

# Chronic Pain Patients Use of Self Care: Associations with Health Care Services and Patient / Provider Perspectives

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# Background

- Chronic pain affects at least 116 million Americans at a cost of \$50–635 billion
- 2011 Institute of Medicine and Dept of Defense/VAMC reports recommend self-management and primary care for treatment of chronic pain
- Participation in structured self-management programs improves functioning and pain outcomes; far less known about what patients are using **on their own** and the impact this may have

# Key Study Questions Examined

- What self-care practices are patients using to manage chronic pain? How are active and provider-dependent self-care practices related to one another?
- How does the use of self-care for chronic pain affect utilization of health services?
- What are patient and health care provider attitudes about use of self-care practices for managing chronic pain?

# Context and Setting

- Focus here on substudies of larger observational study of chronic musculoskeletal pain patients examining clinical and cost outcomes associated with use of CAM services in everyday practice environments

## STUDY PROTOCOL

## Open Access

### Acupuncture and chiropractic care for chronic pain in an integrated health plan: a mixed methods study

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#### Abstract

**Background:** Substantial recent research examines the efficacy of many types of complementary and alternative (CAM) therapies. However, outcomes associated with the "real-world" use of CAM has been largely overlooked, despite calls for CAM therapies to be studied in the manner in which they are practiced. Americans seek CAM treatments far more often for chronic musculoskeletal pain (CMP) than for any other condition. Among CAM treatments for CMP, acupuncture and chiropractic (A/C) care are among those with the highest acceptance by physician groups and the best evidence to support their use. Further, recent alarming increases in delivery of opioid treatment and surgical interventions for chronic pain—despite their high costs, potential adverse effects, and modest efficacy—suggests the need to evaluate real world outcomes associated with promising non-pharmacological/non-surgical CAM treatments for CMP, which are often well accepted by patients and increasingly used in the community.

**Methods/Design:** This multi-phase, mixed methods study will: (1) conduct a retrospective study using information from electronic medical records (EMRs) of a large HMO to identify unique clusters of patients with CMP (e.g., those with differing demographics, histories of pain condition, use of allopathic and CAM health services, and comorbidity profiles) that may be associated with different propensities for A/C utilization and/or differential outcomes associated with such care; (2) use qualitative interviews to explore allopathic providers' recommendations for A/C and patients' decisions to pursue and retain CAM care; and (3) prospectively evaluate health services/costs and broader clinical and functional outcomes associated with the receipt of A/C relative to carefully matched comparison participants receiving traditional CMP services. Sensitivity analyses will compare methods relying solely on EMR-derived data versus analyses supplementing EMR data with conventionally collected patient and clinician data.

**Discussion:** Successful completion of these aggregate aims will provide an evaluation of outcomes associated with the real-world use of A/C services. The trio of retrospective, qualitative, and prospective study will also provide a clearer understanding of the decision-making processes behind the use of A/C for CMP and a transportable methodology that can be applied to other health care settings, CAM treatments, and clinical populations.

**Trial registration:** ClinicalTrials.gov; NCT01345409

#### Background

We describe here our study designed to understand clinically meaningful outcomes (from both patient and provider perspectives) of acupuncture and chiropractic (A/C) care as delivered in routine practice settings for

the treatment of chronic musculoskeletal pain (CMP). The centerpiece of the study is a prospective cohort study. However, before we undertake this phase of work, we will conduct an analysis of electronic medical record (EMR) data and qualitative data collection to provide the foundation for identifying a more meaningful comparison of outcomes between those receiving and not receiving A/C care. Our goal is to test an

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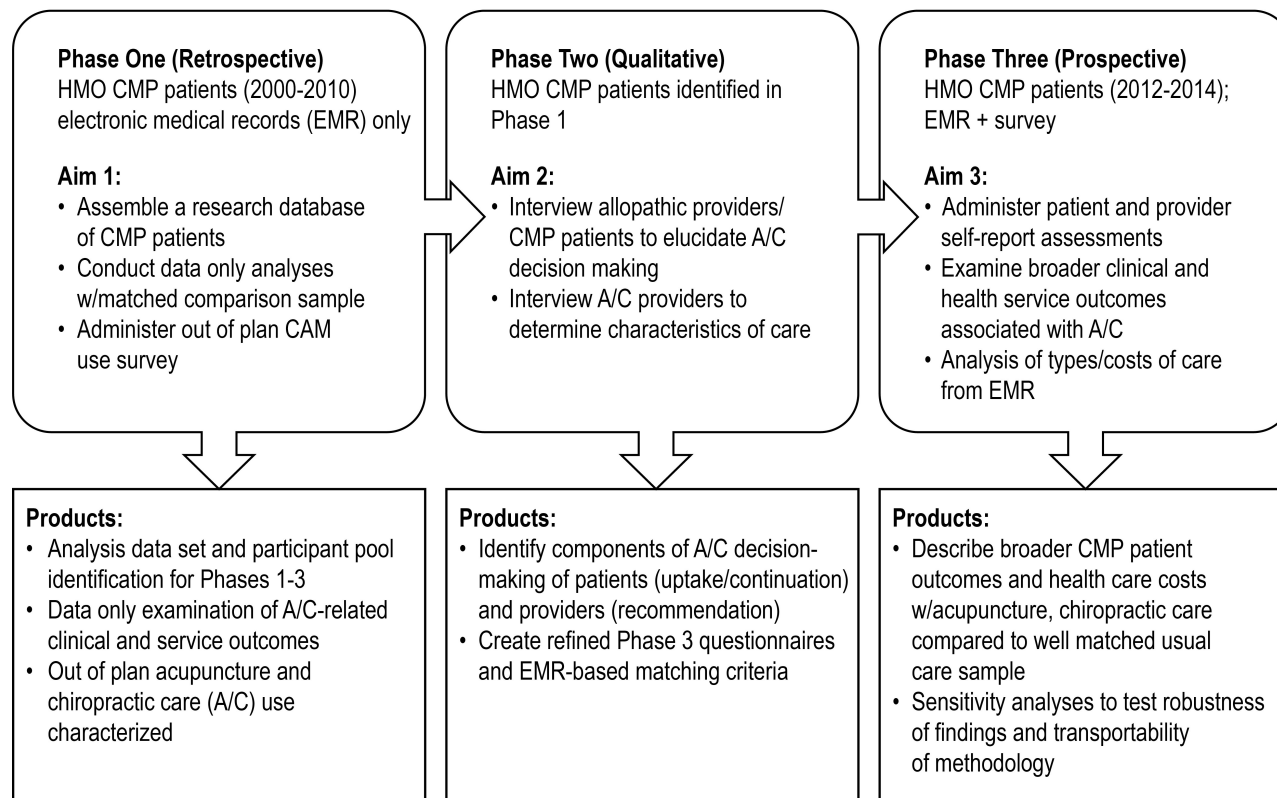
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# Context and Setting

- Large Non-Profit HMO in Pacific Northwest
  - Availability of comprehensive electronic medical record (EMR) thus able to examine service use directly rather than rely on claims data
  - Extensive history of CAM integration (Washington State's 1998 "All Providers" legislation)
  - Integrated care system allows understanding of sampling frame
- Combined use of modalities
  - Survey, EMR, and qualitative data used to examine correspondence of reported pain self-management practices, health service use patterns, and attitudes towards self-care of health care providers and patients

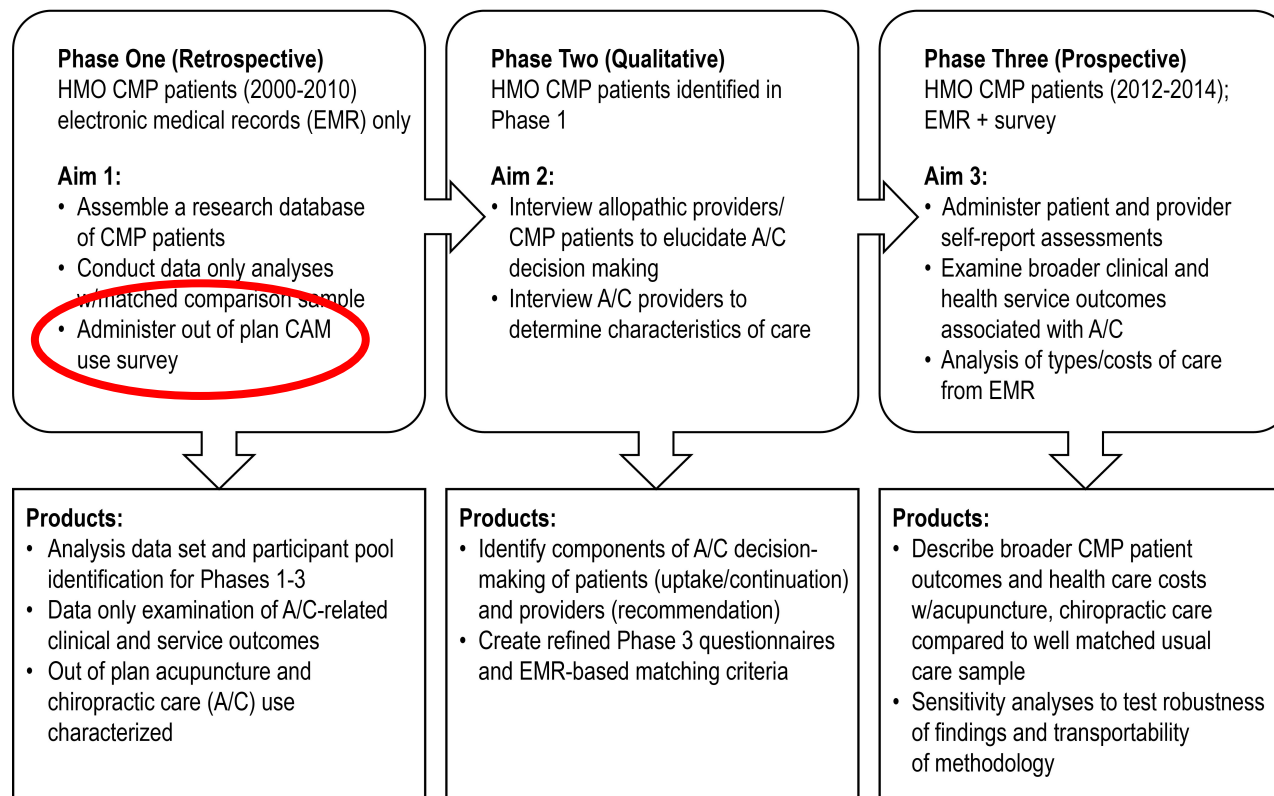
# Relief Study

## RELIEF – Study Phases, Procedures and Chronic Musculoskeletal Pain (CMP) Participant Flow



# Relief Study

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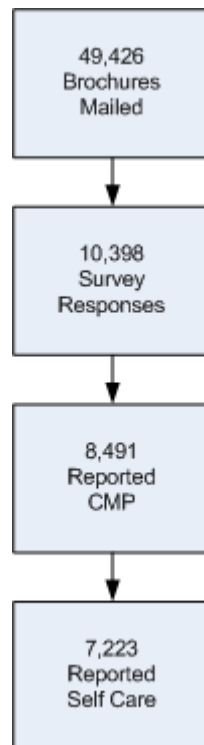


# Substudy #1 - Methods

- Survey
  - All HMO members whose health care utilization patterns from 2006-2010 suggested diagnosis of chronic musculoskeletal pain invited to complete survey (online, mail, interview assisted)
  - Survey responses collected January thru May of 2011
- Health Service Use thru Electronic Medical Record
  - Examined characteristics of respondents vs. non-respondents
  - Examined 2011 health service utilization patterns



# Survey Administration



**Dear Kaiser Permanente Member:**  
 Please tell us about your experiences with practices and treatments you have used to manage your chronic pain.

Many people who suffer from chronic pain find relief with acupuncture or chiropractic care. But little is known about who uses these services, how often, and why.

We want to learn more about who uses acupuncture or chiropractic care for chronic pain, in and outside of Kaiser Permanente. We want to know what made you decide to seek this type of care. Or, if you've never used this type of care, we'd like to know why.

Recently we sent you a brochure inviting you to complete the Relief online survey at [www.kpchr.org/relief](http://www.kpchr.org/relief).

You can still complete the online version—just use the **access code number** found above your name on the back cover of this survey.

This one-time survey should only take a few minutes. In case it's easier for you, we've provided this quick 17-question paper survey. Please return it in the provided postage paid envelope. Anyone completing a survey will be entered into a weekly drawing to **win a \$100 gift card**.

Thank you very much for your time. Your experiences with chronic pain care are very important to us, and we hope you'll participate in the survey.

**Relief**  
What works?

KAISER PERMANENTE

11. Have you used any of the following treatments/practices on your own?

	FOR CHRONIC PAIN, YES	FOR OTHER REASON, YES	NO
• Yoga	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 24
• Tai Chi / Qigong	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 25
• Nutritional Supplements /Herbs	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 26
• Massage	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 27
• Meditation or Mindfulness Practice	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 28
• Regular physical activity—20 minutes or more several times a week for at least several months (If YES, PLEASE DESCRIBE):	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 29
• Any special dietary practices for your health (If YES, PLEASE DESCRIBE):	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 30
• Other Complementary or Alternative Medicine (CAM) treatment (If YES, PLEASE DESCRIBE):	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3 31

12. My date of birth is: MONTH DAY YEAR 32

13. Are you male or female? Male ☐ 1 33 Female ☐ 2

14. Which one of the following groups best represents your race? (If you are of mixed heritage, please check all that apply.)

White/Caucasian	<input type="checkbox"/> 34
African American/Black	<input type="checkbox"/> 35
Native American or Native Alaskan	<input type="checkbox"/> 36
Asian	<input type="checkbox"/> 37
Native Hawaiian or Other Pacific Islander	<input type="checkbox"/> 38
Refuse to answer	<input type="checkbox"/> 39
Unknown	<input type="checkbox"/> 40
Other (PLEASE DESCRIBE):	<input type="checkbox"/> 41

15. Do you consider yourself either Hispanic or Latino? Yes ☐ 1 42 No ☐ 2

# Comparisons of Survey Responders and Non-responders (EMR data)

Characteristic	Responders (N=9,935)	Non-Responders (N=39,491)
Age – mean (st dev)	64.5 (14.0)	55.2 (17.9)
Female- %	6805 (68.5%)	24682 (62.5%)
White - %	9299 (93.6%)	32778 (83.0%)
Hispanic - %	229 (2.3%)	1896 (4.8%)
Pain type - %		
Osteoarthritis, Joint pain, Limb pain	9736 (98.0%)	37832 (95.8%)
Fibromyalgia, non-specific pain	4491 (45.2%)	16191 (41.0%)
Back pain, neck pain	8862 (89.2%)	34950 (88.5%)
Tension headache, TMD	4173 (42.0%)	18679 (47.3%)
Carpel tunnel, Other CMP	4481 (45.1%)	16547 (41.9%)
Mean # pain types	1.64 (1.07)	1.53 (1.10)
Comorbid MH diagnosis - %	4491 (45.2%)	21365 (54.1%)
Charlson Score – mean (st dev)	0.63 (1.12)	0.55 (1.13)
On Long-term Opiate Treatment - %	2365 (23.8%)	9754 (24.7%)

# Reported Self Care Practices (Survey responses)

Type of Self Care	N (%) Using for chronic pain
Any	7,223 (85.1%)
Active	
Regular physical activity	5,446 (64.1%)
Movement practices (yoga/tai chi/qi gong)	2,244 (26.4%)
Nutritional supplements/herbs	3,753 (44.2%)
Meditation/mindfulness	2,171 (25.6%)
Special dietary practices	2,801 (33.0%)
Provider-dependent	
Chiropractic	3,949 (46.5%)
Acupuncture	2,673 (31.5%)
Massage	4,156 (48.9%)

# Characteristics of Self Care Users (Survey responses)

## Use of Active Self Care\*

	No (N=3,256)	Yes (N=5,235)	
Age- mean (st dev)	66.4 (14.0)	61.8 (13.4)	
Female- %	1,918 (58.9%)	3,755 (71.7%)	
White- %	2,795 (85.8%)	4,854 (92.7%)	
Hispanic or Latino- %	58 (1.8%)	126 (2.4%)	
≥ Some College- %	1912 (58.7%)	4106 (78.4%)	
Pain Type- %			
Back & Neck Pain	2,232 (68.6%)	3,749 (71.6%)	
Headache & TMD Pain	604 (18.6%)	1,238 (23.6%)	
Osteoarthritis/Joint/ Extremity Pain	2,699 (82.9%)	4,207 (80.4%)	
Muscle Pain	766 (23.5%)	1,723 (32.9%)	
Fibromyalgia	279 (8.6%)	842 (16.1%)	
Other Pain (RA, Neuropathy)	559 (17.2%)	1,091 (20.8%)	
Mean # Pain Conditions	2.09 (1.20)	2.54 (1.30)	

# Utilization of pain and general health services

(EMR data in column)	Use of Active Self Care (per survey)		P-Value
	No (N=3,256)	Yes (N=5,235)	
Emergency Room Visits	0.38 (0.8)	0.34 (1.0)	0.03
Primary Care Visits	3.44 (3.4)	3.33 (2.8)	0.05
Physical Therapy Visits	1.15 (3.0)	1.49 (3.4)	<0.0001
Telephone Visits	3.62 (4.2)	3.51 (4.7)	<0.0001
Email Visits	2.28 (4.8)	3.27 (5.8)	<0.0001
Days Opiate Supplied	95.87 (174.5)	111.9 (195.8)	0.0001
Patient Morbidity Index (Charlson Score)	0.56 (1.14)	0.57 (1.06)	0.77

# Active vs. Provider-dependent Self-Care

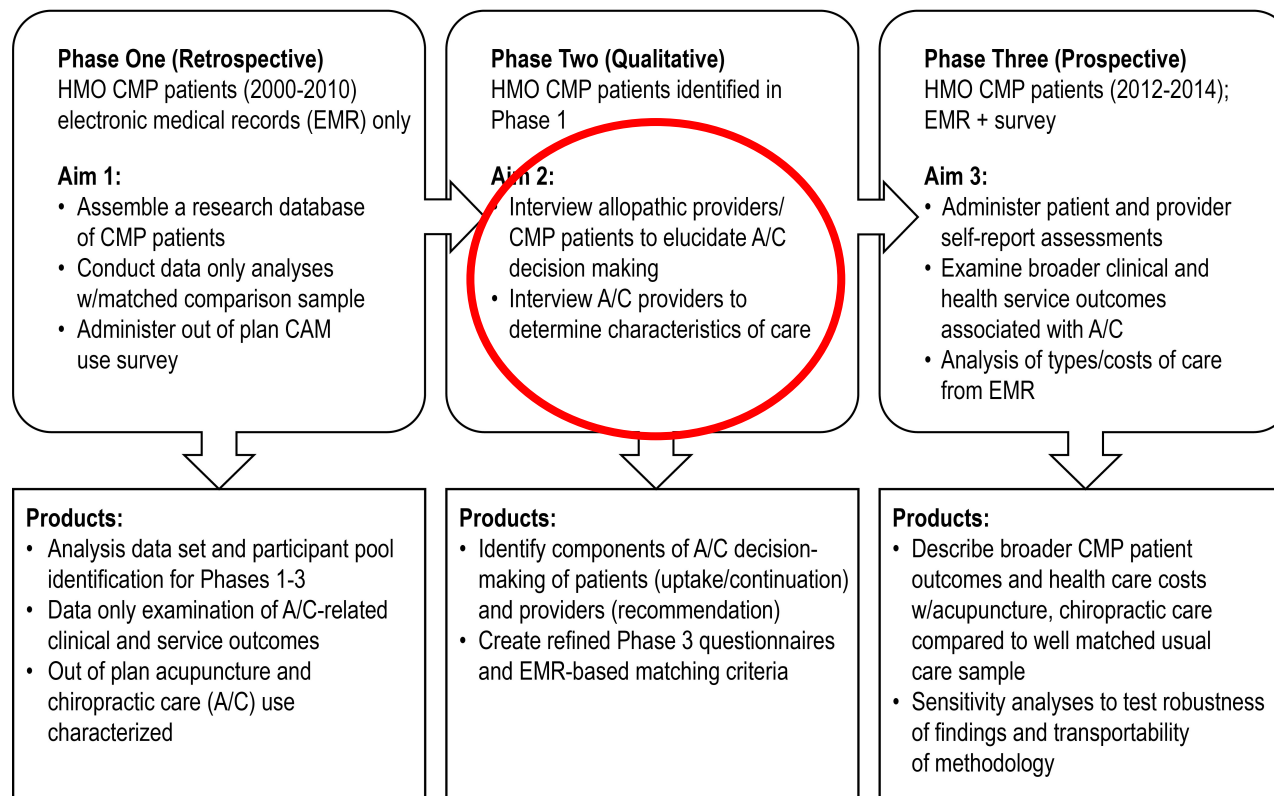
Active Self Care			
Provider-dependent Self Care		Yes	No
	Yes	5,176 (61%)	917 (11%)
	No	1,633 (19%)	765 (9%)

Active self care = physical activity, dietary practices, and stress reduction

Provider-dependent self care = acupuncture, chiropractic care, and massage

# Relief Study

## RELIEF – Study Phases, Procedures and Chronic Musculoskeletal Pain (CMP) Participant Flow



## Substudy #2 Methods

- Qualitative substudy exploring patients' and health care providers' attitudes and practices on pain treatment and self care, we interviewed:
  - 90 Patients with chronic musculoskeletal pain (11 focus groups and 10 individual interviews)
  - 25 Primary care providers
  - 13 physical medicine specialists (9 physiatrists & physical therapists; 4 nurses and social workers from pain clinic)
  - 20 CAM providers (6 health plan providers w/integrated practices; 8 acupuncturists; 6 chiropractors)



# Key Themes and Representative Quotes: Primary Care Providers

- Limited tools to help their patients with chronic pain....
  - “Patient expectations are a problem. But the hardest patients are the patients who think that I can fix them, and patients who will not be a partner, or have a hard time accepting that they need to work on fixing this. Our modality of treatments are really limited.”
  - “[patients say] don’t tell me to fix myself, you fix me, you’re my provider... It’s difficult to tell them I’ve done all I know how to do.”

# Key Themes and Representative Quotes: Primary Care Providers

- ...but appreciate of the role of self-care
  - “You’re not going to get a 50-year old woman who’s 300 lbs and in poverty into a yoga class... so this whole just do some yoga and take care of yourself and eat healthy... all that is really important and I know why that’s important and the patient already knows why that’s important. But to get there is such a long journey in their minds, that I just try to work on the little pieces. So things like eat one vegetable today, or buy a vitamin at Costco where it’s really cheap... or help them sleep.”
  - I really tend to advocate more for physical therapy to sort of undo the bad habits of ergonomics and/or stress. And patients don’t always like that...if it sounds easy it’s probably not going to be successful.”

# Key Themes and Representative Quotes: Physical Medicine Specialists

- Strong focus of on importance of active self-care
  - “I think there are benefits to massage stuff [but] it’s not empowering that person. It’s just another passive treatment that they can rely on, versus taking ownership of it”
  - “they need to show me that they’re going to... be compliant with what I’m asking them to do at home and when they are then you kind of earn your table time” (physical therapist)

# Key Themes and Representative Quotes: Acupuncturists

- ...also emphasized active self-care
  - “A lot of times we have chronic pain because you’re weak and stiff. You haven’t used yourself in, I don’t know, twenty years. And so, you know, everything is weak and stiff. And so, yeah, I [patient] can’t get rid of the pain. But you go out and rake some leaves, because that’s what you used to do and then the pain comes back and you blame, oh wow, the drugs didn’t work. Or the acupuncture didn’t work. It isn’t. It’s the simple fact that you are really weak, really stiff, very deconditioned. And before you can get to do anything you have to go and retrain yourself. Just like an athlete, got to get strong and flexible and function, and then you’ll be fine.”

# Key Themes and Representative Quotes: Acupuncturists

- ...and collaborating with the practitioners that can best guide this
  - “Doing good physical therapy is actually much harder than doing good acupuncture. You have to be intuitive almost, because you are now trying to help a person whose margins are very narrow. You sit around and do nothing all day, you’re never going to get well. You do too much, you’re going to hurt yourself and that’s counterproductive. So you have this little narrow band that you are in. And people with chronic pain, that band almost touches. But you still have to get in there and sort of pry this apart so they can begin that process of regaining function, right? And that’s where I have my physical therapy people do their magic. They seem to be able to pry those two bands apart.”

# Key Themes and Representative Quotes: Acupuncturists

- ...and sometimes appear more comfortable with their limitations than PCPs
  - “The most important thing, is the initial connection you make with the patient. That connection is critical, because that patient needs to know they have, number one, hope. I sell hope here. I hate to admit this, but that is one thing that Western medicine does really badly.”

# Key Themes and Representative Quotes: Patients

- ...know active self-care is important but also reported real world barriers
  - “[My chiropractor] was very instructive about what to do after he ...put the body back in place. ...You have to do certain exercises to keep those muscles from spasms again. Walking, exercising, different things like that, health-wise, looking at the whole body.”
  - “Because I’ve had so many different injuries, the number one remedy that would help me would be change jobs. And I’ve heard that from everybody. But I’m sorry. You know, at thirty-one bucks an hour, I ain’t changing crap!”

# Conclusions / Implications of Findings...

- Pain patients most often use both provider-directed and active self care, helping them to use in most adaptive combination may be key
- Patients reporting use of active self care used primary care and emergency services less frequently yet these patients showed higher use of specific health services for pain (PT, opiates)
- Widespread agreement across various types of practitioners and pain patients on importance of active self care, yet
  - Patients need guidance in such activities and report barriers
  - CAM providers appear more comfortable than PCPs with the limitations of what they can provide directly for pain relief



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