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Chronic Pain – Multidisciplinary Pain Treatment

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PCSS-O Webinar
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This material has been reviewed by the lead Clinical Expert on the PCSS-O grant, co-faculty, and AAN staff. Webinars will be available on-demand for participants unable to make the live event.
Accreditation Statement

The American Academy of Neurology Institute is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

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The American Academy of Neurology Institute designates this live activity for a maximum of 1 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Objectives

• Define chronic pain and biopsychosocial model/interdisciplinary pain management
• Understand the role providers, particularly neurologists can have in chronic pain management
• Review the basic approaches and core components of interdisciplinary pain treatment
• Review published data on functional outcomes of interdisciplinary pain management
Chronic Pain

Chronic Pain Syndrome (ICD-9 Code: 338.4, ICD-10 CM G89.4)

- Pain for at least 3 months AND:
  - Extreme focus on and/or amplification of pain
  - Major inactivity and/or deconditioning
  - Disrupted sleep
  - Multiple work ups and/or failed treatments
  - Depression and irritability
  - Significant reduction in social activities
Prevalence of Chronic Pain

- 50 million American adults with chronic pain
- 25 million had daily chronic pain
- 23 million more reported severe pain (affecting their ADLs)

2015 NIH report based on 2012 National Health Interview Survey (NHIS)
Pain Conditions

- Low back pain 35%
- Migraine 7.5%
- Fibromyalgia 7%
- Lumbar radiculopathy 4.5%
- Cervical radiculopathy 3.5%
- Neuropathy 5%
- Other neurologic condition 5%

Biopsychosocial Model

- Pain is a subjective experience
- It is a physical sensation, but it is an unpleasant and therefore emotional experience
- Pain impacts and is impacted by various factors
- Necessary to address all to impact the development, maintenance, and impact of chronic pain
Psychological Factors and Pain

• A mild degree of depression, anxiety, and irritability is a normal psychological response to pain
• 30-40% of those with chronic pain in Primary Care fall into the subgroup with significant psychiatric comorbidity
• 50-75% in pain specialty settings with major depression or anxiety disorder

Bair, 2003; Wasam, 2004; Gore, 2005
Lit Review: What We Know

• Anxiety

  ▪ Estimated current or 12-month prevalence of anxiety/anxiety disorder exceeds 50% among individuals with fibromyalgia, temporomandibular joint disorder, and chronic abdominal pain; 35-50% in migraine, arthritis, pelvic pain
  ▪ Individuals with migraine 2-3x more likely to be diagnosed with GAD, panic d/o, PTSD, agoraphobia vs those without

Arnold et al, 2006; Monteiro et al, 2011; McWilliams, Cox, Enns, 2003
Lit Review: What We Know

- Depression
  - Estimated current or 12-month prevalence of high levels of depressive symptoms or a mood disorder exceeds 50% among individuals with fibromyalgia, TMD, chronic spinal pain, and chronic abdominal pain; 20+% in migraine, arthritis, pelvic pain
  - Depressed individuals 3x more likely to develop LBP compared to non-depressed individuals
  - Bidirectional - Pain increases symptoms of depression and preexisting depression adds to the risk of pain

Arnold et al, 2006; Manfredini et al, 2010; Demyttenaere et al, 2007; Currie & Wang, 2005
Lit Review: Outcomes

- Surgical Outcomes
  - Most useful predictors of poor outcome:
    - Presurgical somatization
    - Depression
    - Anxiety
    - Poor coping
  - One or more psychological factors associated with poor treatment outcomes in 92% of studies review

Celestin, Edwards, Jamison, 2009
Lit Review: Outcomes

• Outcomes Impact
  ▪ Psychopathology and extreme emotionality negatively predict response to treatment
  ▪ Maladaptive beliefs and pessimistic expectations are associated with poorer functional outcomes

Jamison & Edwards, 2011; Boersman et al, 2005
Background: IOM Report

According to the Institute of Medicine report, “Comprehensive and interdisciplinary (e.g., biopsychosocial) approaches are the most important and effective ways to treat pain.”
Pain Team Complement

Chronic Pain

- Neurology
- Occupational Therapy
- Pool Therapy
- Psychiatry/Psychology
- Nursing
- Recreation Therapy
- Pain Management
- Physical Therapy
- Social Work
- Pharmacy
- Primary Care
- Vocational Rehabilitation

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Role of Pain Treatment Providers

• Like other chronic health conditions without a cure (e.g., diabetes), focus on changes that can be made to positively impact quality of life and functioning

  ▪ MD/DO/PA/NP focuses on medical optimization and coordination of care
  ▪ PT/OT/KT focuses on physical reconditioning
  ▪ Pain Psychologist focuses on lifestyle changes that include critical behavioral and cognitive modifications
Referrals to Pain Clinic

• What is the primary reason for consult
• Identify any opioid safety concerns
  ▪ Substance abuse (e.g. alcohol, cocaine)
  ▪ History of medication misuse including prescriptions from multiple providers
  ▪ History of opioid overdose
  ▪ Psychiatric instability (e.g. recent hospitalizations, medication noncompliance)
  ▪ Consider having UDS information
Treatment Options Within the Pain Clinic

• Make or verify diagnosis
  ▪ Do not take referral diagnosis for granted
• Consider any diagnostic tests to date
  ▪ Add or repeat as appropriate
• Medication Management
  ▪ Ensure current medications have been maximized
  ▪ Consider adjuvant medications
Treatment Options Within the Pain Clinic

• Interventional Treatments
  ▪ May be contraindicated for patients that are abusing alcohol or illicit substances
  ▪ Require good patient counseling regarding indication/expectation
  ▪ Should not be isolated therapy. Considered an adjunct to conservative therapies and active use of self-management strategies
  ▪ Imaging of area (plain films, MRI) must be completed in the past year
  ▪ Mindful of any needs if the patient is on ASA and/or an anticoagulant
Treatment Options Within the Pain Clinic

- Chronic Pain Rehabilitation Program (CPRP)
  - Offers best outcome for patients with Chronic Pain Syndrome (ICD-9 Code: 338.4)
  - Seek those programs that have accreditation if feasible
Treatment Options Within the Pain Clinic

• Chronic Pain Rehabilitation Program
  ▪ Inpatient Program
    – 3 weeks, residential
    – Comprehensive intensive interdisciplinary
    – Taper off of all opioids and muscle relaxants
  ▪ Outpatient Program
    – 3 days per week (Tues/Thurs/Fri) for 6 weeks
Treatment Options Within the Pain Clinic

• Chronic Pain Rehabilitation Program
  ▪ Screening for medical stability as defined by the ability to participate in activities such as PT, walking and pool therapy
  ▪ Screening for psychiatric stability as defined by no psychiatric hospitalizations for 30 days or suicide attempts in the last 90 days
  ▪ Inappropriate for patients that are abusing alcohol or illicit substances
Background: IOM Report

Recommendations

2-1. Improve the collection and reporting of data on pain

3-1. Promote and enable self-management of pain

5-3. Increase support for interdisciplinary research in pain
Multidisciplinary (Interdisciplinary) Pain Programs: Evidence-Based

• Have been found to:\textsuperscript{1-4}
  ▪ Improve functional status
  ▪ Improve psychological well-being
  ▪ Reduce opioid analgesic use
  ▪ Reduce pain severity

• Evidence with gains lasting up to 13 years.\textsuperscript{5}

\textsuperscript{1} Sanders SH, Harden N, Vicente PJ., 2005.
\textsuperscript{2} Guzmán J, Esmail R, Karjalainen K, et al., 2001
\textsuperscript{3} Flor H, Fydrich T, Turk DC. 1992.
\textsuperscript{4} Scascighini L, Toma V, Dober-Spielmann S, et al., 2008
\textsuperscript{5} Patrick LE, Altamaier EM, Found EM., 2004
IPPs: Evidence-Based

- Review of 65 studies for chronic LBP
  - At long-term follow-up, those who participated were functioning 75% better than untreated, conventional, or unimodal treatment\(^1\)

- Review of 27 RCTs
  - Evidence of greater effectives compared with untreated, conventional, or unimodal treatment\(^2\)
  - Well-established effectiveness lasting up to 13 years after treatment

2. Scascighini1 L, Toma V, Dober-Spielmann S, et al., 2008
INTERVENTIONAL THERAPIES, SURGERY, AND INTERDISCIPLINARY REHABILITATION FOR LOW BACK PAIN

An Evidence-Based Clinical Practice Guideline From the American Pain Society

Roger Chou, MD,* John D. Loeser, MD,† Douglas K. Owens, MD, MS,‡§
Richard W. Rosenquist, MD,¶ Steven J. Atlas, MD, MPH,‖ Jamie Baisden, MD, FACS,**
Eugene J. Carragee, MD,†† Martin Grabois, MD,‖‖ Donald R. Murphy, DC, DACAN,§§
Daniel K. Resnick, MD,¶¶ Steven P. Stanos, DO,||| William O. Shaffer, MD,*** and
Eric M. Wall, MD, MPH,†+++ For the American Pain Society Low Back Pain Guideline Panel

- Review of 161 RCTs
  - Thorough review of evidence
  - 8 Recommendations
  - Strongest evidence for interdisciplinary care

• IPP moderately superior to noninterdisciplinary or TAU for short and long term (up to 5 years)

IPPs: Facilitating Self-Management

• Goals
  ▪ Improve overall quality of life by increasing activity levels, improving mood, decreasing reliance on pain medications and passive modalities, learning active coping skills
  ▪ Increase self-efficacy and self-management

• Philosophy
  ▪ Personal responsibility means empowerment
  ▪ By learning the tools to manage pain effectively and improve functioning, veterans can take personal control of their lives and gain independence while becoming happier and healthier
IPPs: Goal of Treatment

- Life gets bigger so pain feels smaller and less overwhelming by comparison
- Pain may stay the same but expand the perimeter
Chronic Pain Rehabilitation Program

- Inpatient versus outpatient
- 6-8 hours of treatment per day
- Treatment components:
  - Medical - medication adjustments
  - Psychology
  - Physical therapy
  - Occupational therapy
  - Kinesiotherapy/aquatic
  - Recreational therapy
  - Vocational therapy
Chronic Pain Rehabilitation Program

- All patients who enter on opioid analgesics are tapered off completely during course of treatment using a pain cocktail approach
  - Also tapered off of muscle relaxants or benzodiazepines

- Overall CBT approach with goals of:
  - Increased functioning across all domains
  - Improved quality of life
  - Reduction of pain level if possible
Chronic Pain Rehabilitation Program

• High Impact Chronic Pain
  - Significant pain-related functional impairment
  - Usually have tried other treatments without success but not required

• Psychological and medical comorbidities
  - NOT appropriate if unable to engage in some level of activity and not relatively stable medically or psychiatrically
Outcome Measures

- Multidimensional Pain Inventory (MPI)
- Center for Epidemiologic-Depression (CES-D)
- Pain Catastrophizing Scale (PCS)
- Short-Form 36 Health Status Questionnaire (SF-36)
**Special Topic Series**

**Opioid Cessation and Multidimensional Outcomes After Interdisciplinary Chronic Pain Treatment**

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

**Objectives:** Although the efficacy of interdisciplinary treatment for chronic noncancer pain has been well-established in the literature, there is limited research examining interdisciplinary programs that require opioid cessation. As the long-term use of opioid analgesics remains controversial, further investigation is warranted. The aim of this study was to evaluate the associations between opioid cessation and subsequent multidomain treatment outcomes among veterans admitted to a pain rehabilitation program at a large Veterans Affairs tertiary care hospital in the southeastern United States.

**Methods:** A retrospective design examined the medical records of

...
Study Purpose and Design

• Compare treatment outcomes between those who were tapered off of opioids during the CPRP with those who were not on opioid analgesics at program initiation

• Retrospective, pre-post design
• 705 consecutive admissions, 600 completers
• Compared 2-groups
• Admission and discharge data
Patient Sample

• 2 Groups
  ▪ Opioid Group (OP) = 221
  ▪ Non-Opioid Group (NOP) = 379

• Characteristics
  ▪ 50 years old; 80% male
  ▪ 61% White; 23% AA; 10% Hispanic
  ▪ 12% employed full-time; 13.8 years education
  ▪ 13 years = average pain duration
  ▪ 57% back; 15% extremity; 11% neck = primary pain

• Only Significant Differences
  ▪ OP group: Slightly more white, employed
Outcome Measures

- Administered within 48 hours of admission and discharge
- Pain Numeric Rating Scale (NRS)
- Pain Outcomes Questionnaire (POQ-VA)
- Chronic Pain Coping Inventory (CPCI)
- Coping Strategies Questionnaire-Catastrophizing (CSQ-CAT)
- Sleep Problems Questionnaire (SPQ)
- 2-Item Treatment Satisfaction Scale
Characteristics of Medication Use

- 39% using daily opioids at admission
- Average dose converted into morphine equivalent dose (MED)
- Range for 221 in group was 6mg – 360mg MED per day, with average of 61mg per day
- All medications prescribed at discharge were abstracted from record and compared along with outcomes
Results

• Opioid-tapered subjects improved at least as much as those not taking opioids on all measures.

• For opioid subjects, correlations between admission taper dose and admission/discharge pain ratings approached zero.

• On four measures, the opioid-tapered group improved significantly MORE than the non-opioid group.
Significant Time x Group Interactions

Improvement in ADLs

Decreased use of catastrophizing
Significant Time x Group Interactions

Increased persistence on tasks

Decreased use of rest as coping skill
2008 Mayo Study

A longitudinal study of the efficacy of a comprehensive pain rehabilitation program with opioid withdrawal: Comparison of treatment outcomes based on opioid use status at admission

Cynthia O. Townsend *, Jennifer L. Kerkvliet, Barbara K. Bruce, Jeffrey D. Rome, W. Michael Hooten, Connie A. Luedtke, John E. Hodgson

Mayo Clinic, Department of Psychiatry and Psychology, Pain Rehabilitation Center, Generose 2W, 1216 Second Street SW, Rochester, MN 55902, USA

Received 21 February 2008; received in revised form 22 July 2008; accepted 11 August 2008

- n = 373; 91% completed, all but 14 tapered off opioids
- 79% female; 96% white
- Back pain 24%; 20% fibromyalgia
- 57% taking daily opioids at admission (not necessarily daily); MED = 99mg
2008 Mayo Study: Results

- 15% taking 200mg+ MED
- 30% taking opioids 5+ years; 10% 10+ years

**Admission:**
- No demo differences; OP group □ pain and dep

**Discharge:**
- Significant improvement at discharge; comparable success to those not taking opioids

**6-month follow-up:**
- Improvements in pain, functioning, and mood maintained; majority reported continued abstinence from opioids
2007 Mayo Study

Treatment Outcomes after Multidisciplinary Pain Rehabilitation with Analgesic Medication Withdrawal for Patients with Fibromyalgia

W. Michael Hooten, MD,*† Cynthia O. Townsend, PhD,* Christopher D. Sletten, PhD,* Barbara K. Bruce, PhD,* and Jeffrey D. Rome, MD*

Departments of *Psychiatry and Psychology and †Anesthesiology, Mayo Clinic College of Medicine, Rochester, Minnesota, USA

- n = 159; 89% completed; all but 4 tapered off opioids
- 86% female; 100% fibromyalgia
- 38% taking daily opioids at admission
- Significant improvement on all outcomes regardless of opioid status at admission
2004 Mayo Study

Chronic Noncancer Pain Rehabilitation With Opioid Withdrawal: Comparison of Treatment Outcomes Based on Opioid Use Status at Admission

JEFFREY D. ROME, MD; CYNTHIA O. TOWNSEND, PhD; BARBARA K. BRUCE, PhD; CHRISTOPHER D. SLETEN, PhD; CONNIE A. LUEDTKE, RN, MA; and JOHN E. HODGSON, MA

- **Objective:** To study differences in treatment outcomes between patients with chronic noncancer pain taking vs those not taking maintenance opioids at admission to a pain rehabilitation program.
- **Patients and Methods:** A nonrandomized 2-group pre-

- **Results:** More than one third of patients (135/356) were taking opioids daily at admission. At completion of the program, all but 3 of the 135 patients had successfully discontinued opioid treatment. No significant pretreatment differences were found between the opioid and nonopioid group.

- n = 356; 92% completed; all but 4 tapered off opioids
- 74% female; 96% white
- 23% fibromyalgia; 21% back pain
- 38% taking daily opioids at admission; MED = 78mg
- **Significant improvement on all outcomes regardless of opioid status at admission**
Implications from Evidence

• Opioid withdrawal DID NOT interfere with rehabilitation

• Improvements are equal or greater for those on opioids at treatment initiation

• Consideration should be given to different treatment modalities, such as formal interdisciplinary pain rehabilitation programs and the use of behavioral strategies
Questions?
Thank you

For questions or feedback, please e-mail hplanalp@aan.com