

Does CAM Have a Role in Chronic Pain?

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Chair, VHACO FAC on CAM

Overview

- CAM in US and VA
- CAM and Pain
- Evidence for CAM
- Summation

CAM in US and VA

Definitions

- ***Complementary and Alternative Medicine*** - A group of medical and health care systems, practices, and products not presently considered to be part of conventional medicine
- ***Complementary Medicine*** - Used in conjunction with conventional medicine
- ***Alternative Medicine*** - Used in place of conventional medicine
- ***Integrative Medicine*** - Combination of mainstream and CAM therapies for which there is some high quality scientific evidence

State of CAM in US

- 2007 National Health Interview Survey
 - 29,266 households; 75,764 persons; 23,393 adults
 - 38% of adults in US (83 million) use some form of CAM
 - \$33.9 B in out-of-pocket expenditure
 - \$11.9 B CAM practitioners
 - \$14.8 B non-vitamin, non-mineral, natural products
 - \$7.2 B other CAM (yoga, tai chi, qi gong, homeopathic medicine, relaxation techniques)
 - 11.2% of total out-of-pocket expenditures on healthcare
 - 2/3 of expenditures are on self-care
 - CAM practitioner cost is 25% of what spent on physicians
 - Compared with prior survey 10 years earlier
 - Increase in self-care and decline in visits to practitioners (50% decline)
 - Biggest decline: visits to energy healer and practitioners of relaxation techniques
 - Acupuncture saw 3-fold increase in visits

Nahin RL, Barnes PM, Stussman BJ, and Bloom B. Costs of Complementary and Alternative Medicine (CAM) and Frequency of Visits to CAM Practitioners: United States, 2007. *National health statistics reports; no 18*. Hyattsville, MD: National Center for Health

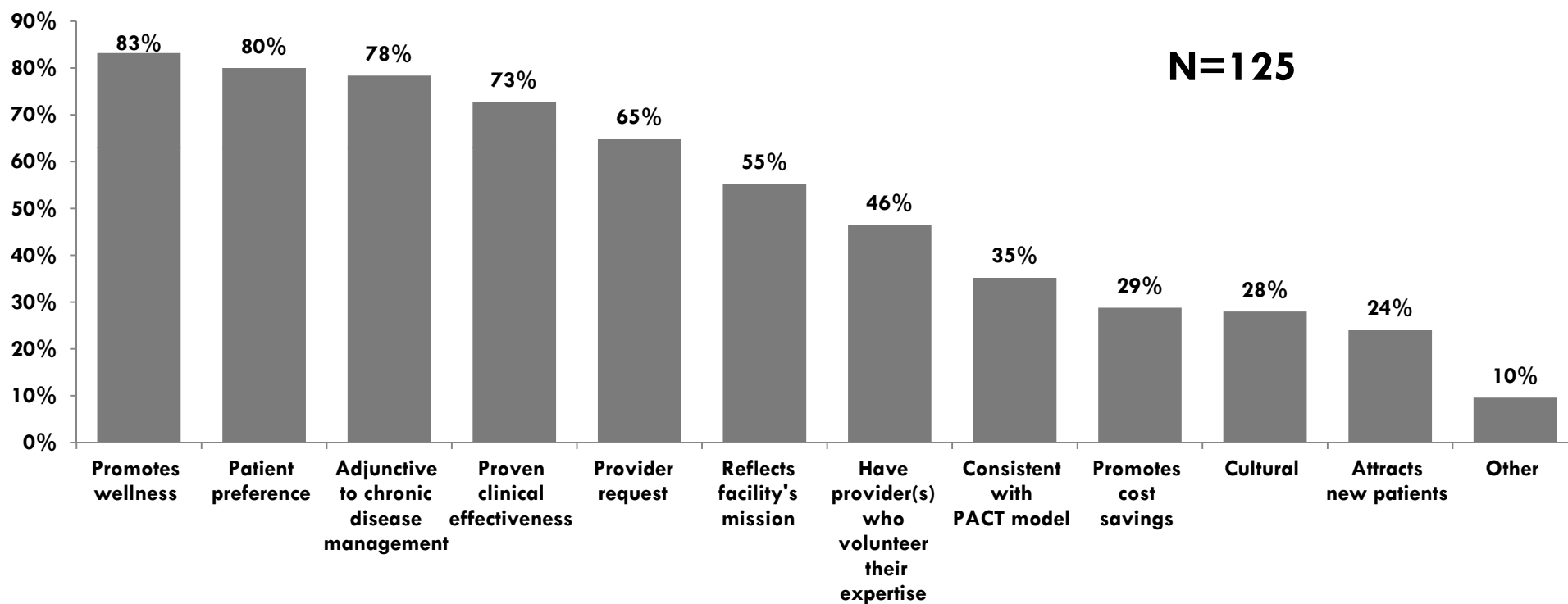
Does CAM Fit Into VA Care?

- CAM's focus on wellness, disease prevention, and health promotion is consistent with VA's approach to care
- There is a possible benefit in management of chronic disease and promotion of health and wellness
- CAM is not explicitly part of the Uniform Benefits Package (UBP)/Medical Benefits Package
- VA has increasing focus on providing evidence-based medicine
 - Lack of high quality research/evidence for many CAM practices
- Many CAM practices lack:
 - Standardized educational accrediting bodies
 - State regulation/licensure
 - Certifying bodies

CAM Offered by VA

- Use is widespread - Healthcare Analysis and Information Group (HAIG) Study on CAM Utilization in VHA 2002
 - 84% of VA facilities provide some form of CAM
 - Most common offered modalities:
 - Acupuncture, biofeedback, chiropractic care, guided imagery, hypnotherapy, meditation, music therapy, progressive relaxation, and stress management
 - Most provided by conventionally trained practitioners
 - Integrated into treatment plans
 - Wide variation in process used to credential privilege providers
 - Limited oversight in training, experience, certification, and practice of CAM providers
 - Limited utilization of scientific evidence to support use of CAM or support its safety and efficacy

Reason CAM Modalities Offered



CAM and Pain

CAM and Chronic Pain

- Pain affect 100 million Americans
 - More than cancer, diabetes, CAD, and stroke combined
- Estimated cost of health care ranges from \$560 - \$635 billion annually
- Most common type of chronic pain is low back pain (27% - NIH Statistics survey)
- Low back pain is the number 1 cause of disability world-wide (Global Burden of Disease 2010 - Lancet)
- Up to 40% of patients with chronic pain may use a CAM modality

Evidence for CAM

NCCAM: Scientific Evidence on CAM for Pain

- Low Back Pain
 - Promising Evidence
 - Massage, Spinal Manipulation, Progressive Relaxation, Yoga
 - Limited/Mixed/No Evidence
 - Prolotherapy, Herbal Remedies
- Arthritis
 - Promising Evidence
 - Acupuncture
 - Limited/Mixed/No Evidence
 - Glucosamine/Chondroitin, Gamma Linolenic Acid, Herbal Remedies
- Headache
 - Promising Evidence
 - Acupuncture, Spinal Manipulation
 - Limited/Mixed/No Evidence
 - Feverfew
- Neck Pain
 - Limited/Mixed/No Evidence
 - Acupuncture, Spinal Manipulation

Review of Evidence for Some CAM Modalities Used for Pain

- Acupuncture
- Massage
- MBSR
- Music
- Tai Chi
- Yoga

Acupuncture

VA TAP: Acupuncture

- 2007 Review
 - RCTs and Qualitative and Quantitative synthesis of RCTs
- Levels of Evidence to Support Use
 - Effective (USPSTF equivalent B)
 - Post op dental pain
 - Promising (USPSTF equivalent C)
 - Migraine, LBP, Fibromyalgia, OA Knee, Tennis Elbow, Labor Pain
 - Inconclusive (USPSTF equivalent I)
 - Carpel tunnel
 - Inconclusive/Ineffective (USPSTF equivalent I/D)
 - Post Herpetic Neuralgia

Acupuncture and Low Back Pain

Cherkin D, PhD; Karen J. Sherman K, et al: A Randomized Trial Comparing Acupuncture, Simulated Acupuncture, and Usual Care for Chronic Low Back Pain: *Arch Intern Med.* 2009;169(9):858-866.

Acupuncture and Low Back Pain

- Back pain leading reason to visit acupuncturist
- Randomized to:
 - Individual acupuncture
 - Standard acupuncture
 - Simulated acupuncture
 - Usual care acupuncture
- 638 patients with CLBP
 - Age 18-70
 - < 3-month duration
- Evaluated with disability questionnaire
 - Assessed at 8, 26, and 52 weeks
 - 10 treatments over 7 weeks
 - 2x/wk x 3 weeks; weekly x 4 weeks

Results

- Statistically significant improvement in dysfunction scores at all acupuncture groups compared to usual care ($p < 0.001$)
 - Seen at 8 weeks persisted through 26 and 52 weeks
 - No difference between acupuncture groups
- Statistical improvements in symptoms in acupuncture groups at 8 weeks, but not at 26 and 52 weeks
- Use of medication decreased significantly in acupuncture groups
 - Persisted through 52 weeks

Conclusions

- Acupuncture is effective in the treatment of CLBP
- Site of needling is unimportant

Message

Massage and Pain

Furlan A, Brosseau L, Imamura M, Irvin E: Massage for
Low –back Pain: A Systematic Review within the
Framework of the Cochrane Collaborative Back Review
Group: Spine 2002;27:1896-1910

Studies

- 8 studies
 - RCT/quasi randomized trials/controlled clinical trials
 - Had at least one of four outcome measures: pain, return to work, subjective change of symptoms, functional status
 - Short term effects – immediate post intervention
 - Long term – > 3 mo post intervention
- Adults >18
- Non specific LBP: acute < 4weeks;subacute 4-12;chronic > 12 weeks
- Aim:
 - Primary: effectiveness of massage vs. placebo; other medical treatments
 - Secondary: effectiveness of different types of massage, massage plus other treatments

Results

- **Massage:**
 - Better than sham laser, acupuncture, self care (education) for symptoms and function
 - Equal to spinal manipulation
 - Effects noted to last up to 52 weeks
 - May be less effective than TENS
- **Massage + education + exercise**
 - Better than exercise alone
 - Better than massage only in short term for pain
- **Acupuncture massage better than classic massage for pain and function**

Conclusions

- Limited – moderate strength of evidence
- Evidence too poor to make assessment in acute LBP
- Appears beneficial for sub acute and chronic LBP
 - Improves symptoms and function
 - Effects are long lasting
- Acupuncture massage may be better than classic massage

Mindfulness Based Stress Reduction

MBSR and Health

Grossman P, Niemann L et al. Mindfulness-based stress reduction and health benefits. A meta-analysis: Journal of Psychosomatic Research 2004;57:35-43

Studies

- Published and unpublished studies from 12/2001
 - Interventions were taught
- Quantitative outcome measures
- 64 studies but only 20 were of acceptable quality
- Total of 1605 subjects
- Diagnoses: Fibromyalgia, cancer, CAD, depression, chronic pain, anxiety, obesity, binge eating, and coping with stress
- Outcomes: Does MBSR improve health related dimensions in the chronically ill and how large are the benefits and is further study warranted

Results

- Studies with control groups

	# studies	# Subjects	Mean Effect Size	95% CI	P (two tailed)
Mental Health	10	771	0.54	0.39-0.68	< .0001
Physical Health	5	203	0.53	0.23-0.81	<.0004

Results (cont.)

- Observational Studies – pre and post comparisons of physical and mental health variables

*significant heterogeneity in subjects

	# studies	# Subjects	Mean Effect Size	95% CI	P
Mental Health *	18	894	0.5	0.43- 0.56	<.0001
Physical Health	9	566	0.42	0.34- 0.50	<.0001

Conclusions

- Suggests usefulness of MBSR in a broad range of chronic disorders
- Mindfulness training may enhance ability to cope with everyday distress and disability as well as in more serious conditions
- Studies only evaluated immediate post-intervention period; Long term effects are unknown
- Further study is needed

MBSR and Low Back Pain

Cramer H, Haller H, Lauche R, Dobos G :

Mindfulness-based stress reduction for low back pain.

A systematic review. BMC Complementary and Alternative
Medicine 2012, 12:162

Studies

- Only RCTs included – wait list control (2) education program (1)
- Main outcome measures – pain intensity, back related disability
- 3 RCT -117 patients
 - 2 RCTs older adults ≥ 65 , chronic LBP > 3 mo
 - 8 weeks MBSR + education
 - 1 RCT patients of any age with failed back surgery syndrome
 - 8 weeks MBSR + education + mindful meditation + yoga

Results

- MBSR vs. wait list control
 - Non-specific LBP
 - No significant difference in pain intensity or disability
 - Significant difference seen for improving physical functioning and pain acceptance
 - Failed back syndrome
 - Significant improvement in pain intensity and disability, pain acceptance, medication intake, and sleep quality
- MBSR vs. health education
 - Non-specific LBP
 - No significant difference in pain intensity or disability
 - No group differences at 4 month follow-up

Conclusions

- More research is needed
- Limited evidence that MBSR can provide short term relief of LBP
- Yoga may be crucial to the intervention's success
 - Trial that showed improvement in pain and disability included yoga
- No evidence for long term effects of MBSR

Music

Music and Pain

Cepeda M, Carr D, Lau J, Alvarez H: Music for pain relief:
Cochrane Database of Systematic Reviews 2006, Issue 2.

Art. No. : CD004843.

DOI:10.1002/14651858.CD004843.pub2.

Studies

- 51 RCTs
- Effect of music on acute, chronic, neuropathic, cancer pain, experiential pain
- Children and adults
- 1867 subjects, 1796 controls
- Combined trials with clinical homogeneity
- Compared music to no music, pharmacologic or non-pharmacologic intervention
- Looked for:
 - Decrease in pain intensity scores
 - Opioid requirements

Results

- Due to heterogeneity of studies only able to evaluate effect on acute pain
- Decrease in opiate use amongst those exposed to music
 - 1 mg over 2 hours; 5.7 mg in 24 hours
- Acute post op pain – significant improvement amongst those exposed to music
 - decrease of 0.5 units on 0-10 scale

Conclusion

- Listening to music decreases pain intensity scores and opiate use
- Magnitude of benefit is small
- Clinical importance is unclear

Tai Chi

Tai Chi and Pain

Hall A, Maher C, Latimer J, Ferreira M: The effectiveness of Tai Chi for chronic musculoskeletal pain condition: A systematic review and meta-analysis. *Arthritis and Rheumatism* 2009 (61): 717-724

Studies

- 7 RCTs
- 321 participants
- Osteoarthritis (5) RA (1) Tension headache (1)
- Styles of Tai Chi used – Yang (42%), Sun (42%), Wu (16%)
- Evaluate effectiveness of Tai Chi in:
 - Decreasing pain
 - Decreasing disability
 - Improving physical function
 - Improving quality of life

Results

- Self reported pain (7/7)
 - Pooled effect of Tai Chi – reduction of 10.1 points on 0-100 scale (P<0.05)
- Self reported disability (6/7)
 - Pooled effect of Tai Chi – reduction of 9.6 points on 0-100 scale (P<0.05)
- Physical performance (3/7)
 - Reporting scales to heterogeneous to pool
 - 2/3 used 50 ft walk
 - 0.4 second reduction seen with Tai Chi (not statistically significant)
- Quality of life (4/7)
 - Results to heterogeneous to pool
 - Trend to positive effects overall physical health, tension levels, satisfaction in OA

Conclusions

- Small positive effect on short term self assessed pain and disability
- Clinical significance of degree of improvement is unclear
- Group exercise, low cost, social rather than clinical setting may increase significance of small improvement

Yoga

Yoga and Chronic Pain

Wren A, Wright M, Carson J, Keefe F: Yoga for persistent pain: New findings and directions for an ancient practice. 2010 International Association for the Study of Pain 152 (2011) 477 - 480

Studies

- 13 RCTs
- Pain population
 - CTS -1, OA hand -1, CLBP – 6, Fibromyalgia – 1, Hemodialysis – 1, Chronic Pancreatitis -1, Migraine -1, Breast cancer survivor
- Subjects
 - Primarily white, middle aged, higher socioeconomic women
- Interventions – Iyengar-based Hatha yoga (2), Iyenger (3), Viniyoga (1), Hatha (2), Modified Hatha (1), Yoga of awareness (2), Modified yoga program (1), Integrated approach to yoga therapy (1)

Results

- CTS – improvement in pain and grip strength
- OA hand – improvement in pain and range of motion
- CLBP – improvements in pain, medication usage (5); no significant difference (1)
- Fibromyalgia – improvement in pain, vigor, acceptance
- Hemodialysis – improvements in pain, fatigue, sleep disturbance
- Breast cancer survivors – improvements in pain, sleep disturbance, vigor, hot flashes
- Chronic pancreatitis – improvements in quality of life, mood, and stress
- Migraine – improvements in pain, frequency and intensity, medication usage, anxiety, depression

Conclusions

- Suggests yoga may have promise in persistent pain conditions
- Similar results despite varying styles of yoga interventions
- Populations studied fairly homogenous with moderate disability due to pain
 - Unclear applicability in more diverse populations
- Further research needed

Summation

Implications for VA

- Insufficient evidence to make CAM is part of medical benefits package
- Evidence does not support use of CAM as a primary intervention
 - May be useful as an adjunct measure
- Most promising interventions are Acupuncture, Yoga, and Massage
 - Could be provided by existing CAM providers
 - Further work needed to create occupational class for CAM providers

Next Steps

- Growing interest to provide acupuncture services in VA
 - Intent: Make acupuncture services available to Veterans by well qualified physicians, chiropractors, and/or licensed acupuncturists
- Memo prepared for USH requesting:
 - Assistant Sec for HRA allows for establishment of the occupation of LAc.
 - The development of qualification standards under this authority
- Document providing statutory justification being finalized
 - Request the establishment of Hybrid T-38 status to LAc.
 - Pure T-38 would require legislation