# Integrating Complementary and Integrative Health (CIH) therapies into US Hospitals:

# The Role of Practice Based Research in Guiding the Field

Jeffery A Dusek, PhD

World Congress Integrative Medicine & Health 2017
Berlin Germany
May 5, 2017

# What is known about current use of CIH in the US?

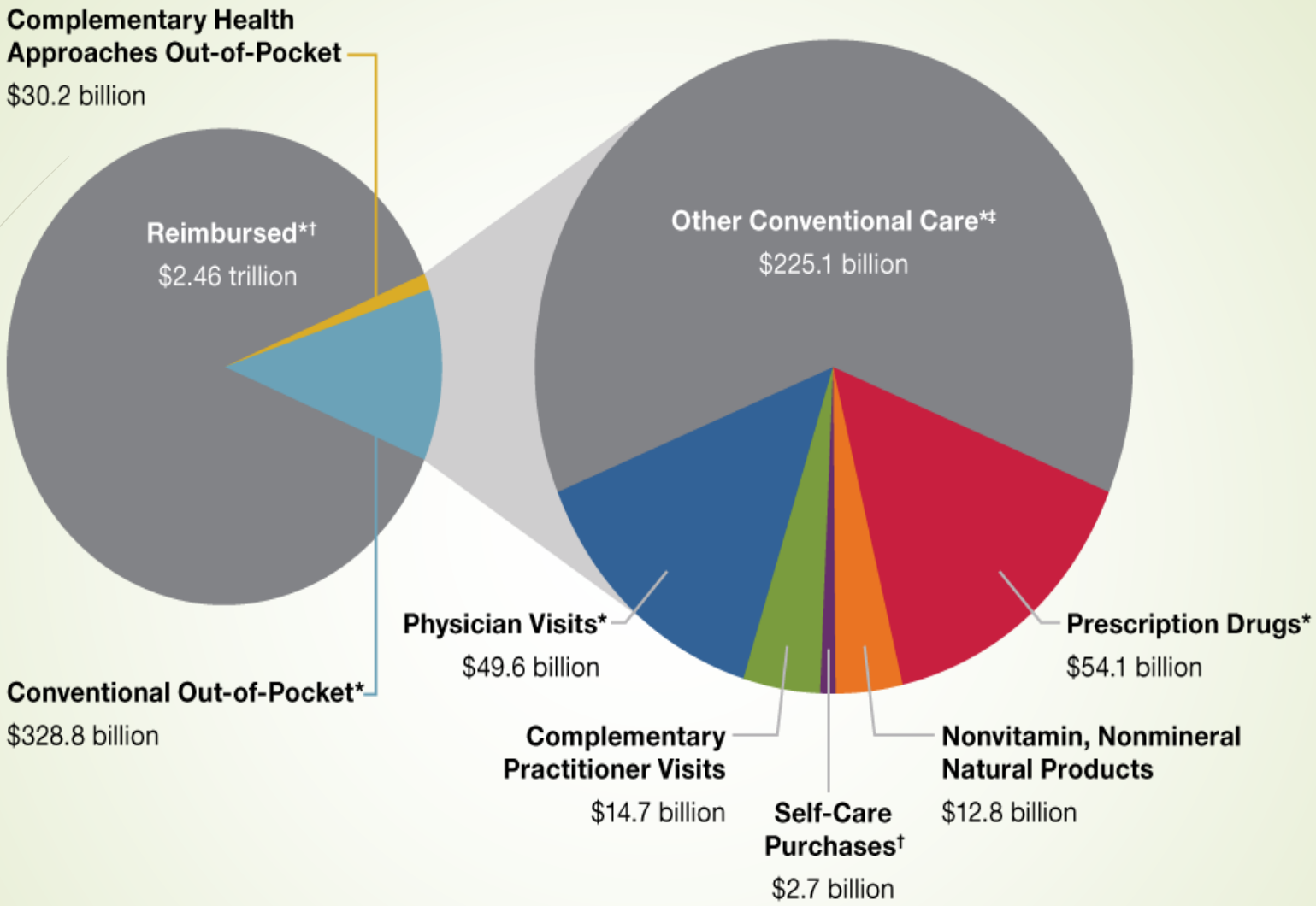
- National Health Interview Survey (NHIS)- 2012
- 34,500 respondents corresponds to 226 million American adults
- 32.3% report using some form of CIH (73 million)
- 2007- 35.5%
- 2002- 33.2%

Clarke TC, Black LI, Stussman BJ, et al. Trends in the use of complementary health approaches among adults: United States, 2002–2012. National health statistics reports; no 79. Hyattsville, MD: National Center for Health Statistics. 2015.

# NHIS Survey 2012 - Costs

- 59 million adults (26%) spend out of pocket.
- $30.2 Billion USD.
- 9% of all out of pocket spending on healthcare

Nahin RL, Barnes PM, Stussman BJ. Expenditures on complementary health approaches: United States, 2012. (433KB PDF) *National Health Statistics Reports*. Hyattsville, MD: National Center for Health Statistics. 2016.



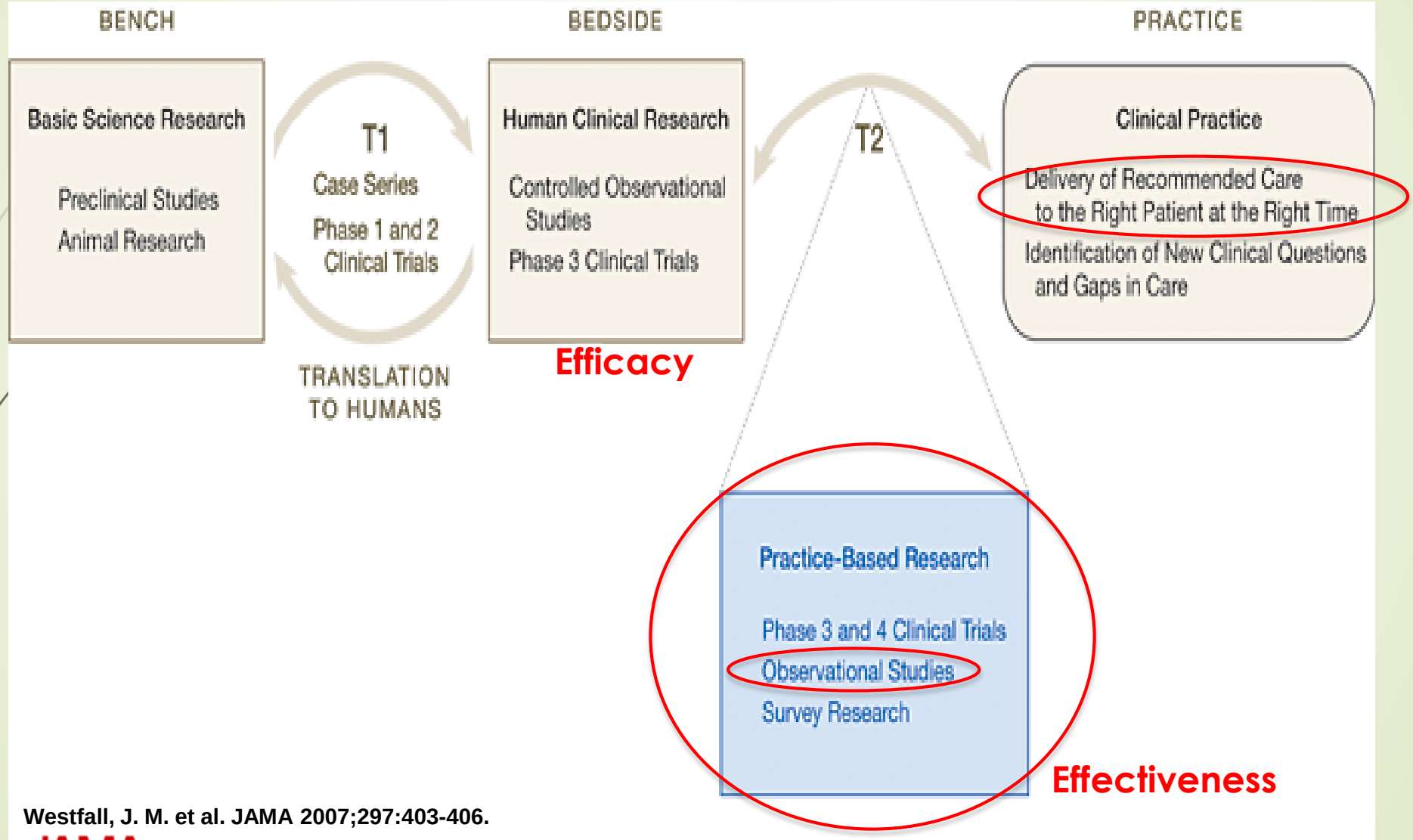

Nahin RL, Barnes PM, Stussman BJ. Expenditures on complementary health approaches: United States, 2012. (433KB PDF) *National Health Statistics Reports*. Hyattsville, MD: National Center for Health Statistics. 2016.

# NHIS Survey 2012 - Pain

- 126 million adults (56%) report some type of pain in prior 3 months.
- 40 million (18%) have severe pain.
- 25 million adults (11%) report daily pain.

Nahin RL. Estimates of pain prevalence and severity in adults: United States, 2012. *Journal of Pain*. 2015;16(8):769-780.

# Observational Research




Westfall, J. M. et al. JAMA 2007;297:403-406.

JAMA

# What is Practiced-based research?

- Practice-based research occurs in the office, clinic or hospital, where patients generally receive clinical care.

Practice-based research can

- demonstrate whether interventions with proven efficacy are truly effective and sustainable when provided in real-world setting; and

- provide the "laboratory" for testing system improvements to maximize the number of patients who benefit from medical discovery.

# Two examples of PBR in practice

- Integrative Medicine provided at Abbott Northwestern Hospital (ANW)
- BraveNet Practice Based Research Network

# Effectiveness of CIH

- CIH provided at Abbott Northwestern Hospital (ANW)
  - 630 bed tertiary care hospital
  - Penny George Institute (PGI) started providing IM services in 2003
    - 10,000 IM sessions annually.
    - Average 31 minutes per session
    - 1.5 sessions per hospital admission

# CIH Care and Practitioners

- Patients receive individualized CIH including:
  - Acupuncture, acupressure
  - therapeutic medical massage, reflexology
  - mind/body therapies (e.g. relaxation response)
  - energy healing (e.g. Reiki, healing touch)
  - music therapy
  - aromatherapy
- 15 practitioners (11.5 FTEs) (circa 2016)
  - 6.3 FTE massage therapists
  - 3.5 FTE acupuncturists
  - 0.9 FTE music therapist
  - 0.8 FTE Nursing

# CIH: Process

- Physician or nurse referrals via EPIC electronic health record (EHR)
  - AQ must be referred by MD
- Triage Meeting of CIH providers
- EHR review by CIH provider
- CIH Treatment Session (24-36 hrs)
  - Intake
  - Baseline data collection (e.g., pain, anxiety, nausea, coping)
  - CIH therapy
  - Follow-up data collection
- CIH provider documents the results

# National Institute of Health grant: 2011-2016

| | | | |
|---|---|---|---|
| **Project Number:** | 5R01AT006518-03 | **Contact PI / Project Leader:** | DUSEK, JEFFERY A |
| **Title:** | EFFECT OF COMPLEMENTARY AND ALTERNATIVE MEDICINE ON PAIN AMONG INPATIENTS | **Awardee Organization:** | ALLINA HEALTH SYSTEM |

**Abstract Text:**

DESCRIPTION (provided by applicant): Effective and safe pain management is a major health priority for the US healthcare system. Pharmaceutical interventions remain the primary approach to pain management, despite their well documented risk of adverse events, potential for addiction, and adverse impact on recovery if used excessively. Nowhere is this more evident than in the post-operative period where roughly 80% of patients report moderate to severe pain after surgery even after receiving pharmaceutical interventions. In inpatient settings, finding an effective non-pharmacologic intervention to augment narcotic medications would be a significant benefit. National surveys indicate that complementary and alternative medicine (CAM) interventions are currently used by 15% of American hospitals. Most often, these therapies are employed to address specific unmet clinical needs, the most frequent of which is pain. Eleven clinical trials have demonstrated the efficacy of CAM therapies to reduce pain (short- and long-term) in hospitalized patients along with traditional pharmaceutical interventions. Generating additional evidence of the effectiveness of these therapies for pain relief would advance knowledge and potentially affect practice patterns. a preliminary study, we retrospectively studied 1,837 patients who received CAM therapies at Abbott Northwestern Hospital. We found an average reduction in immediate pain of 56% and roughly 33% reported complete pain relief after the initial CAM visit. We recognize inadequacies of this study that limit both our knowledge of how adjunctive CAM therapies are implemented in hospitals and the effect of various CAM therapies on pain management, which can only be answered with prospective data collection. Using a prospective, **observational** design, we propose a large scale study to build on this exploratory work. It will document predictors of CAM referral, service delivery, and therapy selection for pain management. It will also examine the impact of CAM therapies as adjuncts to traditional interventions on short and long-term changes in pain across clinical groups in a hospital setting. The setting for this study of CAM is the Penny George Institute for Health and Healing at Abbott Northwestern Hospital. The George Institute is uniquely suited for this work as it is the nation's largest inpatient CAM program serving over 19,000 patients since 2004. The proposed study has 3 aims: 1) quantitatively describe a model for delivering CAM therapies to understand selection of patients and CAM therapies for pain management, 2) examine the effects of selected CAM therapies on immediate change in pain, and 3) examine the effects of selected CAM therapies on duration of pain change. Positive results from this study will assist hospitals in the integration of usual care and CAM therapy for pain reduction. Findings may also drive future research on the cost effectiveness of these therapies for pain management, as well as impact on patient outcomes such as length of stay and use of narcotics.

# R01 Aims:

- Aim 1:  Understand selection of patients and IM therapies (n=~6,000 admissions)
- Aim 2: Examine the effects of therapies on immediate change in pain (n=~6,000 admissions)
- Aim 3: Examine the effects on duration of pain management  (n=3,575 admissions)

# Status of NIH R01

- Assembled a database: 7/09 to 12/12
  - Electronic Health Record (EHR) flowsheet developed
  - Focus on certain clinical populations.
    - Total joint replacement, oncology, and cardiology.
    - Proof of concept: acupuncture in the Emergency Dept.
- Study data collection: 7/12 to 12/14
  - Databases undergoing final analyses.
  - Analyses & manuscripts: 2017.

# Joint Replacement: Pain Analysis

Pre- to post-IM therapy percent decrease in pain scores

| | | |
|---|---|---|
| Any Treatment | No. | 1,977 |
| | Unit Decrease in Pain | -1.91 (-45.2%) |
| | 95% CI | (1.83-1.99) |
| | p-value | <0.001 |

# Oncology: Pain and Anxiety Analysis

| Pre- to post-IM therapy change in pain and anxiety scores | |
|---|---|
| No. Pain Observations | 1,514 |
| % Change in Pain | -46.9 |
| p-value | <0.001 |
| No. Anxiety Observations | 1,074 |
| % Change in Anxiety | -56.1 |
| p-value | <0.001 |

# Cardiovascular: Pain and Anxiety Analysis

Pre- to post-IM therapy percent decrease in pain and anxiety scores

| | | |
|---|---|---|
| No. Pain Obs | | 5,981 |
| | % Decrease in Pain | -46.5 |
| | 95% CI | (45.5 – 47.4) |
| | p-value | <0.001 |
| No. Anxiety Obs | | 3,109 |
| | % Decrease in Anxiety | -54.8 |
| | 95% CI | (53.7 – 55.9) |
| | p-value | <0.001 |

# Acupuncture in an Outpatient Clinic

- Spacious
- Relaxed
- Quiet Instrumental Music
- Softly Lit
- Pleasant Smelling

# Pilot:  Acupuncture in the Emergency Room


- Cramped
- Stressful
- Loud Screaming and Beeping
- Brightly Lit
- Offensive Smelling

# Acupuncture in Emergency Dept

Pre- to post-treatment percent decrease in pain scores

| | | |
|---|---|---|
| AQ + Pain Medications (pre 7.1) | No. Obs | 167 |
| | Unit and % decrease | - 2.40 (-36.6%) |
| | p-value | <0.001 |
| AQ Alone (pre 7.6) | No. Obs | 143 |
| | Unite and % decrease | -2.53 (-33.1%) |
| | p-value | <0.001 |

# Acupuncture in Emergency Dept

Pre- to post-treatment percent decrease in pain scores

| | | |
|---|---|---|
| AQ + Pain Medications (pre 7.1) | No. Obs | 167 |
| | Unit and % decrease | - 2.40 (-36.6%) |
| | p-value | <0.001 |
| AQ Alone (pre 7.6) | No. Obs | 143 |
| | Unite and % decrease | -2.53 (-33.1%) |
| | p-value | <0.001 |

- 62% of "Acupuncture Only" patients were discharged from the ED without receiving any pain medications
- 25% received an opioid medication
- 13% received an analgesic medication

# Publications

Pain Medicine

Pain Medicine 2015; 16: 1195–1203
Wiley Periodicals, Inc.

## Acupuncture Provides Short-Term Pain Relief for Patients in a Total Joint Replacement Program

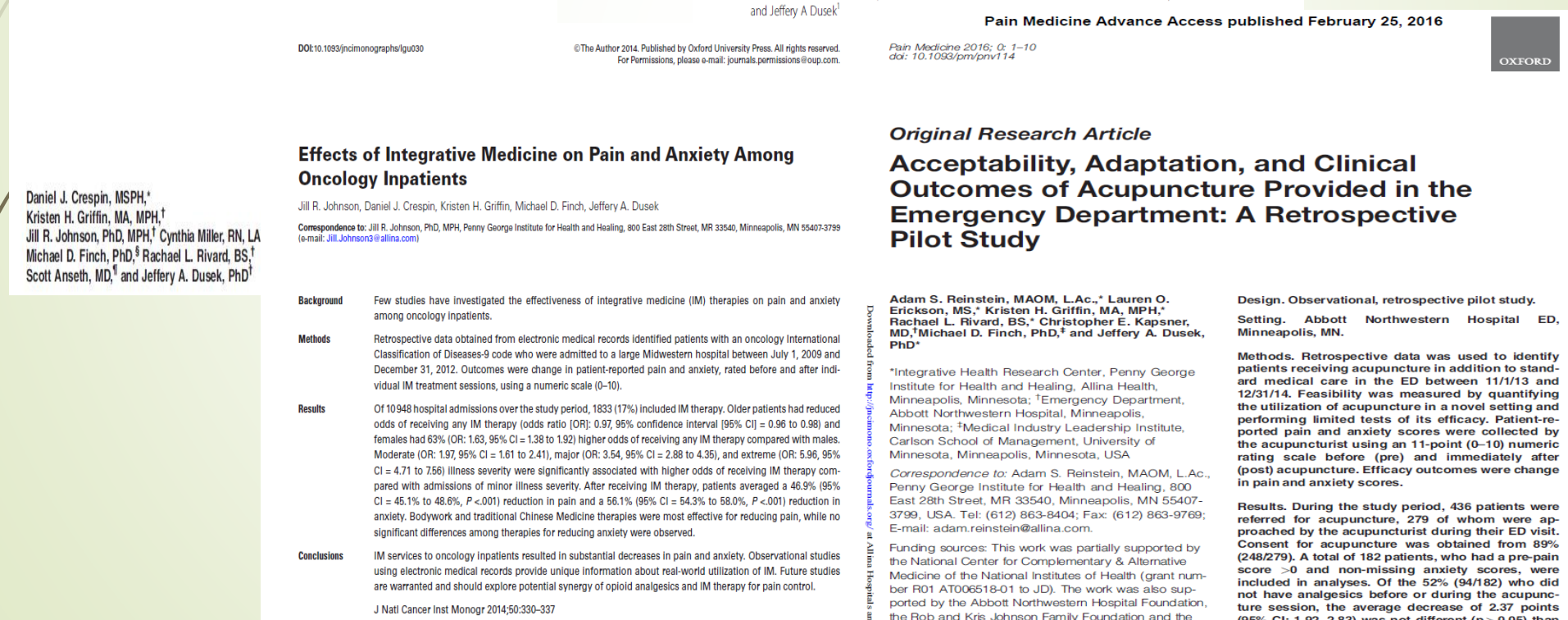
Johnson et al. BMC Complementary and Alternative Medicine 2014, 14:486
http://www.biomedcentral.com/1472-6882/14/486

BMC Complementary & Alternative Medicine

RESEARCH ARTICLE Open Access

## The effectiveness of integrative medicine interventions on pain and anxiety in cardiovascular inpatients: a practice-based research evaluation

Jill R Johnson[1*], Daniel J Crespin[2], Kristen H Griffin[1], Michael D Finch[3], Rachael L Rivard[1], Courtney J Baechler[1] and Jeffery A Dusek[1]



DOI:10.1093/jncimonographs/lgu030

©The Author 2014. Published by Oxford University Press. All rights reserved. For Permissions, please e-mail: journals.permissions@oup.com.

Pain Medicine Advance Access published February 25, 2016

Pain Medicine 2016; 0: 1–10
doi: 10.1093/pm/pnv114

OXFORD

Daniel J. Crespin, MSPH,*
Kristen H. Griffin, MA, MPH,†
Jill R. Johnson, PhD, MPH,† Cynthia Miller, RN, LA
Michael D. Finch, PhD,§ Rachael L. Rivard, BS,†
Scott Anseth, MD,¶ and Jeffery A. Dusek, PhD†

## Effects of Integrative Medicine on Pain and Anxiety Among Oncology Inpatients

Jill R. Johnson, Daniel J. Crespin, Kristen H. Griffin, Michael D. Finch, Jeffery A. Dusek

**Correspondence to:** Jill R. Johnson, PhD, MPH, Penny George Institute for Health and Healing, 800 East 28th Street, MR 33540, Minneapolis, MN 55407-3799 (e-mail: Jill.Johnson3@allina.com)

**Background** Few studies have investigated the effectiveness of integrative medicine (IM) therapies on pain and anxiety among oncology inpatients.

**Methods** Retrospective data obtained from electronic medical records identified patients with an oncology International Classification of Diseases-9 code who were admitted to a large Midwestern hospital between July 1, 2009 and December 31, 2012. Outcomes were change in patient-reported pain and anxiety, rated before and after individual IM treatment sessions, using a numeric scale (0–10).

**Results** Of 10 948 hospital admissions over the study period, 1833 (17%) included IM therapy. Older patients had reduced odds of receiving any IM therapy (odds ratio [OR]: 0.97, 95% confidence interval [95% CI] = 0.96 to 0.98) and females had 63% (OR: 1.63, 95% CI = 1.38 to 1.92) higher odds of receiving any IM therapy compared with males. Moderate (OR: 1.97, 95% CI = 1.61 to 2.41), major (OR: 3.54, 95% CI = 2.88 to 4.35), and extreme (OR: 5.96, 95% CI = 4.71 to 7.56) illness severity were significantly associated with higher odds of receiving IM therapy compared with admissions of minor illness severity. After receiving IM therapy, patients averaged a 46.9% (95% CI = 45.1% to 48.6%, $P < .001$) reduction in pain and a 56.1% (95% CI = 54.3% to 58.0%, $P < .001$) reduction in anxiety. Bodywork and traditional Chinese Medicine therapies were most effective for reducing pain, while no significant differences among therapies for reducing anxiety were observed.

**Conclusions** IM services to oncology inpatients resulted in substantial decreases in pain and anxiety. Observational studies using electronic medical records provide unique information about real-world utilization of IM. Future studies are warranted and should explore potential synergy of opioid analgesics and IM therapy for pain control.

J Natl Cancer Inst Monogr 2014;50:330–337

Pain is a common, often debilitating symptom of cancer and a

The evidence base for integrative oncology among inpatients

*Original Research Article*

## Acceptability, Adaptation, and Clinical Outcomes of Acupuncture Provided in the Emergency Department: A Retrospective Pilot Study

Adam S. Reinstein, MAOM, L.Ac.,* Lauren O. Erickson, MS,* Kristen H. Griffin, MA, MPH,* Rachael L. Rivard, BS,* Christopher E. Kapsner, MD,† Michael D. Finch, PhD,‡ and Jeffery A. Dusek, PhD*

*Integrative Health Research Center, Penny George Institute for Health and Healing, Allina Health, Minneapolis, Minnesota; †Emergency Department, Abbott Northwestern Hospital, Minneapolis, Minnesota; ‡Medical Industry Leadership Institute, Carlson School of Management, University of Minnesota, Minneapolis, Minnesota, USA

*Correspondence to:* Adam S. Reinstein, MAOM, L.Ac., Penny George Institute for Health and Healing, 800 East 28th Street, MR 33540, Minneapolis, MN 55407-3799, USA. Tel: (612) 863-8404; Fax: (612) 863-9769; E-mail: adam.reinstein@allina.com.

Funding sources: This work was partially supported by the National Center for Complementary & Alternative Medicine of the National Institutes of Health (grant number R01 AT006518-01 to JD). The work was also supported by the Abbott Northwestern Hospital Foundation, the Rob and Kris Johnson Family Foundation and the Penny George Institute Foundation.

Conflicts of interest: The authors declare no conflicts



**Design.** Observational, retrospective pilot study.

**Setting.** Abbott Northwestern Hospital ED, Minneapolis, MN.

**Methods.** Retrospective data was used to identify patients receiving acupuncture in addition to standard medical care in the ED between 11/1/13 and 12/31/14. Feasibility was measured by quantifying the utilization of acupuncture in a novel setting and performing limited tests of its efficacy. Patient-reported pain and anxiety scores were collected by the acupuncturist using an 11-point (0–10) numeric rating scale before (pre) and immediately after (post) acupuncture. Efficacy outcomes were change in pain and anxiety scores.

**Results.** During the study period, 436 patients were referred for acupuncture, 279 of whom were approached by the acupuncturist during their ED visit. Consent for acupuncture was obtained from 89% (248/279). A total of 182 patients, who had a pre-pain score >0 and non-missing anxiety scores, were included in analyses. Of the 52% (94/182) who did not have analgesics before or during the acupuncture session, the average decrease of 2.37 points (95% CI: 1.92, 2.83) was not different ($p > 0.05$) than the mean decrease of 2.68 points for those receiving analgesics (95% CI 2.21, 3.15). The average pre-anx-

# Status of NIH R01

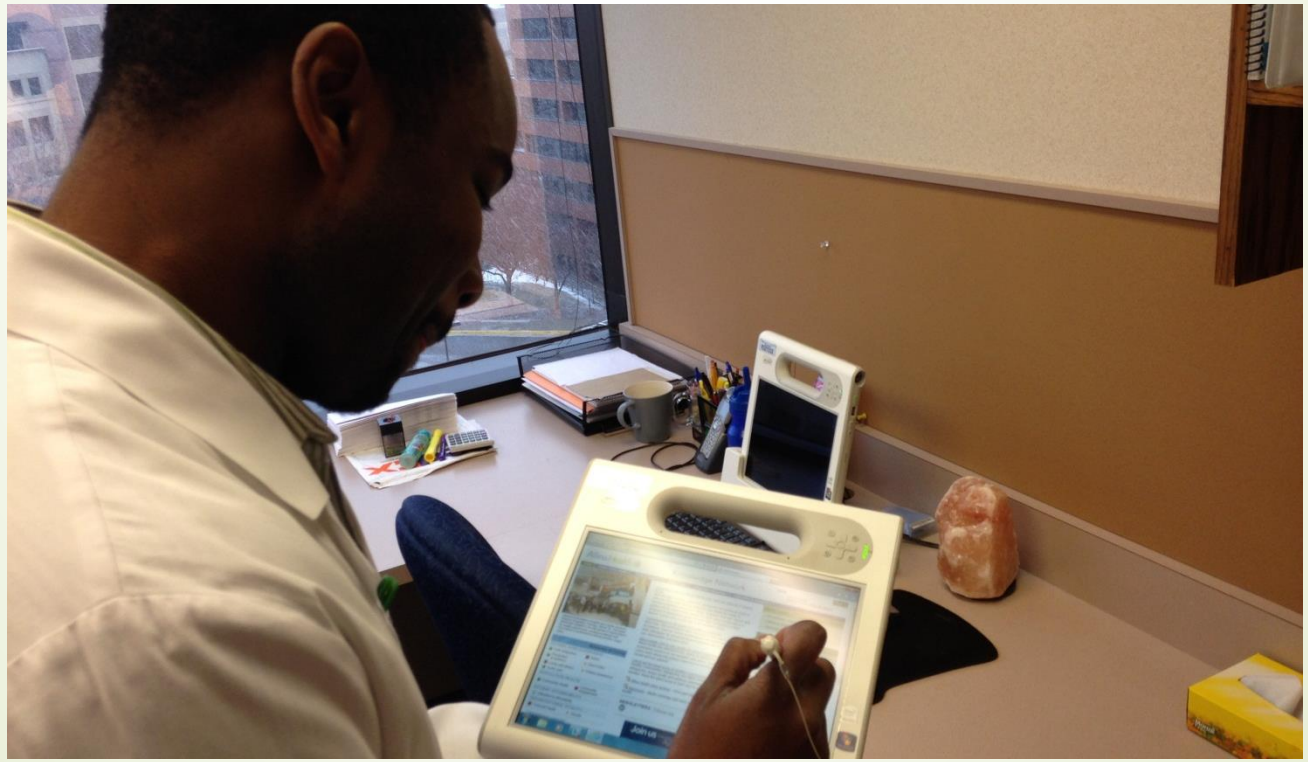
- Assembled a test database: 7/09 to 12/12
  - Electronic Health Record (EHR) flowsheet developed
  - Focus on certain clinical populations.
    - Total joint replacement, oncology, and cardiology.
    - Proof of concept: acupuncture in the Emergency Dept.
- Study data collection: 7/12 to 12/14
  - Databases undergoing final analyses.
  - Analyses & manuscripts: 2016 and 2017.

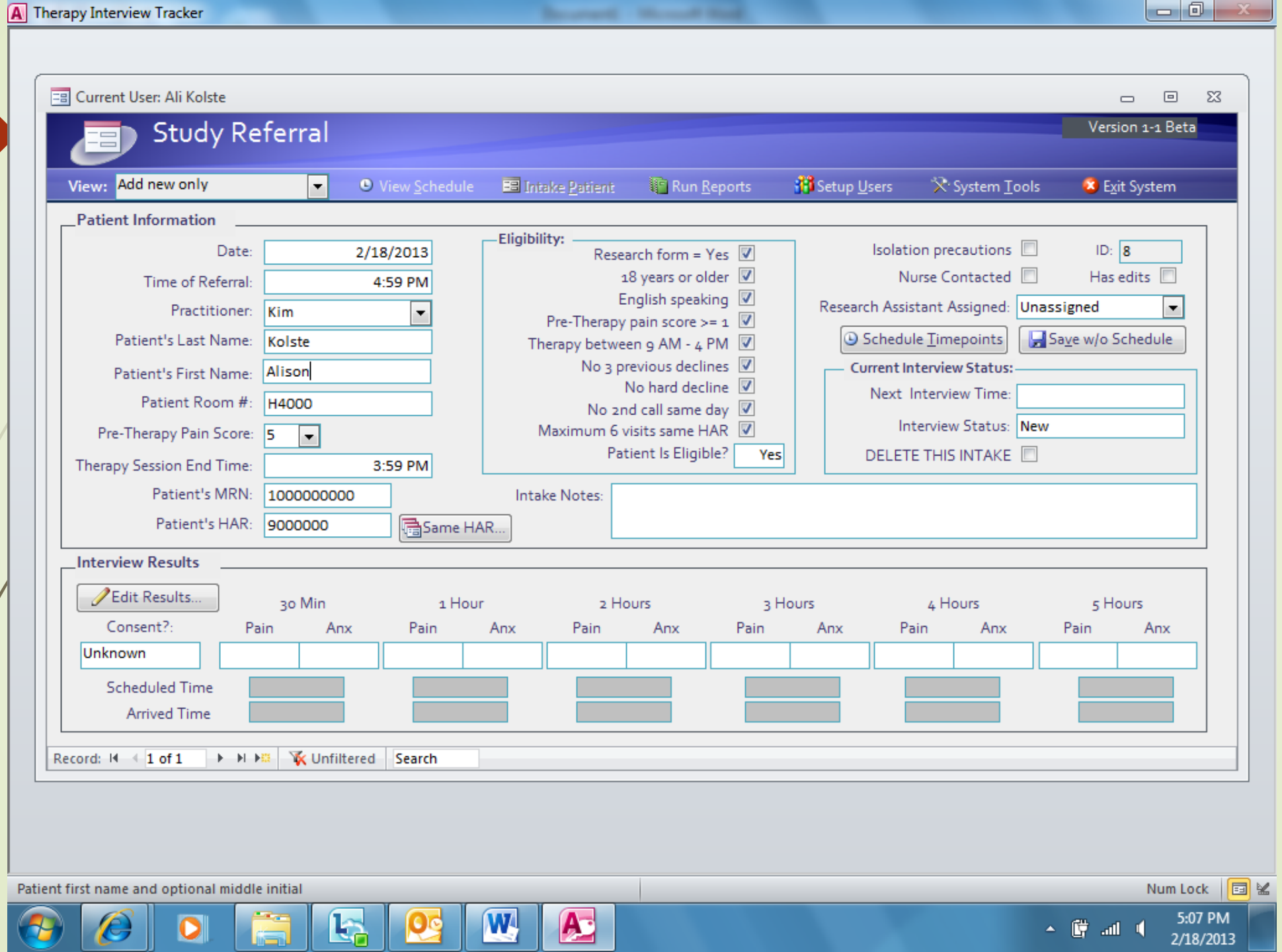
# R01 Aims:

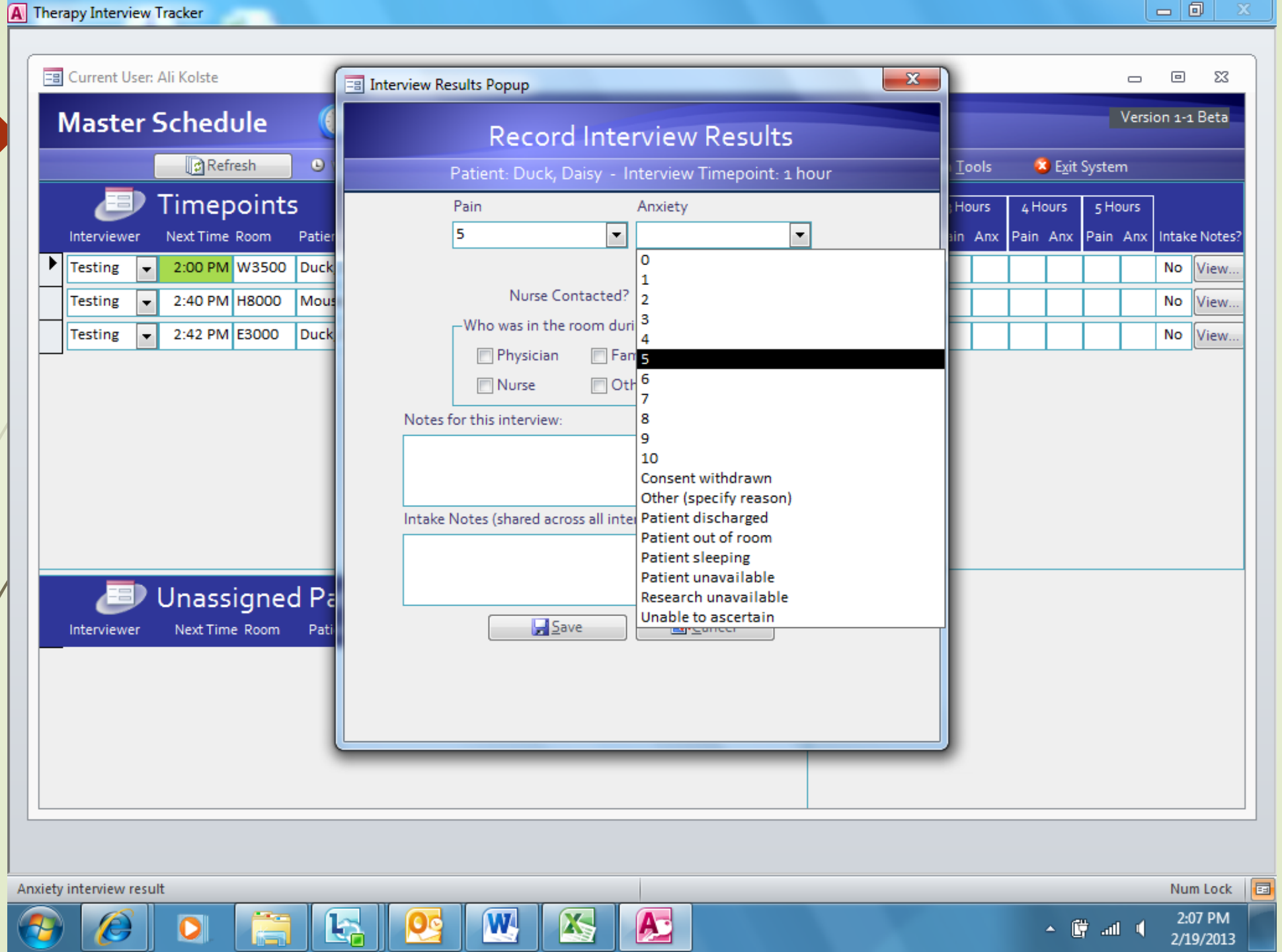
- Aim 1:  Understand selection of patients and CIH therapies
- Aim 2: Examine the effects of therapies on immediate change in pain
- Aim 3: Examine the effects on duration of pain management

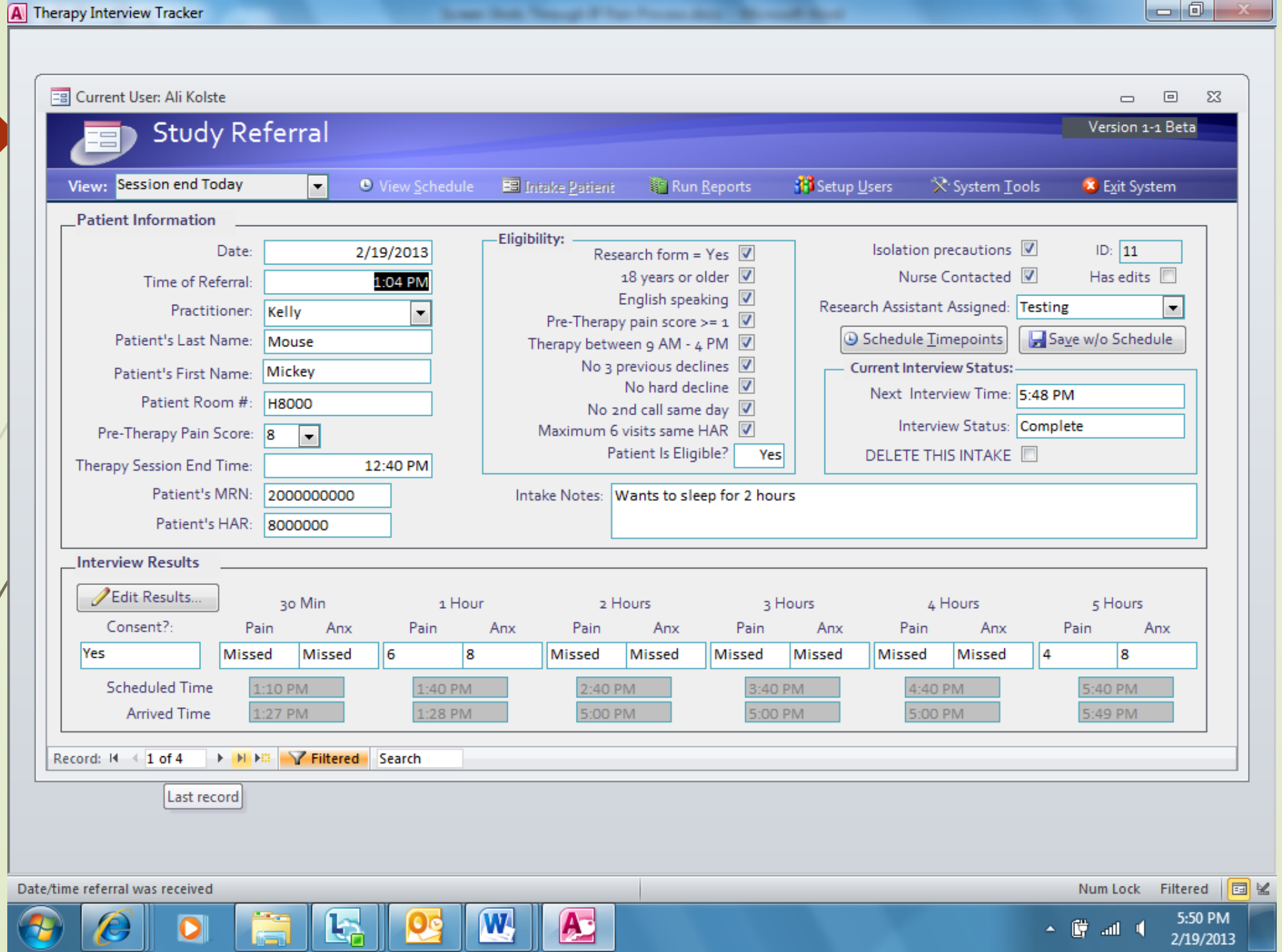
# Methods

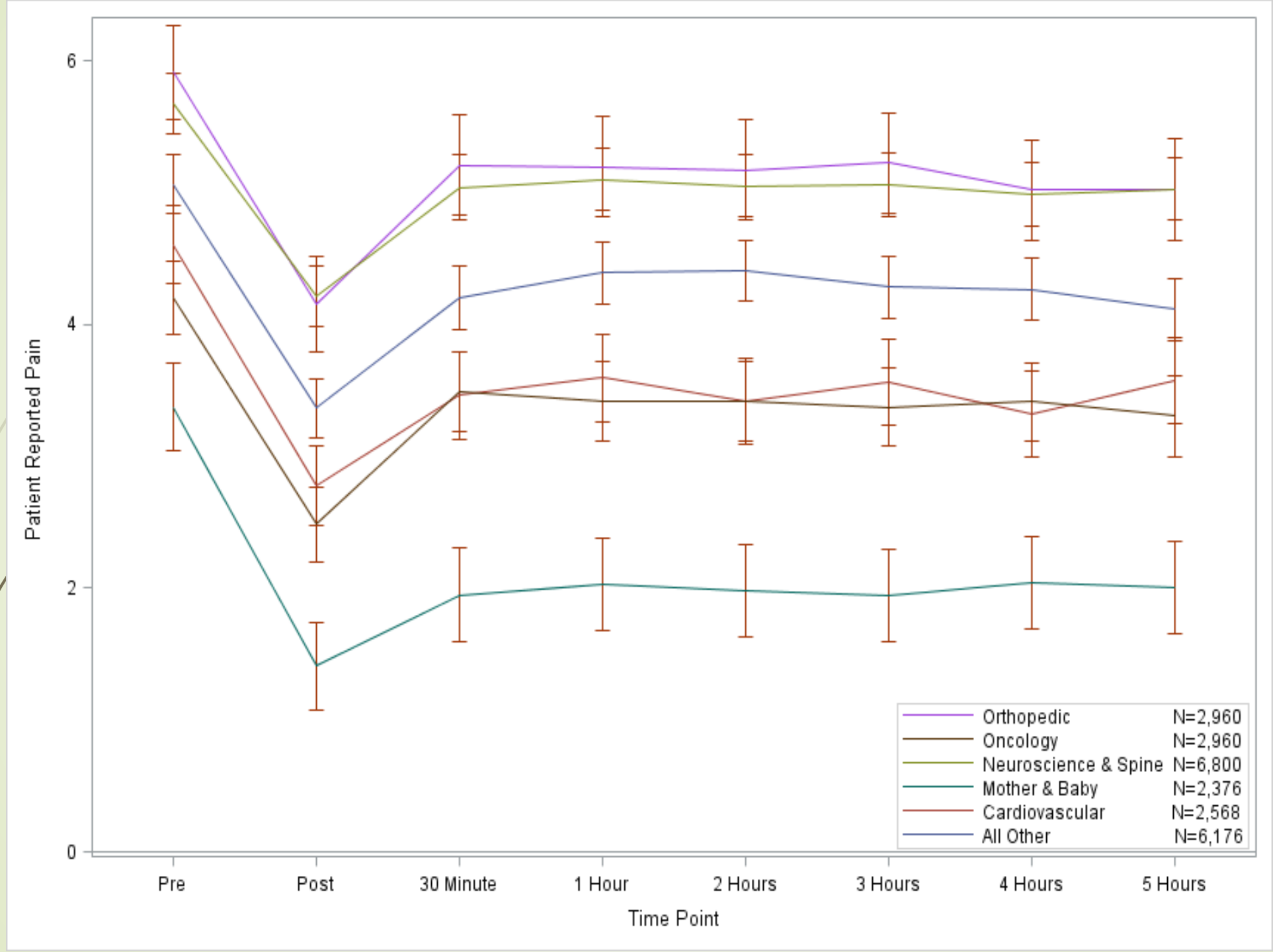
- Collect six post-therapy pain scores:
  - 30 minutes
  - 1, 2, 3, 4 and 5 hours




Therapy Interview Tracker
Current User: Ali Kolste
Study Referral
Version 1-1 Beta
View: Add new only
View Schedule
Intake Patient
Run Reports
Setup Users
System Tools
Exit System
Patient Information
Date: 2/18/2013
Time of Referral: 4:59 PM
Practitioner: Kim
Patient's Last Name: Kolste
Patient's First Name: Alison
Patient Room #: H4000
Pre-Therapy Pain Score: 5
Therapy Session End Time: 3:59 PM
Patient's MRN: 1000000000
Patient's HAR: 9000000
Same HAR...
Eligibility:
Research form = Yes
18 years or older
English speaking
Pre-Therapy pain score >= 1
Therapy between 9 AM - 4 PM
No 3 previous declines
No hard decline
No 2nd call same day
Maximum 6 visits same HAR
Patient Is Eligible? Yes
Isolation precautions
ID: 8
Nurse Contacted
Has edits
Research Assistant Assigned: Unassigned
Schedule Timepoints
Save w/o Schedule
Current Interview Status:
Next Interview Time:
Interview Status: New
DELETE THIS INTAKE
Intake Notes:
Interview Results
Edit Results...
30 Min
1 Hour
2 Hours
3 Hours
4 Hours
5 Hours
Consent?:
Pain
Anx
Unknown
Scheduled Time
Arrived Time
Record: 1 of 1
Unfiltered
Search
Patient first name and optional middle initial
Num Lock
5:07 PM
2/18/2013


Therapy Interview Tracker
Current User: Ali Kolste
Master Schedule
Refresh
Version 1-1 Beta
Tools
Exit System
Timepoints
Interviewer
Next Time
Room
Testing
2:00 PM
W3500
2:40 PM
H8000
2:42 PM
E3000
Intake Notes?
No
View...
Unassigned Pa
Interviewer
Next Time
Room
Interview Results Popup
Record Interview Results
Patient: Duck, Daisy - Interview Timepoint: 1 hour
Pain
Anxiety
5
Nurse Contacted?
Who was in the room duri
Physician
Nurse
Notes for this interview:
Intake Notes (shared across all inte
Save
0
1
2
3
4
5
6
7
8
9
10
Consent withdrawn
Other (specify reason)
Patient discharged
Patient out of room
Patient sleeping
Patient unavailable
Research unavailable
Unable to ascertain
Anxiety interview result
Num Lock
2:07 PM
2/19/2013


Therapy Interview Tracker
Current User: Ali Kolste
Study Referral
Version 1-1 Beta
View: Session end Today
View Schedule
Intake Patient
Run Reports
Setup Users
System Tools
Exit System
Patient Information
Date: 2/19/2013
Time of Referral: 1:04 PM
Practitioner: Kelly
Patient's Last Name: Mouse
Patient's First Name: Mickey
Patient Room #: H8000
Pre-Therapy Pain Score: 8
Therapy Session End Time: 12:40 PM
Patient's MRN: 2000000000
Patient's HAR: 8000000
Eligibility:
Research form = Yes
18 years or older
English speaking
Pre-Therapy pain score >= 1
Therapy between 9 AM - 4 PM
No 3 previous declines
No hard decline
No 2nd call same day
Maximum 6 visits same HAR
Patient Is Eligible? Yes
Isolation precautions
ID: 11
Nurse Contacted
Has edits
Research Assistant Assigned: Testing
Schedule Timepoints
Save w/o Schedule
Current Interview Status:
Next Interview Time: 5:48 PM
Interview Status: Complete
DELETE THIS INTAKE
Intake Notes: Wants to sleep for 2 hours
Interview Results
Edit Results...
Consent?: Yes
30 Min Pain: Missed
30 Min Anx: Missed
1 Hour Pain: 6
1 Hour Anx: 8
2 Hours Pain: Missed
2 Hours Anx: Missed
3 Hours Pain: Missed
3 Hours Anx: Missed
4 Hours Pain: Missed
4 Hours Anx: Missed
5 Hours Pain: 4
5 Hours Anx: 8
Scheduled Time: 1:10 PM | 1:40 PM | 2:40 PM | 3:40 PM | 4:40 PM | 5:40 PM
Arrived Time: 1:27 PM | 1:28 PM | 5:00 PM | 5:00 PM | 5:00 PM | 5:49 PM
Record: 1 of 4
Filtered
Search
Last record
Date/time referral was received
Num Lock
Filtered
5:50 PM
2/19/2013


Patient Reported Pain
6
4
2
0
Pre
Post
30 Minute
1 Hour
2 Hours
3 Hours
4 Hours
5 Hours
Time Point
Orthopedic N=2,960
Oncology N=2,960
Neuroscience & Spine N=6,800
Mother & Baby N=2,376
Cardiovascular N=2,568
All Other N=6,176

# Conclusions

- Results provide evidence that CIH therapies substantially reduce both short-term pain and anxiety among various inpatients.

- Future studies are warranted and could explore:
  - Which treatments are most effective for a given population.
  - Potential synergy of opioid analgesics and IM therapy.
  - Longer-term effects of IM on pain and anxiety.
  - Cost effectiveness of IM therapy for inpatients.

# Collaborators and Funding Source

- Jon Christianson PhD, Economist (U of M)
- Michael Finch PhD, Methodologist (U of M and Children's)
- Rachel Rivard, Biostatistician
- Alison Kolste, Study Coordinator
- Kristen Griffin MA, MPH, Scientific Advisor
- Adam Reinstein MaOM, LAc Acupuncturist

- Pamela Jo Johnson PhD, Epidemiologist
- Jill Johnson PhD, Epidemiologist
- Desiree Trebesch MA, Study Coordinator
- Kelly McBride LAc, Acupuncturist
- Dan Crespin PhD, Methodologist
- Robert Jones, Senior Research Assistant
- Caitlin Dreier, Research Assistant
- Stephanie Wallerius, Research Assistant
- Nichole Janssen, Research Assistant
- Sirri Ngwa, Research Assistant

The project was supported by NIH, NCCIH grant R01 AT006518 to JAD.

# Two examples of PBR in practice

- Integrative Medicine provided at Abbott Northwestern Hospital (ANW)
- BraveNet Practice Based Research Network

# About BraveNet

- BraveNet is a national practice-based research network comprised of 18 member CIH clinics plus VAMC (3 sites)
- Founded in 2007
- Expanded in two waves of enrollment from 8 initial member sites to 18
- Expansion focus:
  - Ethnic, racial, and economic diversity
  - Actively funded researchers
  - Geographic range

# BraveNet Member Practices

# Completed Research Projects

- BraveNet Multi-Center Integrative Medicine Survey (Registry Study)
  - 4,180 subjects, one visit (Explore, 2012 and 2015)

- BraveNet Multi-Center Study on Integrative Medicine Treatment Approaches for Pain (SIMTAP)
  - 400 subject target, four visits with 24 weeks follow-up, and includes laboratory testing
  - 252 participants completed four study visits and contributed to final analysis (BMC CAM, 2013 and Integrative Cancer Therapies, 2014)

# BraveNet Publications

ORIGINAL RESEARCH

## Patients Seek Integrative Medicine for Preventive Approach to Optimize Health

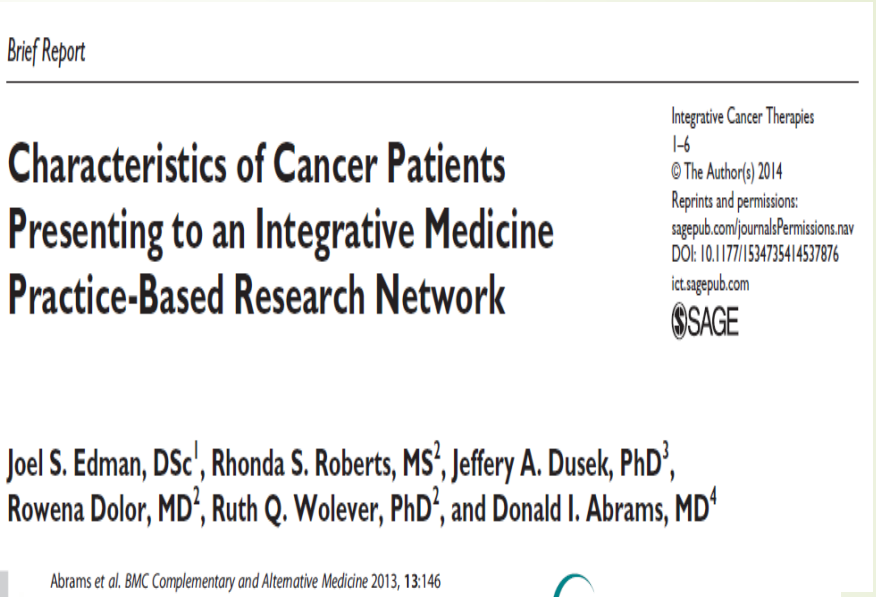
Ruth Q. Wolever, PhD,[1,#] Donald I. Abrams, MD,[2] Benjamin Kligler, MD,[3] Jeffery A. Dusek, PhD,[4] Rhonda Roberts, MSPH,[5] Joyce Frye, DO, MBA, MSCE,[6] Joel S. Edman, DSc,[7] Steve Amoils, MD,[8] Elizabeth Pradhan, PhD,[6] Myles Spar, MD, MPH,[9,10] Tracy Gaudet, MD,[1] Erminia Guarneri, MD,[11] Peter Homel, PhD,[3] Sandra Amoils, MD,[8] Roberta A. Lee, MD,[3] Brian Berman, MD,[6] Daniel A. Monti, MD,[7] and Rowena Dolor, MD, MHS[5]



ORIGINAL RESEARCH

## Integrative Medicine Patients Have High Stress, Pain, and Psychological Symptoms

Ruth Q. Wolever, PhD[1*] Nikita S. Goel, MS[2] Rhonda S. Roberts, MSPH[3] Karen Caldwell, PhD[4] Benjamin Kligler, MD[5] Jeffery A. Dusek, PhD[6] Adam Perlman, MD[7] Rowena Dolor, MD[8] and Donald I. Abrams, MD[9]



*Brief Report*

## Characteristics of Cancer Patients Presenting to an Integrative Medicine Practice-Based Research Network

Integrative Cancer Therapies
1–6

DOI: 10.1177/1534735414537876
ict.sagepub.com
SAGE

**Joel S. Edman, DSc[1], Rhonda S. Roberts, MS[2], Jeffery A. Dusek, PhD[3], Rowena Dolor, MD[2], Ruth Q. Wolever, PhD[2], and Donald I. Abrams, MD[4]**

Abrams *et al. BMC Complementary and Alternative Medicine* 2013, **13**:146
http://www.biomedcentral.com/1472-6882/13/146

BMC
Complementary & Alternative Medicine

**RESEARCH ARTICLE** **Open Access**

## The BraveNet prospective observational study on integrative medicine treatment approaches for pain

Donald I Abrams[1*], Rowena Dolor[2], Rhonda Roberts[2], Constance Pechura[3], Jeffery Dusek[4], Sandi Amoils[5], Steven Amoils[5], Kevin Barrows[1], Joel S Edman[6], Joyce Frye[7], Erminia Guarneri[8], Ben Kligler[9], Daniel Monti[6], Myles Spar[10] and Ruth Q Wolever[11]

# Newest Study: PRIMIER

Patients
Receiving
Integrative
Medicine
Interventions
Effectiveness
Registry

NCT 01754038

# Study Protocol published

Dusek *et al. BMC Complementary and Alternative Medicine* (2016) 16:53
DOI 10.1186/s12906-016-1025-0

BMC Complementary and Alternative Medicine

STUDY PROTOCOL Open Access

## Patients Receiving Integrative Medicine Effectiveness Registry (PRIMIER) of the BraveNet practice-based research network: study protocol

Jeffery A. Dusek[1*], Donald I. Abrams[2], Rhonda Roberts[3], Kristen H. Griffin[1], Desiree Trebesch[1], Rowena J. Dolor[3], Ruth Q. Wolever[4,5], M. Diane McKee[6] and Benjamin Kligler[7]

# PRIMIER OBJECTIVES

- PRIMARY OBJECTIVE

  To evaluate the change in patient-reported outcomes (e.g. quality of life, mood and stress) over time

- SECONDARY OBJECTIVE

  To evaluate whether patient- reported outcomes differ by baseline characteristics of the participants (e.g. demographics, clinical condition, patient activation measure score or intervention sought)

# PRIMIER MEASURES- Patient Reported via Redcap

- Patient Demographics
- PROMIS 29
- PROMIS Perceived Stress Scale (PSS-4)
- Patient Activation Measure © (PAM)
- Self Reported Conditions and Symptoms
- Self Reported CIH Services Used

# Chronic Pain Cohort

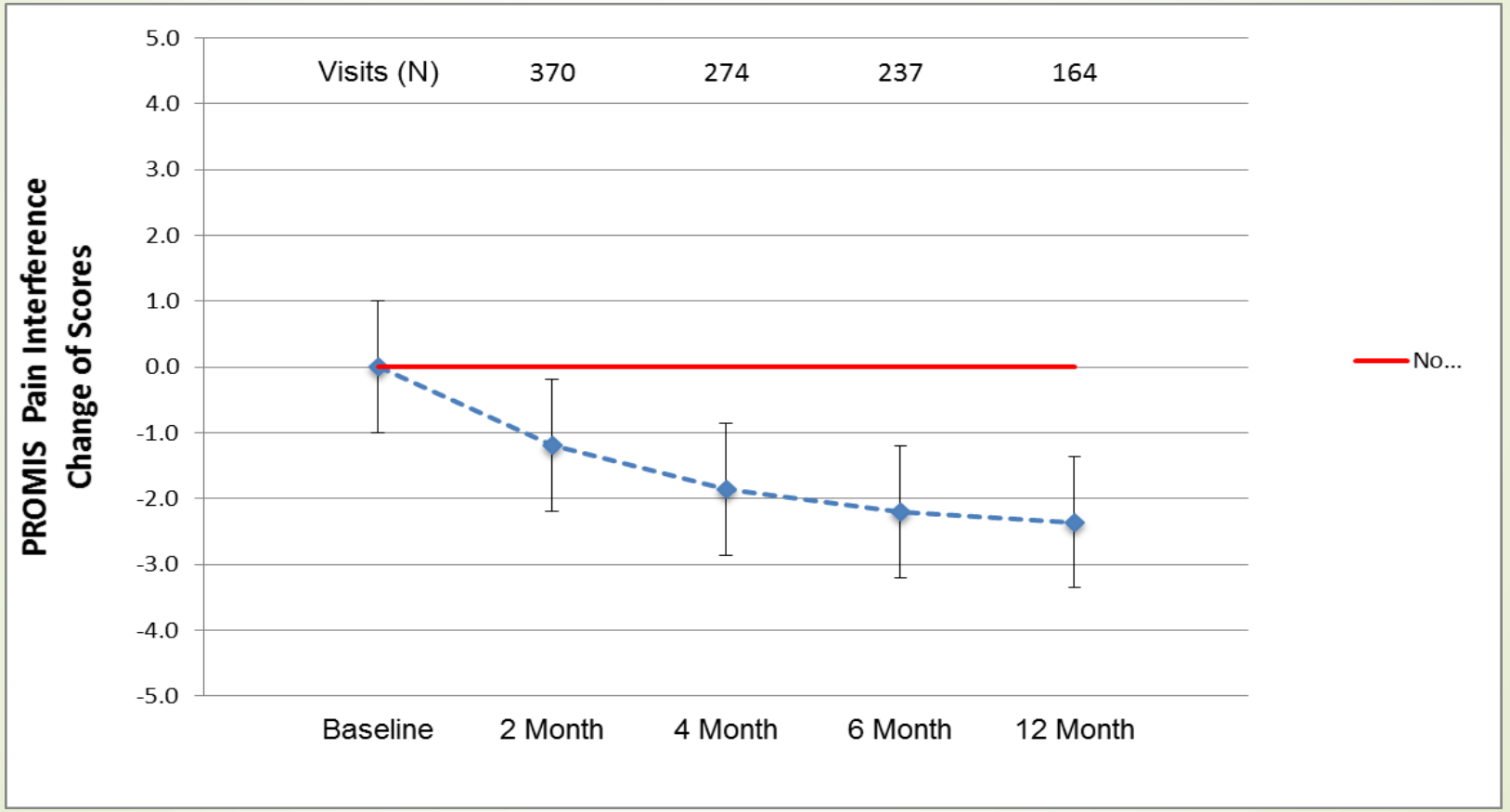
- Report **pain** (4 or greater on a scale of 0 to 10) for 3 months or longer
- Baseline data plus at least one follow up survey

# PROMIS Baseline - Chronic Pain Cohort

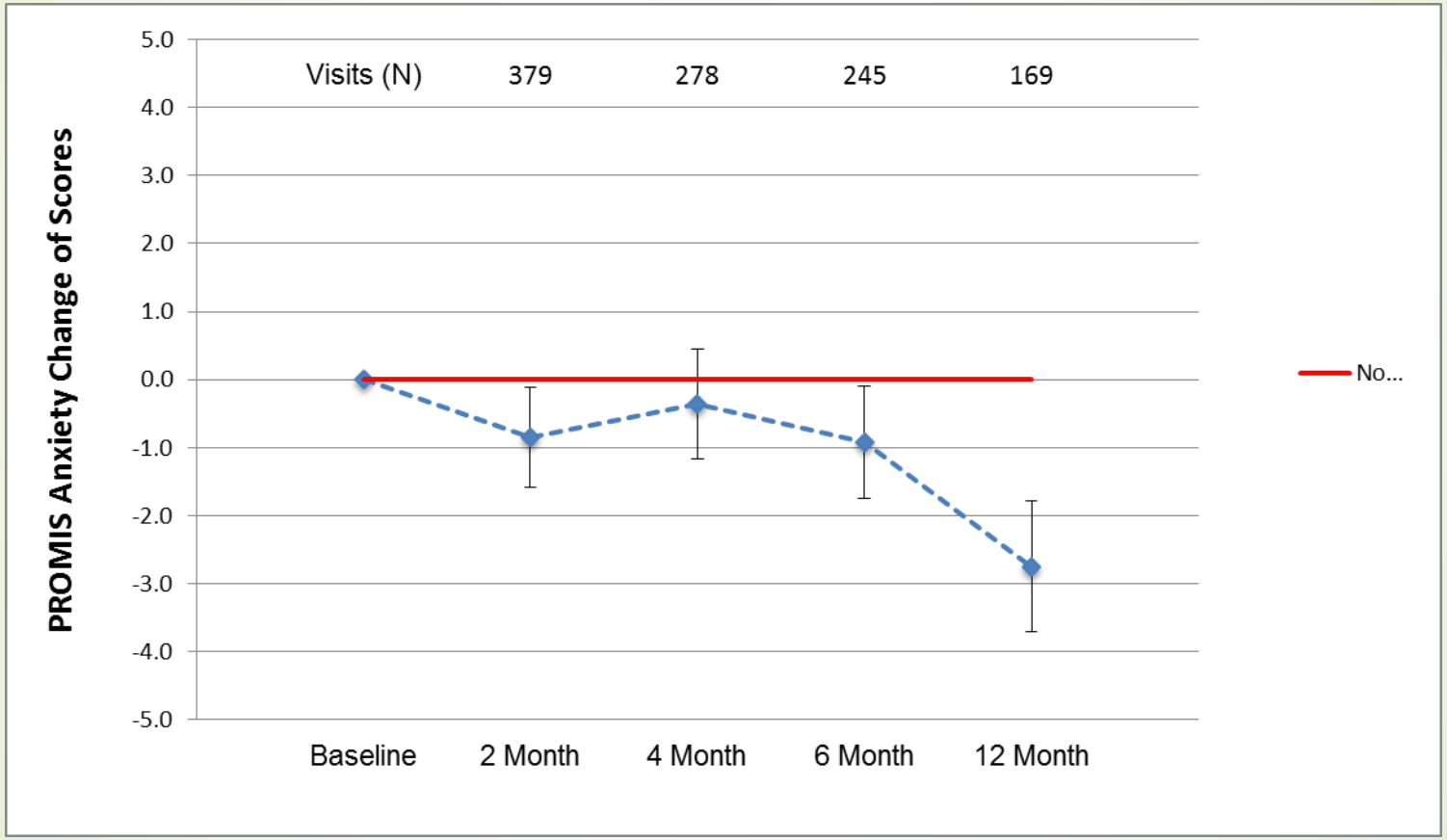
- Pain Interference (0*-100) mean 60.5 (sd 7.5)
- Anxiety (0*-100) mean 57.6 (sd 8.6)
- Depression (0*-100) mean 53.8 (sd 8.7)

* Lower score better health; ** higher score better health

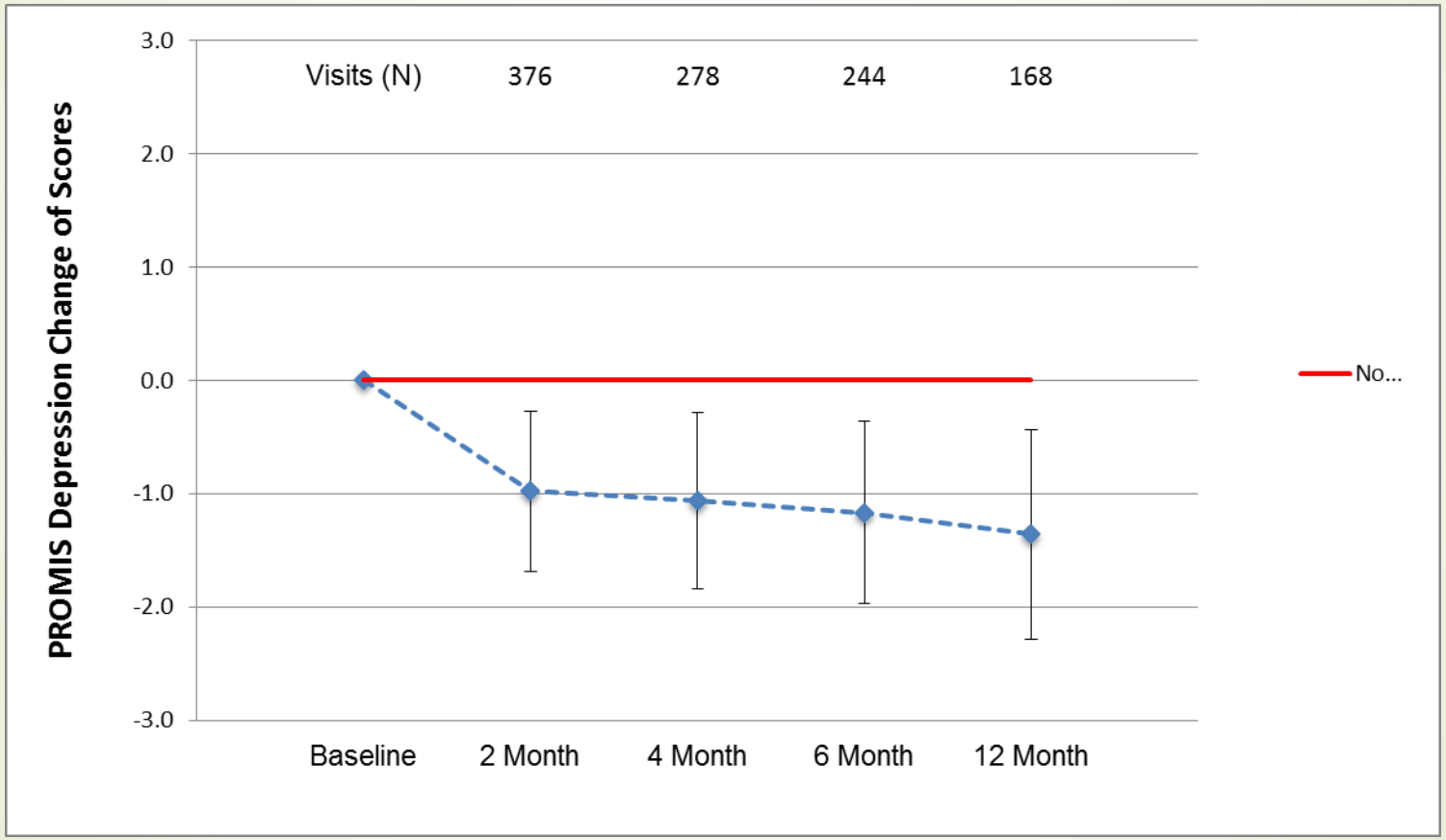
# PROMIS Pain Interference



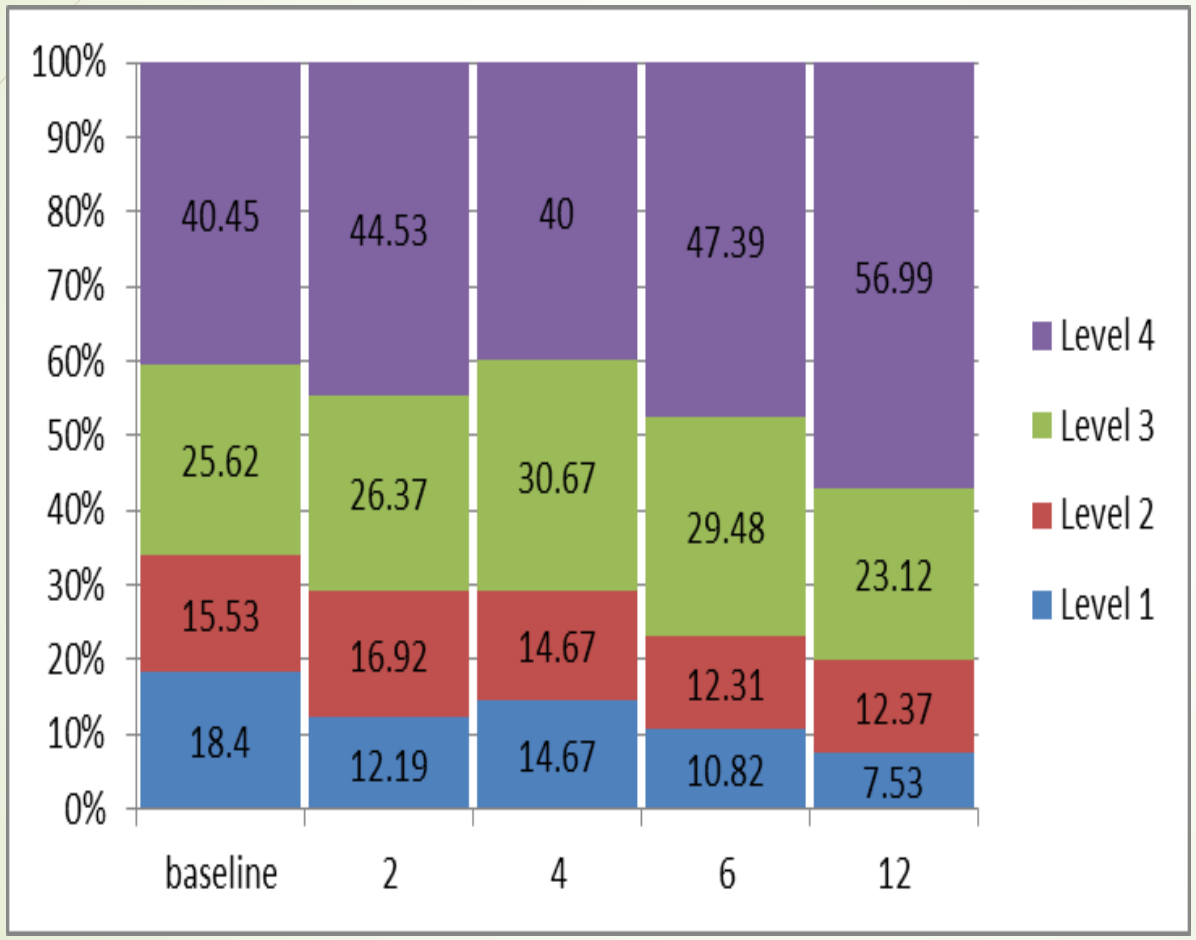
# PROMIS Anxiety



# PROMIS Depression



# Patient Activation Measure




**Level 1- Does not believe has active or important role (↓ 13%)**

**Level 2- Lacks knowledge and confidence to act (↓ 20%)**

**Level 3- Beginning to take action (↓ 9%)**

**Level 4- Maintaining behavior over time (↑ 41%)**

# Conclusions

- Current PRIMIER results demonstrate a capacity to recruit and retain patients.
- PRIMIER Chronic pain cohort achieved important reductions in pain interference, but the enrollment is continuing.
- Using EHR extracts in the next months will allow exploring which treatments, and dosing have the biggest impact on outcomes.

# BraveNet Member Practices

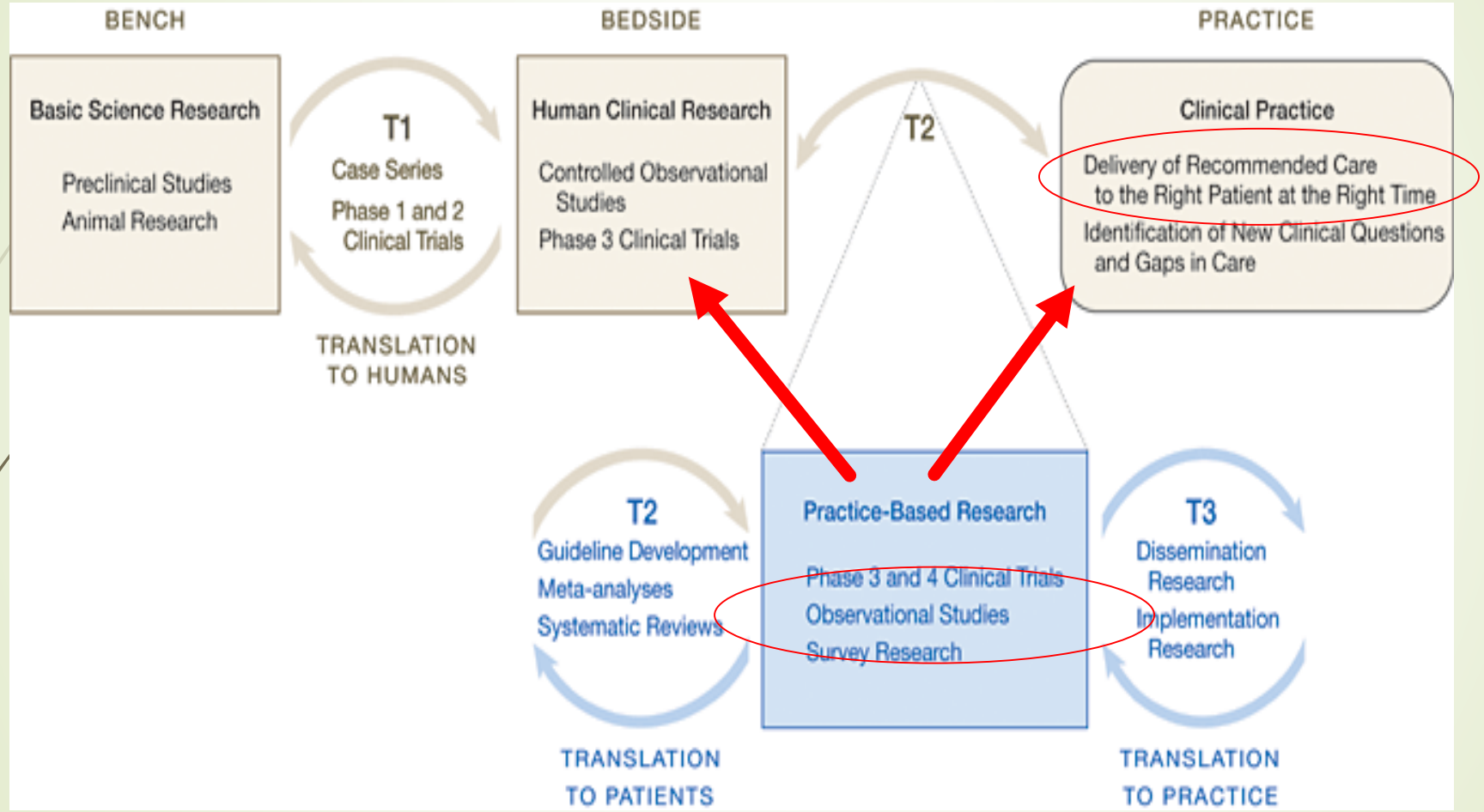
- Albuquerque, NM - Center for Life at UNM
- Baltimore, MD - Center for Integrative Medicine at University of Maryland
- Boston, MA - Boston Medical Center
- Chicago, IL - Northwestern Medical Osher Center for Integrative Medicine
- Cincinnati, OH - Alliance Integrative Medicine
- Columbus, OH - Ohio State Wexner Medical Center, Center for for Integrative Health and Wellness
- Denver, CO - The Center for Integrative Medicine at University of Colorado Hospital
- Durham, NC - Duke Integrative Medicine
- Irvine, CA - Susan Samueli Center for Integrative Medicine at UCI School of Medicine
- San Francisco, CA - Osher Center for Integrative Medicine
- Minneapolis, MN - Penny George Institute for Health and Healing
- Nashville, TN - Vanderbilt University Medical Center
- New York, NY - Center for Health and Healing at Mount Sinai Beth Israel
- Philadelphia, PA - Jefferson Myrna Brind Center of Integrative Medicine
- Pittsburgh, PA - UPMC Center for Integrative Medicine
- San Diego, CA - Scripps Center for Integrative Medicine
- San Diego, CA - UCSD Center for Integrative Medicine
- Venice, CA - Venice Family Clinic, Simm/Mann Health and Wellness Center
- Veterans Affairs (VA) Clinics- DC, GLA, EO

# Summary: Practice-Based Research

- Practice based research provides invaluable information for the field of complementary and integrative health

- Answers derived from this research can be used in various ways
  - Inform future randomized trials
  - Inform clinical practice

# Practice-based Research




**Westfall, J. M. et al. JAMA 2007;297:403-406.**

# 2016 NIH, NCCIH Systematic Review

SYMPOSIUM ON PAIN MEDICINE

MAYO CLINIC

CrossMark

## Evidence-Based Evaluation of Complementary Health Approaches for Pain Management in the United States

Richard L. Nahin, PhD, MPH; Robin Boineau, MD, MA; Partap S. Khalsa, DC, PhD; Barbara J. Stussman, BA; and Wendy J. Weber, ND, PhD, MPH

Mayo Clin Proc. 2016;91(9):1292-1306

# 2016 JAMA Commentary

News & Analysis

Medical News & Perspectives

## As Opioid Epidemic Rages, Complementary Health Approaches to Pain Gain Traction

Jennifer Abbasi

JAMA. 2016 Nov 2. doi: 10.1001/jama.2016.15029. [Epub ahead of print]

# 2016 JAMA Commentary

News & Analysis

Medical News & Perspectives

## As Opioid Epidemic Rages, Complementary Health Approaches to Pain Gain Traction

Jennifer Abbasi

Unlike a typical systematic review that assigns quality values to the studies, the investigators conducted a narrative review, in which they simply looked at the number of positive and negative trials. "If there were more positives than negatives then we generally felt the approach had some value," Nahin

JAMA. 2016 Nov 2. doi: 10.1001/jama.2016.15029. [Epub ahead of print]

# 2016 JAMA Commentary

News & Analysis

Medical News & Perspectives

## As Opioid Epidemic Rages, Complementary Health Approaches to Pain Gain Traction

Jennifer Abbasi

Unlike a typical systematic review that assigns quality values to the studies, the investigators conducted a narrative review, in which they simply looked at the number of positive and negative trials. "If there were more positives than negatives then we generally felt the approach had some value," Nahin

Based on a "preponderance" of positive vs negative trials, complementary approaches that may offer pain relief include acupuncture and yoga for back pain; acupuncture and tai chi for osteoarthritis of the knee; massage therapy for neck pain; and relaxation techniques for severe headaches and migraine.

JAMA. 2016 Nov 2. doi: 10.1001/jama.2016.15029. [Epub ahead of print]

# Quotes from NIH, NCCIH staff

A next step for the NCCIH, Shurtleff said, is to conduct "pragmatic" studies that look at the effectiveness of complementary health strategies for pain outside of the strict inclusion/exclusion criteria of RCTs. "We're looking to see how this works in real time in the real world, with all the warts and things that go along with that," he said.

# Quotes from NIH, NCCIH staff

A next step for the NCCIH, Shurtleff said, is to conduct "pragmatic" studies that look at the effectiveness of complementary health strategies for pain outside of the strict inclusion/exclusion criteria of RCTs. "We're looking to see how this works in real time in the real world, with all the warts and things that go along with that," he said.

"At the end of the day, if an approach is successful you'll be able to generalize it more to everyone with the disease, versus a very small cohort of individuals," Nahin added.

Questions?