CLINICAL WEBINARS
FOR HEALTH SERVICE PSYCHOLOGISTS
TRANSLATING RESEARCH TO PRACTICE

Copyright © 2019 National Register of Health Service Psychologists. All rights reserved.
Patient-Centered Opioid Reduction:
A Toolkit for Psychologists
Beth D. Darnall, PhD

Associate Professor
Stanford University School of Medicine
Anesthesiology, Perioperative and Pain Medicine
Psychiatry and Behavioral Sciences (by courtesy)

Principal Investigator, Stanford PCORI Project
on Opioid and Pain Reduction (EMPOWER study)

Attendees Earn One Continuing Education Credit
The National Register is approved by the American Psychological Association to sponsor continuing education for psychologists.
The National Register maintains responsibility for this program and its content.
Beth Darnall, PhD

Beth Darnall, PhD, is Associate Professor at Stanford University School of Medicine, Department of Anesthesiology, Perioperative, and Pain Medicine. Dr. Darnall is principal investigator for NIH and PCORI-funded clinical trials that broadly investigate behavioral medicine and self-management strategies for acute and chronic pain, and voluntary patient-centered prescription opioid reduction.

She has authored/co-authored five books for patients and clinicians, including The Opioid-Free Pain Relief Kit, Less Pain, Fewer Pills, and Psychological Treatment for Chronic Pain. She develops and investigates digital interventions and virtual reality for perioperative and chronic pain and is the chief science advisor for appliedVR.

In 2018 she briefed the U.S. Congress on the opioid and pain crises, and in 2019 provided invited testimony to the FDA on iatrogenic harms from forced opioid tapering. Her work has been featured in Scientific American, NPR Radio, BBC Radio, JAMA Internal Medicine, and Nature. In 2018 she spoke on the psychology of pain relief at the World Economic Forum in Davos, Switzerland.
Disclosures/Conflicts of Interest

• I have no additional disclosures or conflicts of interest.
Learning Objectives

• Describe why nocebo is a critical therapeutic target in the context of opioid reduction.
• List two pitfalls associated with forced opioid tapering.
• List two ways in which psychologists or psychology treatments can minimize nocebo related to opioid tapering.
Contracts and Grants

• PCORI (PI)  Patient-Centered Opioid and Pain Reduction

• NIH / NCCIH:  R01 (Co-PI)  Mechanisms & Efficacy of Pain Catastrophizing Treatment for Chronic Pain

Chief Scientific Advisor: appliedVR
2011 IOM Report: Relieving Pain in America

- 100 million Americans have ongoing pain
- $635 billion annually
- Erodes quality of life, confers suffering
The biopsychosocial model of pain
Pain Definition: A noxious sensory and emotional experience
Pain is Complex

- Context
- Meaning
- Cognition
- Emotion
- Affect
- Mood
- Attention
- Social factors

EXPECTATIONS

• Analgesic (Pollo, Amanzio, et al 2001)

• Amplify pain (Benedetti, Lanotte, Lupiano, Colloca 2007)
The Effect of Treatment Expectation on Drug Efficacy: Imaging the Analgesic Benefit of the Opioid Remifentanil

Ulrike Bingel,1,2* Vishvarani Wanigasekera,1 Katja Wiech,1 Roisin Ni Mhuircheartaigh,1 Michael C. Lee,3 Markus Ploner,4 Irene Tracey1

Evidence from behavioral and self-reported data suggests that the patients’ beliefs and expectations can shape both therapeutic and adverse effects of any given drug. We investigated how divergent expectancies alter the analgesic efficacy of a potent opioid in healthy volunteers by using brain imaging. The effect of a fixed concentration of the μ-opioid agonist remifentanil on constant heat pain was assessed under three experimental conditions using a within-subject design: with no expectation of analgesia, with expectancy of a positive analgesic effect, and with negative expectancy of analgesia (that is, expectation of hyperalgesia or exacerbation of pain). We used functional magnetic resonance imaging to record brain activity to corroborate the effects of expectations on the analgesic efficacy of the opioid and to elucidate the underlying neural mechanisms. Positive treatment expectancy substantially enhanced (doubled) the analgesic benefit of remifentanil. In contrast, negative treatment expectancy abolished remifentanil analgesia. These subjective effects were substantiated by significant changes in the neural activity in brain regions involved with the coding of pain intensity. The positive expectancy effects were associated
Psychological modulation of opioid analgesia

Ulrike Bingel et al., Sci Transl Med 2011;3:70ra14
Fig. 5. Effect of expectancy modulation of opioid analgesia in the core regions of the pain neuromatrix. (A) Brain activity correlating with the changes in behavioral analgesia in the four experimental conditions. These correlations were identified with z-transformed mean ratings from the four experimental runs as contrast weights. The images are thresholded at $P < 0.001$ uncorrected. (B) Parameter estimates of pain-related BOLD responses averaged across the above shown brain regions for each of the experimental runs plotted for visualization purposes (extracted from a 6-mm sphere around the peak voxels of activation; for details, see Table 1). au, arbitrary units. Color bar indicates $t$ score.
Long-Term Use of Daily Prescription Opioids

- 3.4 % of US adults
- 11 million individuals
Growing Outcry Against Iatrogenic Opioid Reduction Risks and Harms

- **International Stakeholder Letter publishes**
  - Darnall BD, Juurlink D, Kerns R, et al.
  - Reuters Wire service
  - 45 news outlets worldwide

- **Human Rights Watch**
  - Declares the issue a “human rights violation”
  - Laura Mills

- **HP3 Letter**
  - Kertesz, Satel, et al.
  - 300+ signatories
  - 3 former U.S. Drug Czars
  - AMA signs support

- **FDA**
  - Clarifies labeling and cautions against abrupt discontinuation

- **CDC**
  - Dowell et al. Clarification of opioid prescribing guidelines publish in *NEJM*. 
Addressing the dual crises of pain and opioids — a case for patient-centeredness

BY BETH DARNALL, OPINION CONTRIBUTOR — 10/31/18 06:00 PM EDT
THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL
Tapering methods matter greatly

- The health of the patient is paramount
- Rigid dose-based policies violates patient-centeredness, exposes patients to health risks and is unsupported by the CDC and the AMA
- Dose changes are associated with health risks
- Patient-centered methods enhance patient engagement, safety and outcomes
- Imperative to screen prior to tapering, emphasize voluntary tapering, carefully monitor patient response during the taper and adjust accordingly
- Provide psychological support
The biopsychosocial model of tapering
Applause for the CDC opioid guideline authors

BY BETH DARNALL, OPINION CONTRIBUTOR — 04/26/19 01:30 PM EDT
THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL
Tapering methods matter greatly

- Patient-centered methods enhance patient engagement, safety and outcomes
- Learning health systems can facilitate research as well as point of care supports to characterize, screen, monitor, and provide safety measures to patients, clinicians, and healthcare organizations.
- Iatrogenic harms from opioid tapering practices must be appreciated, mitigated, and better studied.
- Patient choice and supports are vitally important.
Comparative Effectiveness of Pain Cognitive Behavioral Therapy and Chronic Pain Self-Management Within the Context of Voluntary Opioid Reduction

Darnall BD (PI)

https://empower.stanford.edu/

Funded by the Patient-Centered Outcomes Research Institute®
Tapering the wrong way

Aggressive Taper

- Withdrawal Symptoms
- Discomfort
- Distress
- Failed tapers
- False belief that outpatient tapering is impossible
- Remaining on high doses
- Overdose (in SUD)
- Suicidal ideation
- Suicide

Forced Taper
Tapering Opioids

Patients’ number one concern/fear?

Not Interested!
Opioid Cessation and Multidimensional Outcomes After Interdisciplinary Chronic Pain Treatment

Jennifer L. Murphy, PhD,* Michael E. Clark, PhD,*† and Evangelia Banou, PhD*

Clin J Pain • Volume 29, Number 2, February 2013

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>OP (n = 221) Mean (SD)</th>
<th>NOP (n = 379) Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain intensity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission</td>
<td>7.01 (1.77)</td>
<td>6.91 (1.58)</td>
</tr>
<tr>
<td>Discharge</td>
<td>6.46 (1.74)</td>
<td>6.14 (1.79)</td>
</tr>
</tbody>
</table>
Community-Based Solutions are Needed

• Low-cost
• Low-risk
• Scalable
• Effectively reduce health risks
• Provide education and support
• Structured
• Address anxiety of patients and prescribers alike
• Promote patient trust and a good doctor-patient bond
• Enhance patient willingness to try a gentle opioid taper
Research Letter

February 19, 2018

Patient-Centered Prescription Opioid Tapering in Community Outpatients With Chronic Pain

Beth D. Damall, PhD; Maisa S. Ziadni, PhD; Richard L. Stieg, MD, MPH; et al

Author Affiliations | Article Information


The risks associated with prescription opioids are well described.1,2 Although reducing opioid use is a national priority, existing opioid tapering models use costly interdisciplinary teams that are largely inaccessible to patients and their physicians.3,4 Patients and physicians need solutions to successfully reduce long-term prescription opioid dosages in settings without behavioral services. We conducted a study of voluntary, patient-centered opioid tapering in outpatients with chronic pain without behavioral treatment.
Opioid Cessation vs. Opioid Reduction
We Optimized Patient Choice and Control in Their Taper

- Participation was VOLUNTARY
- Patients could control the pace of their taper
- Patients could pause their taper
- Patients were free to drop out of the study at any time
- The taper goal was not zero unless the patient chose that goal
- The taper was NOT to a pre-defined opioid dose
- Patients partnered with their doctor to achieve their lowest comfortable dose over 4 months
- The taper was NOT unidirectional

Study Variables

- Demographics (Gender, Age)
- Pain Treatment History (Pain Dx, Duration of Opioid Use)
- Opioid Dose (MEDD)
- Average Pain Intensity (0-10)
- Pain Catastrophizing Scale
- PROMIS Measures
- Marijuana use (Y/N)

16 Weeks
Sample Characteristics (N=51)

- 55% female
- 52 years of age (range = 25 – 72)
- 6 years on opioids (range = 1 – 38)
- Moderate pain intensity
- Marijuana: 37% (18)
- Opioid MEDD = 288 (60, 1005)

Darnall BD, Ziadni MS, Mackey IG, Kao MC, Flood P (FEB 2018; JAMA Int Med)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>16 weeks</th>
<th>P-val</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioid Dose (MEEDD)</td>
<td>288 (153, 587)</td>
<td>150 (54, 248)</td>
<td>0.002</td>
</tr>
<tr>
<td>Pain Intensity (NRS)</td>
<td>5.0 (3.0, 7.0)</td>
<td>4.5 (3.0, 7.0)</td>
<td>0.29</td>
</tr>
<tr>
<td>PCS (catastrophizing)</td>
<td>22 (10, 30)</td>
<td>15 (7, 23)</td>
<td>0.04</td>
</tr>
<tr>
<td>Fatigue</td>
<td>61 (54, 65)</td>
<td>59 (51, 65)</td>
<td>0.64</td>
</tr>
<tr>
<td>Anxiety</td>
<td>60 (53, 64)</td>
<td>54 (46, 62)</td>
<td>0.06</td>
</tr>
<tr>
<td>Depression</td>
<td>56 (49, 64)</td>
<td>55 (48, 61)</td>
<td>0.31</td>
</tr>
<tr>
<td>Sleep Disturbance</td>
<td>59 (54, 70)</td>
<td>56 (50, 64)</td>
<td>0.13</td>
</tr>
<tr>
<td>Pain Interference</td>
<td>63 (58, 67)</td>
<td>63 (57, 67)</td>
<td>0.44</td>
</tr>
<tr>
<td>Pain Behavior</td>
<td>60 (57, 63)</td>
<td>59 (56, 64)</td>
<td>0.47</td>
</tr>
<tr>
<td>Physical Function</td>
<td>39 (34, 41)</td>
<td>39 (34, 43)</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Kruskal-Wallis rank sum test
Change in Pain Score (NRS)
Percent Change Opioid Dose
Increase
Decrease
Chronic Pain Self-Management Program

Two certified trained peer leaders

Darnall BD et al. (protocol manuscript; accepted, *Pain Med*)
Chronic Pain Self-Management Program

Two certified trained peer leaders

Darnall BD et al. (protocol manuscript; accepted, *Pain Med*)
1365 patients taking long-term opioids for chronic pain

• Stanford Pain Management Center (CA)
• Stanford Primary Care (CA)
• Intermountain Health (Salt Lake City)
• Veterans Affairs (Phoenix)
• MedNOW Clinics (Denver, CO)
Eligibility

• > 10 MEDD daily for 3 months
• Pain for 6 months

Exclusions:

• Active suicidality
• Unable to participate in behavioral groups
• Moderate to severe Opioid Use Disorder is exclusionary

Screening: 3 items from the TAPS + DSM-V OUD
We must create a caring and safe system that makes patients want to join and remain in EMPOWER
EMPOWER Guiding Principles

We must create a caring and safe system that makes patients want to join and remain in EMPOWER
• Easy data entry
• Point of care reporting
• Over 30,000 patients and 100,000 longitudinal data assessments
• NIH PROMIS CAT for comparative metrics and computer adaptive testing to reduce patient burden
• Insights from real-world patients
• Open-source (free) licensing with minimal restrictions
• Comprehensive assessment of:
  • Physical, psychological and social functioning and health

http://choir.stanford.edu
Assessments & Monitoring

**Baseline, 6- and 12-month:** comprehensive battery
- Psychosocial factors (PROMIS)
- Opioids
- Substance use
- Degree of choice
- Readiness to taper
- Taper beliefs
- Satisfaction with clinician relationship
- Comments

**WEEKLY surveys** for withdrawal symptoms, mood, comments
**MONTHLY surveys** for mood, suicidality, opioid dose, satisfaction, comments
Close Monitoring of Patient Response to Opioid Reduction

**WEEKLY surveys** for withdrawal symptoms, mood, comments

**MONTHLY surveys** for mood, suicidality, opioid dose, satisfaction, comments

- Alerts are sent to prescribers in real time
- Patients receive tailored messages

We track patients over 12 months
Patient Stories
The biopsychosocial model of tapering.
Practical Tips for Psychologists

1. Assess for OUD
2. Assess patient interest in opioid reduction
3. Assess patient concerns for opioid reduction
4. Validate fears, provide education
5. Support team-based opioid reduction plans that minimize NOCEBO and optimize positive expectation (PLACEBO) and patient engagement
6. Zero is not the goal
7. Closely monitor patient response to opioid tapering, especially mood and suicidality
8. Recognize that opioid tapering is not right for everyone
9. Provide patients with treatment and resources
10. Consider rapid access to a brief treatment class
Cognitive Behavioral Therapy for Chronic Pain

Topics and Skills

- Pain and the brain
- Mood and pain
- Sleep and pain
- Pleasant activities
- Goal setting
- Problem solving
- Movement
- Social connection
- Diaphragmatic Breathing
- Relaxation Response
- Cognitive Restructuring
- Mindfulness
- Meditation
Mindfulness-based stress reduction and cognitive-behavioral therapy for chronic low back pain: similar effects on mindfulness, catastrophizing, self-efficacy, and acceptance in a randomized controlled trial

Judith A. Turner\textsuperscript{a,*,} , Melissa L. Anderson\textsuperscript{b} , Benjamin H. Balderson\textsuperscript{b} , Andrea J. Cook\textsuperscript{b} , Karen J. Sherman\textsuperscript{b} , and Daniel C. Cherkin\textsuperscript{b}

\textsuperscript{a} Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, Washington, USA

\textsuperscript{b} Group Health Research Institute, Seattle, Washington, USA
There’s nothing I can do about my pain. It is only going to get worse!
There are several things I can do right now to soothe myself and feel better.
Negative Pain Mindset

Pain Relief Mindset Skills
Regular skills use:

- Dampens pain processing
- Reduces physiological hyperarousal
- Reduces cognitive and emotional responses that amplify pain
- Entrains positive neural patterns
- Facilitates movement, activation
- Increases self-efficacy, internal locus of control
Pain Catastrophizing and Efficacy of Cognitive Behavioral Therapy

• Increases prefrontal gray matter in patients with chronic pain

BARRIERS

- Insurance coverage
- Time
- Co-pays
- Travel
- Work / family obligations
- Pain / health
- Proximity (rural settings)
- No psychologists nearby who are trained to treat pain


Certification Workshops for Healthcare Clinicians

Empowered Relief™

Train your brain away from pain

https://empoweredrelief.com/
Empowered Relief™
Train your brain away from pain
Webinar Resources

• 11-page resource PDF

• Article:

Colleagues and Collaborators

Luzmercy Perez
Lanja Sinjary
Ming-Chih Kao, PhD, MD
Jesmin Ram
Aram Mardian, MD
Ming-Chih Kao, PhD, MD
Sean Mackey, MD, PhD
Heather Okvat, PhD
Jeremiah West, MD
Garrick Olsen
Kate Lorig, PhD
Wendy Schadle
Anu Roy, MA
Lu Tian, PhD
Joel Porter, MD
Penney Cowan
Mark McGovern, PhD
Ting Pun, PhD
Matt Cheung, PharmD
Nathan Moore, MD
Luana Colloca, MD, PhD
Maisa Ziadni, PhD
Pamela Flood, MD
Heather King, PhD
Sophia You, PhD
Corinne Jung, PhD
Richard Stieg, MD, MPH
Korina DeBruyne, MD
Phil Lavori, PhD
Angie Chen, MD
Jim Weil
Penney Cowan
Patient Advisors
Jessica Root
Joshua Goff
Kelly Adams

Jessica Root
Joshua Goff
Kelly Adams
• Goerlitz D, Heirich M, Sinjary L, Asika Ram J, Lorig K, Darnall BD. Development and Engagement of a National Patient Advisory Panel Informing Patient-Centered Materials for a Multi-Site Chronic Pain and Prescription Opioid Reduction Study (in review).*


• Darnall BD, Ziadni MS, Stieg RL, Mackey IG, Kao MC, Flood P. Patient-Centered Prescription Opioid Tapering in Community Outpatients with Chronic Pain. JAMA Internal Medicine, 2018 May 1;178(5):707-708. PMID: 29459978.* Open Access: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2672574

Q&A

- Dr. Sammons will select questions that were submitted via the Q&A feature throughout the presentation.
- Due to time constraints, we will not be able to address every question asked.