Data Collection

In order to support the growth of the ECHO movement, Project ECHO® collects participation data for each teleECHO™ program. This data allows Project ECHO to measure, analyze, and report on the movement’s reach. It is used in reports, on maps and visualizations, for research, for communications and surveys, for data quality assurance activities, and for decision-making related to new initiatives.
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Behavioral Health & Chronic Pain

Project Echo / Intermountain Healthcare / Pain Medicine Lecture Series 7.20.2021

Jonathan A. Benfield, D.O.
Senior Medical Director Pain Medicine
jon.benfield@imail.org
Disclosure

The content of this presentation does not relate to any product of a commercial entity; therefore, I have no relationships to report.

Off-label indications will not be discussed.
Objectives

At the conclusion of this activity, participants should be able to successfully:

1. Predict the incidence and prevalence of common mood disorders with chronic pain
2. Evaluate screening for mood disorders and opioid/substance use disorder in a primary care setting
3. Review cognitive behavioral therapy and mindfulness and justify why is it important for mood and pain disorders
The Chicken, The Egg, or Scrambled
Chronic Pain Epidemiology

- 20.4% of U.S. adults (50.0 million) with chronic pain
- 8.0% of U.S. adults (19.6 million) with severe high-impact chronic pain.
- 30% will experience chronic pain at some point in their lifetime
- 80-90% will have a spinal pain related issue
Pathophysiology: Overlapping Neurochemicals

<table>
<thead>
<tr>
<th>Pain</th>
<th>Mood</th>
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<tbody>
<tr>
<td>✔️ Norepinephrine</td>
<td>✔️</td>
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<tr>
<td>✔️ Serotonin</td>
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<td>✔️ Glutamate</td>
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<tr>
<td>✔️ GABA</td>
<td>✔️</td>
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</tbody>
</table>
Question 1:

Which neurochemicals are associated with both chronic pain and mood disorders?

A. Norepinephrine
B. Serotonin
C. Glutamate
D. GABA
E. All of the Above
Chronic Pain & Major Depression Disorder

- 60% of individuals suffering from depressions will develop low back pain\(^1\)
- 20% of episodic migraine suffers experience depression with increased rates in depression correlated with increased rates of headache frequency per month\(^2\)

2. American Migraine Foundation. @ www.americanmigrainefoundation.org
3. Graphs: Center of Disease and Control @ cdc.gov
Chronic Pain & Generalized Anxiety Disorder

- 20% of people with episodic migraine have anxiety\(^1\)
- 30% and 50% of people with anxiety\(^1\)
- Abnormal level of anxiety found in 55% patients respectively\(^1\)

2. Graphs taken from CDC @ cdc.gov
Question 2:

Individuals who have depression have a higher rate of experiencing low back pain during their lifetime?

A. True  
B. False
Question 3:

Patients with episodic or chronic migraines experience higher levels of depression and anxiety than the general population. Both of which can increase with more frequent or more intense migraines?

A. True
B. False
Chronic Pain & Post-Traumatic Stress Disorder

• **General:** 7-8% of the population will experience PTSD at some point in their lives.¹

• **Women:** 10% of women develop PTSD sometime in their lives (Men 40%)¹

• **Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF):** 11-20%² who served in OIF or OEF have PTSD in a given year.

• **Gulf War (Desert Storm):** 12% have PTSD in a given year.²

• **Vietnam War:** 15% were currently diagnosed with PTSD at the time of the most recent study in the late 1980s. Some estimate as high as 30%²

• PTSD has the strongest associate with chronic pain ranked as moderate to severe in those veterans.³

• The prevalence of PTSD and chronic pain is 14-25%.
Chronic Pain & Substance Abuse

- 42% Smoking
- 19% Cannabis
- 7.4% Alcohol & PCP
- 6% opioids, stimulant, sedative, hypnotics, cocaine
Question 4:

Smoking is the most commonly abused substance amongst those with chronic spinal pain?

A. True
B. False
Chronic Pain & Suicide Rates

Fibromyalgia 4.4% vs 1.4% general population\(^1\)
Migraines/Head Pain – most associated with suicidal ideation in US Veterans\(^1\)
Low Back Pain specifically associated with suicide attempt in US veterans\(^2\)

1. CDC Fast Facts
2. Pergolizzi et al. The Risk of Suicide in Chronic Pain. Nursing and Palliative Care. Open Access Article ISSN: 2397-9623
Biopsychosocial Model
Question 5:

The biopsychosocial Model of Pain care improves overall pain, opioid use, and return to work compared to conventional care models?

A. True
B. False
Biopsychosocial Model: Outcomes Data

**How the Biopsychosocial Model Can Play Out in Pain Care**

**Increase in Activity**
- 65% improvement with comprehensive pain treatment (i.e., biopsychosocial approaches)
- 35% with conventional medical treatment

**Return to Work**
- 66% improvement with comprehensive pain treatment
- 27% with conventional medical treatment

**Pain Reduction**
- 20-40% improvement with comprehensive pain treatment
- 30% with conventional medical treatment (with opioids)

**Medical Cost Savings**
- 68% improvement with comprehensive pain treatment
- NA

Interdisciplinary pain management involves treatment by a team of people, including physicians, behavioral medicine specialists, physical therapists, nurses, and care coordinators. The team works together to provide a variety of interventions and strategies to manage pain and to improve quality of

- Decrease in Pain Intensity
- Decrease in Pain Catastrophizing
- Improves Return to work including fewer sick days
- Decreased ER and Primary Care visits
- Decrease opioid use
- Less Expensive than conventional care models

Case Presentation:
38-year-old female patient with chronic pain, left upper and lower extremity neuropathic pain from multiple sclerosis, low back pain with radicular symptoms from L4/5 and L5/S1 disc herniations, left knee moderate-severe osteoarthritis, major depressive disorder, anxiety, and prior history of passive suicidal ideation but no attempts. She takes Buspar, Lyrica, Ambien, Valium, Oxycodone, Morphine Sulfate Extended Release who is on a total of 135-150 milligram morphine equivalents who presents to an interdisciplinary pain clinic with who uses a biopsychosocial model for pain management.
Initial Evaluations:

1. Medical Evaluation & Consultation

2. Psychological Evaluation for MDD, GAD, suicidal ideation, and opioid risk stratification

3. Physical Therapy Evaluation

4. Pharmacologic Evaluation*
Initial Recommendation:

Medical Evaluation & Consultation: Recommend transition to Buprenorphine, PT & Psychology consultation, genicular nerve blocks and discussion at interdisciplinary team meeting

Psychological Evaluation: MDD, GAD, suicidal ideation, and opioid risk stratification: Recommend patient for 2-4 week follow-ups x 6 months, and Psychiatry evaluation

Physical Therapy Evaluation: Recommend functional restoration and consideration for lumbar epidural
The Interdisciplinary Team Conference

Interdisciplinary Team Conference Includes:

- 4 physicians:
  - 3 pain BC (2 interventional & 1 non-interventional)
  - 1 psychiatrist/addiction BC
- 4 Psychologist
- 7 Advance Practice Providers
- 2 Physical Therapists
- 1-2 Office Staff to expedite scheduling appts/procedures

Highlight: Both interventionalists agree with procedures, Psychiatrist approves consult, and all agree with transition to Buprenorphine
Follow-up Appts: 6 months out

1. Stopped MSER & Oxycodone $\rightarrow$ Buprenorphine; reduced MME and risk of opioid SE
2. Transitioned off valium and buspirone $\rightarrow$ Lamictal leading to decreased thoughts of suicide, increased quality of life, decreased MDD and GAD
3. PT and HEP improved low back pain $\rightarrow$ no ESI needed
4. Left knee Genicular blocks and RFA completed $\rightarrow$ allowing for HEP and aquatic therapy participation
5. Patient able to return to work & now travel with family
Bibliography/References

1. Pinheiro et al. Symptoms of depression as a prognostic factor for low back pain: a systematic review J. 2016 Jan 1; 16(1):105-16
2. americanmigrainefoundation.org
3. cdc.gov Fast Facts
4. VA.gov. Pain Medicine
7. Gatchel RJ, Okifuji A. Evidence-based scientific data documenting the treatment and cost-effectiveness of comprehensive pain programs for chronic nonmalignant pain. 2006 Nov;7(11):779-93