

Acupuncture

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

Acupuncture has been widely practiced for many years in various parts of the world. It involves the stimulation of specific body areas by penetrating the skin with fine needles. Stimulation can be accomplished electrically or manually.

Acupuncture has been suggested as a viable treatment option for a wide variety of acute and chronic pain conditions in both children and adults. However, determining the clinical utility of acupuncture has been challenging, largely related to the difficulties in designing studies with adequate blinding, controls, size and uniform outcome measures. Furthermore, acupuncture is a passive modality and as such should be used in conjunction with active rehab programs when applicable.

The Plan members may be eligible for acupuncture depending on their plan. Acupuncture is a considered medically necessary service only when used as a substitute for traditional anesthesia and for the treatment of certain conditions. The acupuncture must be provided by a provider practicing within the scope of his or her license, or state licensing requirements for practicing acupuncture. The Plan does not consider acupuncture for all other common indications medically necessary, unless otherwise directed by state regulation.

Definitions

"Acupuncture" is one technique, within a family of procedures in traditional Chinese medicine, which involves the manual or electrical stimulation of sterilized, single-use needles, used to penetrate the skin on acupuncture points along the meridian lines. This therapy activates the body's own self-repair mechanisms.

"Maintenance Therapy " is the use of acupuncture as therapy in a member whose symptoms or condition is neither worsening nor improving, or is being maintained after treating the acute pain.

Clinical Indications

The Plan considers acupuncture as medically necessary if ALL of the following criteria are met:

1. Acupuncture is prescribed by and will be performed by an appropriately licensed provider practicing within the scope of his or her license; *and*
2. Medical records indicate ALL of the following criteria:
 - a. Diagnosis with date of onset or exacerbation of the disorder; *and*
 - b. Quantitative and objective short-term and long-term goals, which should include a reasonable estimate of when the goals will be reached and the frequency and expected duration of treatment.
3. Medical records indicate that ONE of the following criteria are met:
 - a. Acupuncture is being provided as an alternative to traditional perioperative anesthesia, including but not limited to: normal childbirth, dental procedures, and minor surgical procedures; *or*
 - b. The member has ONE of the following conditions:
 - i. Nausea and vomiting associated with pregnancy and childbirth; *or*
 - ii. Nausea and vomiting associated with chemotherapy or anti-neoplastic therapy; *or*
 - iii. Postoperative nausea and vomiting; *or*
 - iv. Postoperative dental pain; *or*
 - v. One of the following chronic pain conditions that has been diagnosed by a licensed medical practitioner (e.g., MD, DO, PA, NP) and lasted a minimum of 12 weeks duration:
 1. Headaches(i.e., tension-type or migraines with or without aura) or temporomandibular disorder; *or*
 2. Osteoarthritic knee or hip pain; *or*
 3. Chronic cervical, thoracic and/or lumbosacral back pain.

Continuation of Services

- After 4 weeks (max two visits per week) of acupuncture therapy, a patient must show meaningful and considerable improvement (i.e., pain decreased by $\geq 50\%$ and/or functional improvement) to continue therapy. Continuation of services without meaningful and considerable improvement is

considered *not medically necessary*. Alternative treatments should therefore be evaluated. If all other treatments have been exhausted or are contraindicated, then continuation of services may be considered.

- After 12 weeks (max two visits per week) of acupuncture therapy, services are considered *experimental and investigational*. Acupuncture has only demonstrated efficacy for short-term improvement in symptoms. Acupuncture has not demonstrated efficacy in long-term or maintenance acupuncture therapy.

Experimental or Investigational / Not Medically Necessary

Maintenance therapy for any condition is considered experimental and investigational by the Plan.

Acupuncture point injections for any indication are NOT considered medically necessary by the Plan. Acupuncture point injections are considered experimental and investigational as there is insufficient evidence in the peer-reviewed literature documenting their effectiveness and long term outcomes relative to established therapies.

Acupuncture for any other indication is considered experimental, investigational, or unproven and these indications include, but are not limited to, the following:

- Acute conditions or injuries [including whiplash]
- Acquired brain injury
- Addiction
- Allergies
- Asthma
- Autism spectrum disorders
- Carpal Tunnel Syndrome
- Cervicogenic headache
- Chronic Obstructive Pulmonary Disease (COPD)
- Depression
- Diabetic gastroparesis
- Erectile dysfunction
- Facial spasms
- Fatigue
- Fibromyalgia
- Hot flashes
- Hypertension
- Infantile colic and diarrhea
- Infertility
- Inflammatory Bowel Disease
- Insomnia
- Irritable Bowel Syndrome
- Mental disorders

- Muscle weakness and/or myalgias
- Neuropathic pain
- Obesity
- Peripheral neuropathy
- Post Traumatic Stress Disorder (PTSD)
- Raynaud's disease
- Smoking cessation
- Spasticity
- Substance Use Disorders
- Tennis elbow
- Tic disorders
- Tinnitus
- Urinary incontinence
- Xerostomia

Evidence for Experimental or Investigational or Not Medically Necessary for the Above Indications:

Acute conditions or injuries [including whiplash]

A 2016 Cochrane Database Review by Trinh and colleagues found that although the quality of randomized, controlled trials regarding acupuncture and acute conditions such as whiplash have improved over the past decade, they continue to show only modest short-term improvement in pain. And a 2014 review by Moon and colleagues found that acupuncture provided no additional benefit to usual care in whiplash injury in terms of disability and function.

Acquired brain injury (Traumatic Brain Injuries and Non-Traumatic Brain Injuries)

Overall, evidence supporting the use of acupuncture of acquired brain injuries is insufficient and therefore considered experimental or investigational. A 2018 Cochrane systematic review of acupuncture for acute stroke by Xu and colleagues found the quality of research studies to be low due to confounding bias and imprecision. The review does not recommend acupuncture for these injuries due to the lack of long-term functional outcomes. Furthermore, a 2013 retrospective cohort study by Shih and colleagues in Taiwan identified 66,026 new-onset TBI patients, of which 3,495 received at least two rounds of acupuncture; the study suggests some reduction of emergency care and hospitalization over the first year after injury, but future prospective trials are still needed.

Addiction

A 2006 review by Jordan found that when only randomized, controlled, blinded studies were included, acupuncture offered no improvement in the treatment of cocaine and/or opiate addiction when compared to controls. This review highlighted that numerous published studies supporting the use of acupuncture in the treatment of addiction suffered from a lack of adequate controls. The studies with sound methodologic clearly quality showed no benefit from acupuncture in the treatment of cocaine and/or opiate addiction.

Allergies

There have been few studies documenting the benefit of acupuncture in the treatment and prevention of allergic conditions. In May 2021, Hayes's report for traditional needle acupuncture (AP) for treatment of allergic rhinitis was rated C. Laser acupuncture for treatment of allergic rhinitis was rated D2. Hayes stated that "true traditional needle AP may offer some benefit relative to placebo AP or no AP, although the clinical significance of treatment benefit is unclear." Allergic rhinitis has been the most well-studied of the allergic conditions with respect to acupuncture, but results remain inconclusive. A 2015 systematic review and meta-analysis by Feng and colleagues did show a reduction in nasal symptom scores, medication use and serum IgE levels in the acupuncture group compared to controls. This analysis included 13 studies, but these studies did not have a sham or placebo group, thus limiting the conclusions that can be drawn.

Asthma

A 2004 Cochrane Database Systematic Review by McKarney and colleagues found insufficient evidence to make recommendations regarding acupuncture in the treatment of asthma. This review included 11 studies and 324 patients. Since that time, numerous conflicting studies have been published regarding acupuncture for asthma. One methodologic problem that plagues many of the studies is that sham acupuncture shows improvement in asthma symptoms similar to actual acupuncture. In 2015, Pai and colleagues performed a crossover study in patients with mild and moderate asthma for acupuncture and sham acupuncture. This RCT was not effective because both arms of the crossover study saw similar improvements.

A prospective study by Karlson and colleagues in 2013 in asthmatic children did show an improvement in asthma symptoms during the 3 month treatment period but not at 8 months. However, this study lacked a placebo treatment in the control group. Recent reviews find evidence lacking to support the use of acupuncture for asthma, and even more recent clinical trials do not offer sufficient evidence to alter this stance.

Autism Spectrum Disorder (ASD)

A 2011 Cochrane Database Systematic Review performed by Cheuk and colleagues evaluated 10 clinical trials that included 390 children. They found no difference between acupuncture and sham or placebo in core autistic features. These studies suffered from small numbers of patients, non-standardized outcome measures and a short duration of follow-up. There are studies that have found small improvements in specific areas of behavior and function in patients with ASD, but replicating these findings has proven difficult. And when the data are evaluated as a whole, the positive effects of acupuncture on ASD are not evident.

Cervicogenic Headaches

Cervicogenic headaches are unilateral or bilateral headaches associated with the pathology of the cervical spine that result in referred pain from the cervical spinal nerves. As per Hayes, Inc., the prevalence of cervicogenic headaches is estimated to be 3-4% of the general population. However, there

has been no rigorous, large scale epidemiologic studies. As per UpToDate, there has been debate regarding cervicogenic headache as a distinct clinical disorder and the underlying pathophysiology. The clinical features of cervicogenic headache overlap with primary headache disorders such as tension-type headache, migraine without aura, and associated neck pain. There is a lack of peer reviewed studies or RCTs supporting acupuncture efficacy for cervicogenic headaches. Acupuncture is not the standard of practice for this indication.

COPD

A 2014 literature review of 16 studies by Coyle and colleagues found that acupuncture had no effect on lung function in patients with COPD. These authors did find that acupuncture improved health-related quality of life. A 2016 randomized, controlled trial by Feng and colleagues also found that acupuncture improved health-related quality of life compared to sham acupuncture. The evidence for acupuncture in the treatment of COPD has certainly improved in recent years. However, as Coyle and colleagues noted in their review, more high-quality randomized, controlled trials are needed to confirm the evidence that acupuncture is superior to sham in the treatment of COPD.

Depression

A 2010 Cochrane Database Systematic Review by Smith and colleagues found insufficient data to support the use of acupuncture in the treatment of depression. This review included 30 clinical trials and 2,812 patients. When compared to medication, acupuncture offered no additional benefit. Two of these trials did show some benefit of acupuncture plus antidepressants compared to antidepressants alone, but these studies had a high risk of bias and were potentially too small from which to draw generalizations.

A specific area of interest is the treatment of depression in pregnant patients as this is a commonly encountered comorbid condition that has been historically treated with acupuncture. A 2013 review by Sniezek and colleagues found some evidence from 3 blinded, randomized controlled trials that acupuncture does offer some benefit for depression in this patient population. However, a 2013 Cochrane Database Systematic Review by Dennis and Dowswell found that there was not a reduction in the number of women with clinical depression or in depression symptomatology with acupuncture when compared to sham or placebo. When evaluating the totality of the evidence for or against the use of acupuncture in this patient population, the authors found insufficient evidence to support its use in the treatment of depression.

Diabetic Gastroparesis

Yang and colleagues performed a meta-analysis that ultimately included 14 randomized, controlled trials evaluating acupuncture in the treatment of diabetic gastroparesis. While most of the studies reported an improvement in dyspeptic symptoms, gastric emptying times remained unchanged. Furthermore, the authors cite poor methodologic quality and a high risk of bias in the studies that prevented a conclusion regarding the effectiveness of acupuncture in the treatment of diabetic gastroparesis.

Erectile Dysfunction

A 2016 systematic review by Cui and colleagues found insufficient evidence to support acupuncture in the treatment of erectile dysfunction. Only 3 randomized, controlled trials with 183 patients were included and only 1 of the 3 studies found evidence of benefit. The authors of the review note that the overall quality of the studies reviewed was low. For these reasons they found the evidence insufficient to support the use of acupuncture for erectile dysfunction. Earlier reviews such as one done by Lee and colleagues in 2009 met with similar results.

Facial Spasms

In 2012 Wang and colleagues performed a meta-analysis of 13 studies (1262 patients) evaluating the use of acupuncture for facial spasm. All 13 of the included studies were performed in China and were of low quality. All 13 studies reported that acupuncture was superior to other treatments including medications and massage therapy. However, because of the poor quality of the studies and the possible lack of generalizability (all patients were Chinese), the authors were unable to find evidence to support the use of acupuncture for facial spasms. The authors called for high quality, international, randomized, controlled trials.

Fatigue

There is a paucity of randomized, sham-controlled trials evaluating the use of acupuncture in the treatment of fatigue. A 2013 systematic review by Posadzki and colleagues found insufficient evidence to determine the efficacy of acupuncture in cancer-related fatigue, which is the most commonly studied form of fatigue with respect to acupuncture. A 2014 meta-analysis by Zeng and colleagues also found insufficient evidence for its use in cancer-related fatigue. Similarly, Yeun found insufficient evidence in a 2014 systematic review for the use of acupuncture for fatigue in patients with systemic lupus erythematosus.

A 2015 randomized, controlled trial by Kim and colleagues evaluated acupuncture in the treatment of chronic fatigue syndrome and idiopathic chronic fatigue. This study did show a difference between total body acupuncture and usual care alone with a modest improvement in fatigue with acupuncture. However, this study suffered from a lack of a sham or placebo group, and further studies are needed.

Fibromyalgia

Hayes rating C in last review Dec 10, 2020. A 2013 Cochrane Database Systematic Review by Deare and colleagues found that larger, high-quality studies are needed before acupuncture can be conclusively deemed an effective therapy for fibromyalgia. Compared to control only, acupuncture was superior to controls with regards to pain and stiffness. But when evaluating acupuncture versus sham, neither pain, fatigue, sleep or global well-being were superior in the acupuncture group. The authors stated that a number of factors, including small sample sizes in the studies, limit clinical application. An earlier 2003 statement by the Agency for Healthcare Research and Quality came to similar conclusions.

Hot Flashes

A 2016 randomized control trial by Ee and colleagues compared acupuncture with sham acupuncture in 327 women with menopausal hot flashes. Ten treatments were administered over eight weeks, and the primary outcome was the hot flash score (a validated measure) at the end of eight weeks. Both the acupuncture and sham acupuncture groups showed an approximately 40 percent reduction in symptoms after treatment. The authors stated that Chinese medicine acupuncture was not superior to noninsertive sham acupuncture for women with moderately severe menopausal hot flashes.

Hypertension

A 2013 statement by the American Heart Association directly addressed the use of acupuncture in the treatment of hypertension. The authors stated that acupuncture is not recommended due to a lack of benefit. The statement addressed the questionable methodologic quality of many of the studies that previously found acupuncture to be beneficial, the small effect size demonstrated in these positive trials (typically only 3-5 mmHg on either systolic or diastolic blood pressure) and the negative results found from the large United States trial, Stop Hypertension with the Acupuncture Research Program. This was a sham-controlled study that found no difference between the treatment arm and the sham group in blood pressure reduction. Similar results were found by a 2009 review and meta-analysis by Lee and colleagues.

Infantile Colic and Diarrhea

There are few well-designed studies evaluating the use of acupuncture in the treatment of infantile colic and diarrhea. One 2013 study by Kjeie randomized 90 patients to either acupuncture or usual care. There was no statistically significant difference between the two groups in crying time, the primary outcome. There was a trend to less crying (13 minutes) in the acupuncture group that was determined by the authors to not be a clinically meaningful difference. An important methodologic piece that is present in this study and noticeably absent in older studies is the demonstration of successful blinding of the parents.

Infertility

Acupuncture for the treatment of infertility has shown mixed results in the literature. Despite these mixed results, acupuncture remains a widespread treatment for infertility, especially in cases of in vitro fertilization. In a 2013 Cochrane Database Systematic Review by Cheong and colleagues, acupuncture was found to provide no improvement in live birth rates or pregnancy rates in assisted conception. This review included 20 randomized controlled trials and found that acupuncture was ineffective.

Acupuncture near the time of egg retrieval and near the time of embryo placement both failed to show benefit.

A meta-analysis by Jerng and colleagues in 2014 evaluated the effect of acupuncture on semen quality in infertile males. This analysis included four randomized controlled trials and did show improved semen quality overall, although the results were highly variable across the 4 studies. This improvement in semen

quality did not translate into any difference in pregnancy rate between acupuncture and control groups. At this time there is insufficient evidence to support the use of acupuncture in the treatment of infertility.

Inflammatory Bowel Disease

A 2013 systematic review and meta-analysis by Ji and colleagues found insufficient evidence for the use of acupuncture in the treatment of Inflammatory Bowel Disease and highlighted the need for well-designed studies in the future. The analysis found that compared to sulphasalazine, acupuncture and/or moxibustion demonstrated better efficacy. However, these 10 randomized, controlled studies suffered from low methodologic quality such as lacking sham controls. One well-designed, sham-controlled study by Joos and colleagues found no difference between acupuncture and sham for the treatment of Ulcerative Colitis. A 2014 study of patients with Crohn's Disease by Bao and colleagues found that the acupuncture plus moxibustion group and the sham group both demonstrated improvement in symptoms and that the treatment group experienced effects beyond that of the placebo effect. Given the mixed results of recent controlled studies, more high-quality evidence is needed to determine the efficacy of acupuncture in the treatment of Inflammatory Bowel Disease.

Insomnia

A 2012 Cochrane Database Systematic Review by Cheuk and colleagues that included 33 studies and a total of 2,293 patients found insignificant evidence to support acupuncture for insomnia. Many studies did suggest a trend that favored acupuncture over no treatment or placebo. However, the authors note that after including study dropouts in the sensitivity analysis, this trend was no longer present. These studies also suffered from variable methodological rigor and the authors of the review highlight the need for well-controlled studies in the future to establish or refute the efficacy of acupuncture in the treatment of insomnia.

A more recent study evaluated the effects of acupuncture specifically in patients with Major Depressive Disorder, as insomnia is frequently a comorbid condition with depression. Chung and colleagues used both sham and placebo groups to compare to acupuncture. They found that the effects of acupuncture on sleep in this patient population were mild and no different than sham or placebo in the primary outcome measure evaluated in the study.

Irritable Bowel Syndrome (IBS)

A May 2012 Cochrane Database Systematic Review performed by Manheimer and colleagues demonstrated no improvement in symptom severity or quality of life in patients with Irritable Bowel Syndrome (IBS) who received acupuncture compared to sham interventions. A total of 5 randomized controlled trials that included a sham group were included in this review. The authors highlight that many of the studies showing a positive benefit in IBS lack a control group and suffer from significant bias.

A slightly more recent trial was published in October 2012 that compared acupuncture plus usual management to usual management alone. 116 patients received acupuncture weekly for 10 weeks in addition to usual care, and 117 patients receive usual care alone. In this trial, there was a small

improvement in symptom severity and an even smaller improvement in quality of life. However, this study lacked a sham or placebo arm which limits the conclusions that can be drawn. There remains insufficient evidence to support the use of acupuncture in the treatment of IBS.

Mental Disorders

A 2014 Cochrane Database Systematic Review by Shen and colleagues found that better designed studies are needed to evaluate the efficacy of acupuncture in the treatment of schizophrenia. While the adverse effect profile appeared to favor acupuncture compared to antipsychotic medications, the improvement in mental state seen with acupuncture was of only modest effect size. Acupuncture plus a low-dose antipsychotic medication produced favorable relapse rates compared to standard doses of antipsychotics, but this was demonstrated in only one controlled trial and found to offer very low quality evidence. Overall, the evidence for the use of acupuncture in the treatment of schizophrenia is lacking.

The use of acupuncture in the treatment of depression has been more promising in experiments, but conclusive data are still lacking. Please see above for full discussion of acupuncture for depression.

Use of acupuncture for mental disorders other than depression and schizophrenia has been much less studied. It was found by Cao and colleagues to be ineffective in the treatment of vascular mild cognitive impairment. There is an ongoing study evaluating its use in attention deficit hyperactivity disorder, but these results are currently unavailable.

Muscle Weakness and/or Myalgias

Kim and colleagues performed a 2016 systematic review evaluating acupuncture's effect on local blood flow as a potential mechanism to treat myalgias. The authors found insufficient evidence that acupuncture alters microcirculation in the eight randomized, controlled trials they evaluated. There is very limited evidence only in the form of narrative case reports that acupuncture improves muscle weakness, and high quality studies are needed before it can be recommended as a non-experimental treatment. There are also case reports of acupuncture actually causing weakness, in one case as a result of an acute spinal subdural hematoma.

Neuropathic Pain

Acupuncture has been utilized clinically as an adjunct in the management of numerous neuropathic pain states. The often severe and debilitating nature of neuropathic pain, the difficulty in adequately treating it and the unfavorable side effect profile of many of the medications routinely used all have led to clinicians and patients alike seeking alternative therapies such as acupuncture. However, there is little evidence to suggest that acupuncture has a meaningful effect in neuropathic pain and even less evidence that this effect exists beyond a placebo effect. Chemotherapy-induced peripheral neuropathy is the most-studied condition with respect to acupuncture, and the results are mixed. A 2013 review by Franconi and colleagues found insufficient evidence to support the use of acupuncture in chemotherapy-induced peripheral neuropathy but highlighted the need for future studies. In a 2016

study by Greenlee and colleagues, acupuncture was not found to be superior to sham acupuncture in the prevention and treatment of taxane-induced peripheral neuropathy in patients with breast cancer.

Similarly, there is insufficient evidence to recommend the non-experimental use of acupuncture in other neuropathic pain states such as diabetic painful neuropathy and spinal cord injury due to a lack of methodologically sound clinical trials.

Obesity

Cho and colleagues conducted a Cochrane Database Systematic Review in 2009 on acupuncture in the treatment of obesity. While the results were positive in favor of acupuncture compared to control or sham, the effect size was small (approximately 3 pounds). However, the authors highlight numerous methodologic issues with the 29 randomized controlled trials that were ultimately included in the final meta-analysis, calling the quality "poor." The authors note the need for higher quality, long-term trials to truly evaluate the effectiveness of acupuncture in the treatment of obesity.

Peripheral Neuropathy

A 2017 systematic review and meta-analysis by Dimitrova and colleagues evaluated the use of acupuncture in the treatment of numerous peripheral neuropathies: diabetic peripheral neuropathy, Bell's palsy, HIV-induced peripheral neuropathy and idiopathic peripheral neuropathy. The authors found that acupuncture produced improvement in symptoms compared to usual care in all but idiopathic peripheral neuropathy. However, due to a lack of sham controls in existing clinical trials, definitive evidence is still lacking. These findings were similar to an earlier review by Chen and colleagues in 2013, and these authors highlighted the need for researchers in China to be trained in conducting unbiased trials.

Post-Traumatic Stress Disorder (PTSD)

A 2016 systematic review by Metcalf and colleagues found insufficient evidence to support the use of acupuncture in the treatment of PTSD. The authors did cite moderate quality evidence that acupuncture may improve some symptoms of PTSD but noted that large clinical trials are needed. A 2013 systematic review by Kim and colleagues also found evidence lacking in the use of acupuncture in the treatment of PTSD. Both reviews noted that there does exist some encouraging evidence that acupuncture may play some role in the management of PTSD, but future studies are required.

Raynaud's Disease

A 2011 systematic review by Huisstede and colleagues found that while calcium channel blockers and iloprost were effective treatments for Raynaud's disease, acupuncture was not. While there is currently a clinical trial underway evaluating acupuncture in the treatment of Raynaud's disease, there exists a lack of data to support its use in the literature. Only one randomized, controlled trial has been performed, and Hahn and colleagues found no difference in symptoms between acupuncture and control groups at 8 weeks.

Shoulder Pain

Hayes rating C last review in Aug 18, 2022 that there were no systematic review or meta-analysis identified for indication of shoulder pain. However, 10 out of 14 RCTs found acupuncture yielded a statistically significant reduction in pain intensity compared to control groups.

Spasticity

A 2019 systematic review on non-pharmacological interventions for spasticity by *Annals of Physical and Rehabilitation Medicine* that “despite the available range of non-pharmacological interventions for spasticity, there is lack of high-quality evidence for many modalities.” A 2015 systematic review and meta-analysis by Lim and colleagues, that “5 randomized RCTs and 268 patients reported that acupuncture or electro-acupuncture decreased spasticity after stroke, but differences in controls, acupoints, and duration resulted in study heterogeneity, requiring further studies to determine whether any observed effects are persistent.”

Smoking Cessation

A 2014 Cochrane Database Systematic Review by White and colleagues found insufficient evidence to support the use of acupuncture for smoking cessation. Acupuncture was found to be inferior compared to nicotine replacement therapy and no more effective than psychological treatment. The authors noted that the 38 studies included suffered from methodologic issues and limit the conclusions that can be drawn. The authors cited the need for large, high-quality randomized controlled trials in the future before acupuncture can be recommended as a therapy for smoking cessation.

Substance Use Disorders

A 2016 systematic review and metaanalysis by Drug Alcohol Dependence concludes that there are no consistent differences between acupuncture and comparators for substance use. The research is limited by low quality bodies of evidence and Hayes rating C, last review Aug 18, 2020.

Tennis Elbow

A 2002 Cochrane Database Systematic Review found no evidence for or against the use of acupuncture in the treatment of lateral epicondylitis (also commonly known as tennis elbow). This review included four trials and found no benefit beyond 24 hours. A more recent 2011 review by Bisset and colleagues found conflicting evidence for acupuncture in the treatment of tennis elbow. The authors did find some low-quality evidence that acupuncture may work in the very short-term (i.e. 2 weeks) but not at 3 months.

Tic Disorders

There are only a few studies and case reports describing the use of acupuncture in the management of tic disorders such as Tourette Syndrome. A 2016 review by Yu and colleagues found seven randomized, controlled trials of varying quality. These trials included 564 patients and found that acupuncture may have similar results to usual care for tic disorders. However, the existing studies are fraught with biases that prevented the authors from recommending acupuncture. They stated the need for future studies if acupuncture is to be used in the usual care for tic disorders.

Tinnitus

A 2016 review including five studies and 322 patients by He and colleagues found that electroacupuncture was not effective in treating tinnitus. The authors were unable to perform a pooled analysis of these trials because the methods and outcomes were so variable. The authors of another 2016 systematic review and meta-analysis, Liu and colleagues, also found evidence lacking. They noted that studies published in English were likely to yield negative results while studies published in Chinese were likely to yield positive results. The authors noted that the Western studies were of higher methodologic quality.

Urinary Incontinence

A 2013 Cochrane Database Systematic Review by Wang and colleagues was only able to include one study that met review criteria, demonstrating the paucity of trials from which to draw conclusions. This one study included 60 patients but had a high risk of bias due to lack of blinding between the acupuncture and medication groups. Although more women improved in the acupuncture group, there was no difference in cure rates. Due to the small amount of evidence available and the high risk of bias present in this trial, the authors agreed that there is insufficient information to determine if acupuncture is effective in the treatment of urinary incontinence. A 2013 review by Paik and colleagues agreed with that conclusion.

Olivera and colleagues suggested that acupuncture is a reasonable treatment option in a 2016 review. And while there is promise that it may be effective and remains an attractive experimental option given the favorable side effect profile, evidence remains lacking to recommend acupuncture in the usual care of urinary incontinence.

Xerostomia

A 2017 review and meta-analysis by Mercadante and colleagues found that the medications pilocarpine and cevimeline should be first-line therapy for treatment of xerostomia caused by radiation. Only studies comparing at least one of these medications to placebo were included in the meta-analysis. The authors found no convincing evidence for any other therapy to include in a formal analysis. As part of the systematic review, they found that the evidence for both acupuncture and acupuncture-like transcutaneous electrical nerve stimulation were lacking. A 2011 review by Lee and colleagues also found evidence limited for acupuncture in xerostomia treatment. A 2015 review by Hackett and colleagues found that further studies are also needed prior to recommending acupuncture in the treatment of primary Sjogren's Syndrome.

Applicable Billing Codes

Codes considered medically necessary if clinical criteria are met:

<i>Code</i>	<i>Description</i>
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97810	Acupuncture, 1 or more needles; without electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
97811	Acupuncture, 1 or more needles; without electrical stimulation, each additional 15 minutes of personal one-on-one contact with the patient, with re-insertion of needle(s)
97813	Acupuncture, 1 or more needles; with electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
97814	Acupuncture, 1 or more needles; with electrical stimulation, each additional 15 minutes of personal one-on-one contact with the patient, with re-insertion of needle(s)
S8930	Electrical stimulation of auricular acupuncture points; each 15 minutes of personal one-on-one contact with patient
ICD-10 codes considered medically necessary:	
G43.001 - G43.919	Chronic Migraine
G44.00 - G44.09	Cluster headaches and other trigeminal autonomic cephalgias (TAC)
G44.221 - G44.229	Chronic tension-type headache
G44.321 - G44.329	Chronic post-traumatic headache
G44.51 - G44.52	Complicated headache syndromes
K91.0	Vomiting following gastrointestinal surgery
M16.0 - M16.9	Osteoarthritis of hip
M17.0 - M17.9	Osteoarthritis of knee
M26.601 - M26.69	Temporomandibular joint disorders
M54.2	Cervicalgia
M54.4 - M54.9	Back pain [when used for chronic back pain]
O21.1 - O21.9	Excessive vomiting in pregnancy
R11.2	Nausea with vomiting [when used for postoperative, chemotherapy-induced or due to anti-neoplastic therapy]
T45.1x5A - T45.1x5S	Adverse effect of antineoplastic and immunosuppressive drugs [chemotherapy-induced nausea and vomiting]
ICD-10 codes <i>not</i> considered medically necessary or considered experimental or investigational:	

B33.0	Epidemic myalgia
E08.43, E09.43, E10.43, E11.43, E13.43	Diabetes mellitus due to/with underlying condition with diabetic autonomic (poly)neuropathy [Diabetes mellitus due to underlying condition with diabetic gastroparesis]
E66.01 - E66.9	Overweight and obesity
F07.81	Postconcussional syndrome
F10.1- F19.99	Substance Use Disorders
F32.0 - F34.9	Major depressive and persistent mood [affective] disorders
F43.10 - F43.12	Post Traumatic Stress Disorder (PTSD)
F84.0 - F84.9	Pervasive developmental disorders [autism spectrum disorders]
F95.0 - F95.9	Tic disorders
G44.86	Cervicogenic headache
G47.00 - G47.09	Insomnia
G50.0 - G59	Nerve, nerve root and plexus disorders
G51.2 - G51.8	Facial spasms
G56.0 - G56.03	Carpal tunnel syndrome
G60 - G64	Polyneuropathies and disorders of the peripheral nervous system
H93.11 - H93.19	Tinnitus
H93.A1 - H93.A9	Pulsatile tinnitus
I10 - I16.9	Hypertension
I60.00 - I69.998	Cerebrovascular diseases
I73.00 - I73.01	Raynaud's disease
J30.1 - J30.9	Allergic rhinitis
J44.0 - J44.9	Chronic Obstructive Pulmonary Disease (COPD)
J45.20 - J45.998	Asthma
K11.7	Disturbance of salivary secretion [xerostomia]
K31.84	Gastroparesis

K50.0 - K52.9	Inflammatory bowel disease
K58.0 - K58.9	Irritable Bowel Syndrome
M60.80 - M60.9	Myositis
M62.81	Muscle weakness (generalized)
M77.10 - M77.12	Tennis elbow
M79.10 - M79.18	Myalgia
M79.7	Fibromyalgia
N39.3 - N39.8	Urinary incontinence
N46.0 - N46.9, N97.0 - N97.9	Infertility
N52.01 - N52.9	Erectile dysfunction
N95.1	Menopausal and female climacteric states
O99.210 - O99.215	Obesity complicating pregnancy, childbirth, and the puerperium
R10.83	Colic [infantile]
R19.7	Diarrhea [infantile]
R53.83	Fatigue
R56.00 - R56.9	Convulsions, not elsewhere classified
S00.03xA - S00.03xS	Contusion of scalp
S00.83xA - S00.83xS	Contusion of other part of head
S01.100xA - S01.05xS	Open wound of scalp
S01.80xA - S01.95xA	Open wound/laceration of other part of head and unspecified parts of head
S02.0xxA - S02.42xS, S02.600A - S02.92xS	Fracture of skull and facial bones

S06.0x0A - S06.9x9S	Concussion, Traumatic cerebral edema, traumatic brain injury, intracranial injury
S07.0xxA - S07.9xxS	Crushing injury of head
S09.0xxA - S09.19xS	Other and unspecified injuries of head
S13.4xxA - S13.4xxS	Whiplash Injury
S14.0xxA - S14.9xxS	Injury of nerves and spinal cord at neck level
T36.0x1A - T50.996S	Poisoning by adverse effects and underdosing of drugs, medicaments and biological substances
T51.0x1A - T51.94xS	Toxic effect of alcohol
T57.0xA - T57.94xS	Toxic effect of inorganic substances
T74.4xxA - T74.4xxS	Shaken infant syndrome
T75.1xxA - T75.1xxS	Unspecified effects of drowning and nonfatal submersion
T78.40xA - T78.49xS	Other and unspecified allergy
Z87.820	Personal history of traumatic brain injury

Codes not considered medically necessary for indications listed in this Guideline:

<i>Code</i>	<i>Description</i>
20550	Injection(s); single tendon sheath, or ligament, aponeurosis (eg, plantar "fascia")
20551	Injection(s); single tendon origin/insertion
20552	Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)
20553	Injection(s); single or multiple trigger point(s), 3 or more muscle(s)

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