Global Views

Acupuncture’s Role in Solving the Opioid Epidemic: Evidence, Cost–Effectiveness, and Care Availability for Acupuncture as a Primary, Non–Pharmacologic Method for Pain Relief and Management—White Paper 2017

Arthur Yin Fan1, David W. Miller2,3,4, Bonnie Bolash3, Matthew Bauer3,5, John McDonald3,6, Sarah Faggert2,7, Hongjian He8,9, Yong Ming Li10, Amy Matecki9,11, Lindy Camardella2,12, Mel Hopper Koppelman3,6, Jennifer A.M. Stone2,12, Lindsay Meade2,3, John Pang13

1. The American TCM Association, Vienna, VA 22182, USA
2. The American Society of Acupuncturists, Chicago, IL 60618, USA
3. The Joint Acupuncture Opioid Task Force, La Verne, CA 91750, USA
4. Pacific College of Oriental Medicine, Chicago, IL 60601, USA
5. The Acupuncture Now Foundation, La Verne, CA 91750, USA
6. The Acupuncture Evidence Project, Providence, RI 02860, USA
7. The Acupuncture Society of Virginia, Vienna, VA 22182, USA
8. The National Federation of Chinese TCM Organizations, New York, NY 11501, USA
9. The American Alliance for Professional Acupuncture Safety, Greenwich, CT 06878, USA
10. The American Traditional Chinese Medicine Society, New York, NY 11501, USA
11. Highland Hospital, Alameda Health System, Oakland, CA 94602, USA
12. Indiana University School of Medicine, Indianapolis, IN 46202, USA
13. University of California, San Diego School of Medicine, San Diego, CA 92093, USA

ABSTRACT

The United States (U.S.) is facing a national opioid epidemic, and medical systems are in need of non-pharmacologic strategies that can be employed to decrease the public’s opioid dependence. Acupuncture has emerged as a powerful, evidence-based, safe, cost-effective, and available treatment modality suitable to meeting this need. Acupuncture has been shown to be effective for the management of numerous types of pain conditions, and mechanisms of action for acupuncture have been described and are understandable from biomedical, physiologic perspectives. Further, acupuncture’s cost-effectiveness can dramatically decrease health care expenditures, both from the standpoint of treating acute pain and through avoiding addiction to opioids that requires costly care, destroys quality of life, and can lead to fatal overdose.

Numerous federal regulatory agencies have advised or mandated that healthcare systems and providers offer non-pharmacologic treatment options for pain. Acupuncture stands out as the most evidence-based, immediately available choice to fulfill these calls. Acupuncture can safely, easily, and cost-effectively be incorporated into hospital settings as diverse as the emergency department, labor and delivery suites, and...
neonatal intensive care units to treat a variety of commonly seen pain conditions. Acupuncture is already being successfully and meaningfully utilized by the Veterans Administration and various branches of the U.S. Military, in some studies demonstrably decreasing the volume of opioids prescribed when included in care.

**Keywords:** acupuncture; opioid epidemic; pain; opiate dependency; effectiveness; safety; cost-effectiveness; mechanism; United States


### 1 Introduction

In 2015 it was estimated that 25.3 million Americans suffered from chronic pain, while an estimated 126 million American adults reported some type of pain in the prior three months.[1] As a result, more than 240 million prescriptions were written for opioid medications during that year.[2] An unfortunate consequence of this high use and availability of opioids, is a growing number of opioid-related deaths from addiction and overdose. More than 33 000 Americans died from opioid drugs in 2015, and more than 64 000 died in 2016.[3] Due to the severity of this epidemic, a White House panel urged the United States (U.S.) president to declare the opioid crisis a national emergency, and August 31, 2017 was designated as “International Overdose Awareness Day” by the Centers for Disease Control and Prevention (CDC).[4]

To cope with the opioid crisis, various federal regulatory and oversight agencies, including the U.S. Food and Drug Administration (FDA), the National Academies of Sciences, Engineering, and Medicine (NASEM), and the Joint Commission have started to advise or mandate that healthcare systems and providers offer non-pharmacologic treatment options for pain control.[5–7] Acupuncture stands as the most evidence-based, immediately available choice to fulfill these calls.

The aim of this white paper is to summarize for academic scholars, healthcare professionals, administrators, policymakers, and the general public the available evidence for acupuncture as a treatment for various pain conditions as well as for opiate dependency. This includes evidence on the safety, cost-effectiveness, mechanisms of action, and provider availability for acupuncture.

### 2 Acupuncture is an effective, safe, and cost-effective treatment for numerous types of acute and chronic pain; acupuncture should be recommended as a first line treatment for pain before opiates are prescribed, and may reduce opioid use

#### 2.1 Effectiveness/Efficacy of acupuncture for different types of pain

There is growing research evidence to support the effectiveness and efficacy of acupuncture for the relief of numerous types of pain, especially chronic pain, as well as for the use of acupuncture for a diverse array of medical conditions. In an independently published work, which is the largest and most comprehensive of its kind for the period evaluated, McDonald and Janz[8] summarized the research from March 2013 to September 2016 for acupuncture, published and available in all languages on PubMed and in the Cochrane Library. They looked at systematic reviews, meta-analyses, network meta-analyses, overviews of systematic reviews (NHMRC level I evidence), and a number of narrative reviews. They performed meta-analyses on 62 of the non-Cochrane systematic reviews, representing pooled data from more than 1 000 randomized controlled trials (RCTs). They assessed and graded the quality of evidence, and noted the strength of evidence for acupuncture for numerous conditions (Box 1, Appendix 1).

Acupuncture has been found to be effective for treating various types of pain, with the strongest evidence emerging for back pain, neck pain, shoulder pain, chronic headache, and osteoarthritis. In an individual patient meta-analysis of 17 922 people from 29 RCTs, patients receiving acupuncture had less pain, with scores that were 0.23 (95% confidence interval (CI) [0.13–0.33]), 0.16 (95% CI [0.07–0.25]), and 0.15 (95% CI [0.07–0.24]) standard deviations (SDs) lower than sham controls for back and neck pain, osteoarthritis, and chronic headache, respectively; the effect sizes in comparison to non-acupuncture controls were 0.55 (95% CI [0.51–0.58]), 0.57 (95% CI [0.50–0.64]), and 0.42 (95% CI [0.37–0.46]) SDs. A variety of pain severity and disability scores were used, including Visual Analog Scale (VAS) ratings, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), and the Roland Morris Disability Questionnaire. These results were robust to a variety of sensitivity analyses, including those related to publication bias.[9]

In the largest study of its kind to date, 454 920 patients were treated with acupuncture for headache, low-back pain, and/or osteoarthritis in an open pragmatic trial. Effectiveness was rated by the 8 727 treating physicians as marked or moderate in 76% of cases.[10] In a network meta-analysis comparing different
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات