

# Chronic Pain Self-Management: Results of Two Randomized Controlled Trials

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# The current situation

- An estimated 14% - 39% of the adult population suffer from chronic non-cancer pain
  - can result in deep distress & disability and cause major disruption in individual and family functioning
  - third leading cause for absence from work in the United States
  - economic impact is high (estimated > \$ 61B U.S.\$)

# The problem of access

In spite of high prevalence and impact on individuals, families and society, access to specialty pain services is limited by:

- nature of the referral process
  - we wait too long to refer -- most disabled referred
- geographic location
  - urban tertiary care centres
- cost and resource constraints
  - cost containment issues in health care generally

# The need for community-based programs

Need for a low-cost, accessible, community-based intervention to assist individuals to better manage their chronic pain to improve QOL.

- “an intervention that can be widely disseminated even if it is only moderately effective, may have greater impact on patient care than a more effective treatment approach that is more restricted in terms of numbers of patients that can be treated” (Turk, et al., 1993)

# CPSMP: Description

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- ⌘ a standardized, community-based program adapted from the Stanford Arthritis Self-Management Program
- ⌘ designed to enhance ability to manage everyday experience of chronic pain by learning about: problem-solving, multiple strategies for symptom management, safe exercise, managing emotions, communication
- ⌘ runs for 2 hrs/week for 6 weeks with 7-10 individuals with a facilitator

# From ASMP to CPSMP

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- Process elements were not changed.
- Changes in content areas included:
  - information about chronic pain
  - pacing (balancing activity & rest)
  - exercise (ROM Exercise)
  - nutrition
  - breathing and body awareness
  - communication skills (how to talk about pain)
  - medications

# CPSMP: Program Content and Format

TOPICS	WEEK					
	1	2	3	4	5	6
Self-help principles	✓					
Debunking myths	✓					
What is chronic pain?	✓					
Balancing rest/activity	✓			✓		
Exercise/ROM Dance	✓	✓	✓	✓	✓	✓
Pain management/ relaxation		✓	✓	✓	✓	✓
Depression			✓			
Nutrition				✓		
Evaluating non- traditional treatments					✓	
Problem-solving	✓	✓	✓	✓	✓	✓
Communication skills		✓			✓	
Medications						✓
Fatigue						✓
Feedback/contracting	✓	✓	✓	✓	✓	✓

# Process Components

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## Mini-lectures

- information sharing

## Self-reflection — sharing of feelings

- what chronic pain means to me, communication issues

## Quiz

- myths about chronic pain

## Brainstorming

- about benefits of exercise, symptoms of depression

# Process (cont.)

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## Setting weekly contracts/action plans

- learning the process of setting short term goals

## Feedback

- about how well they are doing (verbal & written)

## Group problem-solving

- depression, solving problems that arise with the contract

Telephone support mid-week

# Efficacy Enhancing Strategies

- Feedback: action planning & reporting back;  
exercise diary
- Modeling: participants serve as models for each other
- Reinterpreting symptoms and changing beliefs -  
cognitive reframing
- Persuasion - by seeing others succeed in class,  
by encouragement to do a 'bit' more

# Participant materials

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Package of information which includes:

- 150 page workbook
- relaxation tape
- current pamphlets on nutrition and walking
- an exercise diary
- a relaxation audio tape

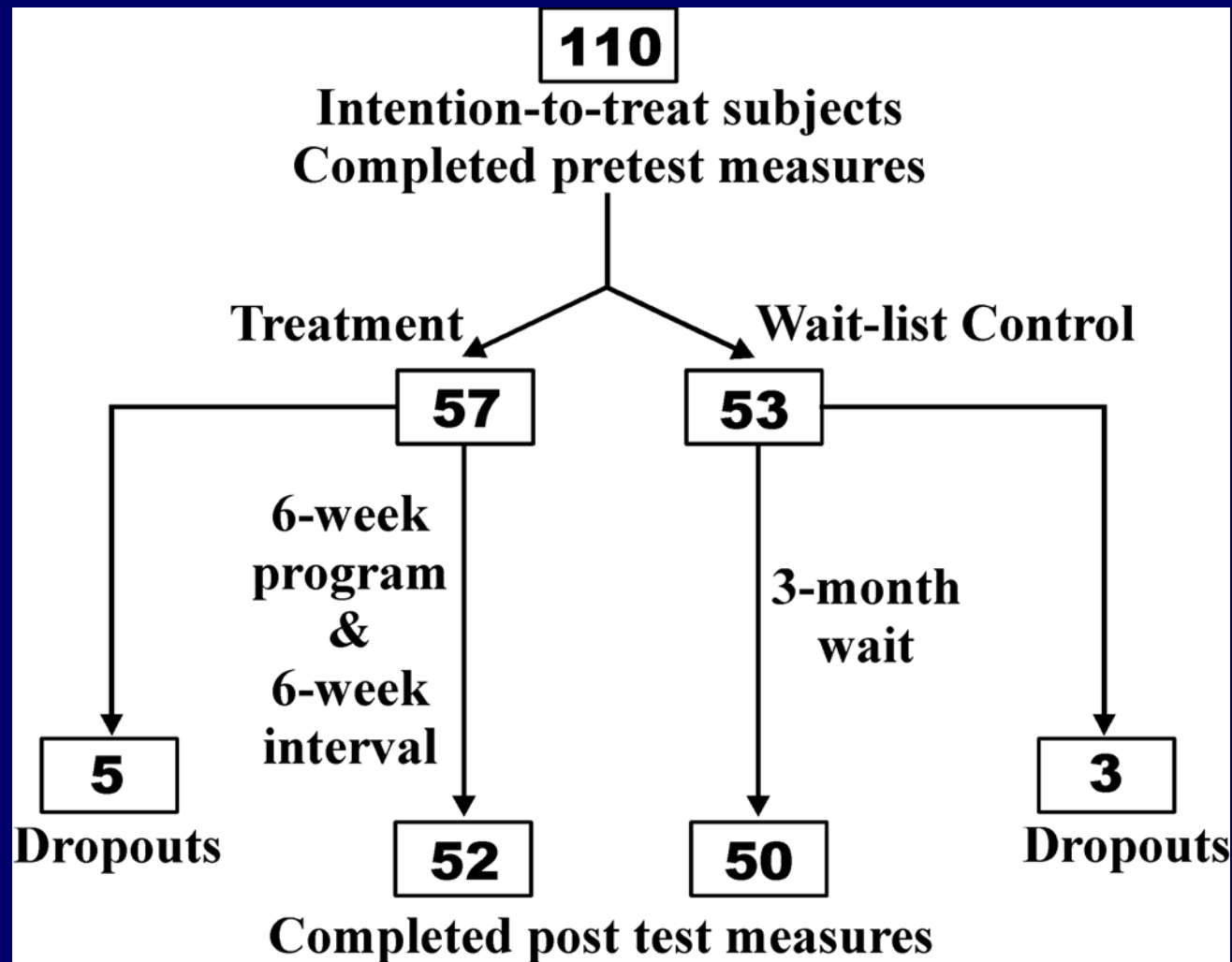
# CPSMP RCT #1: Efficacy Trial

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⌘ Study funded by NHRDP

- ⌘ LeFort, S. et al. A randomized controlled trial of a community-based psychoeducation program for the self-management of chronic pain. *Pain*. 1998; 74; 297-306.
- ⌘ LeFort, S. (2000). A test of Braden's Self-Help Model in Adults with chronic pain. *Journal of Nursing Scholarship*, 32(2), 153-160.

# CPSMP RCT #1 – Efficacy Trial



# Results: Subject Characteristics

⌘ Mean age (range)	39.5 yrs (24-60)
⌘ Gender (% female)	73%
⌘ Education	
➤ (% high school graduate)	89%
⌘ Employment (% working)	38%
⌘ Mean pain duration	6.5 yrs (1-28)
⌘ # pain locations	6 sites (1-20)
⌘ Back/neck pain (%)	68%
⌘ Medications for pain	81%
⌘ Physician/specialist visit	62% in past 30 days

# Results:

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- ⌘ statistically reliable improvement in health status measures (pain, independence, social/role functioning, physical functioning, vitality, self-efficacy/resourcefulness)
- ⌘ improvement in treatment group ranged from 9% to 47% with most in the modest range
- ⌘ comparable results compared to studies of ASMP and other pain programs reported in the literature
- ⌘ results supported self-efficacy theory (i.e., confidence building and increased problem solving lead to better outcomes)

# So, do community-based interventions help?

⌘ The results of this efficacy trial were promising, but questions remained unanswered:

1. Can the intervention be effectively delivered by generalist health care providers in the community?
2. Are improvements maintained over the long term?
3. Does it make a difference in terms of health care costs?

# CIHR-funded CPSMP RCT #2: Effectiveness Trial (n=279)

- ⌘ Larger study in varied rural and urban sites:
  - 3 in Newfoundland (St. John's, Gander, Corner Brook)
  - 2 in Toronto and 1 in Halton
  - 1 in Regina
- ⌘ Facilitators were community-based nurses and allied health care providers
- ⌘ Baseline, 3 and 12 month data collection on major study variables and monthly Pain Care Diaries to track economic costs

# Participant characteristics

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⌘ Mean age: 48 yrs

⌘ % Female: 80%

⌘ Working: 31%

⌘ Mean pain duration: 9 yrs

⌘ % back or neck pain: 75%

⌘ Recent visit to health provider: 90%

# Results (n=207)

⌘ Statistically significant change:

- **Mental Health Composite Score** of the SF-36 (includes vitality, social & emotional functioning, and mental health) ( $p = .001$ ) and
- **Resourcefulness** ( $p = .006$ )

⌘ Positive trends to improvement: **disability, psychosocial adjustment to illness, & life satisfaction.**

⌘ Results maintained at 12 months

# What chronic pain means to me...

## Session 1

- Isolation
- Constancy
- Limitation
- Loss
- Adversary

## Session 6

- Learning from others/helping others
- Validation
- Coming to terms
- Self-esteem
- Knowledge & Self-knowledge
- Hope/direction
- Learning to manage

# Estimated Yearly Overall Costs of Chronic Pain

- ⌘ Newfoundland Median Costs: \$ 9,990
- ⌘ Ontario Median Costs: \$ 12,700
- ⌘ Saskatchewan Median Costs: \$ 5,620
- ⌘ Costs in all 3 provinces were highest for younger participants, those who were not working, who had more education, and who lived with another adult.
- ⌘ There was a decrease in indirect health care costs for men who participated in the CPSMP.

# Conclusions


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- Results suggest that community-based health care providers such as RNs can reliably deliver the CPSMP.
- Participation in the CPSMP results in modest positive outcomes at 3 months that are maintained for up to a year
- The CPSMP appears to reduce the indirect costs of chronic pain for men.
- Results continue to support self-management education approaches.

## Next steps.....

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- I did these studies as one clinician-researcher trying to implement a community-based approach as an adjunct to traditional care for chronic pain
- Need to have buy-in from the local health authority to incorporate self-management into main stream care
- There are great examples of this happening (e.g., the State of Vermont; Calgary Health Authority with the CDSMP, the CPM Centres in Ontario; provinces of British Columbia and Nova Scotia)

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- Also interest by the Public Health Agency of Canada and CIHR Institute of Musculoskeletal Health and Arthritis (IMHA) trying to impact policy and knowledge transfer
  - Newly funded CAHR grant in Pain and Knowledge Translation (PI: J. Henry)
    - Theme 1: "From the Ground Up" – exploring patient and health system needs including self-management programs

THANK YOU!

