Chronic Pain Syndrome and evidence-based treatment

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Disclosure statement

- No conflicts of interest to disclose
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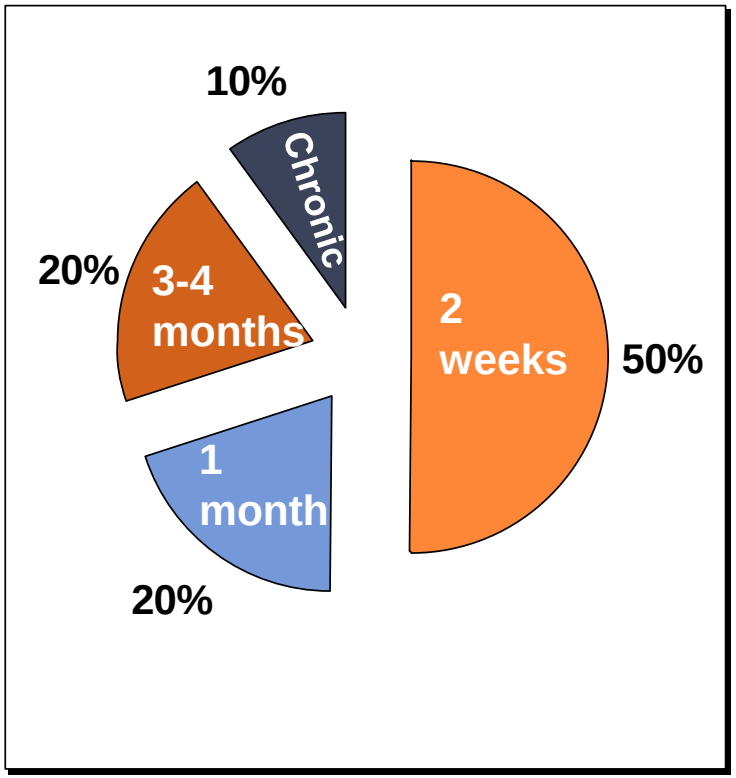
Overview & Objectives

- Presentation will focus on an overview of chronic pain, rehabilitation, and specifically skills taught to improve self-management of pain and quality of life.

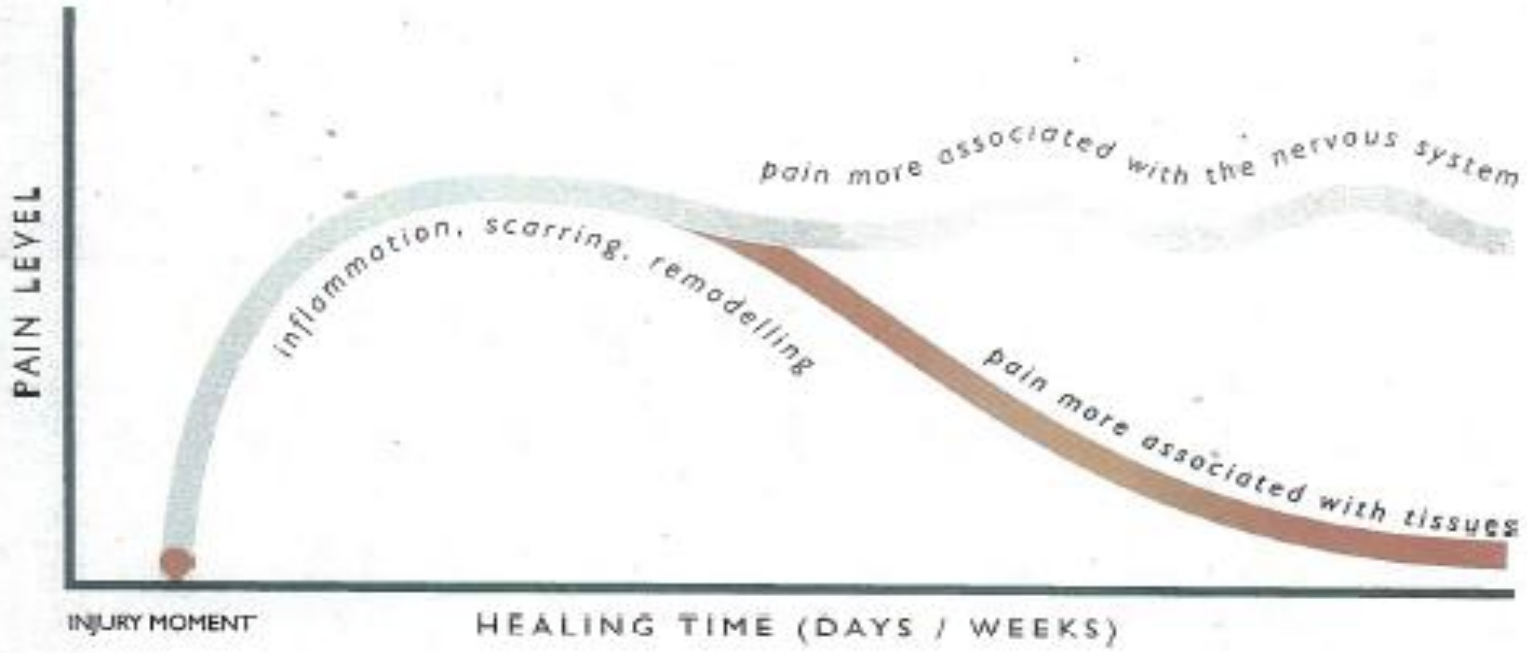
- Objectives:
  - Learn about chronic pain syndrome
  - Appreciate indications chronic pain rehabilitation.
  - Understand how a Cognitive Behavioral framework is beneficial to treating chronic pain syndrome.

The Process of Pain: From Acute to Chronic Low Back Pain



- **Fortunately**, most individuals recover from episodes of acute LBP (Deyo, 1983).
- 50% in 2 weeks, 70% by 1 month, 90% by 3-4 months. (Mayer & Gatchel, 1988)
- **Unfortunately**, beyond 3-4 months (now meeting the **Chronic** definition), complete remission of pain is unlikely for the remaining 10%.

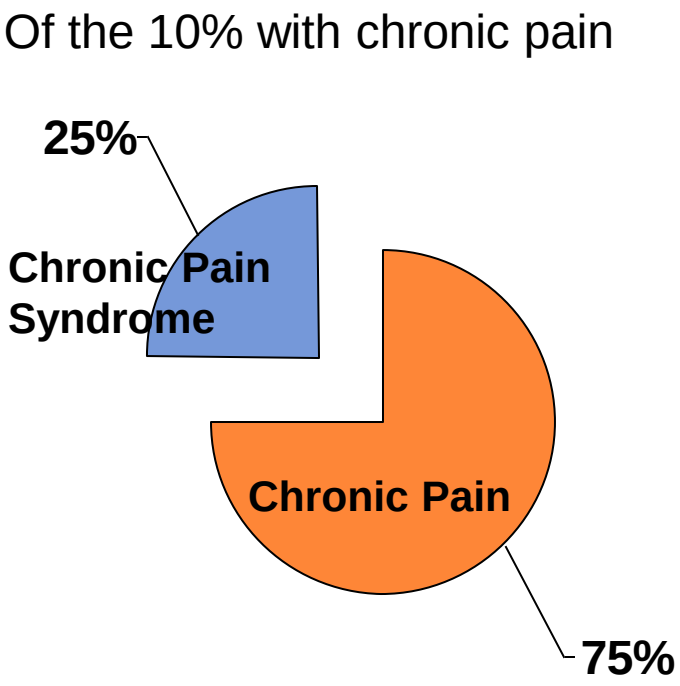
With Chronic pain….



Butler and Moseley, 2012

- Ongoing damage is not occurring
- Hurt does **NOT** equal harm

From Chronic Pain to Chronic Pain Syndrome



- Most of the of individuals who develop chronic pain lead relatively normal lives
- Portion of those with chronic pain develop **Chronic Pain Syndromes** (Klapow et al., 1993).
- It is important to understand what makes one more likely develop chronic pain syndrome.

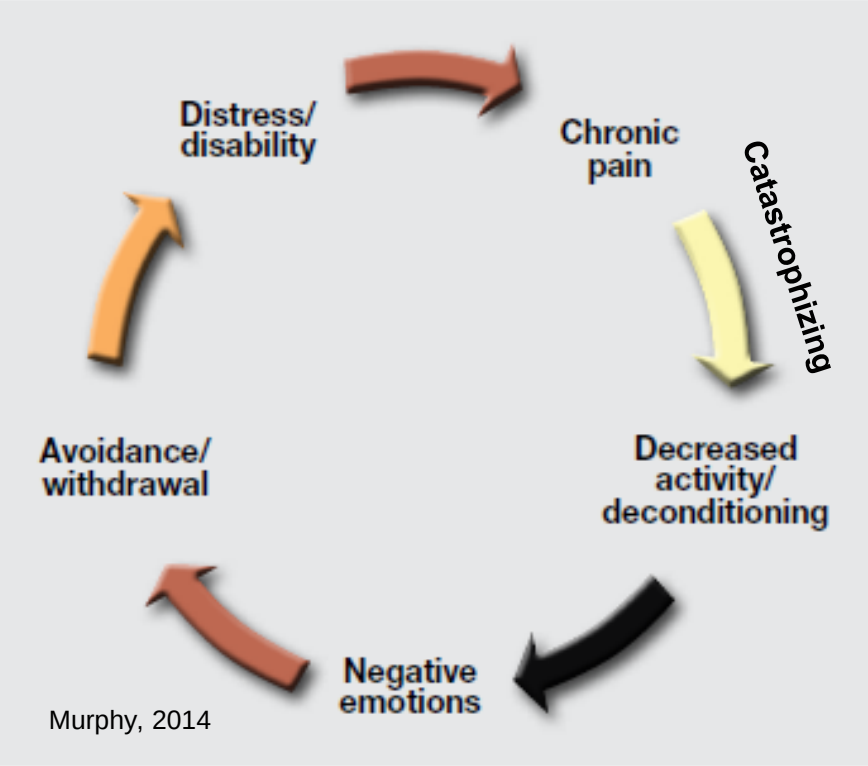
Transition to Chronic Pain Syndrome

- **Unrelated** to pain intensity or physical severity of original injury (Epping-Jordan et al., 1998; Klapow et al., 1993).
- **Psychological variables** (e.g., depression; somatic focus) and **self-perceived disability** consistently are the most accurate predictors of subsequent pain syndrome development (e.g., Fricton, 1996; Gatchel et al., 1995).
- Development reflects a **failure to adapt** (Epping-Jordan et al., 1998).

Chronic Pain Syndrome Symptoms

- Reduced activity
- Impaired sleep
- Depression
- Suicidal ideation
- Social withdrawal
- Irritability and Fatigue
- Strong somatic focus
- Memory and cognitive impairment
- Misbehavior by children in the home
- Less interest in sex
- Relationship problems
- Pain behaviors
- Helplessness
- Hopelessness
- Alcohol abuse
- Medication abuse
- Guilt
- Anxiety
- Poor self-esteem
- Loss of employment
- Kinesiophobia

Role of the Chronic Pain Cycle in Chronic Pain Syndrome



- Reducing activity to minimize pain may help in the short term but leads to deconditioning over time and **increased pain**
- **Avoidance** inherent in this cycle can lead to or worsen psychological, behavioral, and interpersonal problems

Chronic Pain from different vantage points:

Providers know…

- Different from acute pain
- Patients have tried and found limited benefit from single modality approaches to pain treatment
- Patients present with chronic pain *plus*…
  - Psychiatric comorbidities
  - Medical comorbidities
  - Poor functioning

Patients experience…

- Increased pain
- Desperation for a fix
- Frustration with lack of answers
- Declining functioning
- Perceive limited options or nothing can be done

Treatment of patients with chronic pain syndrome

- Despite the complexities noted, many approaches to treatment of chronic pain focus on biomedical approaches
  - Pain is solely explainable in **biological** or **medical** terms.
  - Emotional problems may result from chronic pain, but **pain** itself is **entirely biological** in origin.
  - The only truly effective treatment for pain involves medical approaches.
- Examples: injections, surgeries, opioid and muscle relaxant medications
- Often limited decrease in pain intensity, side effects, and reliance on medical appointments

Opioids and Chronic Pain Syndrome

- Considerable concerns about misuse, side effects, and limited efficacy (Ballantyne et al., 2003)
- Individuals use opioids for reasons other than pain, such as:
  - Assisting with sleep initiation and maintenance
  - Decreasing negative impact of psychological factors such as depression and anxiety by emotional blunting
  - Inducing euphoric feelings/"high"

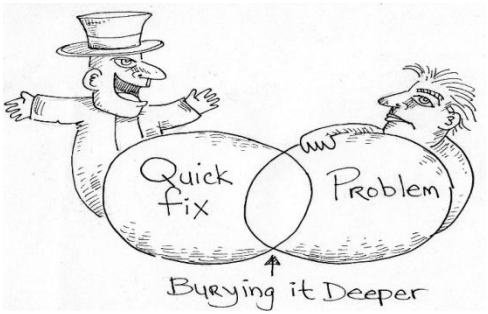
Opioids and Sleep

- Research indicates that opioids have negative impact on sleep time, efficiency, & REM (Dimsdale et al, 2007)
- Recent literature suggests that chronic opioid therapy is related to sleep-related breathing disorders such as central sleep apnea (Junquist et al, 2012)
- High doses of tramadol linked to insomnia and reduction of REM sleep (Walder et al, 2001)

Opioids and Negative Affect

- Higher NA is related to poorer reported opioid analgesia (Wasan et al, 2015)
- Creation of cycle of opioid-induced positive mood followed by withdrawal effects such as dysphoria, restlessness, agitation
- Opioids may then make the experience of negative affect even more unbearable while no coping skills have been developed

A Shift in Philosophy



- As we have reviewed, patients who experience chronic pain syndrome are often very *complicated*.
  - Approaching treatment from one discipline **IS NOT EFFECTIVE**
  - Patients benefit from learning active coping skills to empower them to self-manage pain
- There is no quick fix, there are no easy answers – several disciplines *must be involved* in treatment for interventions to be effective in the long term
- Biopsychosocial model of assessment and treatment is essential

Biomedical

- Focuses on on purely biological factors in illness/disease
- Predominant model used by physicians
- Health = Freedom from:
  - Disease
  - Pain
  - Defect
- Works well with acute pain

Biopsychosocial

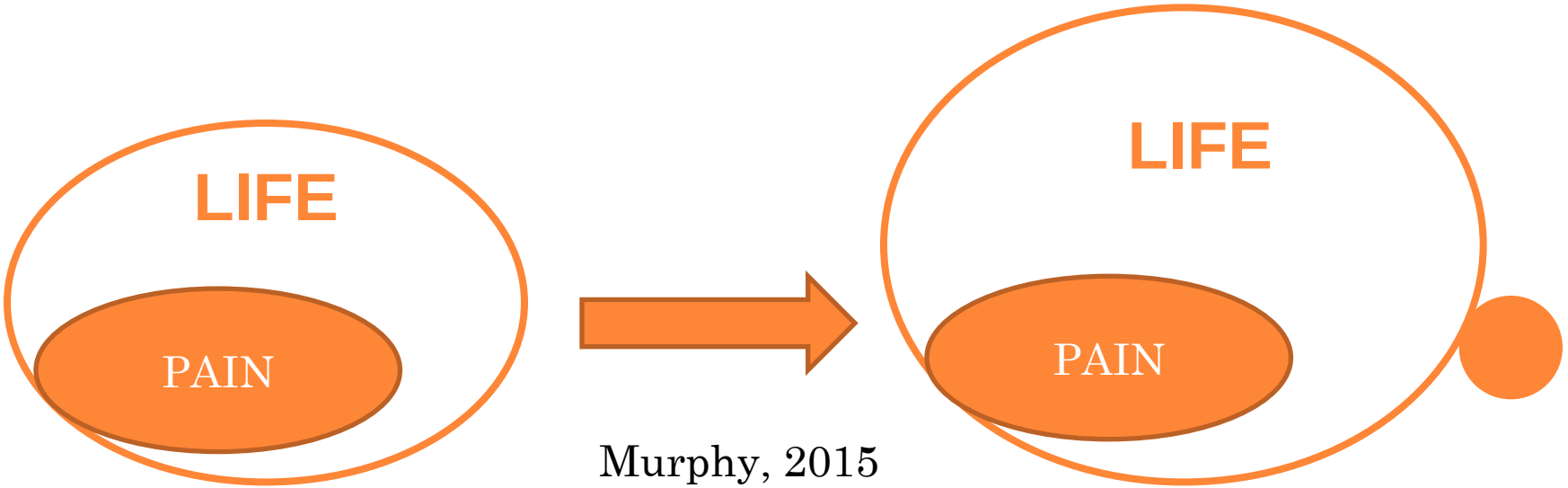
- Focuses on interaction:
  - Biological/biomedical,
  - Psychological
  - Social
- Acknowledges the interaction between the physical body and the mind and social context
- Emphasis on teaching patients how to effectively address these issues
- Needed for chronic pain

Chronic Pain Rehabilitation

- Focus on functioning
- Change how one reacts to pain by:
  - Chronic pain education
    - Hurt vs Harm
    - Pain impact on thoughts, feelings, and behaviors as well as the impact these on chronic pain
    - Approach versus avoidance
  - Introduction of safe, consistent activities
  - Active instead of passive coping skills
- Increasing self-efficacy
- This framework is necessary whether the patient is being treated in primary or specialty care (e.g., interdisciplinary program)

Biopsychosocial Approach:

- Learn how to live the best life that you can despite the pain
  - Effective approach for most chronic diseases
- Rehabilitation can help make like bigger so that pain feels smaller and the patient has skills and exercises to more effectively deal with setbacks



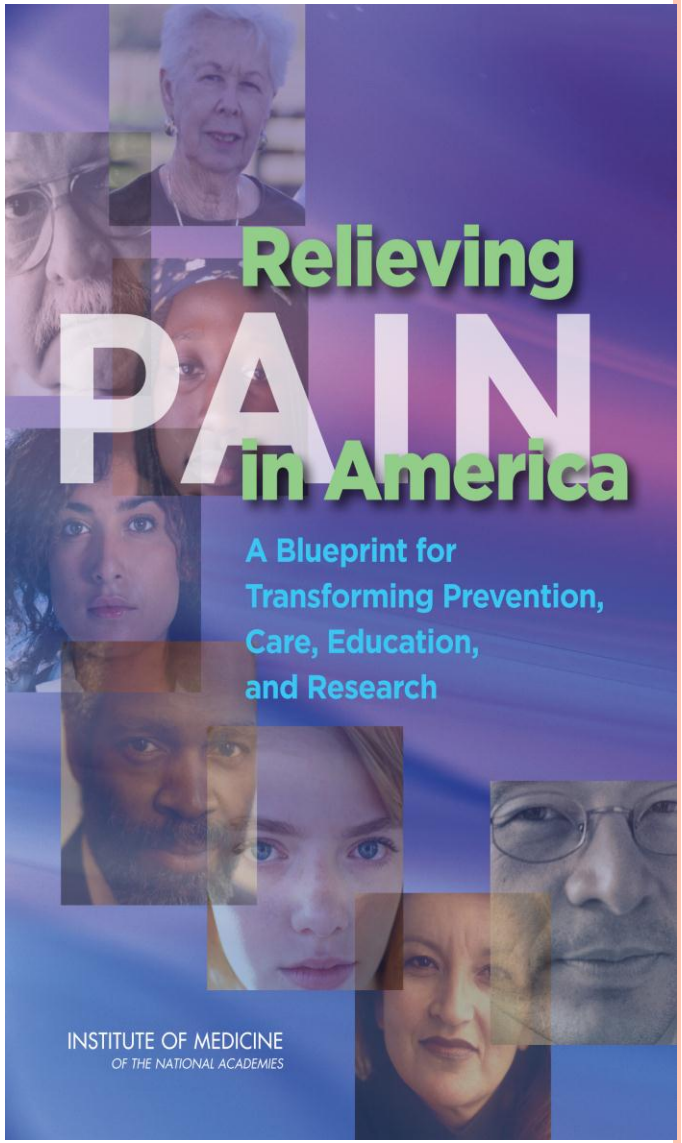
Murphy, 2015

Pain Management Goals

- How does the patient live the best life possible despite the pain?
  - Decrease avoidance through gradual exposure to safe activities and adoption of active coping skills
    - Increase activity levels
    - Decrease reliance on pain medications and other passive modalities
    - Learn active coping skills such as relaxation
    - Increase socialization with others
    - Improve mood
- By facilitating these changes, functioning is improved *across all domains*

Empirical Support

- Institute of Medicine report, "Comprehensive and interdisciplinary (e.g., biopsychosocial) approaches are the most important and effective ways to treat pain."
- Evidence for reduction in pain intensity, opioid use, healthcare utilization, improved functioning (e.g., physical activity, work, decreased distress), and sustainable gains. (Flor et al, 1992; Turk and Okifuji, 1998; Scascighin et al, 2008)



Patient Example

- Multiple pain locations
- Failed treatments
- Somatic focus
- History of TBI
- Chronic opioid use
- Sleep apnea, Obesity, HTN, Diabetes
- Psychiatric co-morbidities: depression, anxiety, irritability
- Social isolation & limited social support, relationship problems
- Limited physical & recreational activities; significantly deconditioned
- Significant sleep problems

PAIN DETERMINES EVERYTHING

Chronic Pain Rehabilitation Program: Tampa's History

- The Chronic Pain Rehabilitation Program began in 1988 as 4-bed inpatient unit housed on a general rehabilitation unit… added 2 more beds in 1991…became 12 beds in 1994
  - As the only inpatient program in the VA, we treat veterans and active duty service members from across the country
- Outpatient program added in 2009
- Both CARF-Accredited
  - Inpatient since 1996
  - Outpatient since 2011

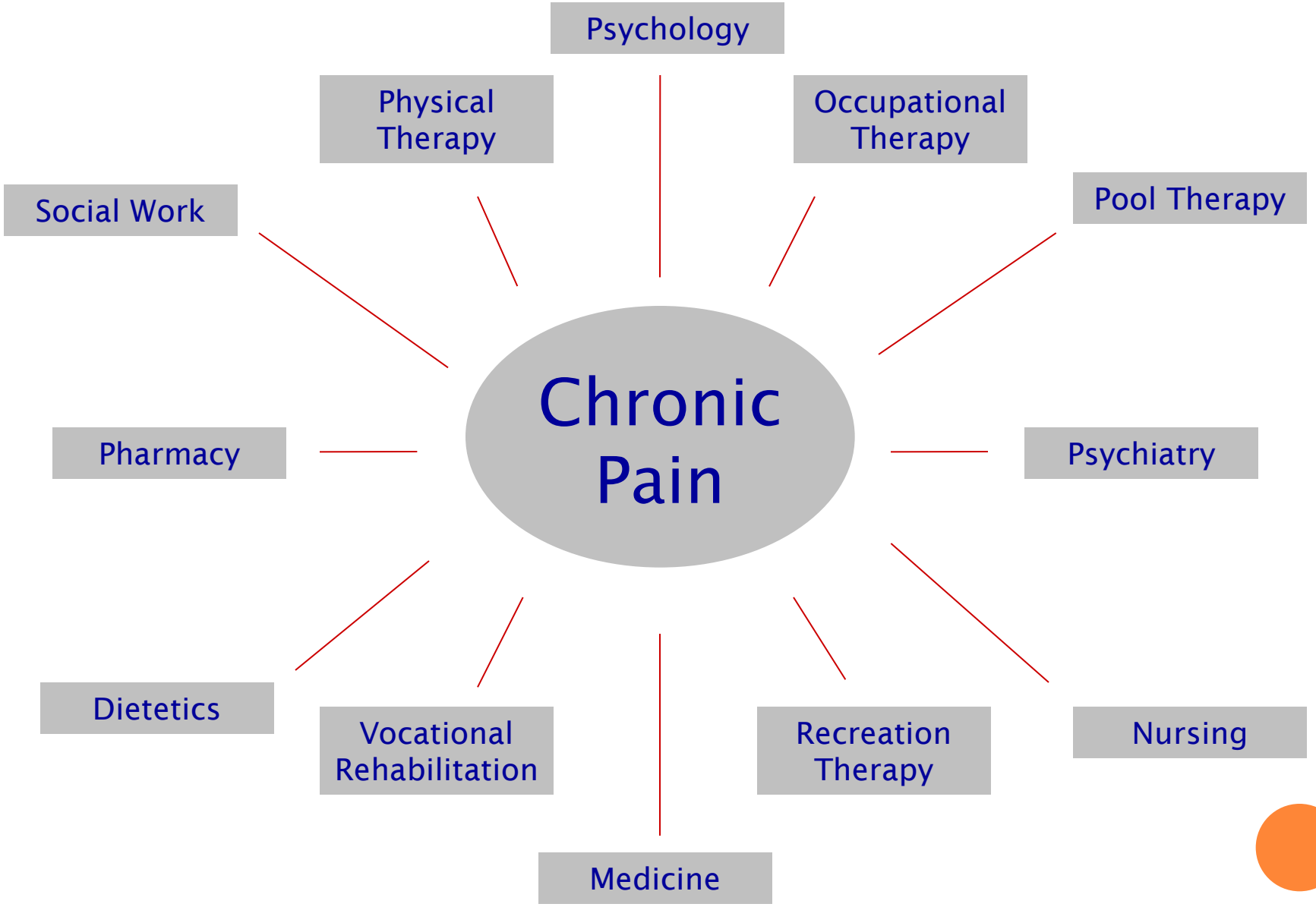
Chronic Pain Rehabilitation Program: Program framework

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

- Overall **Cognitive Behavioral Therapy** approach with goals of:
  - Increased functioning across all domains
  - Improved quality of life
  - Reduction of pain level if possible

Psychological & Medical Treatment

- Psychological factors that impact pain presentation and severity require intervention and should be viewed as medically necessary components of effective pain management
  - Common misconception exists that 'fix the pain' and that will fix all the problems
- Treatment should not involve an either/or of physical versus mental health care

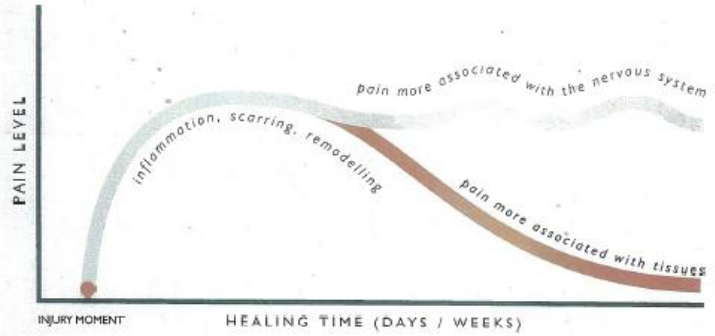

Psychology
Physical Therapy
Occupational Therapy
Social Work
Pool Therapy
Chronic Pain
Pharmacy
Psychiatry
Dietetics
Vocational Rehabilitation
Recreation Therapy
Nursing
Medicine

Interdisciplinary Pain Programs: treatment components

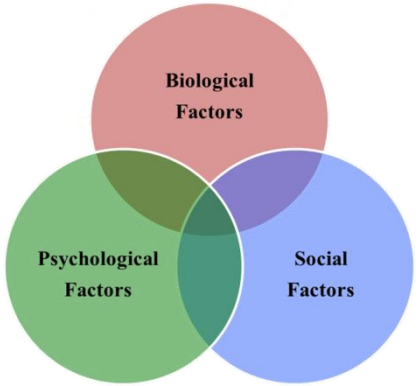
- Interdisciplinary treatment in outpatient and inpatient programs is intensive and includes an individualized program with these basic components:
  - Daily heated pool therapy session
  - Daily physical therapy with exercise program completed twice per day
  - Relaxation training sessions twice daily, once with occupational therapist
  - Group classes 2 hours per day
  - Recreational therapy daily
  - Daily medical rounds
  - Walking session twice daily
  - Sessions with pain psychologist, 2x/week

Cognitive behavioral therapy for chronic pain : Key Components

- Education regarding
  - Acute versus chronic pain
  - Hurt versus harm
  - Chronic pain cycle



- Biomedical to Biopsychosocial approach



- Managing Pain Before It Manages You by Margaret A. Caudhill
- Explain Pain by David Butler & Lorimer Moseley

SMART GOALS

Specific	Identifies a specific action or event that will take place.
Measurable	Should be quantifiable (countable) so progress can be tracked.
Achievable	Should be attainable and realistic given resources.
Relevant	Should be personally meaningful.
Time-Bound	State the time period for accomplishing the goal.

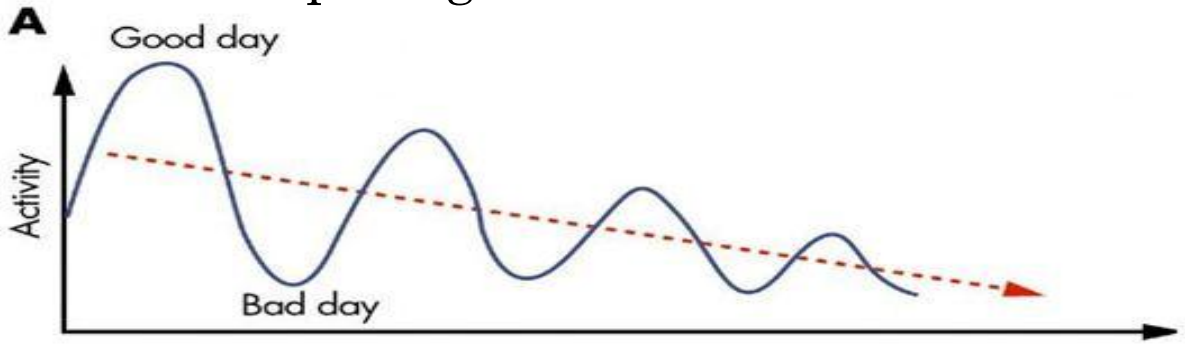
Adapted from Doran, 1981

Murphy, 2014

- Important whether or not prescribed opioids
  - These goals address suffering occurring in the chronic pain cycle

Reconditioning and pacing

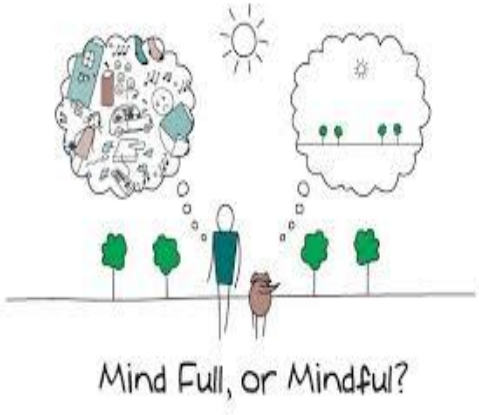
- Gradual exposure to safe physical activities
  - Whole body reconditioning
- Monitor physical activities, develop pacing
  - Time-based pacing



Relaxation

- Chronic pain ⟺ muscle tension
- Learn, implement, practice relaxation techniques
  - Diaphragmatic breathing, PMR, visualization

A GLIMPSE AT MINDFULNESS…



- Mindfulness meditation can assist with:
  - Acceptance and awareness
  - Engagement in the present moment
    (whatever may occur with that moment)
    - Centers on breathing, but not intentionally changing it
    - Observing and noticing without judgment or reactivity
    - Attitude of openness and curiosity
    - Creates space for experience instead of struggle and avoidance
- Many applications and mp3 available to assist with practice
  - Some overlap with Yoga

Mindfulness resources

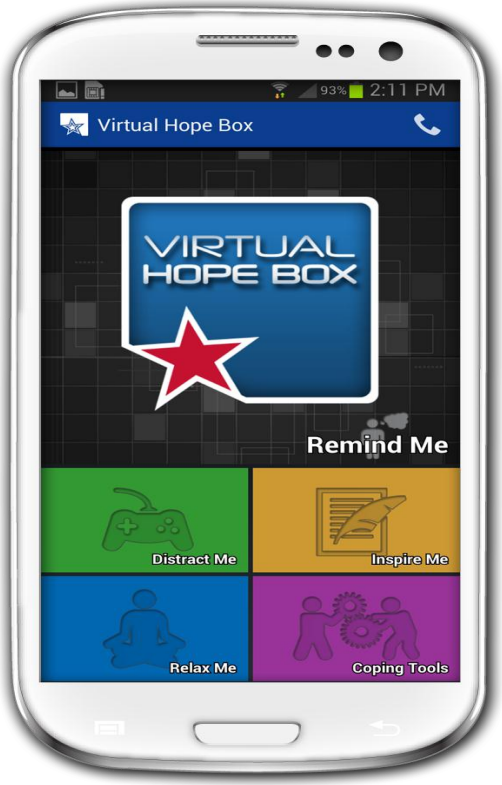
- Mindfulness Coach
  - Mobile app to help patients sense of calm, decrease reactivity, develop self-acceptance and compassion, increase self-awareness, & decrease struggle
  - Developed by DoD's T2
  - Free

- Living Beyond Your Pain

  by Joanne Dahl

Pleasant activities

- Increase pleasurable activities
  - Recreation, hobbies, social activities
    - Recreation therapy, adaptive sports, wounded warrior program
  - Apply learned skills to these activities
  - Diversity of activities
- Virtual Hope Box
  - Mobile app to help patients decrease their experience of distress by facilitating healthy coping and emotion regulation skills
  - Developed by DoD's T2 (National Center for Telehealth & Technology
  - Free



Cognitive restructuring

- Identify, challenge, correct cognitive distortions
  - Thoughts like these are catastrophic distortions that create distress and lead to increases in pain perception partly due to increased muscle tension, attentional focus, and avoidance

Situation	Thought	Effect on pain/mood	Balanced coping statement
Cleaning garage & pain flares	This pain is killing me. It ruining my life. I can't do anything anymore.	Helpful OR Harmful	I am hurting right now because I overdid it. I will feel better soon. Then I will pace myself to get the job done.

Murphy, 2014

Sleep hygiene

- Assess sleep problems and factors that can contribute to worse sleep
- Recommend:
  - Avoid over-resting and/or naps
  - Calming wind-down routine
    - Relaxation, warm shower
  - Only use bed for sleep and sex
    - Avoid TV watching, reading, or eating in bed
  - Decrease caffeine, nicotine, or large meals

Planning for pain flares

- Anticipate obstacles for successful implementation
  - Problem-solve
    - Identify *specific* things that may be trigger pain flare-ups
    - 1. _____
    - 2. _____
    - Ways to Cope**:**
      - ***Physically***
      - ***Emotionally***
      - ***Socially***
      - *(Examples: Walking, Deep breathing, Pleasant activity)*
    - 1. _____
    - 2. _____

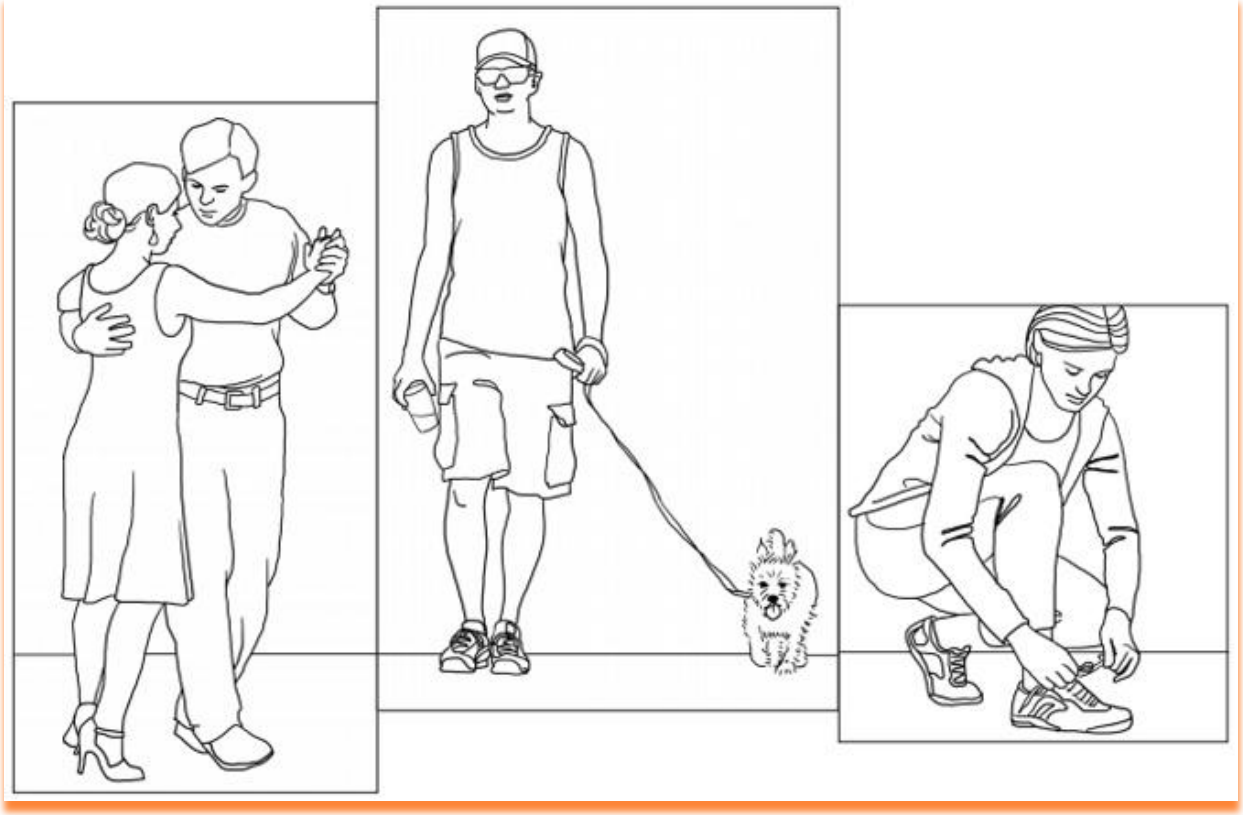
Family involvement

- The "mistake of love"
  - Doing too much for the person with chronic pain can contribute to deconditioning and the chronic pain cycle
  - Increased focus on pain and disability
  - Fewer opportunities to pace
  - Decreased self-efficacy

- Recommendations
  - Involve family members to improve generalizability
    - Provide them with education on chronic pain and the importance of active coping

Patient outcomes

- What would the example patient learn through engagement in CBT for chronic pain?
- How would this benefit the patient?



RESEARCH FROM CPRP

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.

mented adverse effects.[5] A review of randomized controlled trials (RCTs) for CNP reveals that the duration of trials was generally brief (4 to 16 wks), and although pain reduction may have been achieved, functional improvement was not.[6–10] In addition, other methodological issues such as stringent inclusionary criteria and high dropout rates often hinder the generalizability of these results.

The potential dangers of opioid therapy, particularly with the marked increase in opioid prescriptions and

Results

- Both the opioid taper and non-opioid groups improved significantly from admission to discharge on ALL measures. Improvements in:
  - Pain severity; ADLs; mobility; negative affect; vitality; pain-related fear; catastrophizing; sleep.
- No differences in pain reduction by group.
- Opioid-tapered patients improved at least as much as those not taking opioids on all measures.
- For patients taking opioids, correlations between admission taper dose and admission/discharge pain ratings approached zero.

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

Cognitive behavioral therapy for chronic pain: Barriers to Treatment

- Only a small percentage of pain sufferers seek psychological care
  - Those who need it the most often are rehabilitation-hesitant
  - Pain is solely a physical problem, medical solutions are only option
  - Social stigma
  - Mind and body are separate entities
  - Externalize responsibility and blame the system
  - Psychological care not legitimate
- Work on increasing readiness to engage in active rehabilitation
  - Consistent education from all providers on this as best approach for chronic pain tends to increase receptiveness

KEYS TO SUCCESS

- Designated personnel who are committed
- Close, constant communication
- Consistent message, unified, self-management and rehabilitation message
- Support

Questions?