Association Between Nonpharmacological Pain Treatment Utilization and Opioid Tapering Among Veterans Receiving Long-Term Opioid Therapy

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Outline

Background

OPCC&CT/Whole Health System of Care
- Services and Resources
- CIH modalities and utilization
- Methods to identify CIH

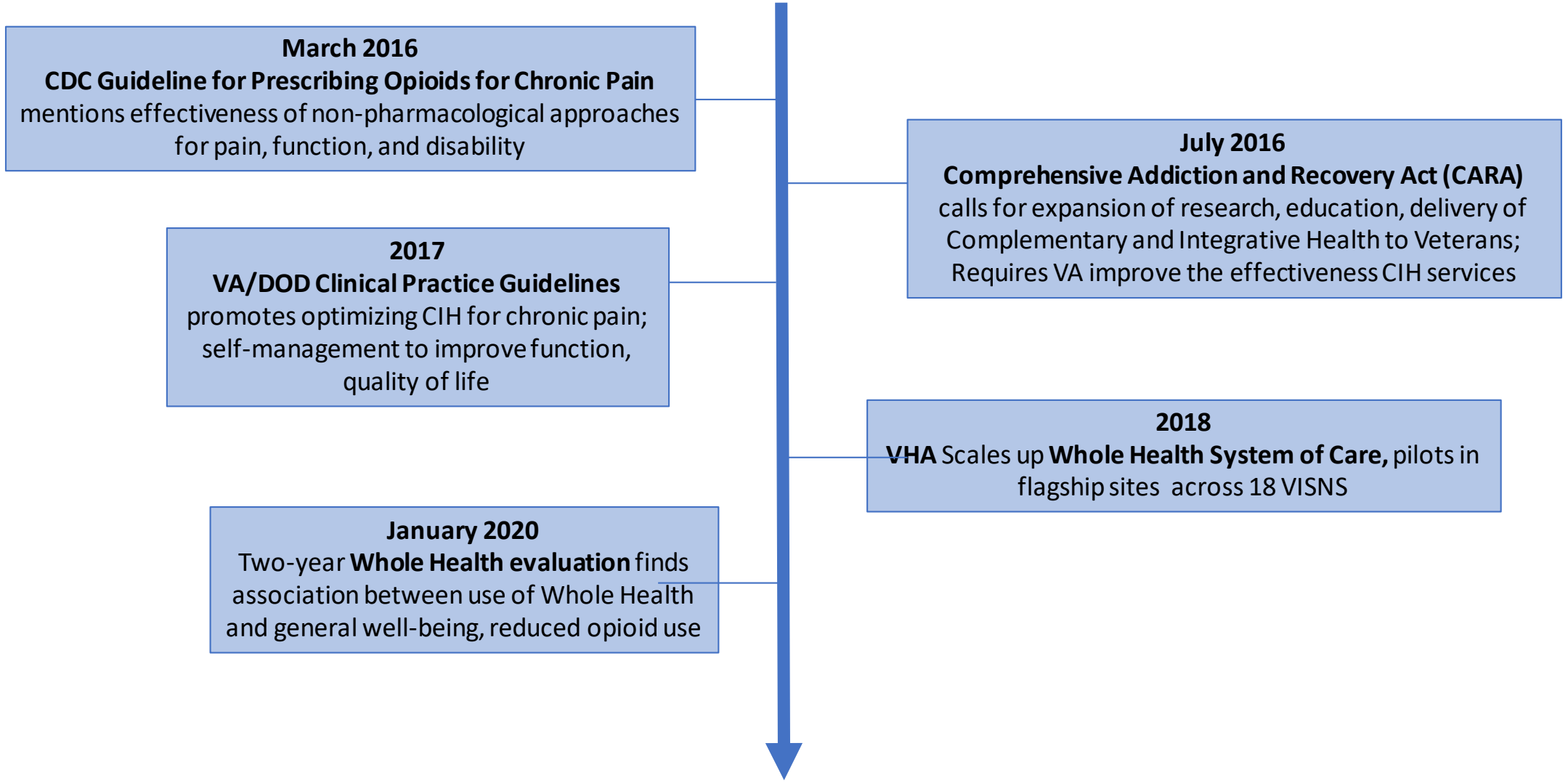
OPCC&CT pilot study
- Aims
- Methods
- Results
- Limitations
- Conclusion and Future Research

Poll slide #1

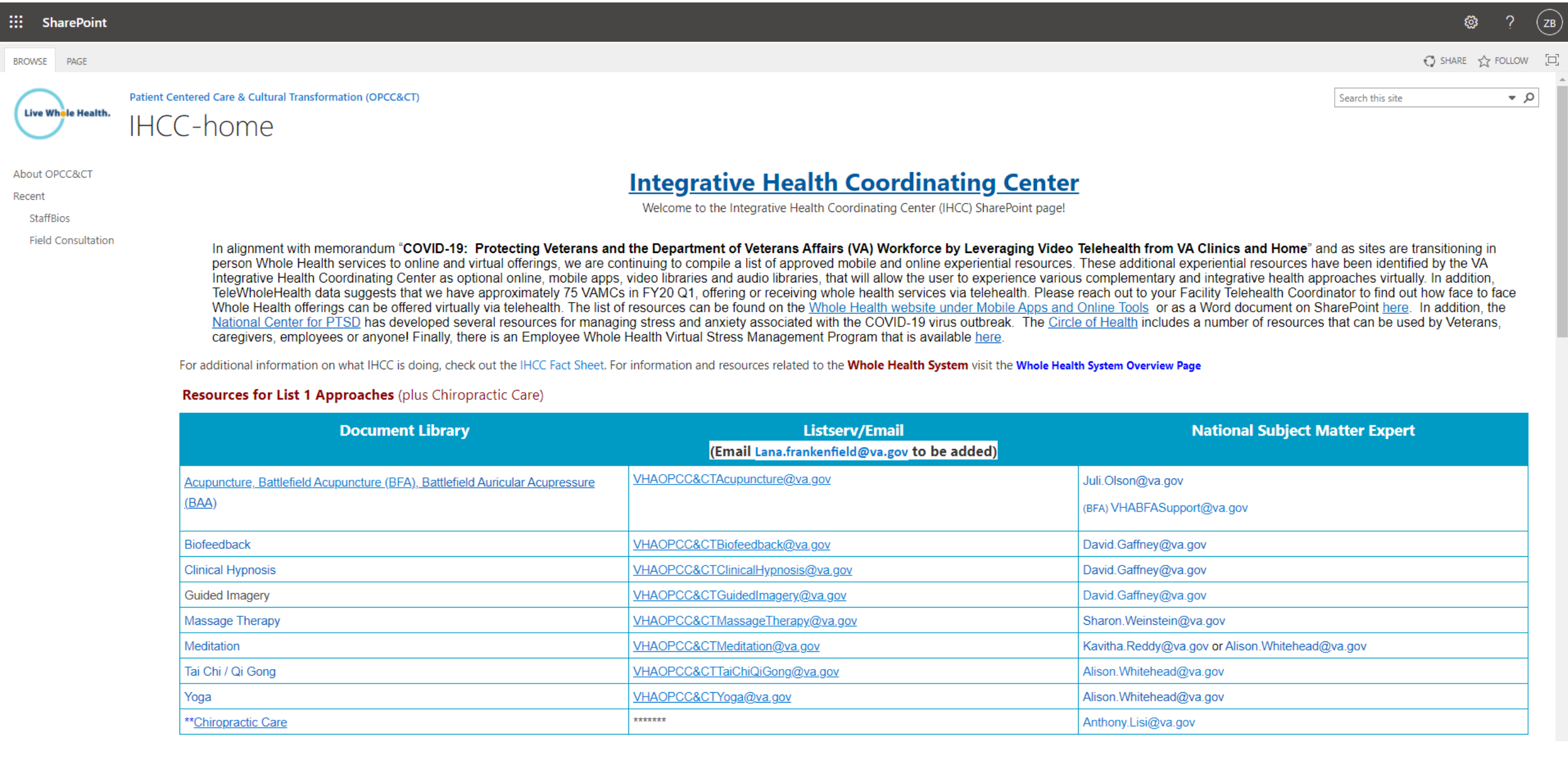
As a provider, how often do you refer patients on long-term opioid therapy to Complementary and Integrative Health services?

A. Weekly
B. Monthly
C. Several times per year
D. Rarely or never
E. I do not work with patients on long-term opioid therapy
F. Complementary and Integrative Health services are not available to my patients

Movement toward an adjunctive role for Whole Health services in opioid therapy de-implementation



Patient Centered Care & Cultural Transformation (OPCC&CT) - IHCC-home (sharepoint.com)



CIHEC
Complementary and Integrative Health Evaluation Center

Live Whole Health.

The VA Office of Patient Centered Care and Cultural Transformation's and VA Complementary and Integrative Health Evaluation Center's

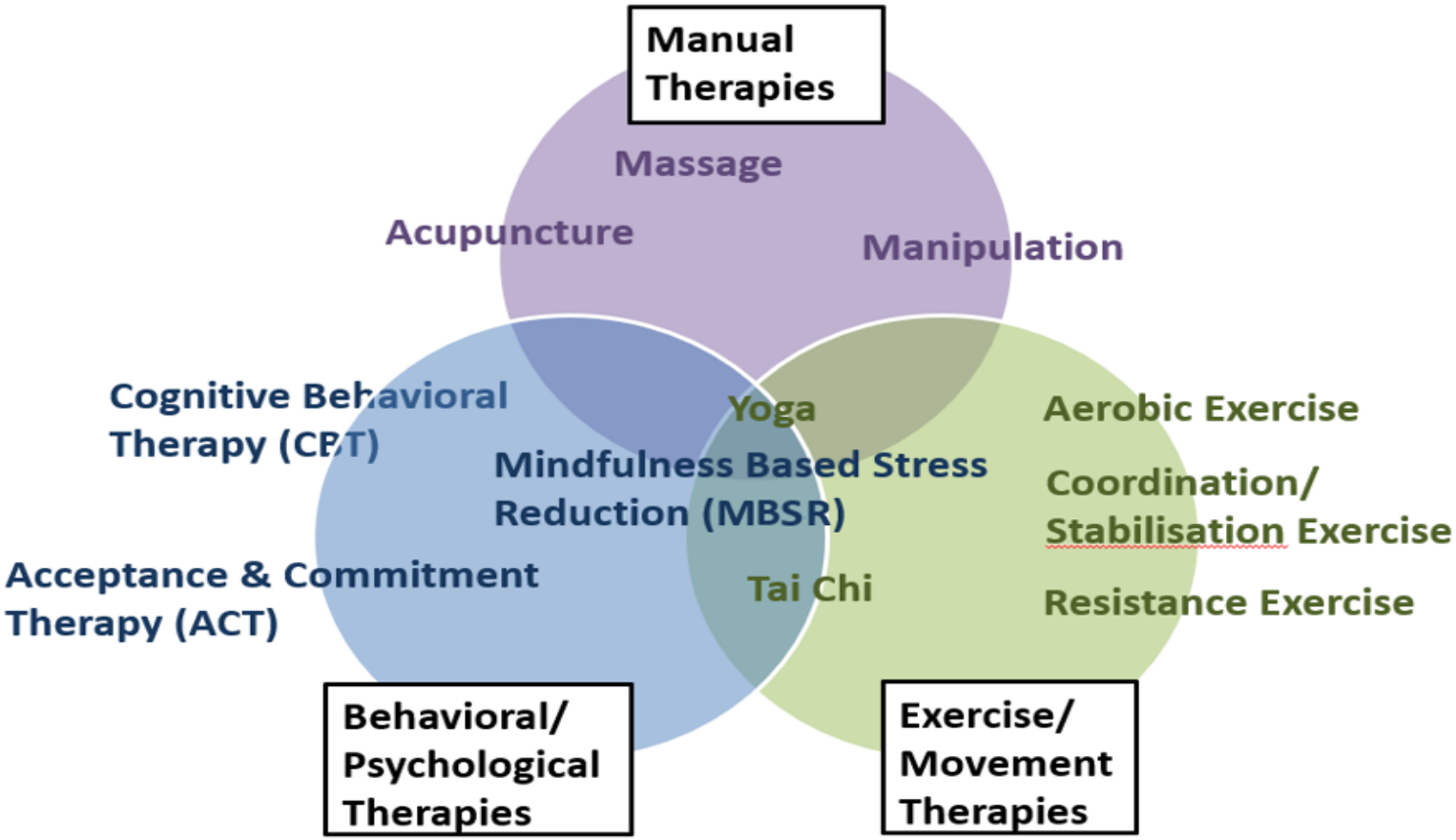
Library of Research Articles on Veterans and Complementary and Integrative Health Therapies

April, 2020

CIH Therapies

CIH Health Outcomes

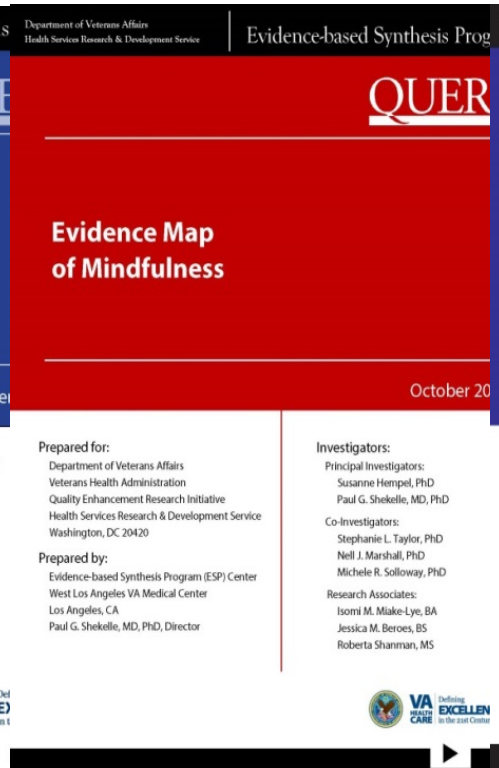
2016 VA State of the Art Conference on Evidence for Non-Pharmacological Approaches for MSK Pain

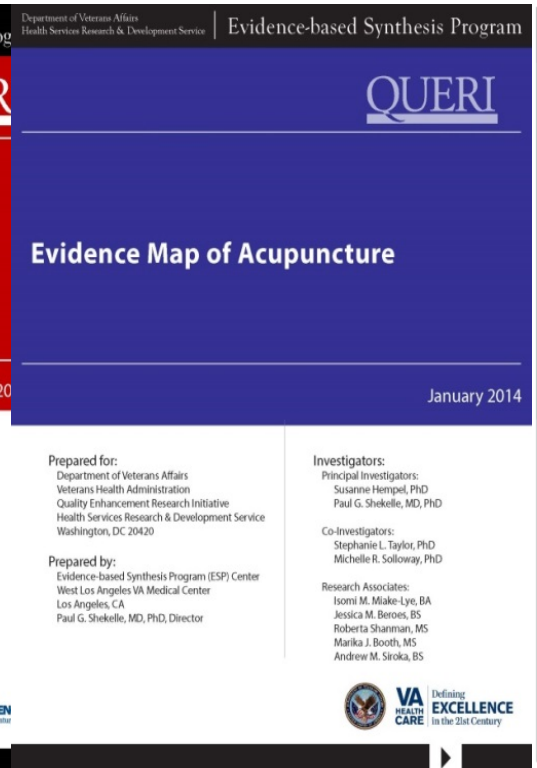


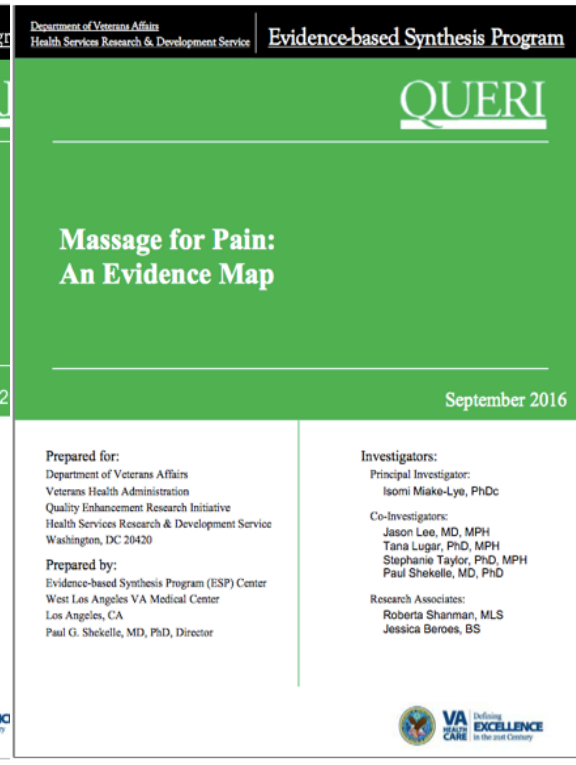
B Kligler, MJ Bair, R Banerjea, L DeBar, S Ezeji-Okoye, A Lisi, J Murphy, F Sandbrink, D Cherkin. Clinical Policy Recommendations from the VHA State-of-the-Art Conference on Non-Pharmacological Approaches to Chronic Musculoskeletal Pain. JGIM; 2018 (33, Supp 1):16–23.

QUERI "Evidence Maps"

https://www.research.va.gov/pubs/varqu/spring2015/spring15-10.cfm







CIH Approach	Most Frequently Reported Reason for Using CIH Approach n (%)	CIH Approach was Moderately/Very Helpful n (%)
Acupuncture (n = 107)	For pain: 99 (93%)	54 (54%)
Battlefield Acup. (n = 13)	For pain: 12 (92%)	5 (42%)
Chiropractic (n = 241)	For pain: 221 (92%)	168 (76%)
Acupressure (n = 93)	For pain: 76 (82%)	43 (57%)
Massage Therapy (n = 281)	For pain: 210 (75%)	161 (77%)
Reflexology (n = 75)	For pain: 52 (69%)	20 (38%)
Healing Touch/ Reiki/ Ther. Touch (n = 61)	For pain: 42 (69%)	23 (55%)
Movement Therapy (n = 112)	For pain: 73 (65%)	41 (56%)
Biofeedback (n = 43)	For pain: 20 (46%)	10 (50%)

Taylor SL, Hoggatt KJ, Kligler B. Complementary and Integrated Health Approaches: What Do Veterans Use and Want. J Gen Intern Med. 2019 Jul;34(7):1192-1199.

CARA Act 2016 & Whole Health Flagship Pilot

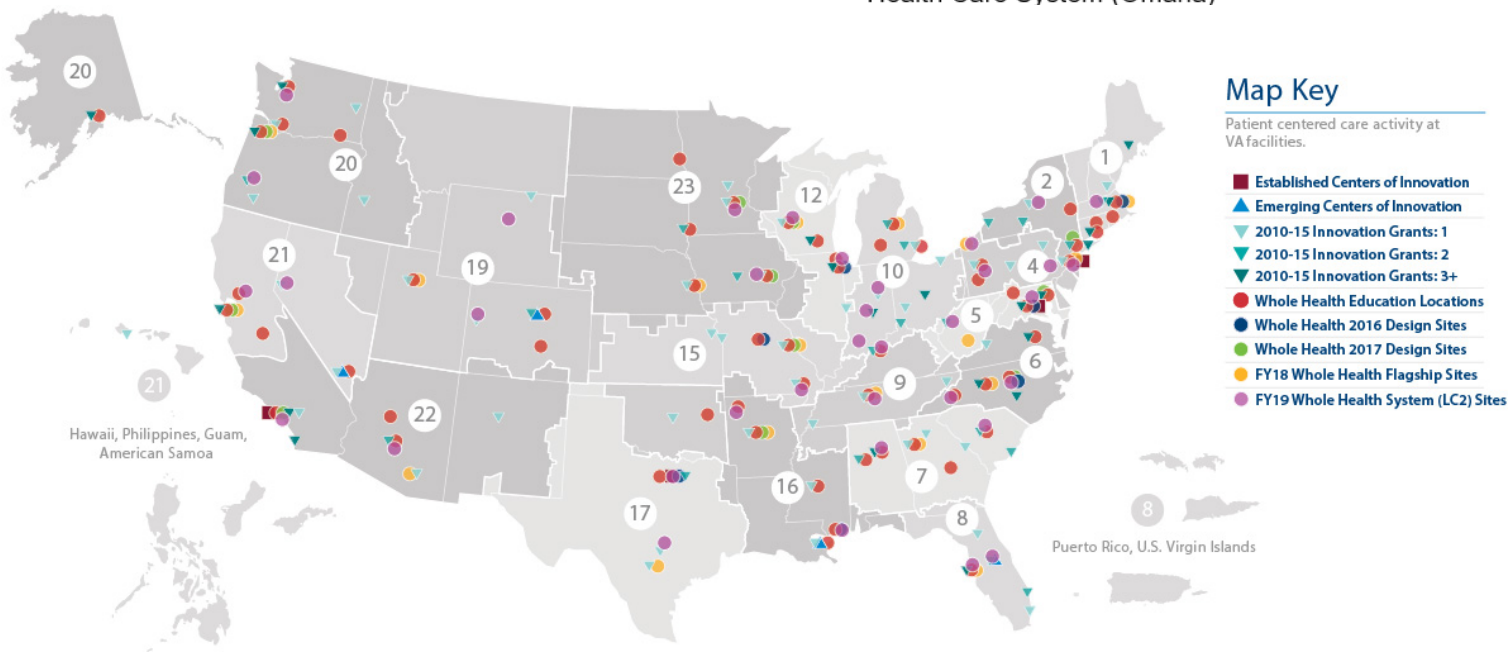
S.524 - Comprehensive Addiction and Recovery Act of 2016 - Subtitle C— Complementary and Integrative Health (CIH)

- **Sec. 931** Establishment of "Creating Options for Veterans' Expedited Recovery" Commission

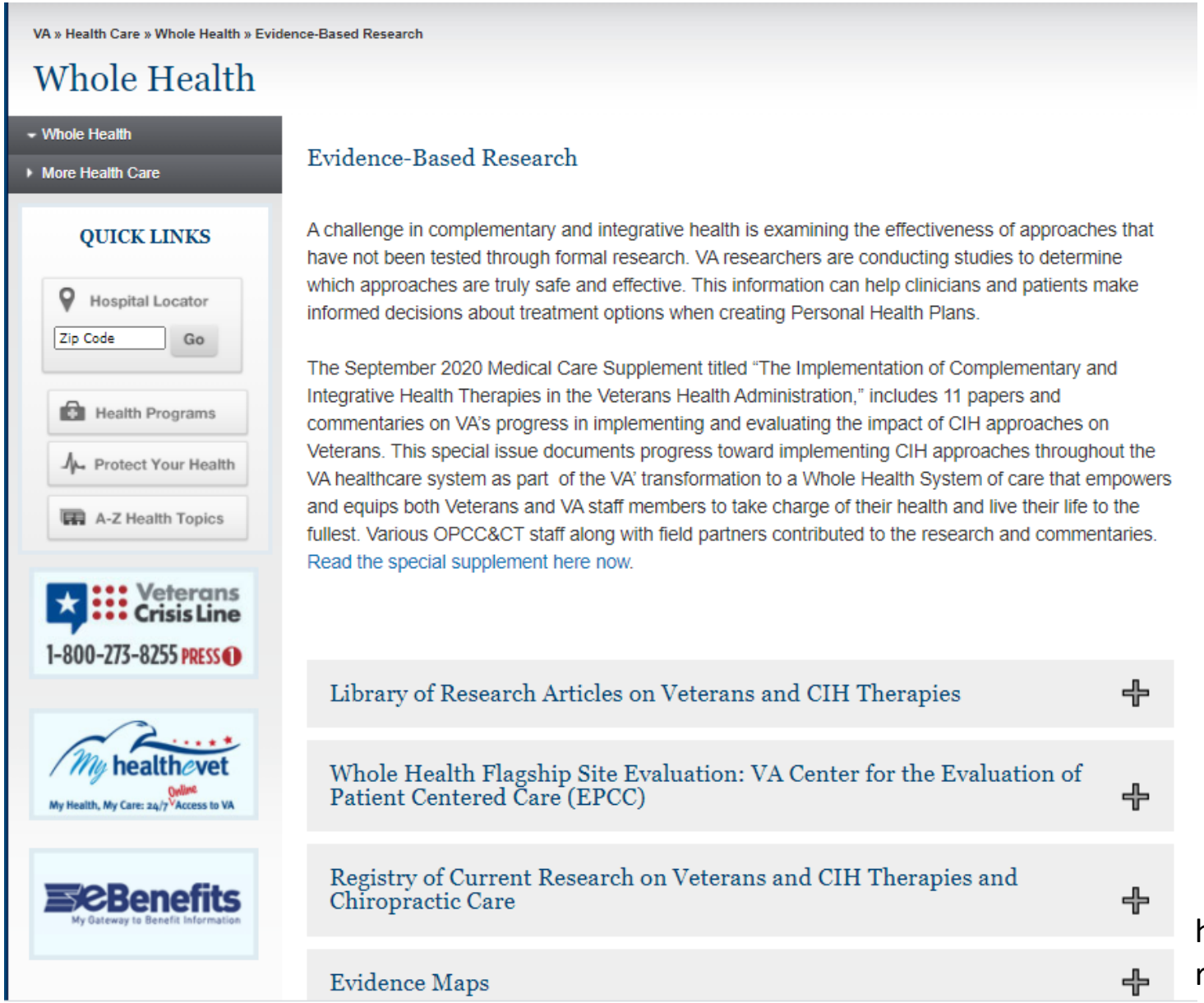
- **Sec. 932 Expansion of research and education on and delivery of CIH to veterans.**
  - Development of plan to expand research, education, and delivery of CIH to Veterans (within 180 days)

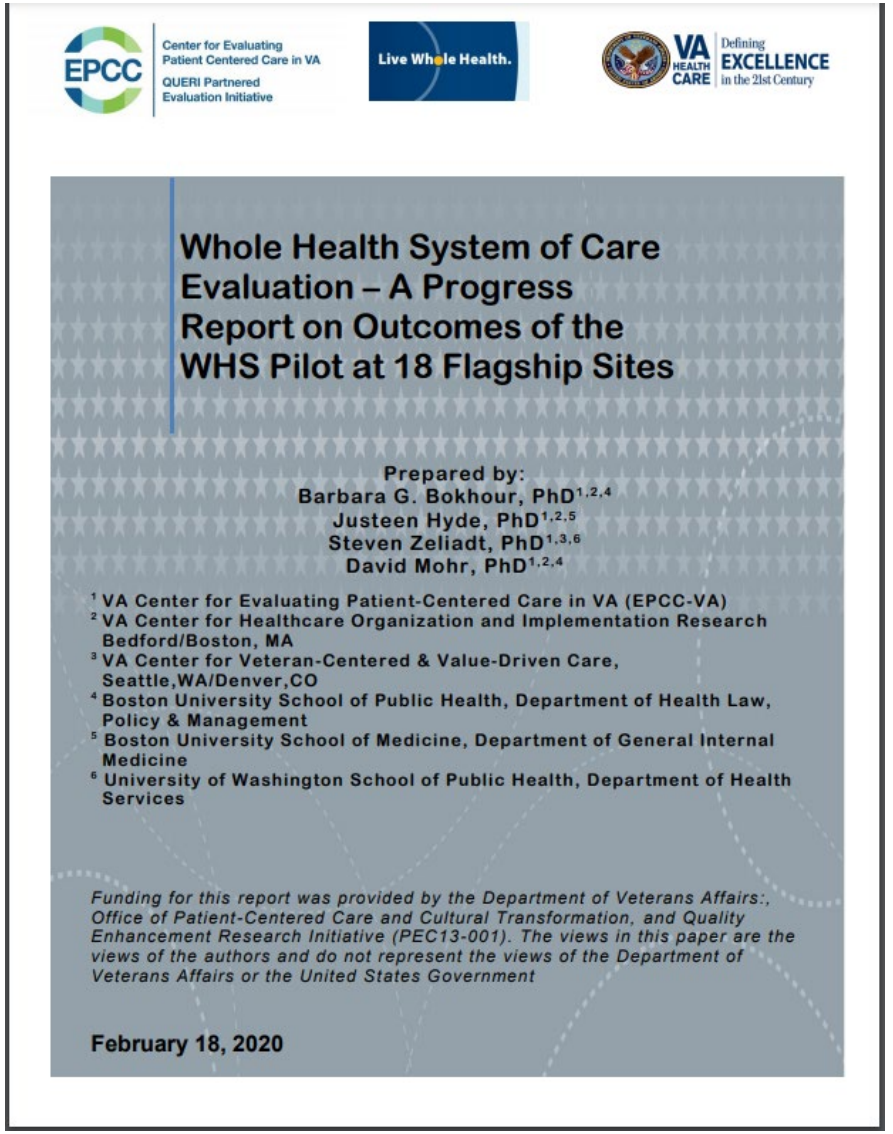
- **Sec. 933. Pilot program on integration of CIH and related issues for veterans and family members of veterans.**
  https://www.congress.gov/bill/114th-congress/senate-bill/524/text

- **VISN 1:** VA Boston Health Care System
- **VISN 2:** VA New Jersey Health Care System (East Orange)
- **VISN 4:** Erie VA Medical Center
- **VISN 5:** Beckley VA Medical Center
- **VISN 6:** W. G. (Bill) Hefner VA Medical Center (Salisbury)
- **VISN 7:** Atlanta VA Medical Center
- **VISN 8:** Tampa VA Medical Center
- **VISN 9:** Tennessee Valley Health Care System
- **VISN 10:** Aleda E. Lutz VA Medical Center (Saginaw)
- **VISN 12:** Tomah VA Medical Center
- **VISN 15:** St. Louis VA Health Care System
- **VISN 16:** Central Arkansas Veterans Healthcare System (Little Rock)
- **VISN 17:** South Texas Health Care System (San Antonio)
- **VISN 19:** Salt Lake City VA Medical Center
- **VISN 20:** VA Portland Health Care System
- **VISN 21:** Palo Alto VA Medical Center
- **VISN 22:** Tucson VA Medical Center
- **VISN 23:** VA Nebraska-Western Iowa Health Care System (Omaha)



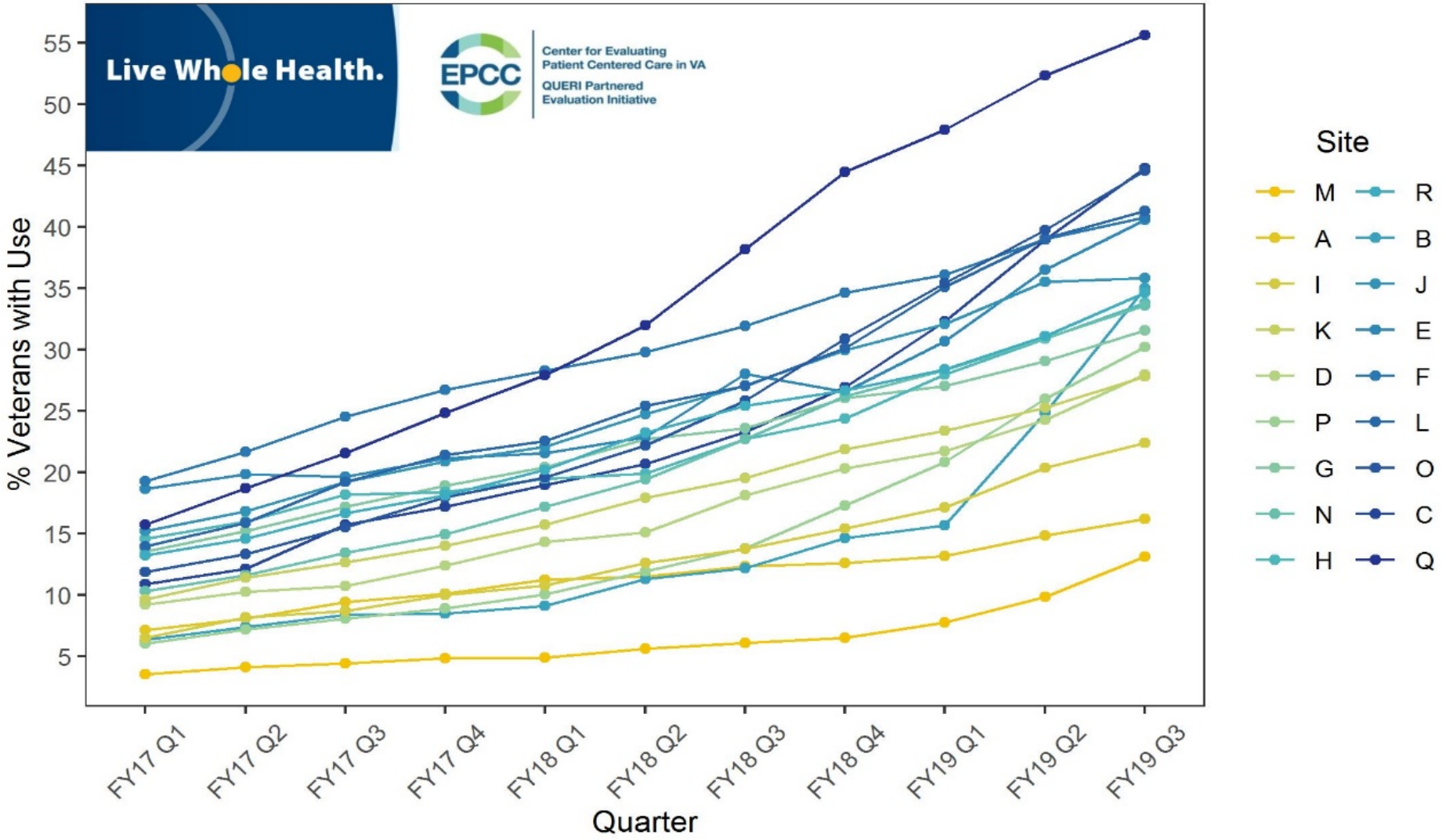
Flagship Evaluation Report for CARA



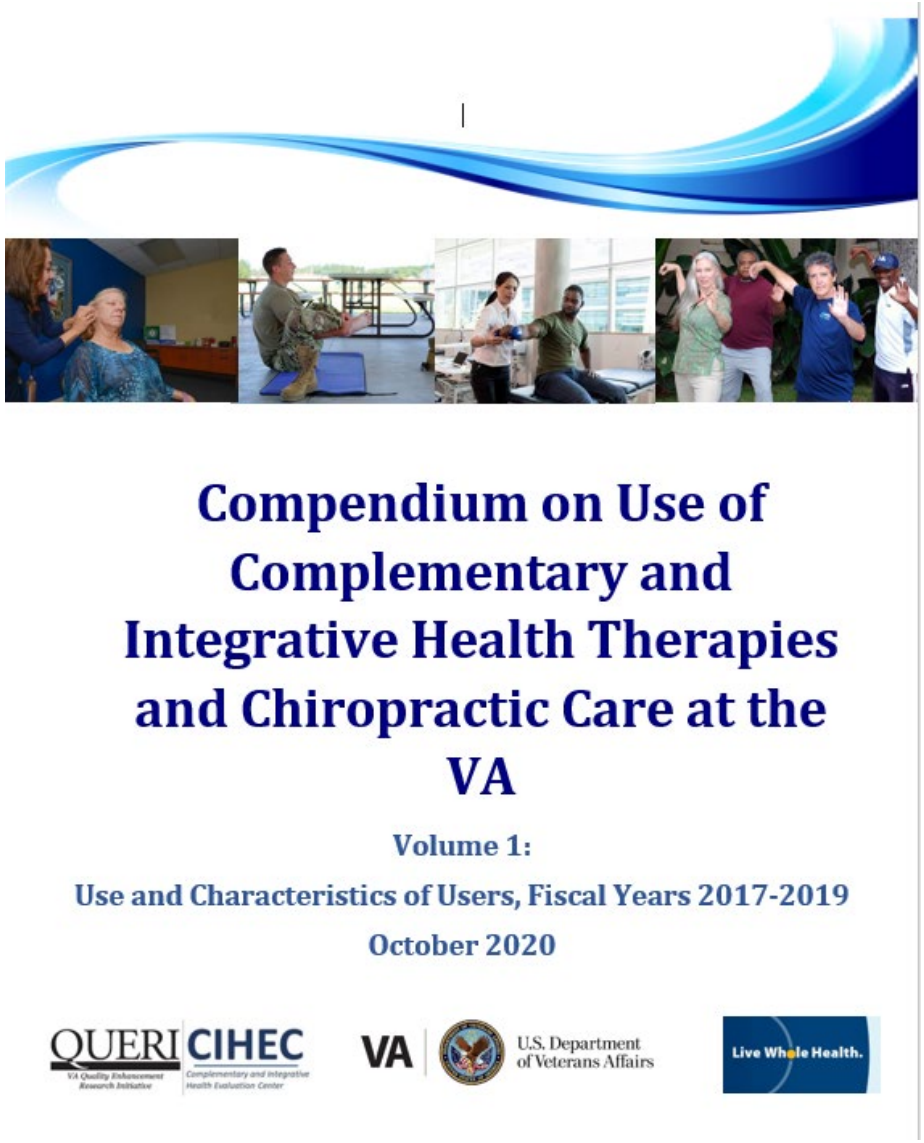


https://www.va.gov/WHOLEHEALTH/professional-resources/clinician-tools/Evidence-Based-Research.asp

Whole Health Patients – Cumulative Use During Flagship Implementation

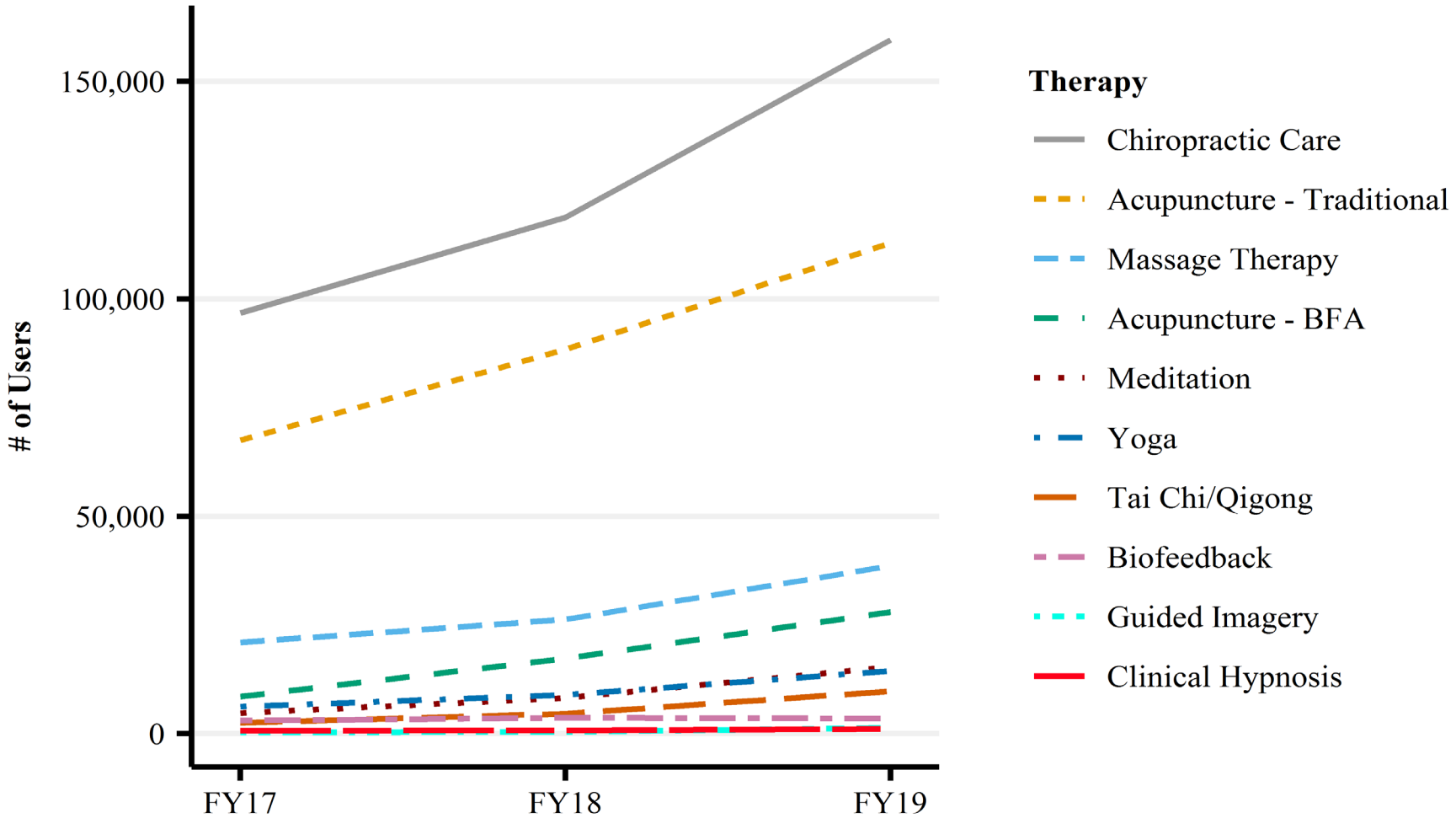


National Compendium



Therapy (FY19)	# of Users	# of Visits
Any Therapy	302,296	2,792,653
Chiropractic Care	159,506	1,224,324
Acupuncture - Traditional	112,826	868,728
Acupuncture - BFA	27,990	79,911
Massage Therapy	38,582	386,828
Meditation	15,317	60,866
Yoga	14,424	92,163
Tai Chi/Qigong	9,806	62,038
Biofeedback	3,534	12,051
Guided Imagery	1,340	3,209
Clinical Hypnosis	1,138	2,535

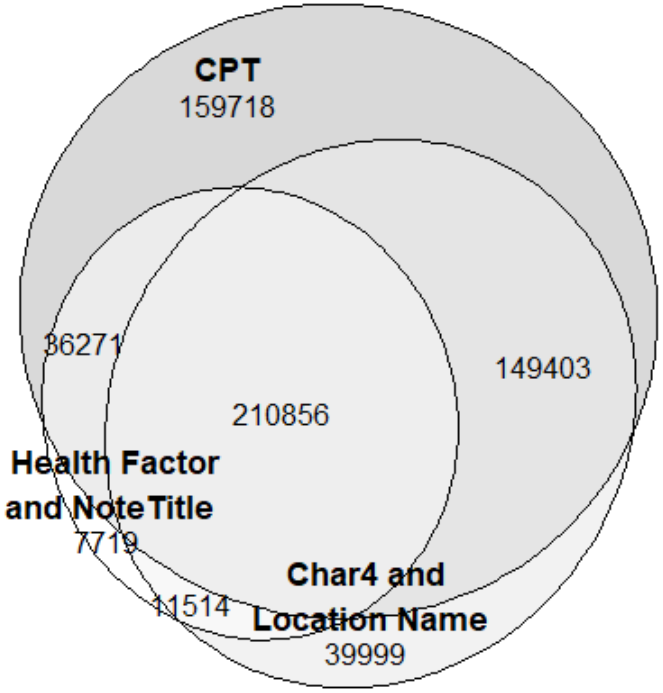
Increasing National Use



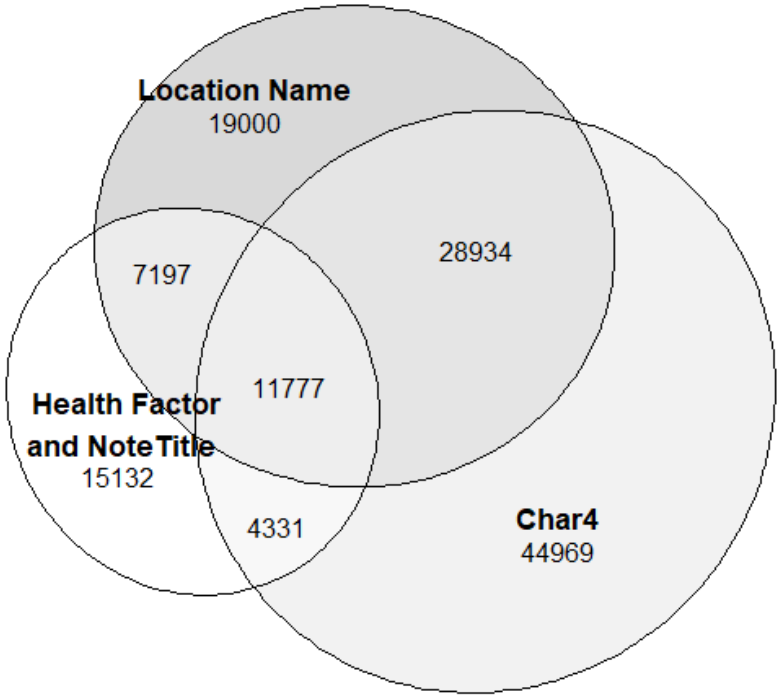
Identifying CIH Use in EHR

- VERA (Veterans Equitable Resource Allocation) coding incentives
- Combine information from CPT codes, VA accounting codes (Char4, stop codes), Healthfactors, clinic names, and clinic notes to find utilization
- Each therapy has a unique coding pattern - continually evolving

Acupuncture



Meditation



What are the patterns of CIH use among Veterans on long-term opioid therapy?

How is CIH use associated with opioid dose and tapering?

CIH Use and Opioid Prescription among Veterans using Long-Term Opioid Therapy for Pain

VA Connecticut

- Anne C. Black, PhD
- William C. Becker, MD
- Robert D. Kerns, PhD
- Rixin Wang, PhD
- Melissa Skanderson, MSW

VA Puget Sound

- Steven B. Zeliadt, PhD
- Hannah Gelman, PhD
- Jamie H. Douglas, MA

Live Whole Health.

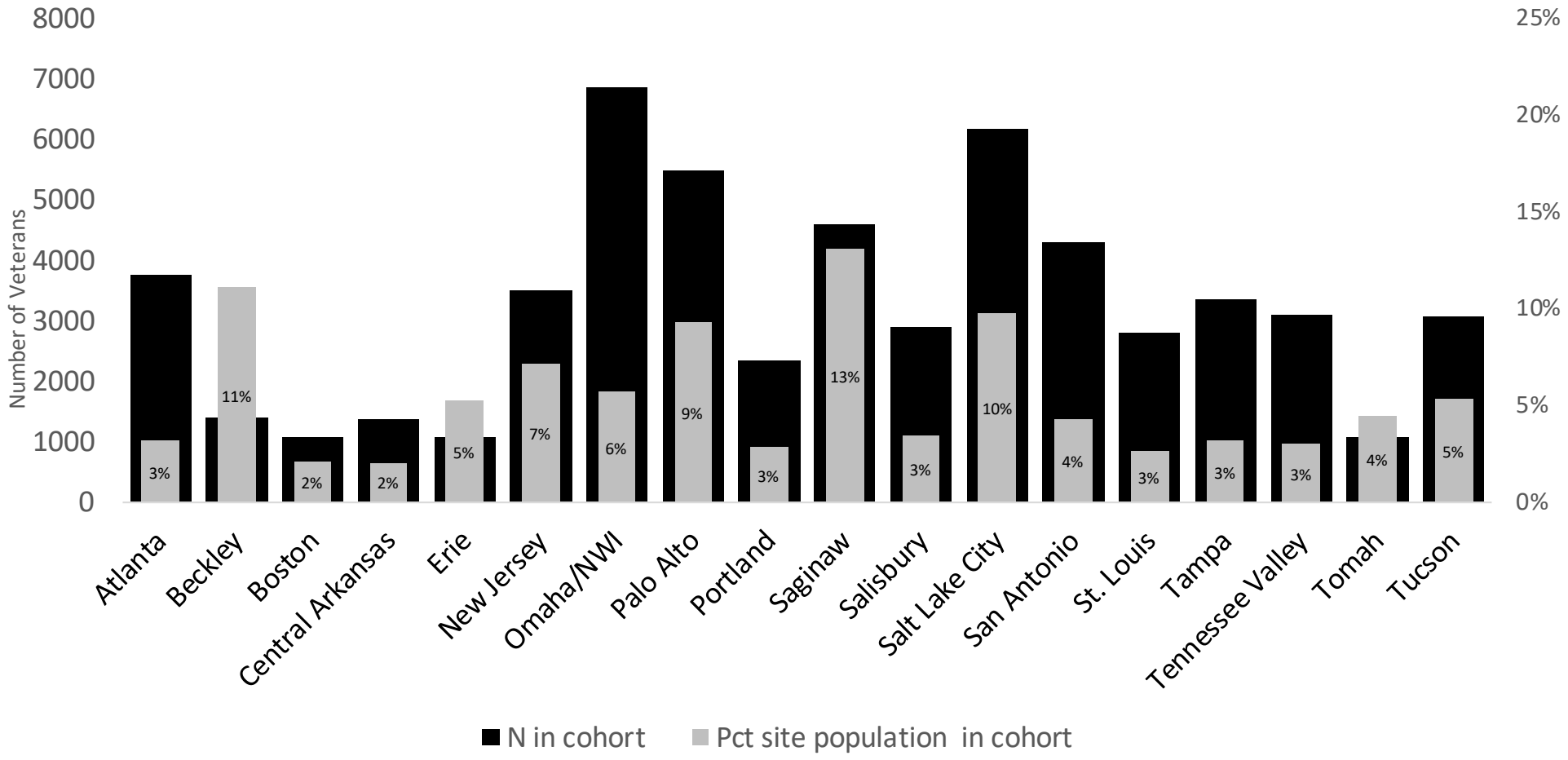
VA | U.S. Department of Veterans Affairs
Veterans Health Administration

Aims

- Define cohort of Veterans prescribed LTOT for chronic pain at Whole Health flagship sites
- Describe CIH utilization in the context of LTOT
- Quantify patterns of LTOT tapering
- Assess association between LTOT tapering and CIH utilization

Cohort: 58,119 Veterans met criteria for long-term opioid therapy (LTOT) between 1/1/2018 and 2/28/2019 at one of 18 Whole Health Flagship VA Medical Centers

LTOT: 90 or more consecutive days, allowing for 30 days between refills



	%/Mean(SD)
Male	92.85
Age	64.16 (12.02)
Married	58.79
Race	
Black or African-American	11.75
White	81.26
Other Race or Multi Race	1.97
Missing/Unknown	4.98
Hispanic or Latino	3.69

Baseline pain intensity (NRS)	4.10 (3.15)
Baseline pain intensity >= 4	58.39
Chronic pain (2 or more NRS >= 4 past yr)	61.03
Mental health diagnosis	
Any mental health diagnosis	42.08
Anxiety	16.04
Depression	24.13
PTSD	22.47
Chronic disease	
Obesity	18.74
Diabetes	36.25
COPD	23.96
Cardiovascular disease	27.97

Opioid prescription

-data extracted from EHR pharmacy records

-mean mg morphine-equivalent daily dose (MEDD) calculated for the baseline LTOT period, each 30-day period

-days with no prescription averaged into the MEDD calculation as 0 mg

-30 day periods of no prescription assumed 0 mg if date precedes latest healthcare utilization

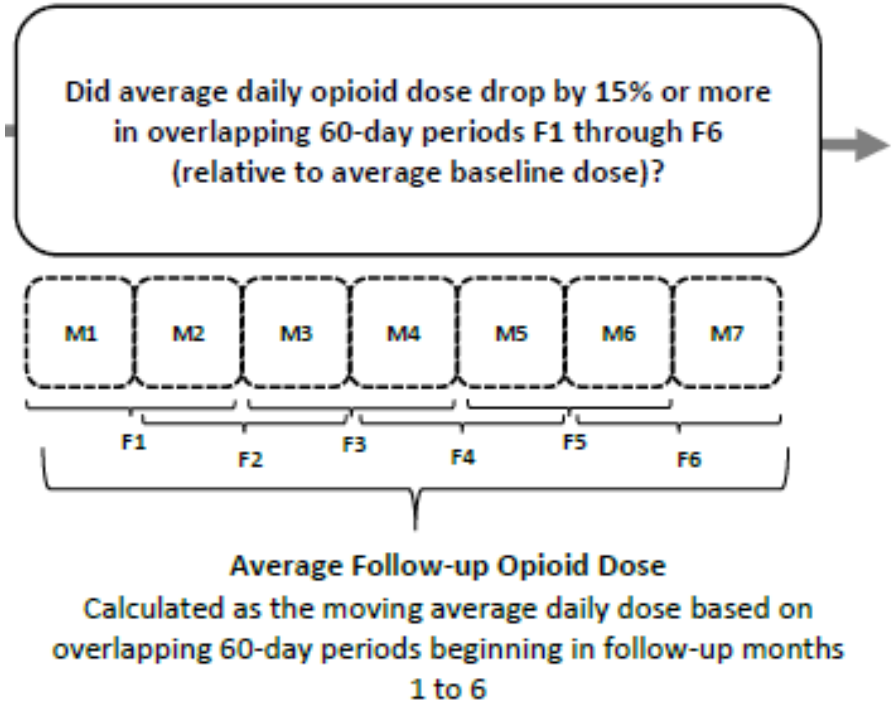
Opioid tapering, dichotomous

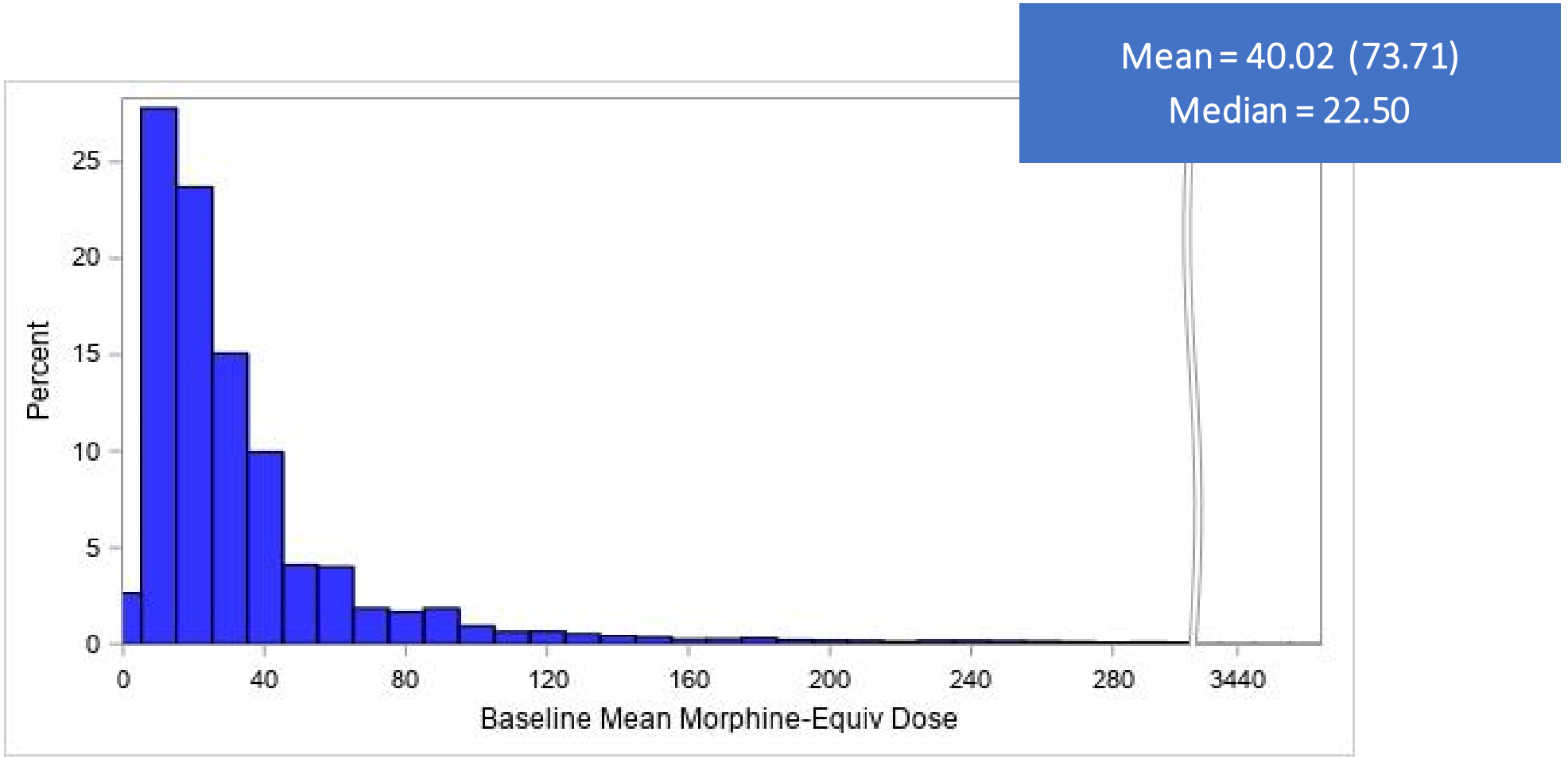
-moving average mg MEDD calculated from "overlapping 60-day periods" (Fenton et al., 2017)

-Mean reduction of >=15% from the baseline MEDD in the 2-month period, with no increase in MEDD of >= 10% over baseline for any 2-month average

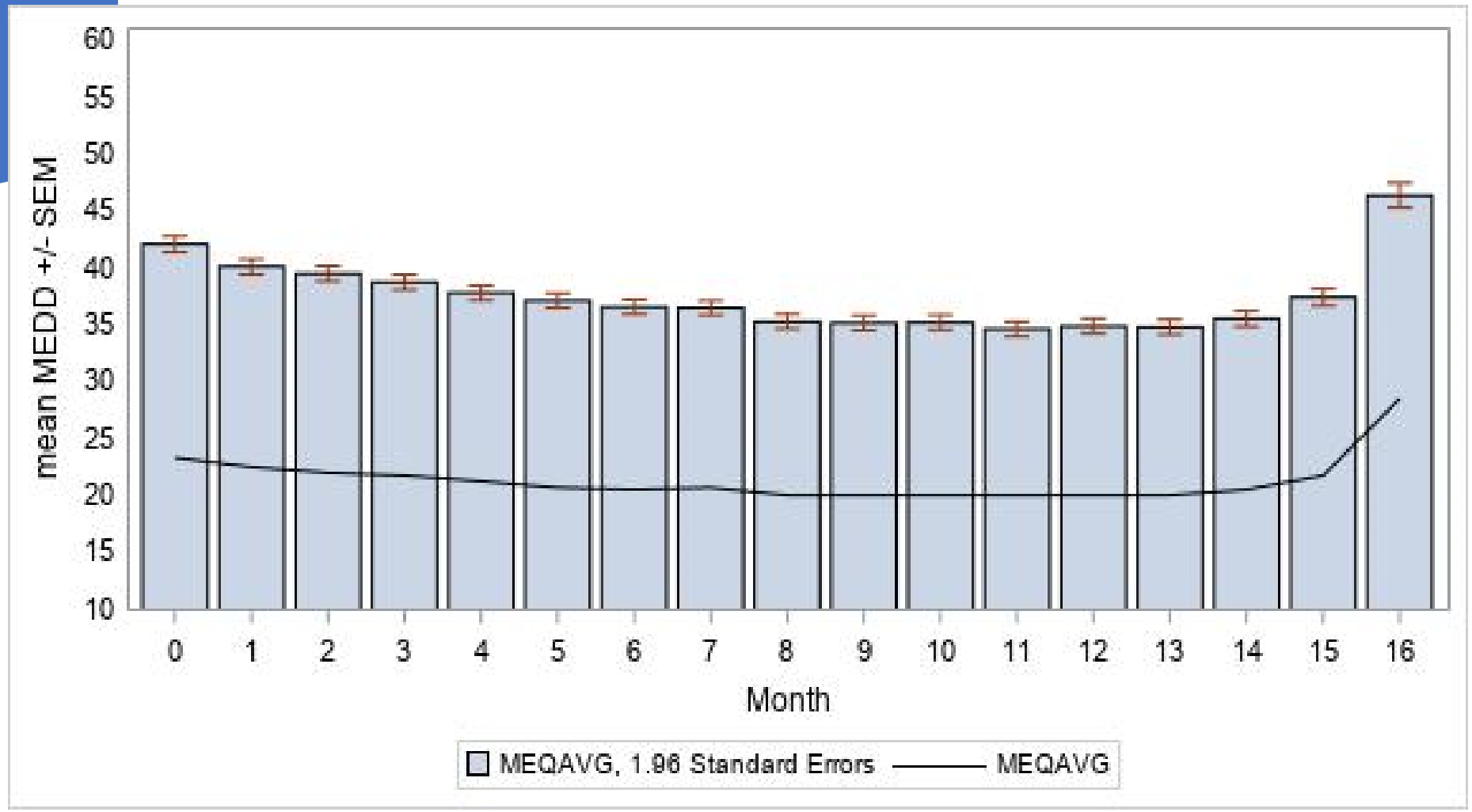
Opioid tapering, slope

-slope of moving average mg MEDD

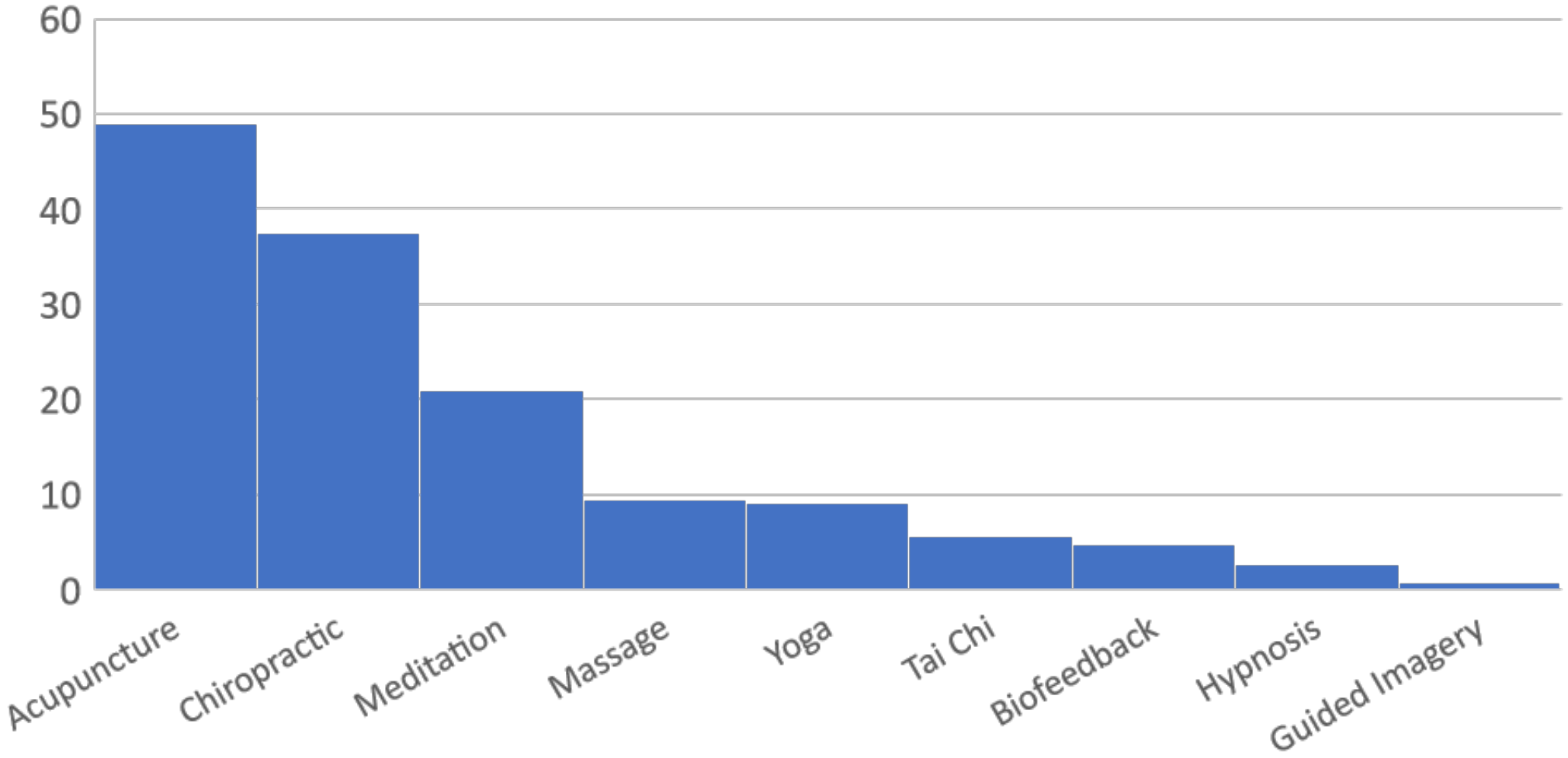



Mean = 40.02 (73.71)
Median = 22.50
Percent
25
20
15
10
5
0
0
40
80
120
160
200
240
280
3440
Baseline Mean Morphine-Equiv Dose

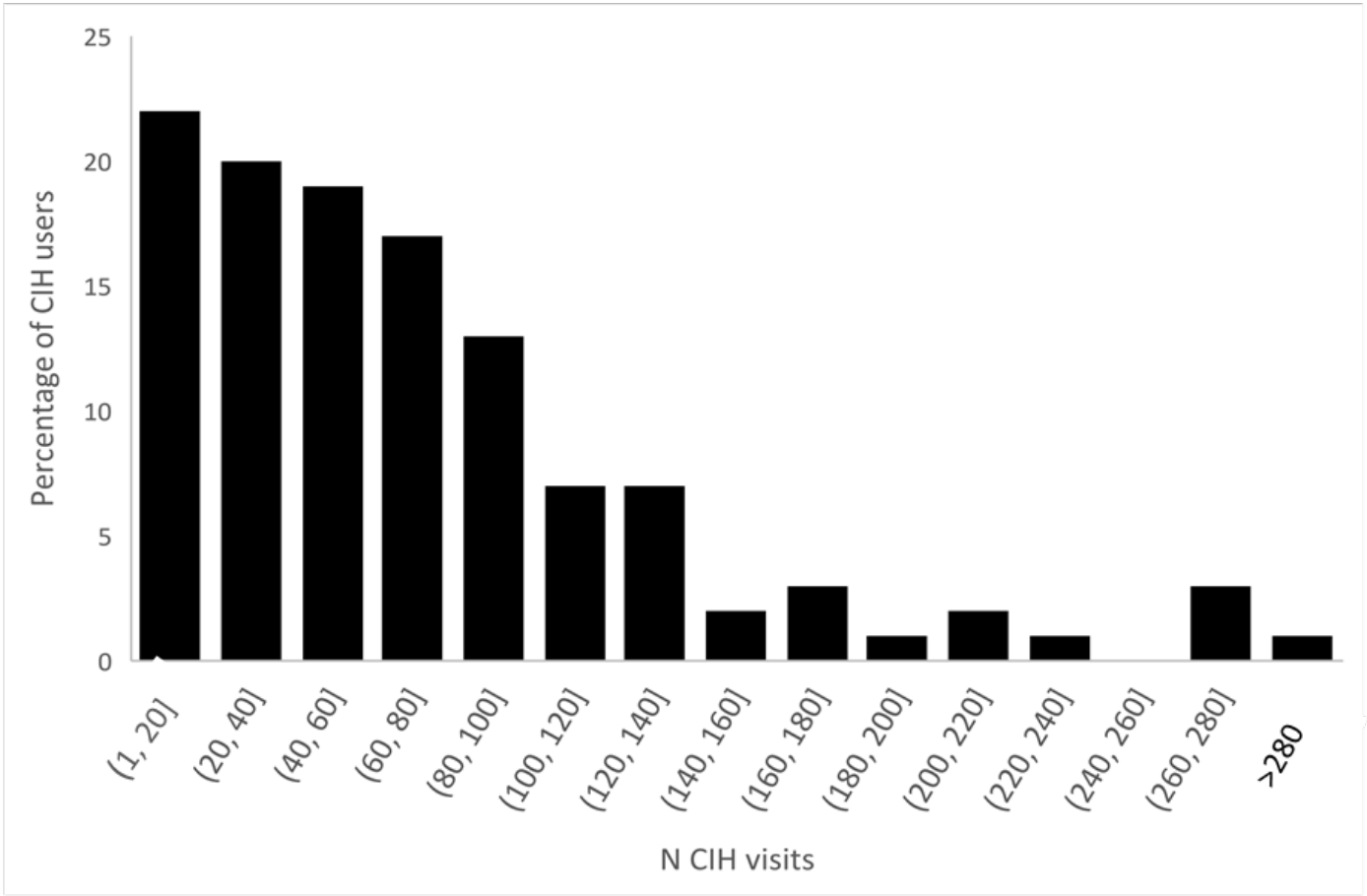
42.48% of Veterans achieved >=15% taper in study period



13.76% of cohort used any CIH. The most common modalities were Acupuncture and Chiropractic care



Frequency of CIH visits over 2 years varied substantially



Covariates of CIH use

Female

African-American

Hispanic

Younger age

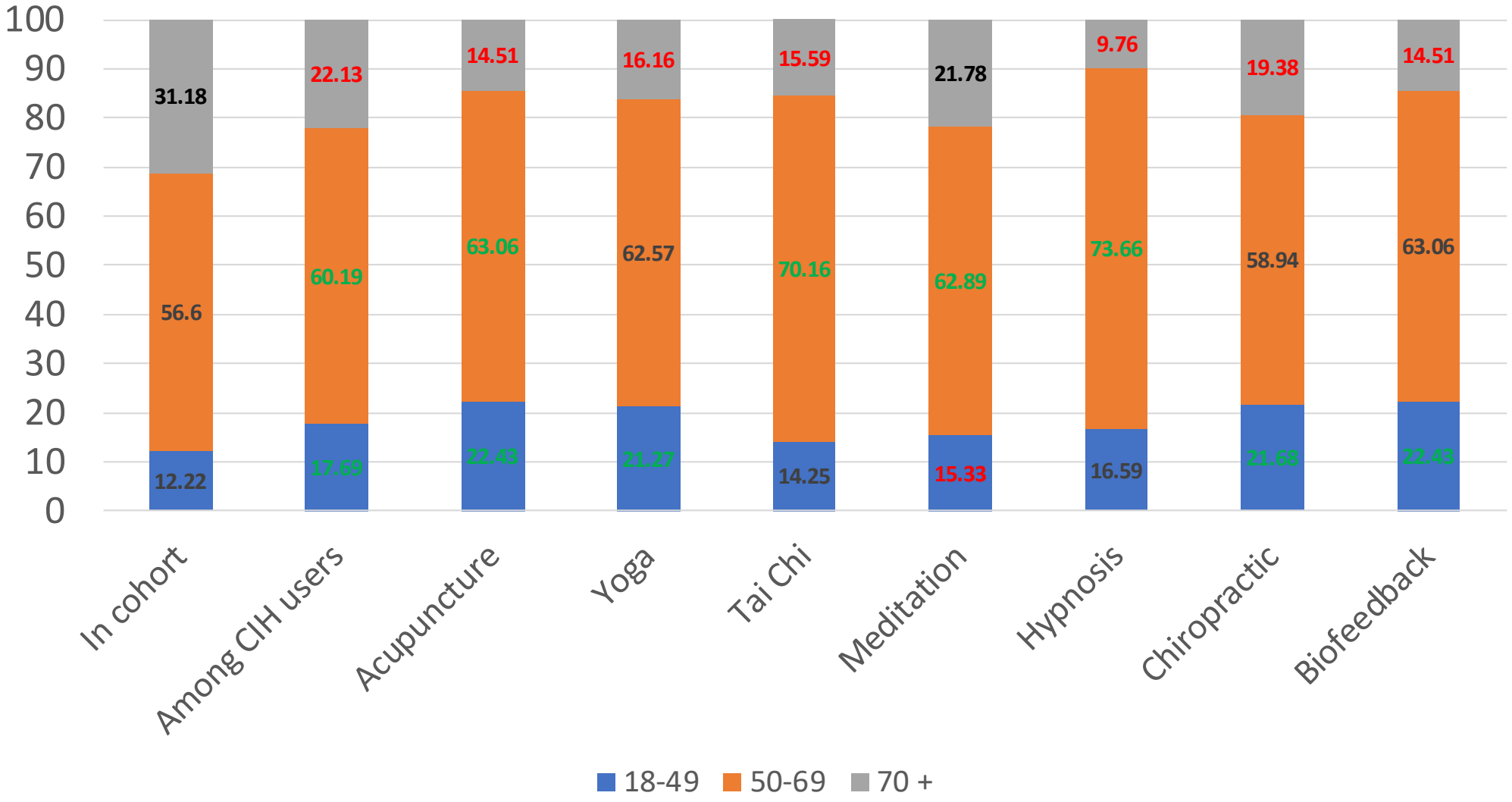
Mental health diagnosis

Diagnosis of obesity

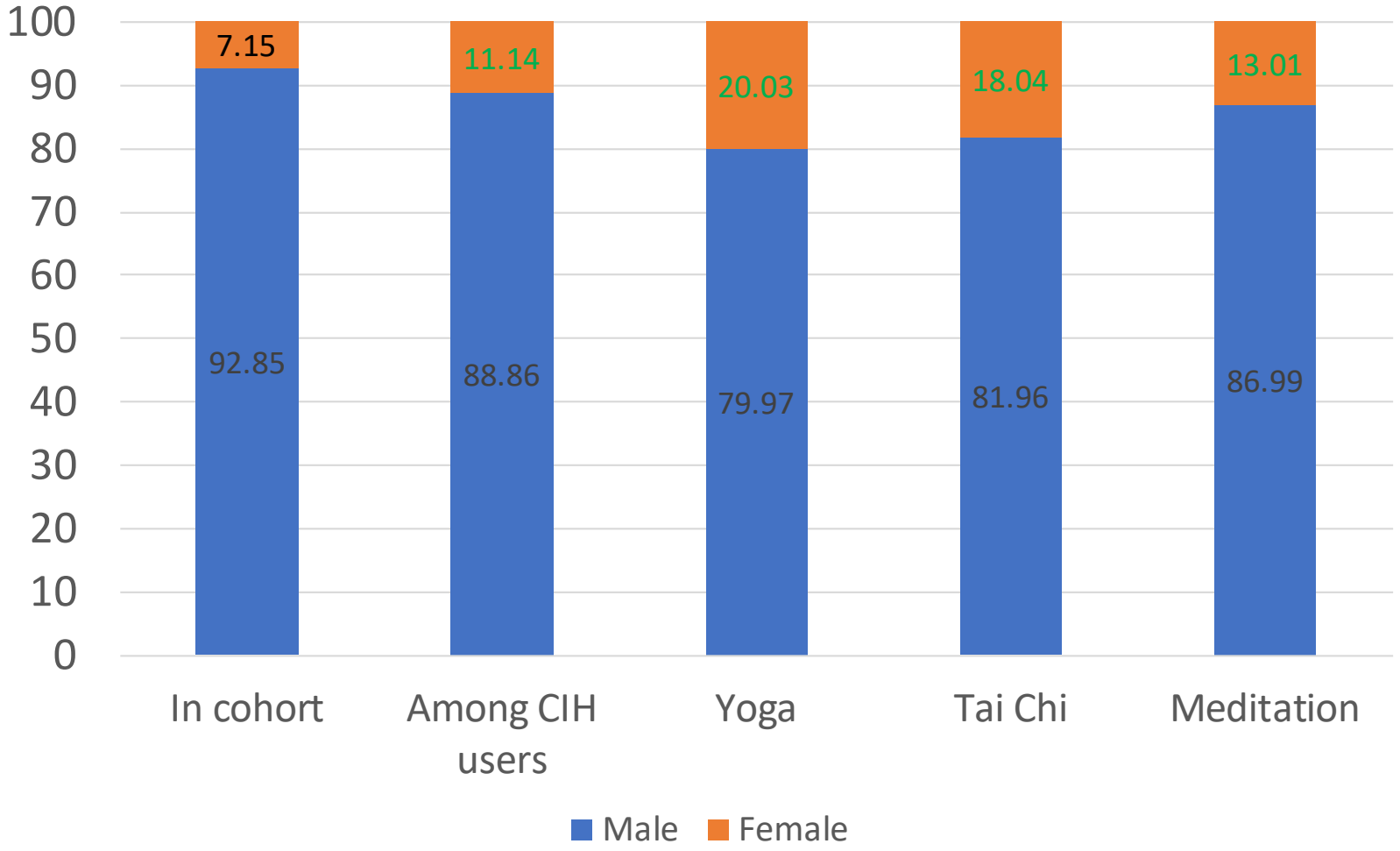
Higher baseline pain intensity

Higher baseline Mean mg MEDD

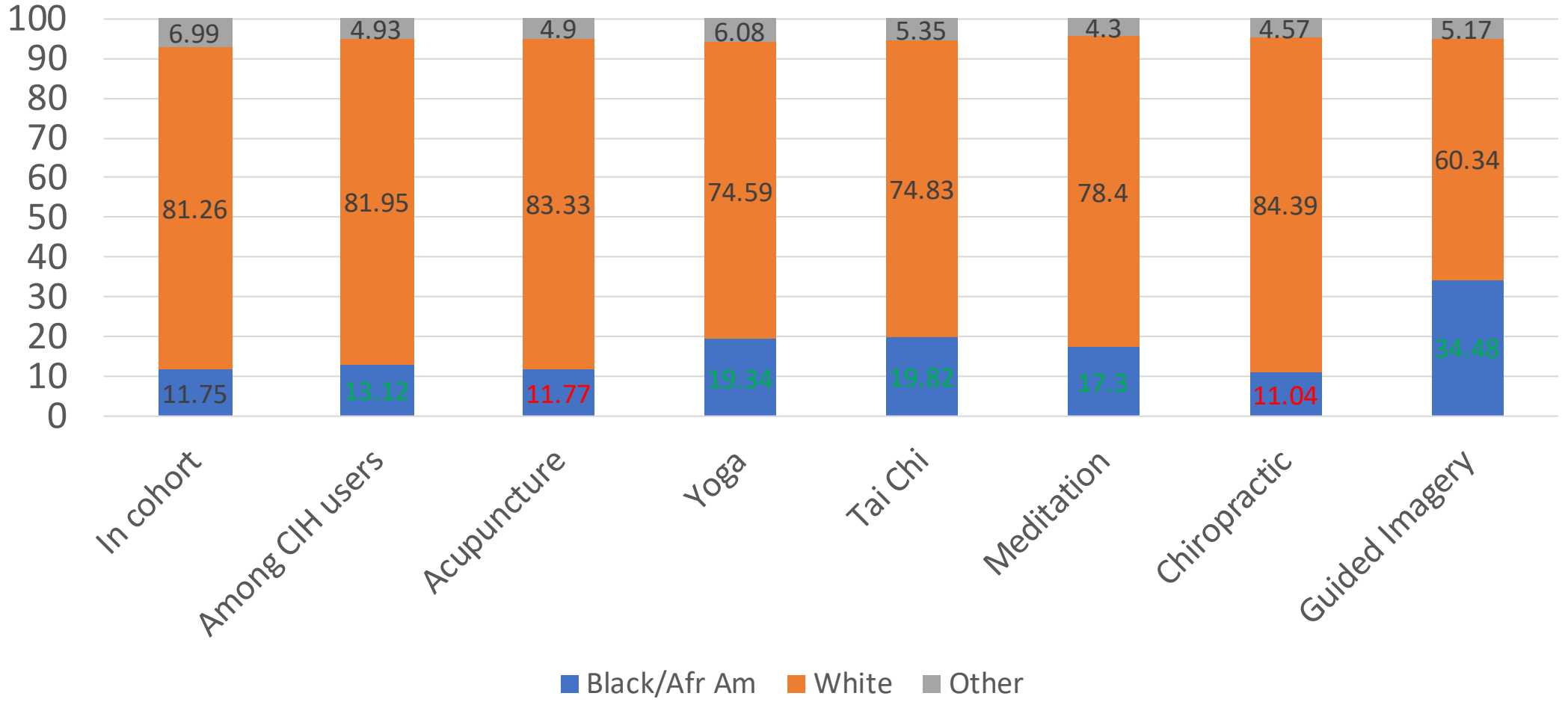
Within modalities associated with age group, older Veterans tended to underrepresented



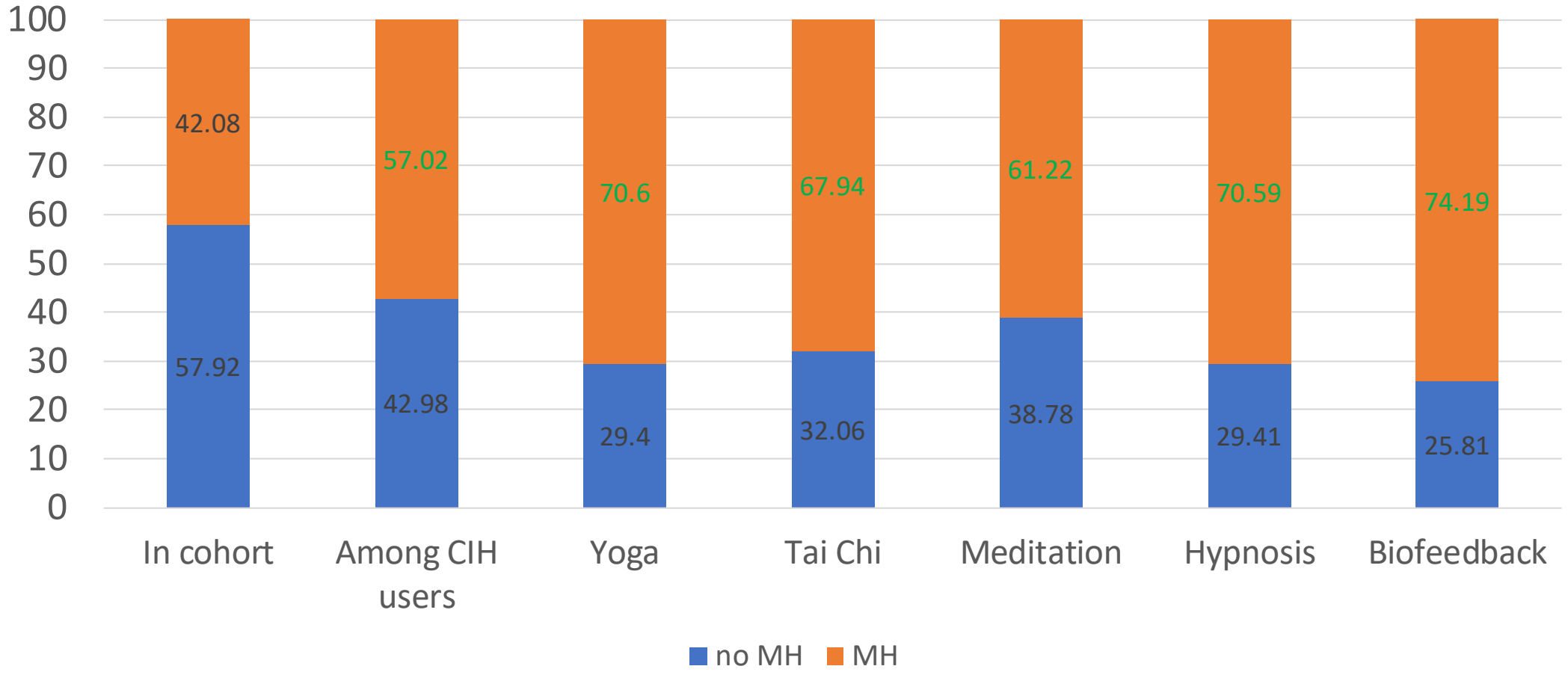
Female Veterans were overrepresented in Yoga, Tai Chi and Meditation; no differences for Chiropractic, Acupuncture, others



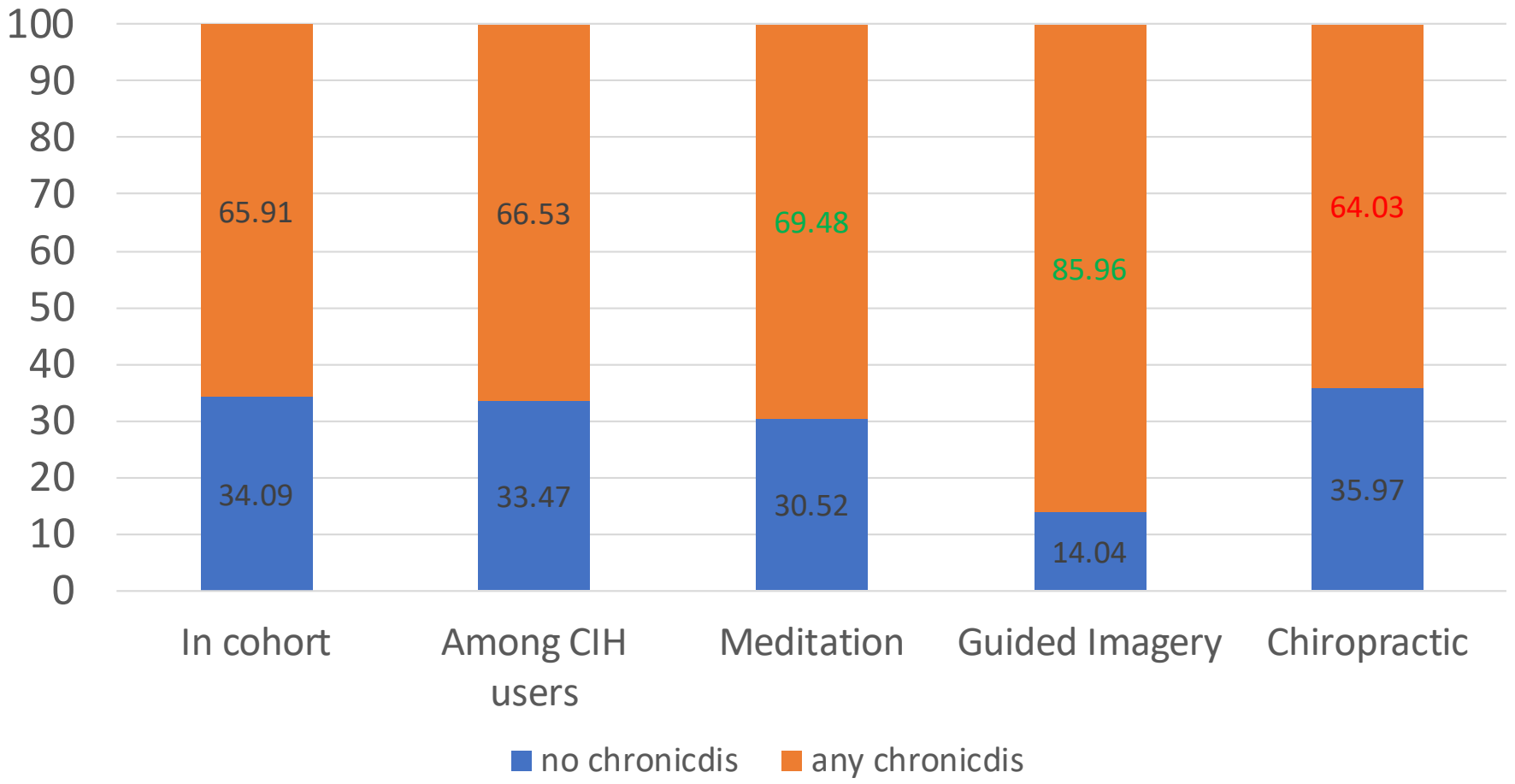
African-American Veterans were overrepresented in Yoga, Tai Chi, Meditation, and Guided Imagery; underrepresented in Chiropractic, Acupuncture



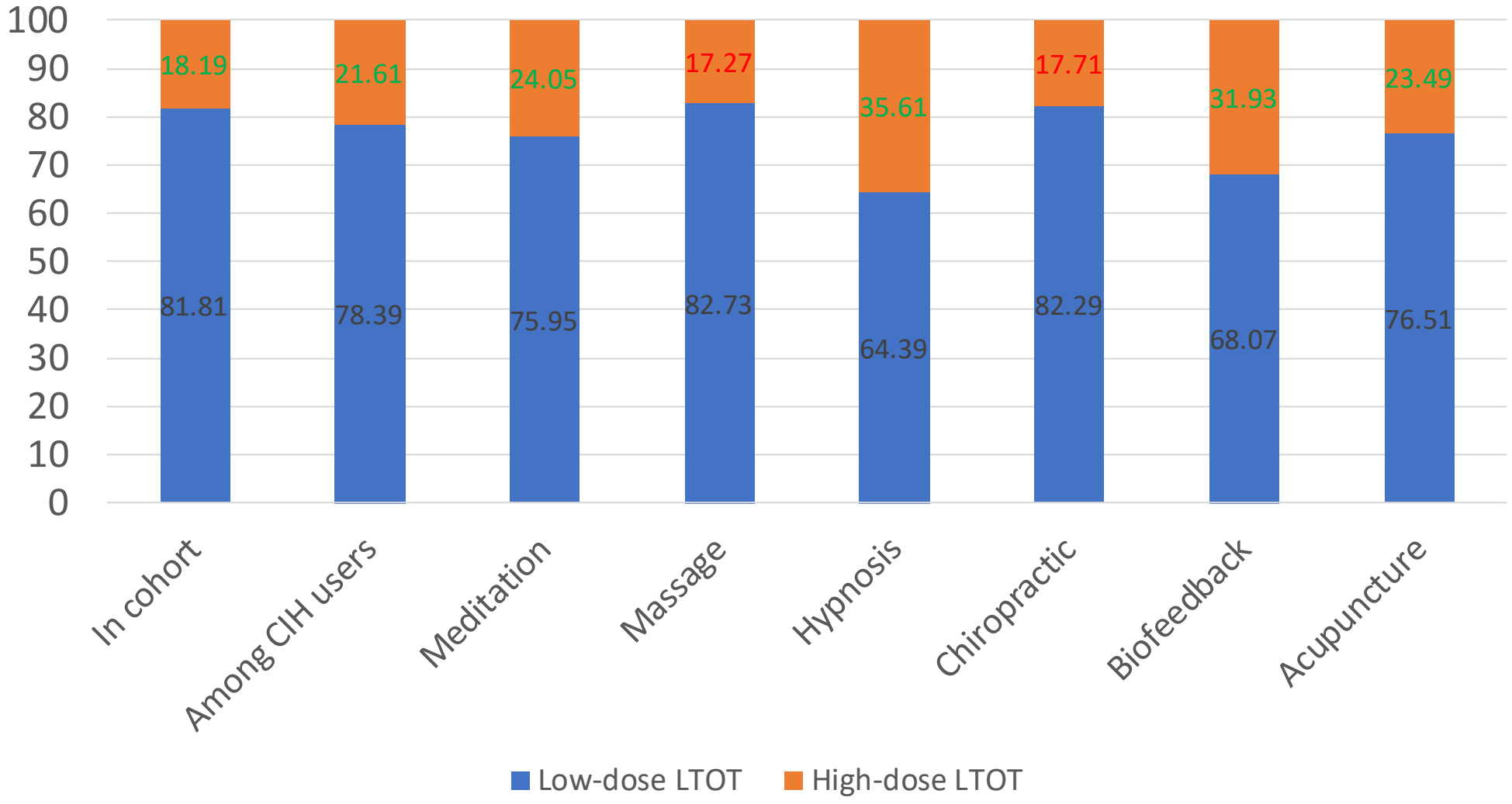
Veterans with a mental health diagnosis were overrepresented in many modalities; no differences in Chiropractic, Acupuncture



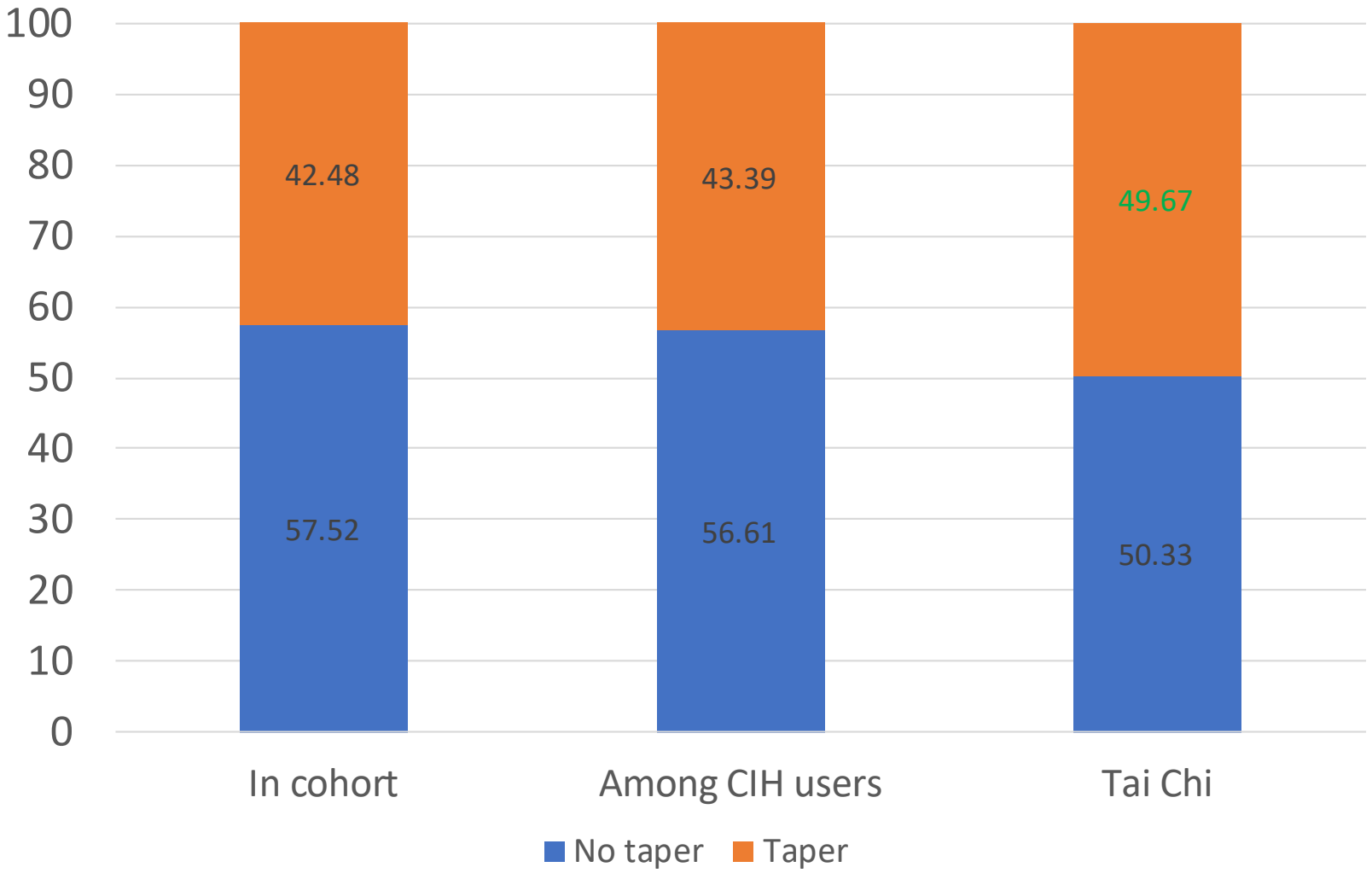
Veterans with a chronic medical disease were not more likely to use CIH; overrepresented in Meditation, Guided Imagery; underrepresented in Chiropractic care



Veterans on high-dose LTOT were more likely to use CIH; Were overrepresented across many modalities; underrepresented in Massage and Chiropractic care

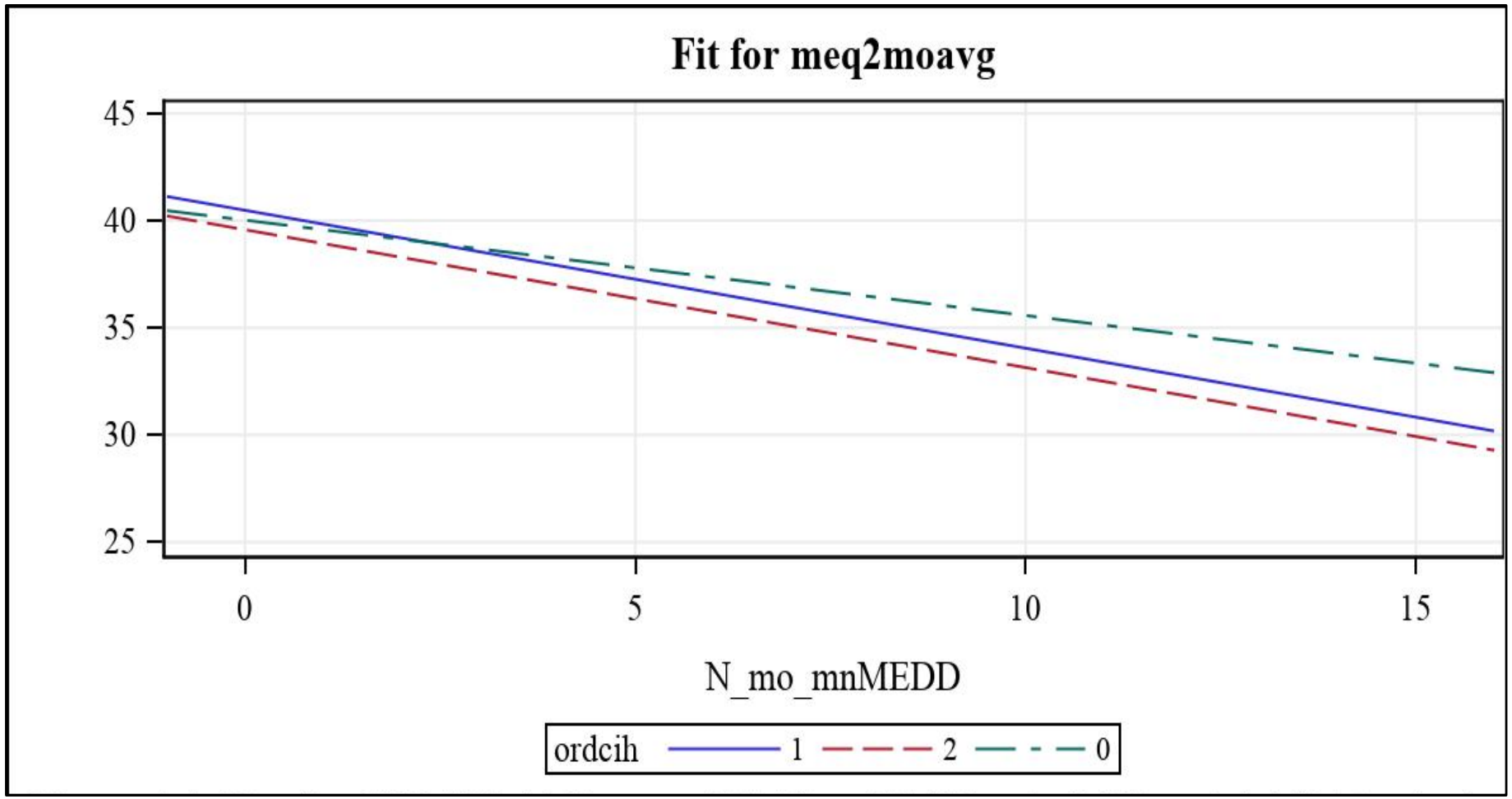


There was no difference in any CIH use by 15% LTOT taper achieved. Those who achieved taper were overrepresented in Tai Chi



LINEAR MIXED EFFECTS MODEL	
Outcome	Mean mg MEDD overlapping 60-day intervals
Time	Months
Baseline status	Baseline mean MEDD
Demographic covariates	Age
	African American
	Hispanic
	Married
Co-occurring disorders	Baseline pain
	Mental health diagnosis
	Obesity
	Diabetes
	COPD
	Cardiovascular disease
CIH utilization	1-3 CIH visits (vs. 0)
	4+ CIH visits (vs. 0)
Time X CIH utilization	Months X 1-3 CIH visits
	Months X 4+ CIH visits

Veterans who used CIH, higher-frequency CIH, experienced faster rates of LTOT dose reduction



Limitations

-No ability to assess cause or directionality
-No details about LTOT history; dose trend pre-cohort entry
-No detail about CIH timing relative to tapering onset
-Potential omitted variable accounting for association between tapering and CIH use (e.g., motivation)
-No information about CIH referral, uptake
-Assumptions about 0 mg dose

Conclusion

-A minority of Veterans prescribed LTOT used CIH
-CIH use was associated with presence of comorbidities, greater baseline pain and higher baseline LTOT dose
-Differences in modality use were associated with Veteran characteristics, comorbidities, and LTOT dose
-Achieving 15% tapering was not associated with CIH use
-CIH was associated with significantly faster rates of LTOT tapering

Poll slide #2

Having seen the data in this presentation, how likely are you to increase the frequency with which you refer patients on long-term opioid therapy to Complementary and Integrative Health services?

A. Very likely
B. Somewhat likely
C. No change
D. Somewhat unlikely
E. Very unlikely
F. I do not work with patients on long-term opioid therapy