

**VA**



U.S. Department  
of Veterans Affairs

# Research into Non-Opioid Therapies for Pain at Department of Veterans Affairs

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# Chronic Pain and Opioid use among Service Members after Combat Deployment

## Chronic pain (more than 3 months)

26%

general public  
estimates

44%

U.S. military after  
combat deployment

## Opioid use (in the past month)

4%

general public  
estimates

15%

U.S. military after  
combat deployment



# Unique Aspects of VA for Pain Research

- Serves 6 million Veterans at over 1000 sites of care
  - Focus on ***implementation, spread, fidelity***
  - Emphasis on self-care, telehealth, caregiver issues
- Global budget
  - Need to assess ***value*** of new interventions
  - Demand for different approaches, virtual options
- Steady increase in provision of CIH in VA
  - 2015: 93% of medical centers offer 2+ CIH modalities
- Pain often overlaps with other co-morbidities
  - Need to address ***mental health, SUD, social support***



# Results: What CIH Did Veterans Use in Past Year

## **52% used any type of CIH approach in the past year (n=1,230):**

**44% massage therapy**

**37% chiropractic**

**34% mindfulness**

**24% non-mindful/mantram medit.**

**25% yoga**

**20% progressive relaxation**

**17% acupuncture**

**17% movement therapy**

**15% animal assisted therapy**

**14% acupressure**

**12% reflexology**

**11% mantram meditation**

**10% Tai Chi**

**9% guided imagery**

**9% healing/therapeutic touch or reiki**

**8% creative art therapy**

**7% biofeedback**

**6% Pilates**

**6% Qi Gong**

**5% Native American healing**

**4% EMDR**

**3% using hypnotherapy/hypnosis**

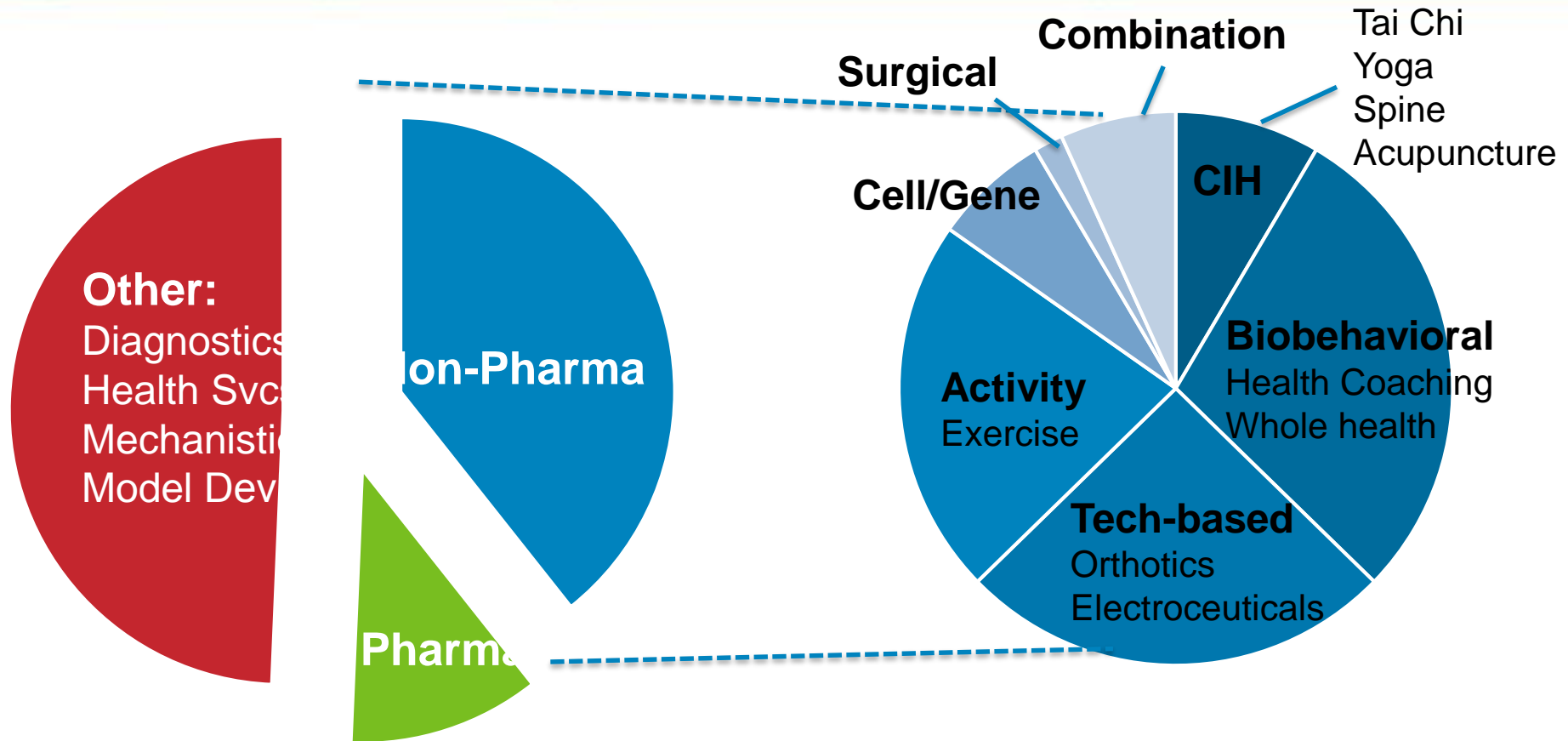


# Office of Research and Development

- **Biomedical and Laboratory (BLR&D)** supports preclinical (cellular and animal) research to understand molecular, genomic, and physiological
- **Clinical Science (CSR&D):** Human subject research to identify causes of disease and to test the effectiveness of new drugs, therapy, or devices. **Cooperative Studies Program (CSP) – large, multi-site trials**
- **Health Services (HSR&D):** Studies issues of health care system and delivery, including access, quality and safety, costs and value, implementation, and patient experience.
- **Rehabilitation (RR&D):** Novel approaches to restore full and productive lives to Veterans with traumatic amputation, central nervous system injuries, loss of sight or hearing, or other physical and cognitive impairments.



# VA-ORD FY2018 Pain Portfolio



Total # of Projects - 151



# Studies on CIH & pain

## Conditions

Chronic musculoskeletal pain

Lower back pain

Muscle pain

Neck pain

## CIH Interventions

Acupuncture

Biofeedback

Exercise training

Guided imagery

Hypnosis

Massage

Meditation

Spinal cord manipulation

Tai Chi

Yoga

## Outcomes

Cost of healthcare utilization

Health-related QOL

Mental health (anxiety, depression, stress)

Opioid use

Pain severity

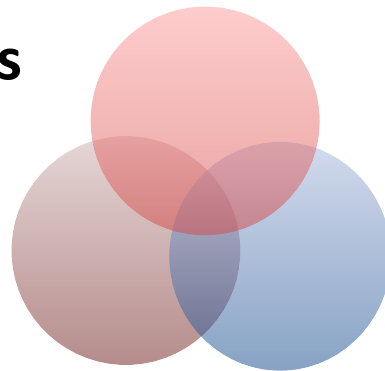


# 2016: VA State of the Art Conference – Non-Opioid Therapy for Chronic Musculoskeletal Pain

Multiple therapies have sufficient evidence to support broad implementation

## **Manual therapies**

Acupuncture  
Manipulation  
Massage



## **Exercise/movement therapies**

Exercise (aerobic, resistance  
coordination/stabilization,  
Tai Chi  
Yoga

## **Behavioral/psychological therapies**

Cognitive Behavioral Therapy (CBT)  
Acceptance & Commitment Therapy (ACT)  
Mindfulness-Based Stress Reduction (MBSR)





# Evidence gaps relate to dose, delivery, and strategies to enhance participation

- For most therapies, need further study of...
  - Delivery approaches (e.g., in-person vs. on-line, group vs. individual)
  - Dose (e.g., frequency, intensity, duration)
  - Strategies for engaging patients, improving adherence, and maintaining benefits
- For care delivery models, need further study of multi-site implementation



# Ongoing Non-Opioid Research at VA

- PMC Trial (Taylor and Zeliadt) : 1) practitioner-delivered care (acupuncture & chiropractic) ; 2) self-care therapies (yoga, meditation and Tai Chi) vs 3) combination
- VOICE Trial – Krebs (PCORI) – low-intensity (Telecare pharmacist CM) to high-intensity (integrated pain team) strategy f
- Cost effectiveness of CIH for chronic pain
- Caregiver-assisted vs. therapist massage for chronic pain
- Yoga vs. structured exercise
- Pain management in patients with co-occurring substance use



# Conclusions

- Growing evidence base for the effectiveness of non-opioid therapies, stepped-care and integrated pain therapy.
- Remaining challenges involve how to make patient-centered approaches scalable, affordable and accountable across a diverse system.



- Extra Slides



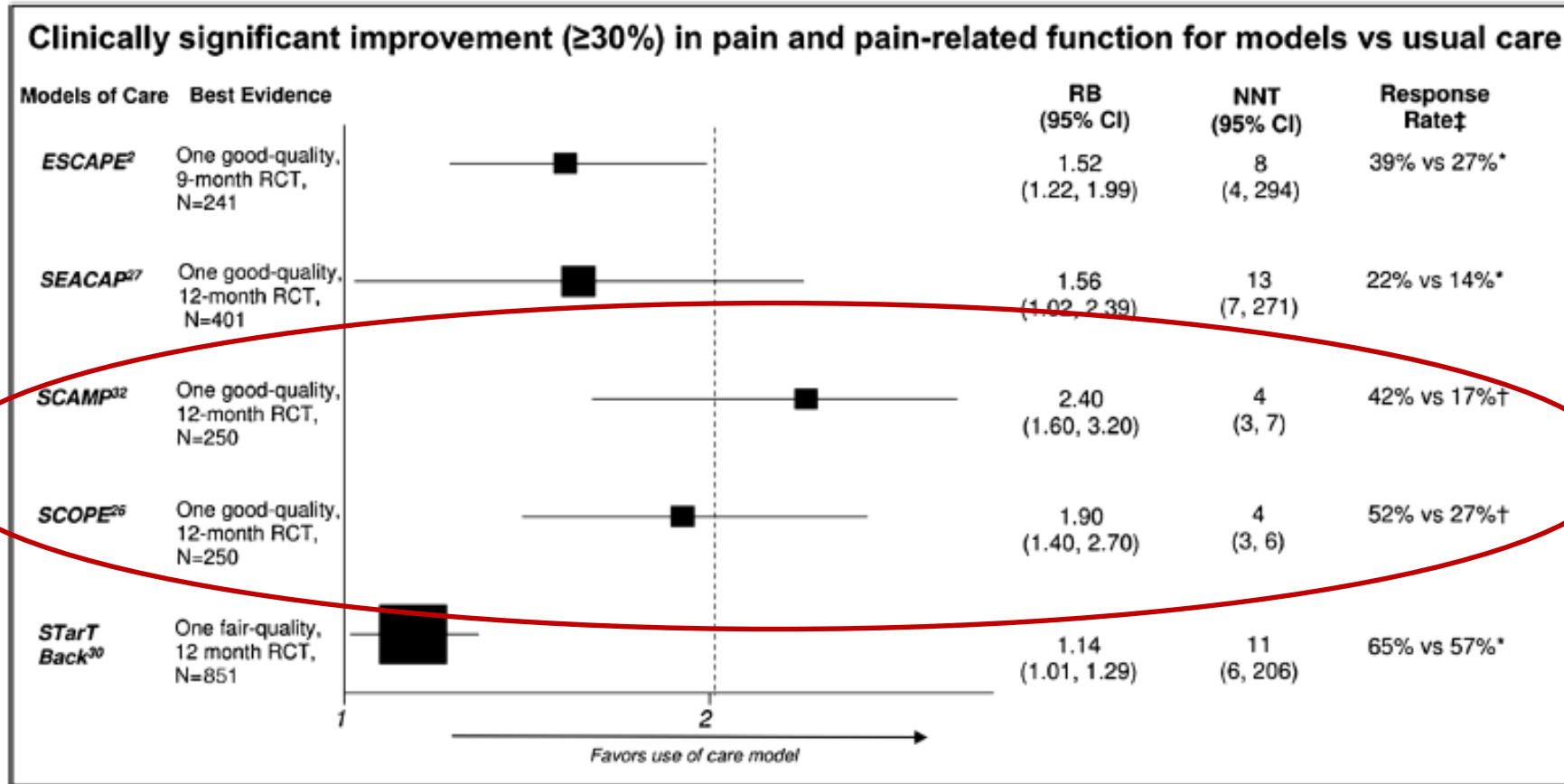
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# Two VA studies highlighted as having most promising approach to multi-modal stepped care



Peterson K, et al. J Gen Intern Med 2018;33(S1):S71-81



STATE OF THE ART CONFERENCE  
Non-pharmacological Approaches  
to Chronic Musculoskeletal  
Pain Management  
VA HSR&D



# Evidence-based Synthesis Program

The **Evidence Synthesis Program** produces summaries of existing evidence based on careful review of individual research studies.

**Evidence Maps** are a convenient way to summarize a large body of research using published reviews.

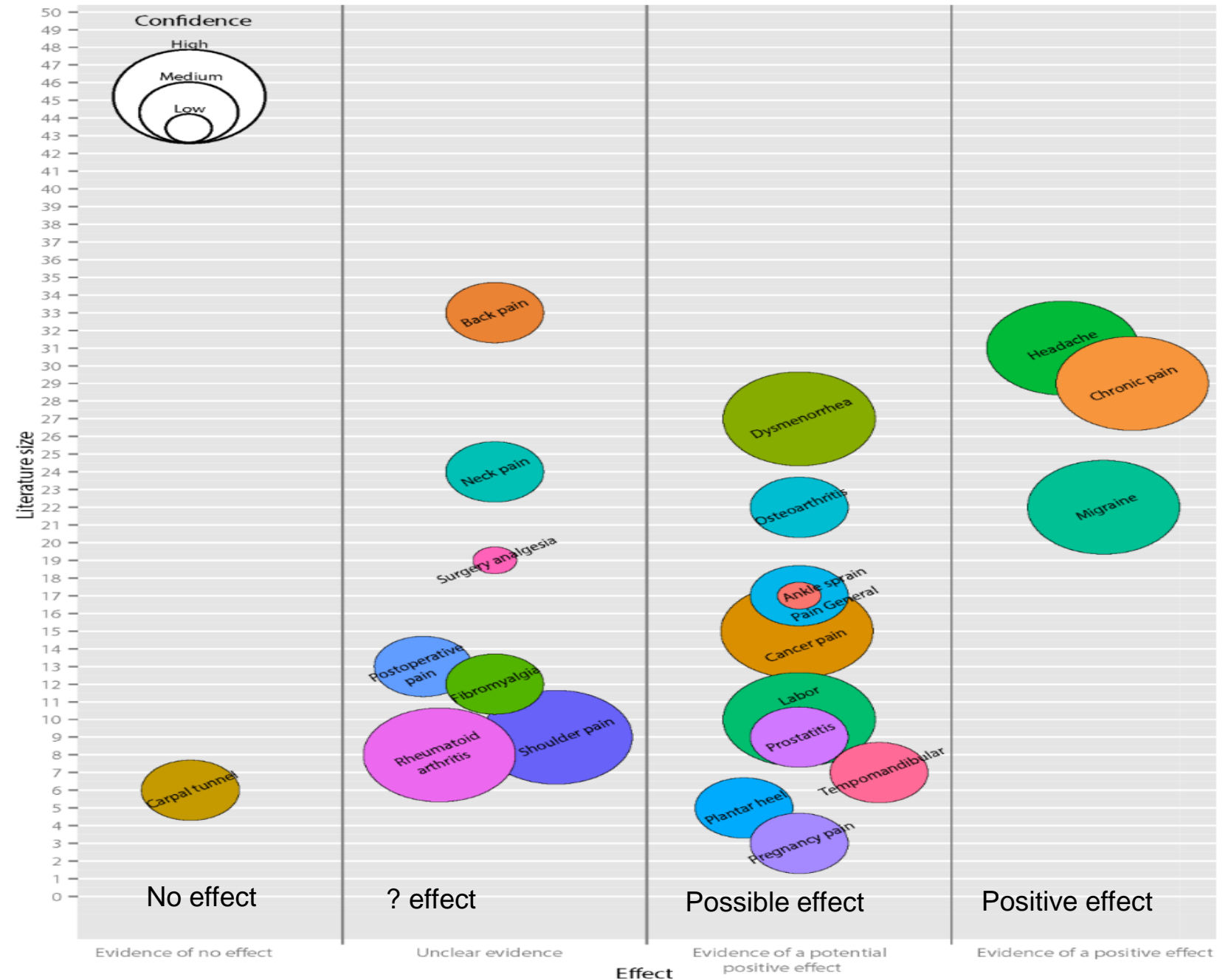
## **Evidence map topics:**

- Evidence Map of Acupuncture (2013)
- Evidence Map of Yoga for High-Impact Conditions Affecting Veterans (2014)
- Evidence Map of Mindfulness (2014)
- Evidence Map of Tai Chi (2014)
- Massage for Pain: An Evidence Map (2016)
- Evidence Map on Guided Imagery, Biofeedback, & Hypnosis (*in progress*)



# Evidence Map: Acupuncture & Pain

Hempel, S., Taylor, S. L., Solloway, M.,  
Miake-Lye, I. M., Beroes, J. M.,  
Shanman, R., Booth, M. J., Siroka, A. M.,  
Shekelle, P. G. Evidence Map of  
Acupuncture. VA-ESP Project #05-226;  
2013





# Other ESP reviews

- CAM & PTSD (2011)
- Computerized CBT (2013)
- Repetitive TMS for Treatment-Resistant Depression (2014)
- CIH Use for Preventing or Reducing Opioid Use (2016)
- Cannabis & Chronic Pain/PTSD (2017)
- Stellate Ganglion Block for PTSD (2017)
- HBOT for TBI &/or PTSD (2018)
- Cranial Electrical Stimulation (2018)

