. The Policy Statement was updated to show that manipulation/mobilization for carpal tunnel syndrome has been determined to be clinically appropriate.
4/07/2011	Annual review completed
4/19/2012	Annual review completed
4/18/2013	Annual review completed
4/17/2014	Annual review completed; Policy rebranded "Optum* by OptumHealth Care Solutions, Inc."
4/16/2015	Annual review completed
4/21/2016	Annual review completed
4/20/2017	Annual review completed; Legal entity name changed from "OptumHealth Care Solutions, Inc." to "OptumHealth Care Solutions, LLC."
4/26/2018	Annual review completed; no significant change to the document
4/25/2019	Annual review completed; Title changed to "Extraspinal Manual Therapy Interventions"; The Policy Statement was revised to include all upper and lower extremity musculoskeletal disorders; Definitions, Background, Evidence Review, and Plain Language Summary sections all revised; References updated.
4/23/2020	Annual review completed; No new evidence was identified that would change the policy statement

### Contact Information

Please forward any commentary or feedback on Optum utilization management policies to: [policy.inquiry@optumhealth.com](mailto:policy.inquiry@optumhealth.com) with the word "Policy" in the subject line.

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**PLAIN LANGUAGE SUMMARY*****Extraspinal Manual Therapy*****Utilization Management Policy # 81**

*Plain Language Summaries* are a service provided by *Optum®* by *OptumHealth Care Solutions, LLC* to help patients better understand the complicated and often mystifying language of modern healthcare.

Plain Language Summaries are presented to supplement the associated clinical policy or guideline. These summaries are not a substitute for advice from your own healthcare provider.

**What is extraspinal manual therapy for musculoskeletal disorders and what is known about it so far?**

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Manual therapy is a treatment that uses hands-on pressure to gently move your joints and tissues to correct any restrictions in your range of motion. Manual therapy has been shown to be effective treatment options for common spinal pain of musculoskeletal origin.

There is evidence that manual therapy of the extremity (extraspinal) joints appears to be helpful for treating certain conditions involving the upper and lower extremities.

**How was extraspinal manipulative/mobilization therapy for musculoskeletal disorders evaluated?**

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A work group of clinicians was assigned to review the available research. The internet was searched for articles about manual therapy of the extremities and/or jaw for the treatment of a wide range of musculoskeletal disorders. The work group independently examined the selected research studies. A broadly accepted rating scale was used. Possible ratings were high, moderate, low, or critically low quality.

Before it was approved, the policy was presented to a series of committees that included independent health care practitioners.

### **What did the work group find?**

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Manual therapy may be helpful in the treatment musculoskeletal conditions involving the upper extremity (shoulder, elbow, wrist, and hand) and lower extremity (hip, knee, ankle, and foot). In particular, manual therapy may help with pain and your ability to do daily activities. At present, there is not enough evidence of benefit to recommend manual therapy for temporomandibular joint (TMJ) dysfunction or jaw pain. Research evidence does not support the use of extraspinal manual therapy for the treatment of spine-related disorders (neck and low back pain).

Further research can be expected to help better understand the role of manual therapy for the treatment of individuals with extremity and jaw disorders.

### **What were the limitations of the information?**

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The research supporting manual therapy of the extremities is based upon limited study. For the most part, manual therapy of the extremities has not been compared to commonly used medications. Additional research will help in more accurately defining the benefit from these services.

### **What are the conclusions?**

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Extraspinal manual therapy is considered to be proven and medically necessary when:

- The services are covered by your health plan; and
- Your health care provider has a diagnosed health condition/disorder for which extraspinal manual therapy techniques are clinically appropriate and not contraindicated; and
- Skilled care services are warranted

Extraspinal manual therapy is considered to be unproven and not medically necessary for the treatment of pain and dysfunction of the jaw (temporomandibular joint) and for spinal disorders (neck and low back pain).