Accessible behavioral pain care

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Stanford MEDICINE | Pain Relief Innovations Lab
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Empowered Relief®

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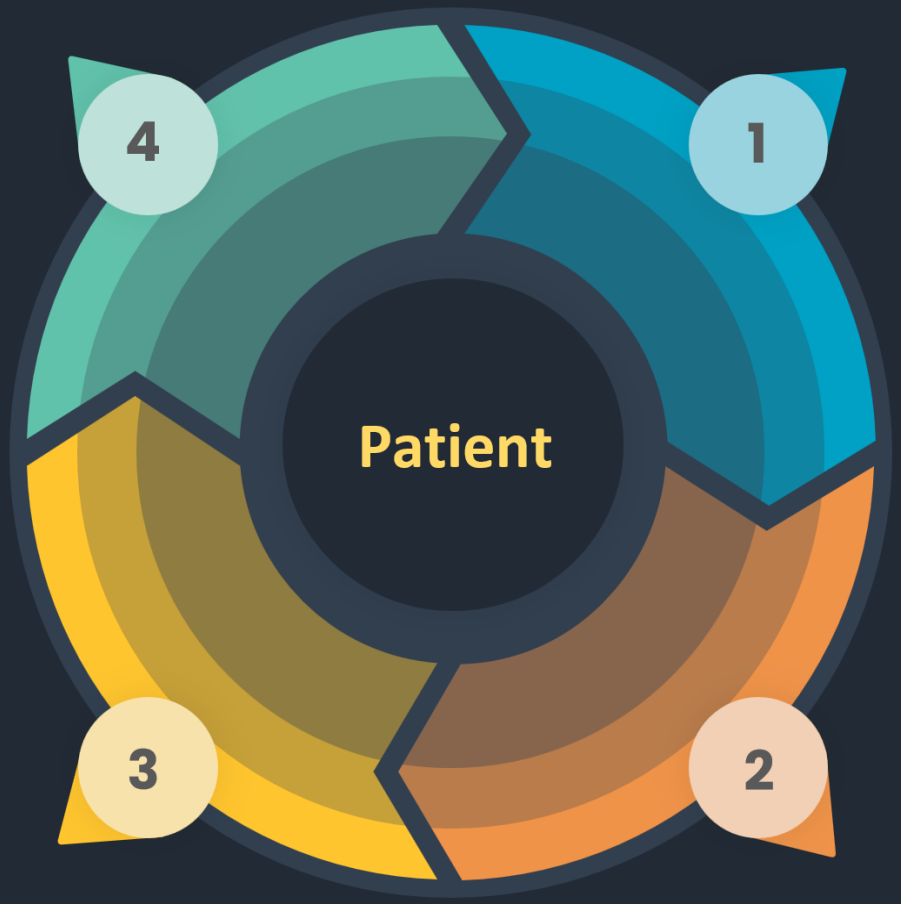
- Stanford receives fees for CME clinician certification workshops
- I receive no personal monies

Pain and Social Security Disability

SSI Disability Received
for chronic pain

Acute Pain
Injury, surgery, or disease



Disability Determination Process

Chronic Pain
Prior to SSI process

IASP
INTERNATIONAL ASSOCIATION
FOR THE STUDY OF PAIN

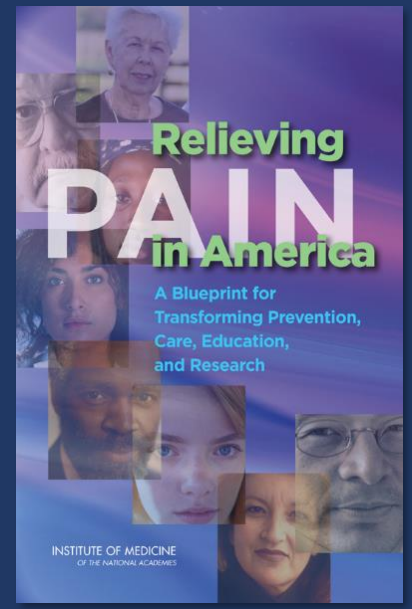
Pain Definition: A noxious sensory **and emotional experience**

Poor access to behavioral pain treatment

- Incomplete treatment response
- Overmedicalization
- Amplification of pain
- Progression of pain
- Greater disability

Buse DC et al 2025
Tang Y et al 2024

Calls for Accessible Behavioral Pain Care



- Institute of Medicine (2011)
- National Pain Strategy (2016)
- Federal Pain Research Strategy (2016)
- NASEM (2019)
- HHS Interagency Task Force on Best Practices in Pain Management (2019)
- Centers for Disease Control and Prevention (2022)

Cost savings described: E.g., Lanoye 2017; Melek SP et al. Millman Research Report 2017

Behavioral Pain Treatment

- Received 1:1 or in small groups
- 16+ hours of total treatment time
- Learn what worsens and reduces pain
- Gain skills and resources
- Create action plans
- Understand which daily choices and daily skills offer relief

BARRIERS

- Multisession treatments; 16 hours total
- Insurance and Co-pays
- Work / family obligations
- Pain / health
- Proximity (rural settings)
- No available trained clinicians
- Surgical patients need asynchronous treatment

Pain Medicine 2016; 17: 250–263
doi: 10.1093/pm/pnv095

Pain Psychology: A Global Needs Assessment and National Call to Action

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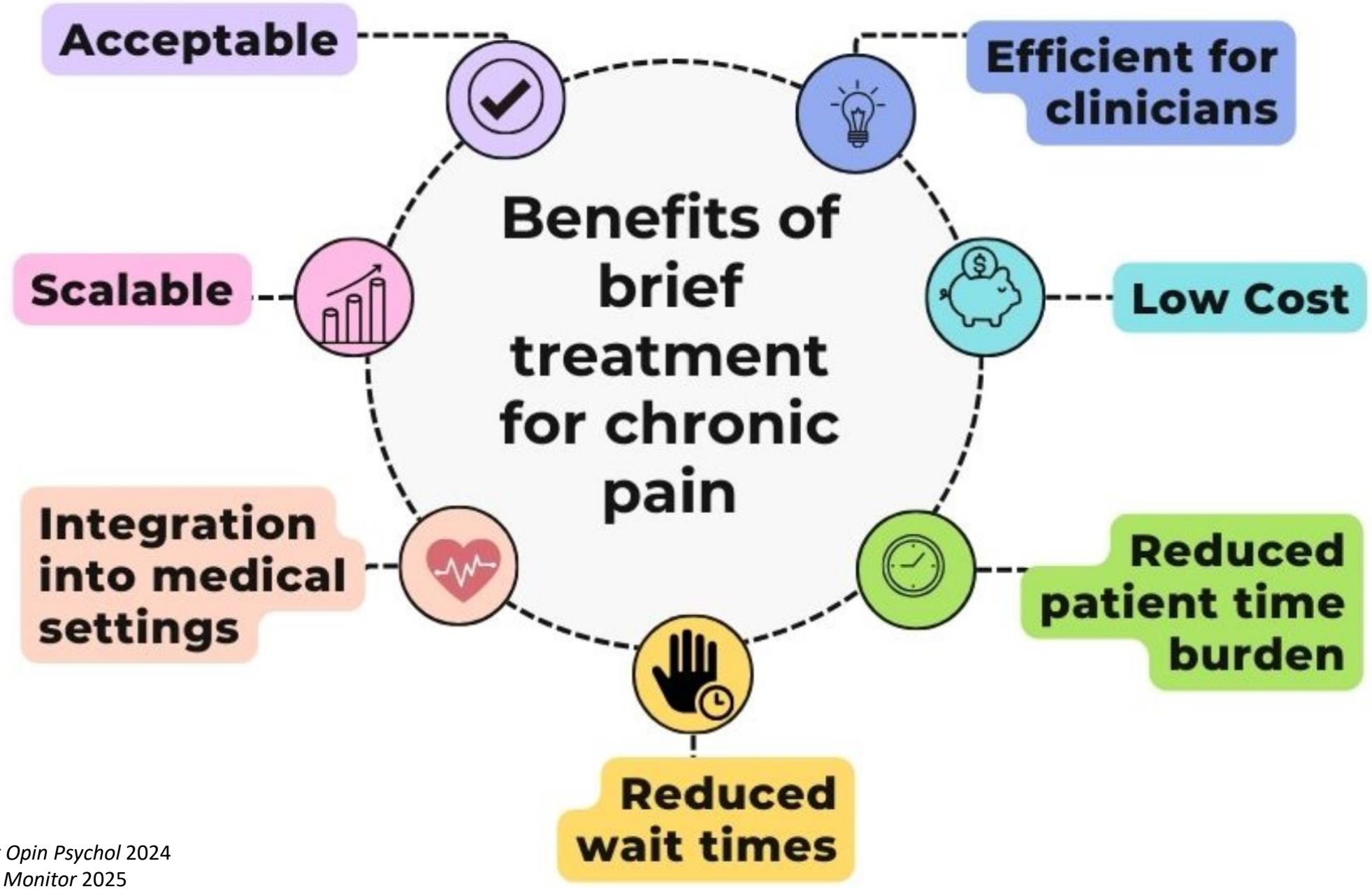
Sara Davin, PhD,[†,b] John W. Burns, PhD,[‡,b]
Jennifer L. Murphy, PhD,[§,b] Anna C. Wilson, PhD,[¶,b]
Robert D. Kerns, PhD,[‖] and
Sean C. Mackey, MD, PhD,[*,a]

HEALTHCARE SYSTEMS BARRIERS

- Medical approaches are emphasized
- Poor reimbursement
- Limited resources to implement behavioral treatment



Darnall BD, *Curr Opin Psychol* 2024
Darnall BD, *ASA Monitor* 2025

Available online at www.sciencedirect.com

ScienceDirect 2024

Current Opinion in Psychology

Review

Brief interventions for chronic pain: Approaches and evidence

Beth D. Darnall

Various countries have published national guidance supporting the integration of behavioral approaches into chronic pain treatment. Yet multiple barriers prevent broad patient access. Brief treatment formats may address universal shortcomings of therapists and resources and offer patients expanded access to care through lower costs and treatment burdens. This article summarizes published evidence for eight identified therapist delivered brief behavioral pain interventions (operationalized as 1–4 treatment sessions or ≤8 h total treatment time) for adults with chronic pain (≥18 years of age) including a description of the treatment approach, implementation features, evidence to date, and salient points. The discussion includes current clinical dissemination and future directions that leverage technology to enhance patient access to behavioral pain care.

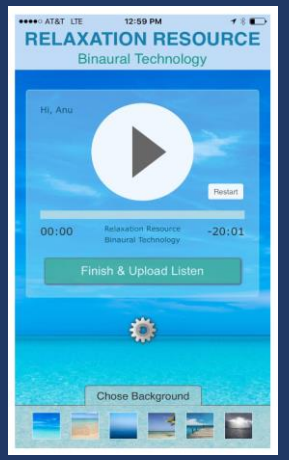
[8,9], medical utilization [10], costs [11,12], and for improving medical outcomes [13]. Various countries (e.g., U.S. [14,15], U.K. [16], Australia [17], Canada [18] and The Netherlands [19]) have published guidance supporting the integration of psychological and behavioral pain management strategies into chronic pain treatment pathways. Moreover, rapid access is a priority: a recent evidence review and expert consensus panel for chronic low back pain recommended that cognitive behavioral therapy (CBT) should be a first-line treatment [20]. However, behavioral pain treatment is noted to be a priority gap for care access [14,21], largely due to implementation barriers such as a lack of therapists with specialty training in pain [22]. In cases where behavioral pain treatment is available to patients, care access may be

1. Brief CBT for Veterans in primary care
2. Empowered Relief

1-session pain relief skills intervention

Empowered Relief

- Didactic
- 3 core pain management skills
- personalized plan
- Free Binaural App for daily use
- Large class sizes are possible



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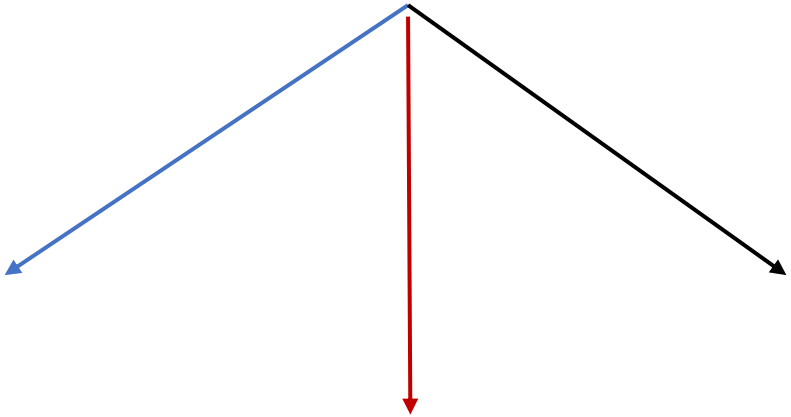
N = 263

National Center for Complementary and Integrative Health



Health Education

2 hours
(no skills)

Empowered Relief

2 hours

8-session CBT

16 hours

Darnall BD et al. Comparative Efficacy and Mechanisms of a Single-Session Pain Psychology: Protocol for a Randomized Controlled Trial in Chronic Low Back Pain. *Trials* 2018; 19:165.

Darnall BD et al. *JAMA Network Open*. Aug 16, 2021;4(8):e2113401.

Empowered Relief was non-inferior to 8-session CBT for improving:

- Pain intensity
- Pain interference
- Pain catastrophizing

Secondary outcomes:

- Pain self-efficacy
- Pain bothersomeness
- Sleep disturbance
- Depression
- Anxiety
- Fatigue

Study Details

- Chronic low back pain study (N=263)
- Half had 2+ chronic pain conditions
- **Results at 3 months post-treatment**

JAMA Network | Open™

NIH National Center for Complementary and Integrative Health

Darnall BD et al. JAMA Network Open. AUG 2021;4(8):e2113401.

6 months: Continued non-inferiority to 8-session CBT for reducing pain intensity and pain interference

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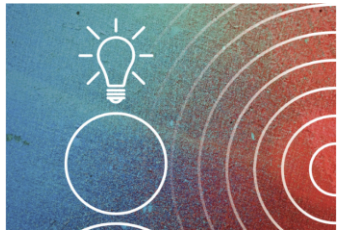
Home > Research > Research Results > Benefits of a Single-Session Pain Skills Class Last for 6 Months in People With Chronic Low-Back Pain

Benefits of a Single-Session Pain Skills Class Last for 6 Months in People With Chronic Low-Back Pain

A single 2-hour pain relief skills class continues to reduce pain catastrophizing, pain intensity, and pain bothersomeness in people with chronic low-back pain after 6 months and is no less effective than an 8-session cognitive behavioral therapy (CBT) program, according to a study from Stanford University, partly funded by the National Center for Complementary and Integrative



Darnall BD et al. 2024

Holly Watson, PhD

Nurse-delivered Empowered Relief

ASPMN
American Society for Pain Management Nursing
SUPPORTING NURSES MANAGING PAIN

- Randomized trial: ER vs. Wait List Control (WLC)
- National online study
- N = 150 with all types of chronic pain
- Predominantly White sample
- Some college education

At 2 months ER was superior for reducing:

- Pain intensity
- Pain catastrophizing
- Depression
- Pain self-efficacy
- Anxiety
- Pain bothersomeness
- Fatigue

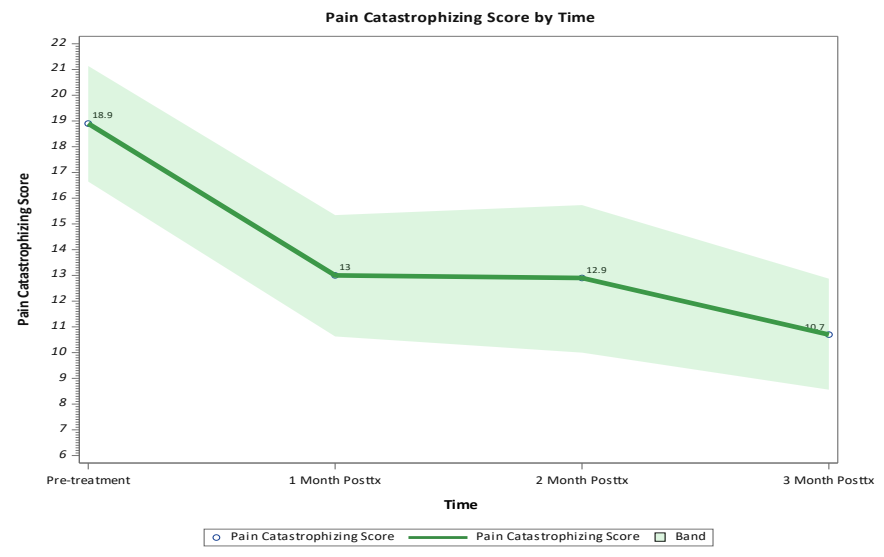
Watson et al, in review

Marfan Syndrome Study

THE MARFAN FOUNDATION

- Partnership with the Marfan Foundation
- Enrolled N=108
- N=92 attended one “en masse” online class
- >80% treatment satisfaction ratings

Secondary Outcomes:
Depression, Pain Self-Efficacy, **Anger**, **Anxiety**, Fatigue
Sleep Disturbance, **Pain Bothersomeness**



Primary outcomes:

Outcome	Mean (95% CI)	Estimate (95% CI)[1]	p-value
PROMIS Pain Intensity			
Baseline	5.5 (5.2, 5.8)		
Month 1	4.6 (4.1, 5.1)	-0.88 (-1.25, -0.51)	<.001**
Month 2	4.6 (4.1, 5.2)	-0.91 (-1.32, -0.49)	<.001**
Month 3	4.2 (3.7, 4.7)	-1.32 (-1.73, -0.90)	<.001**
PROMIS Pain Interference			
Baseline	64.7 (63.6, 65.8)		
Month 1	59.8 (58.0, 61.6)	-4.30 (-5.64, -2.96)	<.001**
Month 2	60.0 (58.0, 62.1)	-4.13 (-5.63, -2.63)	<.001**
Month 3	58.7 (56.9, 60.6)	-5.57 (-7.01, -4.12)	<.001**
Pain Catastrophizing Score			
Baseline	18.9 (16.6, 21.1)		
Month 1	13.0 (10.6, 15.3)	-5.80 (-7.62, -3.98)	<.001**
Month 2	12.9 (10.0, 15.7)	-5.57 (-7.74, -3.41)	<.001**
Month 3	10.7 (8.6, 12.9)	-7.67 (-9.81, -5.53)	<.001**

Perez L. et al, in review

Dissemination and Adoption of Empowered Relief

- 1,600 certified instructors
- 30 countries
- 8 languages
- 15,000 monthly visitors to our Empowered Relief app page
- Most types of licensed clinicians may become certified

Davin S, Savage J, Schuster A, Darnall BD. Transforming Standard of Care for Spine Surgery: Integration of an Online Single-Session Behavioral Pain Management Class for Perioperative Optimization. *Frontiers in Pain Research*. 2022 May 2;3:856252.

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Standard Care

Spine Surgery

Cleveland Clinic

COMMUNITY HEALTH CENTER FQHC QUALITY

NHS

Allegheny Health Network

Humana

Lehigh Valley Health Network

Cleveland Clinic | Neurological Institute

Stanford HEALTH CARE

MGH 1811 MASSACHUSETTS GENERAL HOSPITAL

CEDARS-SINAI MEDICAL CENTER

Davin S et al 2022

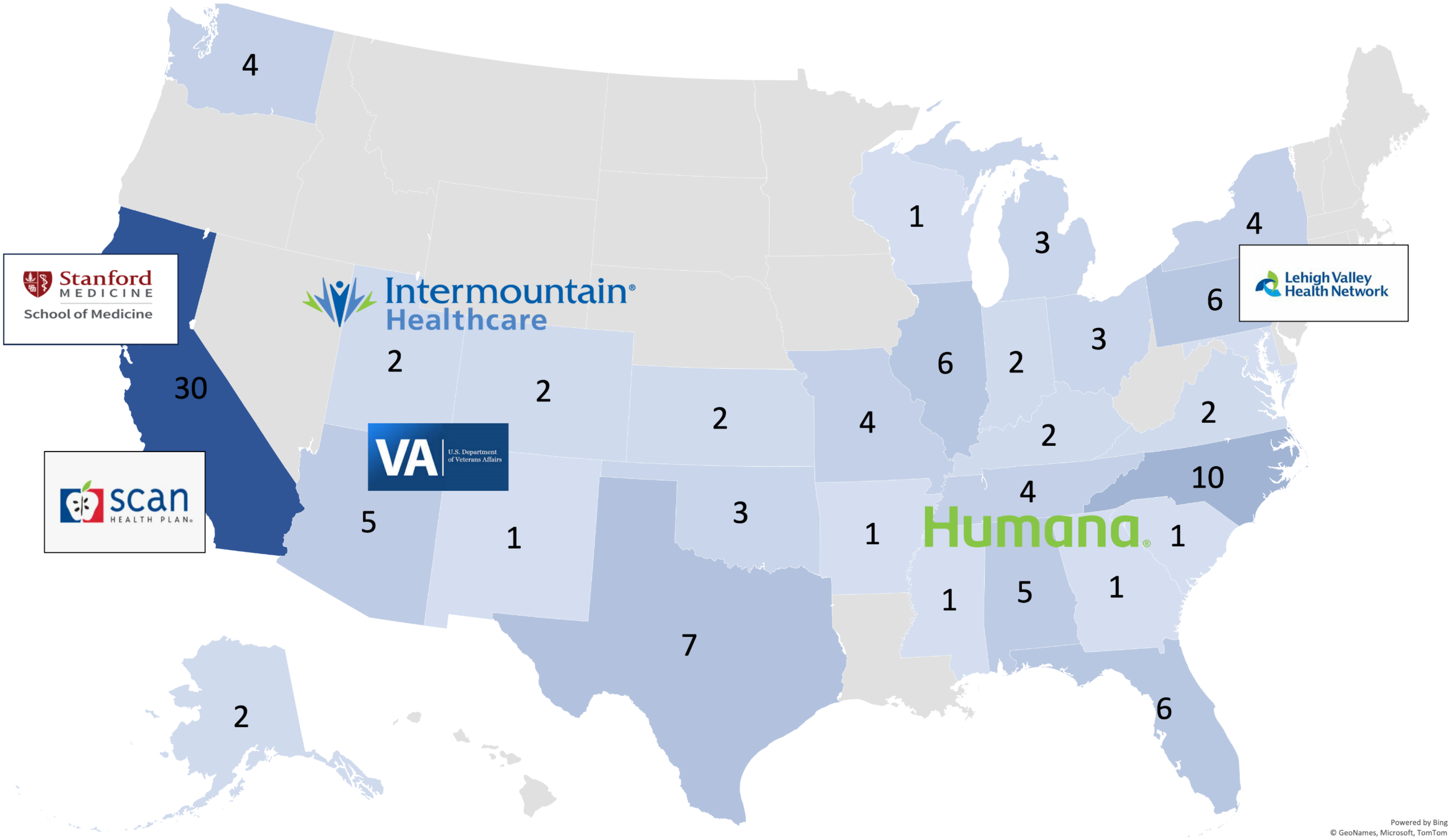
Pragmatic Comparative Effectiveness Randomized Trial

Online 8-Session CBT vs. Online 1-session Empowered Relief

- PI: Darnall
- National study
- 1,650 adults, mixed-etiology chronic pain

pcori
PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE

PROGRESS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Digital versions:

- On-demand access with internet
- Interactive treatment, personal portal
- Applied in worker’s compensation

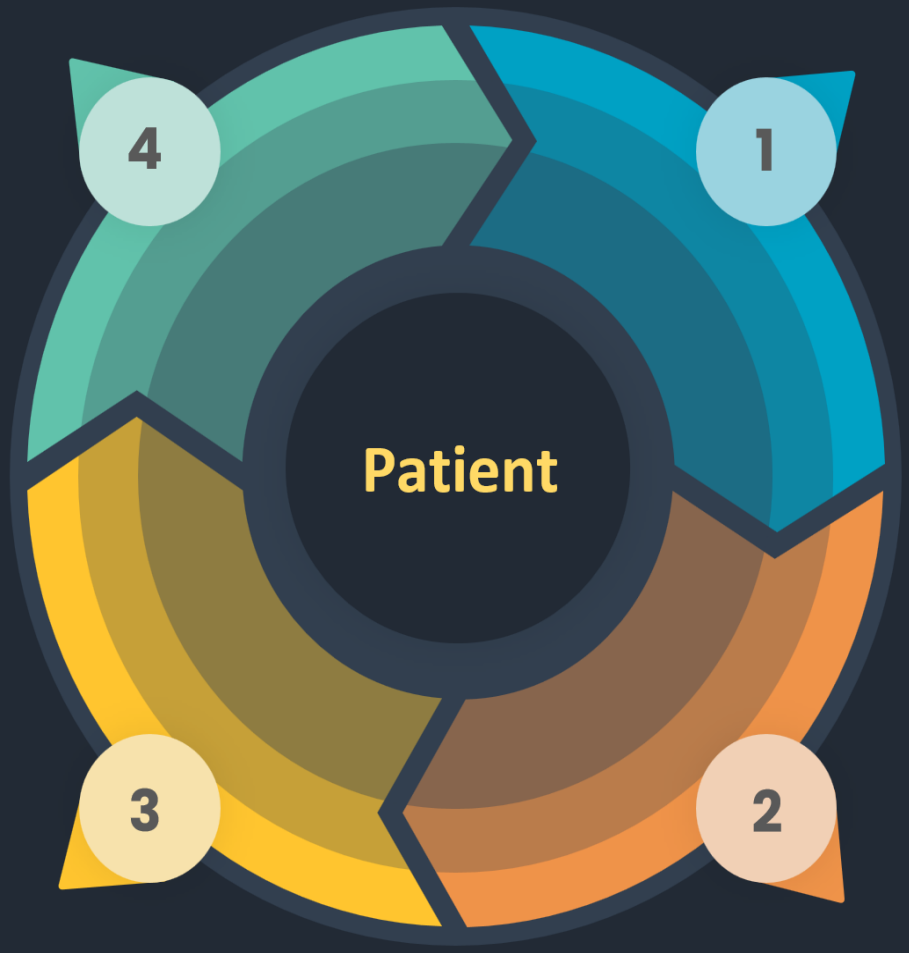
Accessible Behavioral Pain Treatment

SSI Disability Received

Better support, lower costs

Better pain treatment

Early on



Disability Determination Process

Chronic Pain

Reduced costs, risks

Summary & Recommendations for SSA:

- Access to evidence-based behavioral pain treatment is essential
- Offer low-burden behavioral pain treatment early and through SSDI process
- Support brief behavioral pain intervention research
- Consider relevant unsolicited proposals that would shore pain care gaps
- Consider interagency policy advocacy to improve reimbursement across provider types
- Digital interventions integrated into a learning health system may help scale access nationally

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