Effectiveness of Integrative Medicine Interventions Provided to Patients on Pain Outcomes: via Practice Based Research

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Director of Research,
Connor Integrative Health Network
February 8, 2019
Pain Burden in the United States

- Pain affects an estimated 100 million adults in the United States.¹

- Annual cost related to pain in the US is estimated to be between $560 to $635 billion.¹,²

- Pain is a public health problem, a major driver of health care seeking and for taking medications, a major cause of disability, and a key factor in quality of life and productivity.¹

- In 2012, there were 50 times more opioid prescriptions than the rest of the world combined,³ reflecting a persistent national epidemic associated with 130 deaths daily.⁴

Sources:
1- Institute of Medicine, Committee on Advancing Pain Research, Care and Education. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington (DC): National Academies Press (US); 2011.
Phases of Research

- **Bench**
  - Basic Science Research
  - Preclinical Studies
  - Animal Research

- **Bedside**
  - Human Clinical Research
  - Controlled Observational Studies
  - Phase 3 Clinical Trials

- **Practice**
  - Clinical Practice
  - Delivery of Recommended Care to the Right Patient at the Right Time
  - Identification of New Clinical Questions and Gaps in Care

Phases of Research

**BENCH**
- Basic Science Research
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Efficacy

Phases of Research

BENCH

Basic Science Research
- Preclinical Studies
- Animal Research

BEDSIDE

Human Clinical Research
- Controlled Observational Studies
- Phase 3 Clinical Trials

PRACTICE

Clinical Practice
- Delivery of Recommended Care to the Right Patient at the Right Time
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Phases of Research

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**PRACTICE**
- Clinical Practice
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Phases of Research

**Bench**
- Basic Science Research
- Preclinical Studies
- Animal Research

**Bedside**
- T1 Case Series
- Phase 1 and 2 Clinical Trials
- Human Clinical Research
- Controlled Observational Studies
- Phase 3 Clinical Trials

**Practice**
- Clinical Practice
  - Delivery of Recommended Care to the Right Patient at the Right Time
  - Identification of New Clinical Questions and Gaps in Care

Phases of Research

Practice-Based Research

Basic Science Research
- Preclinical Studies
- Animal Research

T1
- Case Series
- Phase 1 and 2 Clinical Trials

Human Clinical Research
- Controlled Observational Studies
- Phase 3 Clinical Trials

T2
- Delivery of Recommended Care to the Right Patient at the Right Time
- Identification of New Clinical Questions and Gaps in Care

Practice-Based Research
- Phase 3 and 4 Clinical Trials
- Observational Studies
- Survey Research

Practice-Based Research


Effectiveness
What is Practiced-Based research?

• Research that occurs in the office, clinic or hospital, where patients generally receive clinical care.

• Method to study the interventions as they are routinely delivered clinically.
Advantages?

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

- Captures data on representative patients who are receiving representative treatments

- Possible to assess utility of an intervention provided by clinicians with a broad range of training and expertise

- Possible to obtain clinically detailed, patient-level data
Disadvantages?

• Limited ability to infer causality given the lack of randomization

• Data collection may be performed by clinicians who may lack specialized research training

• Electronic health record is a clinical tool and not designed for research purposes
Practice Based Research: Integrative Medicine

- Integrative Medicine provided at Abbott Northwestern Hospital (ANW)
  - Acute pain

- BraveNet Practice Based Research Network (PBRN)
  - Chronic Pain
Effectiveness of Integrative Medicine

Integrative Medicine (IM) provided at Abbott Northwestern Hospital

- 630 bed tertiary care hospital
- Penny George Institute (PGI) started providing IM services in 2003
  - ~10,000 IM sessions annually (circa 2016)
  - IM services are provided at no cost to patient
  - Average 31 minutes per session
  - 1.5 sessions per patient per hospital admission
Patients receive individualized IM care 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)

- 6.3 FTE massage therapists
- 3.5 FTE acupuncturists
- 0.9 FTE music therapist
- 0.8 FTE Nursing
Penny George Institute: IM Process

- Physician or nurse referrals via EPIC electronic health record (EHR)
  - Acupuncture must be referred by MD

- Triage Meeting of IM providers

- EHR review by IM provider

- IM Treatment Session (conducted within 24-36 hrs)
  - Intake
  - Baseline data collection (e.g., pain, anxiety, nausea, coping)
  - IM therapy provided
  - Follow-up data collection

- IM provider documents the baseline and follow-up results in EHR
EPIC - specialized flowsheet
EPIC - specialized flowsheet
Impact of IM on Pain Management

- Participants: 1837 patients hospitalized between January 1, 2008 and June 30, 2009.

- Measurements: Pretreatment and post-treatment pain scores on a verbal numeric rating scale (0 to 10).

- Results: Most patients (66%) had not previously received any integrative services.

- The average reduction in pain was 1.9 points and the average percentage in pain reduction was 55%.

- No differences across clinical populations (due to small sample size).

Unanswered Questions…

• Is the 1.9 unit decrease reproducible?
• Which patients receive IM?
• Does pain relief differ by IM therapy?
• Does pain relief differ by clinical population?
• Might specific therapies effect greater pain relief in certain clinical populations?
• Is IM cost effective in pain population?
• What is the duration of pain relief?
• Does concurrent use of opioids influence pain relief in the IM patients?
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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. In 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)
Update on Status of NIH R01

• Initial database: 7/09 to 12/12
  ➢ Electronic Health Record (EHR) flowsheet developed
  ➢ Focus on certain clinical populations.
    - Total joint replacement, oncology, and cardiology.
  ➢ Cost analysis

➢ Acupuncture in the Emergency Dept.
  ➢ Observational proof of concept
  ➢ Pilot RCT

• Study data collection: 7/12 to 12/14
  ➢ Databases undergoing additional analyses.
## Joint Replacement: Pain Analysis

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

<table>
<thead>
<tr>
<th>Any Treatment</th>
<th>No.</th>
<th>1,977</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Decrease in Pain</strong></td>
<td></td>
<td>-1.91</td>
</tr>
<tr>
<td><strong>95% CI</strong></td>
<td></td>
<td>(1.83-1.99)</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td></td>
<td>&lt;0.001</td>
</tr>
</tbody>
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<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Treatment</td>
<td>1,977</td>
<td>-1.91 (-45.2%)</td>
<td>(1.83-1.99)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Day 1</td>
<td>1,259</td>
<td>-1.79 (-38.8%)</td>
<td>(1.69 – 1.89)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Day 2</td>
<td>718</td>
<td>- 2.14 (59.9%)</td>
<td>(2.01 – 2.26)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

## Oncology: Pain and Anxiety Analysis

<table>
<thead>
<tr>
<th></th>
<th>Pre- to post-IM therapy change in pain and anxiety scores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. Pain Observations</strong></td>
<td>1,514</td>
</tr>
<tr>
<td>% Change in Pain</td>
<td>-46.9</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>No. Anxiety Observations</strong></td>
<td>1,074</td>
</tr>
<tr>
<td>% Change in Anxiety</td>
<td>-56.1</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Cardiovascular: Pain and Anxiety Analysis

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

<table>
<thead>
<tr>
<th>No. Pain Obs</th>
<th>5,981</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Decrease in Pain</td>
<td>-46.5</td>
</tr>
<tr>
<td>95% CI</td>
<td>(45.5 – 47.4)</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Anxiety Obs</th>
<th>3,109</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Decrease in Anxiety</td>
<td>-54.8</td>
</tr>
<tr>
<td>95% CI</td>
<td>(53.7 – 55.9)</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
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</tbody>
</table>

Cost implications of IM for Pain Relief

- A retrospective analysis including data from an EPIC-based electronic health record (EHR)
  - Patient demographics,
  - Length of stay (LOS), and
  - All Patient Refined Diagnosis Related Groups (APR-DRG) severity of Illness

- Total of 2730 patients received IM for pain and met eligibility criteria

- Regressed the demographic, change in pain, LOS, and APR-DRG variables with changes in pain on total cost for the hospital admission.

- Pain was reduced by an average of 2.05 points.

- Pain reduction was associated with a cost savings of $898 per hospital admission.

Acupuncture in an Outpatient Clinic

- Spacious
- Relaxed
- Quiet Instrumental Music
- Softly Lit
- Pleasant Smelling
Acupuncture in the Emergency Department

- Cramped
- Stressful
- Loud Beeping (screaming?)
- Brightly Lit
- Offensive Smelling
Acupuncture in ED: Acceptability & Outcomes

- **Would MDs refer?**
  - Yes: 73% of MDs referred for AQ.

- **Would patients accept acupuncture?**
  - Yes: 89% of patients accepted AQ. (248/279)

- **Would acupuncture provide pain relief?**
  - The final sample: 182 patients with acute pain received acupuncture and had a post-treatment score.
    - 49% (88/182) of patients received pain medications before AQ
      - 6.88 on the pain pre-score and a change of -2.68 units (SD 2.23).
    - 51% (94/182) received no pain medications before AQ
      - 6.71 on the pain pre-score and a change of -2.37 units (SD 2.23).
    - As a -2.0 unit decrease in pain on NRS is considered clinically significant, patients in both groups exceeded this threshold.

- **Any effect on pain medication use?**
  - Yes: 62% were discharged from ED w/o any additional pain meds.
  - 25% received an opioid and 13% received a NSAID.
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Acupuncture Provides Short-Term Pain Relief for Patients in a Total Joint Replacement Program

J. R. Johnson, D. J. Crespi, C. H. Griffin, M. D. Finch, R. L. Rivas, C. B. Scott, A. Dusek

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

J. R. Johnson, D. J. Crespi, C. H. Griffin, M. D. Finch, R. L. Rivas, C. B. Scott, A. Dusek

Cost Savings from Reducing Pain Through the Delivery of Integrative Medicine Program to Hospitalized Patients

Jeffrey A. Dusek, M.D., Kristen H. Griffin, M.A., Michael D. Finch, Ph.D., R. L. Rivas, MPH, and David Watson, M.D.
Acupuncture in ED: Concerns

- There was no control group nor any randomization;
- The acupuncturist was involved in data collection; and
- Patients were referred to acupuncture by their physicians.
- To overcome these limitations, we conducted a pilot RCT

Acupuncture in ED Pilot RCT: Flow

1. Admit to ED
2. Triage by ED staff and Study Coordinator prescreens patient
3. Patient Roomed
4. Provider assesses patient and, if eligible, signs approval form
5. Consent and baseline forms collected
6. Randomize
7. "Pre" PRO data collected
8. Acupuncture consent and Acupuncture delivered
9. Acupuncture "Post" PRO data collected
10. Usual Care determined by ED provider
11. Usual Care "Post" PRO data collected
12. ED Discharge PRO data collected
13. 30-day call
Acupuncture in ED Pilot RCT: Outcomes

• Would patients (pain >=4) enroll?
  ➢ Yes: 78% of patients enrolled. (46/59)

• Subjects were randomized to either AQ (n=23) or Usual Care (n=23)
  ➢ The average age was 36.3 (15.5 SD), 78% were female and 55.0% were non-white.

  ➢ Acupuncture:
    pre-pain: 8.18 (SD 1.62)
    post-pain: -3.0 (SD 2.51)
    ED discharge: -2.71 (SD 1.86)
    30-day: -5.28 (SD 3.0)

  ➢ Usual Care:
    pre-pain: 7.91 (SD 1.41)
    post-pain: -1.56 (SD 2.37)
    ED discharge: -2.53 (SD 2.27)
    30-day: -3.41 (SD 4.0).

Update on Status of NIH R01

• Initial database: 7/09 to 12/12
  ➢ Electronic Health Record (EHR) flowsheet developed
  ➢ Focus on certain clinical populations.
    - Total joint replacement, oncology, and cardiology.
  ➢ Cost analysis
  ➢ Proof of concept: acupuncture in the Emergency Dept.

• Study data collection: 7/12 to 12/14
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R01 Aims:

- **Aim 1:** Understand selection of patients and IM 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-IM therapy pain scores:
  – 30 minutes
  – 1, 2, 3, 4 and 5 hours
Specialized database
Specialized database

Therapy Interview Tracker

Current User: Ali Kolste

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: 800000

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: Yes
ID: 11
Has edits: No

Research Assistant Assigned: Testing
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

<table>
<thead>
<tr>
<th>Consent</th>
<th>Pain</th>
<th>Anx</th>
<th>30 Min</th>
<th>1 Hour</th>
<th>2 Hours</th>
<th>3 Hours</th>
<th>4 Hours</th>
<th>5 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Missed</td>
<td>Missed</td>
<td>6</td>
<td>8</td>
<td>Missed</td>
<td>Missed</td>
<td>Missed</td>
<td>Missed</td>
</tr>
</tbody>
</table>

Scheduled Time
- 1:10 PM
- 1:40 PM
- 2:40 PM
- 3:40 PM
- 4:40 PM
- 5:00 PM
- 5:49 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

Date/time referral was received: 2/19/2013
Duration of Pain Outcomes

![Graph showing patient reported pain outcomes over time for different categories such as Orthopedic, Oncology, Neuroscience & Spine, Mother & Baby, Mother & Baby, Cardiovascular, and All Other. The x-axis represents time points from Pre to 5 Hours, and the y-axis represents patient reported pain levels.](image-url)
Duration of Pain Outcomes

Mother & Baby
Duration of Pain Outcomes

Cardiovascular & Oncology
Duration of Pain Outcomes

Conclusions

• IM therapies
  ➢ Reduce short-term pain and anxiety among various inpatients.
  ➢ Longer-term pain relief is exhibited across clinical populations.
  ➢ Reduce hospital costs for pain inpatients responding to IM.
  ➢ Are well liked by providers and patients (Emergency department) with potential impact on pain intensity.

• Future studies are warranted and could explore:
  ➢ Multi-site, feasibility of AQ in the ED is next step.
  ➢ Definitive study of AQ in ED is final goal.
  ➢ Potential synergy of opioid analgesics and IM therapy.
  ➢ Longer-term effects of IM on pain and anxiety.
  ➢ Optimal cost effectiveness delivery of IM therapy for inpatients and ED.
  ➢ Biological mechanisms of action.
Collaborators and Funding Source

• Jon Christianson PhD, Economist
• Michael Finch PhD, Methodologist
• Rachel Rivard, Biostatistician
• Alison Kolste, Study Coordinator
• Kristen Griffin MA, MPH, Scientific Advisor
• Adam Reinstein MaOM, LAc Acupuncturist

• Pamela Jo Johnson PhD, Co-Investigator
• Jill Johnson PhD, Epidemiologist
• Desiree Trebesch MA, Study Coordinator
• Kelly McBride LAc, Acupuncturist
• Dan Crespin, 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 partially supported by grant R01 AT006518 from the National Center for Complementary and Integrative Health (NCCIH) to JD.
Practice Based Research: Integrative Medicine

- Integrative Medicine provided at Abbott Northwestern Hospital (ANW)
  - Acute pain

- BraveNet Practice Based Research Network (PBRN)
  - Chronic Pain
About BraveNet

• BraveNet is the only national practice-based research network of IM
• Currently comprised of 15 leading Integrative Medicine clinics plus VAMC (3 sites)
• Founded in 2007
• Expanded in two waves of enrollment from 8 initial member sites
• Expansion focus:
  ➢ Ethnic, racial, and economic diversity
  ➢ Actively funded researchers
  ➢ Geographic range
BraveNet Member Clinics
Characteristics of Cancer Patients Presenting to an Integrative Medicine Practice-Based Research Network

Joel S. Edman, DSc1, Rhonda S. Roberts, MS2, Jeffery A. Dusek, PhD3, Rowena Dolor, MD2, Ruth Q. Wolever, PhD2, and Donald I. Abrams, MD4

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Integrative Cancer Therapies 1:6
DOI: 10.1177/1544734414537875
sagepub.com/journalPermissions.nav

Abstract: Objective: Patients with cancer frequently seek integrative medicine (IM) as a preventive approach to optimize health. This paper describes the characteristics of cancer patients seeking IM care within the BraveNet Practice-Based Research Network (PBRN)/Practice-Based Research Network (PBRN). Methods: Descriptive statistics were computed for patient characteristics from the BraveNet database (N = 204). Results: Patients were significantly older than the general US cancer population, more likely to be female, and more likely to have a cancer diagnosis of breast, colorectal, or lung cancer. Conclusion: Understanding the characteristics of cancer patients seeking IM care is important to inform the design of future interventions.
PRIMIER

Patients Receiving Integrative Medicine Interventions Effectiveness Registry

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STUDY PROTOCOL

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

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PRIMIER Overview

• Prospective, non-randomized, observational evaluation conducted at all BraveNet clinical sites.

• Participants complete patient-reported outcome measures at enrollment, 2, 4, 6, 12 months.

• Extractions from participants’ health records include
  
  ➢ IM services received
  ➢ ICD diagnostic codes
  ➢ CPT codes
PRIMIER OBJECTIVES

- **PRIMARY** To evaluate the change in patient-reported outcomes (PROs: quality of life, mood and stress) over time

- **SECONDARY** To evaluate PROs differ by baseline characteristics (e.g. demographics, clinical condition, pain interference or IM intervention sought)

- **TERTIARY** To evaluate whether specific IM interventions differentially impact PROs over time.
Final PRIMIER Participants Recruited by Site
PRIMIER DATA COLLECTION: Self-reported

- Enrollment Date
- Patient Demographics
- PROMIS-29
- PROMIS Perceived Stress Scale (PSS-4)
- Patient Activation Measure © (PAM)
- Primary Conditions and Symptoms
- IM Services Utilized
- New patient status
## Pain Interference

In the past 7 days...

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much did pain interfere with your day to day activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much did pain interfere with work around the home?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>How much did pain interfere with your ability to participate in social activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much did pain interfere with your household chores?</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Chronic Pain Cohort: Enrollment

- Report pain (4 or greater on a scale of 0 to 10) for 3 months or longer (n=969)
- Participants with at least 2 surveys completed
- Participants with complete EMR data

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Baseline</th>
<th>2 Months</th>
<th>4 Months</th>
<th>6 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Pain</td>
<td>969</td>
<td>693</td>
<td>559</td>
<td>490</td>
<td>421</td>
</tr>
</tbody>
</table>
Pain Interference: Change Over Time

PROMIS Pain Interference

Enrollment 2 month 4 month 6 month 12 month
Pain Interference: Change Over Time
Conclusions

• PRIMIER Chronic pain cohort achieved important reductions in pain interference.

• Future PRIMIER analyses will identify:
  
  ➢ Which IM therapies are associated with the best pain relief.
  ➢ Optimal dose of IM therapies for pain reduction
Summary: Practice-Based Research

- Practice based research provides invaluable information for the field of complementary and integrative health:
  - Research, clinical practice and operations.

- Answers derived from this research can be used in various ways:
  - Inform future randomized trials
  - Uncover best clinical practice
  - Optimize operations
Practice-based Research

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

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

Jennifer Abbasi

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

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.

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.
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 and Answers