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Noninvasive, Nonpharmacological Treatment for Chronic Pain: A Systematic Review

Supplemental comments submitted to the Agency for Healthcare Research and Quality
December 21, 2017

The Academy of Integrative Pain Management (AIPM) is the nation's largest organization for pain management professionals. As its name implies, AIPM promotes an integrative model of pain care, one that conceptualizes pain as a biopsychosocial-spiritual experience and uses all available treatments to design a unique comprehensive care plan for each person with pain, with a goal of restoring that person to optimal health and wellness. AIPM collaborates with many organizations representing the full range of licensed and certified healthcare professionals and a wide variety of treatment modalities. These comments were informed by discussions with the groups listed at the end of the document.

We are grateful for the efforts of the Agency for Healthcare Research and Quality (AHRQ) in pulling together this systematic review. This was a very large-scale undertaking, and the effort required to complete this review was substantial. The review follows standard scientific methodology for systematic reviews, and as such, presents a robust set of findings that are very well-grounded in the evidence that was considered for the study. The review finds that there is at least some evidence of efficacy for a wide variety of nonpharmacological pain treatments, both in terms of pain intensity and degree of functioning. The review also identifies shortcomings in the existing body of literature, and recommends research strategies designed to overcome these shortcomings.

In discussion with our collaborators, several themes have emerged. We will enumerate those themes and briefly present our concerns related to each.

- *Psychological Therapies:* In the review, four specific types of psychological therapy are grouped together for purposes of analysis. Specifically, cognitive-behavioral therapy, acceptance and commitment therapy, biofeedback, and relaxation therapy are all subsumed under the category of psychological therapies. While it is true that these are all psychological therapies, they have differences foci for their interventions and probably should not be considered as one aggregate category. Cognitive-behavioral therapy and acceptance and commitment therapy focus primarily on modifying the thoughts patients have regarding their painful experiences. Biofeedback and relaxation therapy, on the other hand, focus primarily on inducing a state of relaxation, rather than modifying thought patterns. We suggest that, if possible, these therapies be subjected to sub-analyses as delineated here.
- *Massage Therapy:* Our massage therapy collaborators raise a concern that the review's inclusion criteria for studies are too restrictive to capture the best and most relevant massage therapy research. Massage therapy studies typically last only two to three weeks, causing most of the massage therapy literature to be excluded. Additionally, the review's focus on the persistence of results over follow-up periods of up

to a year suggests an assumption that massage therapy's effects extend well beyond the intervention period; this assumption is not supported by the profession. Recommendations for additional studies that should be considered are attached at the end of this document.

- *Acupuncture*: Our collaborators recommend that you acknowledge the Australian Acupuncture Evidence Project¹ as a resource regarding the effectiveness and safety of acupuncture. They also note the previous publication of an AHRQ/CG CAHPS survey² regarding patient satisfaction, quality of service, and response rate in acupuncture patients, and suggest a reference to this in the discussion section of the review. Additionally, they note a recent publication in *The Integrative Medicine Journal*³, which raises some concerns about the ability for acupuncture studies to be designed in a manner consistent with the standards for drug trials—a factor that can lead to the exclusion of many acupuncture trials from a systematic review such as this. Recommendations for additional studies that should be considered are attached at the end of this document.
- *Combinations of interventions*: Several of our collaborators noted that, while the review studies the efficacy of interventions in isolation from each other, in the real world, patients often receive combinations of nonpharmacological treatments, +/- pharmacological treatments. While the results of this study are informative, studies that take a more pragmatic, real-world approach to the delivery of integrative pain care should be conducted. It is possible that the effects of combined treatments are synergistic, and that studies demonstrating this point could have a significant impact on insurance coverage. This point can easily be made in the discussion section of the review.
- *Delivery of services*: It is unclear from this review if the efficacy of the interventions differs if those interventions are delivered by licensed providers for those therapies (e.g., licensed acupuncturists, licensed massage therapists) or by primary care or other providers who are not specifically licensed to provide the treatments (e.g., massage therapy delivered by a physical therapist, or acupuncture delivered by a physiatrist).
- *Role of patient education*: Several collaborators raised questions about the role of patient education about pain as a nonpharmacological intervention. It is the feeling of our collaborators that education can have a beneficial effect for a variety of reasons, including improved treatment adherence. The suggestion was made to expand the review to include patient pain education as an additional nonpharmacological intervention.
- *Support groups and patient self-management programs*: These are additional nonpharmacological interventions with bodies of existing evidence demonstrating their efficacy. The suggestion was made to include them in the review.
- *Patient selection and comorbidities*: The draft notes that the issue of comorbid physical and mental conditions is beyond the scope of the review, and that the presence of these conditions might not even be mentioned in most studies. However, a few of our collaborators point out that these are key factors that can significantly influence the efficacy of nonpharmacological therapies. At a minimum, this should be a specific point in the discussion section, with a call for further research to delineate these effects. Patient selection for future trials should consider these factors.

Collaborators (Alphabetical Order)

Acupuncture Now Foundation (ANF)
American Association of Nurse Practitioners
American Massage Therapy Association
American Society of Acupuncturists (ASA)
American Traditional Chinese Medicine Association (ATCMA)
Bill Meeker, DC, Palmer College
Bill Reddy, LAc
Cindy Steinberg, patient advocacy leader
Greg Terman, MD, pain physician
Heather Tick, MD, integrative pain management physician
Integrative Health Policy Consortium (IHPC)
International Association of Yoga Therapists
Joe Cabaret, MD, The Healing Place
Kavitha Reddy, MD, pain physician
Ken Babb, patient advocacy leader
Maggie Buckley, patient advocacy leader
National Association of Social Workers
National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM)
Ravi Prasad, PhD, pain psychologist
Robb Russell, DC, Southern California University of Health Sciences
Society of Acupuncture Research (SAR)

References

1. https://www.acupuncture.org.au/wp-content/uploads/2017/04/The-Acupuncture-Evidence-Project_Mcdonald-and-Janzen-Revised-Edition_21-Feb_For-publication.pdf
2. <http://files.clickdimensions.com/ashcompaniescom-a7oce/files/acupuncturecahps.pdf>
3. Fan AY, Miller DW, Bolash B, Bauer M, McDonald J, Faggert S, He H, Li YM, Matecki A, Camardella L, Koppelman MH, Stone JA, Meade L, Pang J. 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. *J Integr Med.* 2017; 15(6): 411–425.

Recommendations for Additional Studies that Should Be Considered

Massage Therapy

- Pedersen K, Björkhem-Bergman L. Tactile massage reduces rescue doses for pain and anxiety: an observational study. [BMJ Support Palliat Care](#). 2017 Nov 4. pii: bmjincare-2017-001421. doi: 10.1136/bmjincare-2017-001421. [Epub ahead of print]
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Acupuncture

Chronic Pain:

Macpherson, et al. The persistence of the effects of acupuncture after a course of treatment: a meta-analysis of patients with chronic pain (2017)

Vickers AJ, Cronin AM, Maschino AC, Lewith G, MacPherson H, Foster NE, et al. Acupuncture for Chronic Pain: Individual Patient Data Meta-Analysis. *Archives of Internal Medicine*. 2012;172(19):1444-53.

Knee:

Berkovitz et al. High Volume Acupuncture Clinic (HVAC) for Chronic Knee Pain – Audit for a possible Model of Delivery of Acupuncture in the National Health Service. *Acupunct Med*. 2008 Mar;26(1):46-50.

Low Back:

Lam M, Galvin R, Curry P. Effectiveness of acupuncture for nonspecific chronic low back pain: a systematic review and meta-analysis. *Spine (Phila Pa 1976)*. 2013 Nov 15;38(24):2124-38.

Eric Manheimer, Adrian White, Brian Berman, Kelly Forys, Edzard Ernst. Meta-Analysis: Acupuncture for Low Back Pain. *Ann Intern Med*. 2005;142:651–663. doi: 10.7326/0003-4819-142-8-200504190-00014

Fibromyalgia:

Deare JC, Zheng Z, Xue CC, Liu JP, Shang J, Scott SW, et al. Acupuncture for treating fibromyalgia. Cochrane Database Syst Rev. 2013(5):Cd007070.