

Patient Utilization of Pain Self-Management Strategies

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NIAMS

National Institute of Arthritis and
Musculoskeletal and Skin Diseases

Background

- ◆ A significant evidence base exists for the utility of professionally delivered, individually administered cognitive-behavioral therapy (CBT) based self-management (SM) interventions for management of chronic pain.
- ◆ There is a growing evidence base for the utility of CBT-based SM interventions as a secondary prevention strategy to prevent the development of pain and disability.
- ◆ One challenge is the diffusion and wide spread application of sustainable CBT-based SM interventions while retaining effectiveness for the target population.



Evolving Context of Self Management Interventions

- ◆ A favorable health care environment is developing to support development, evaluation, implementation and diffusion.

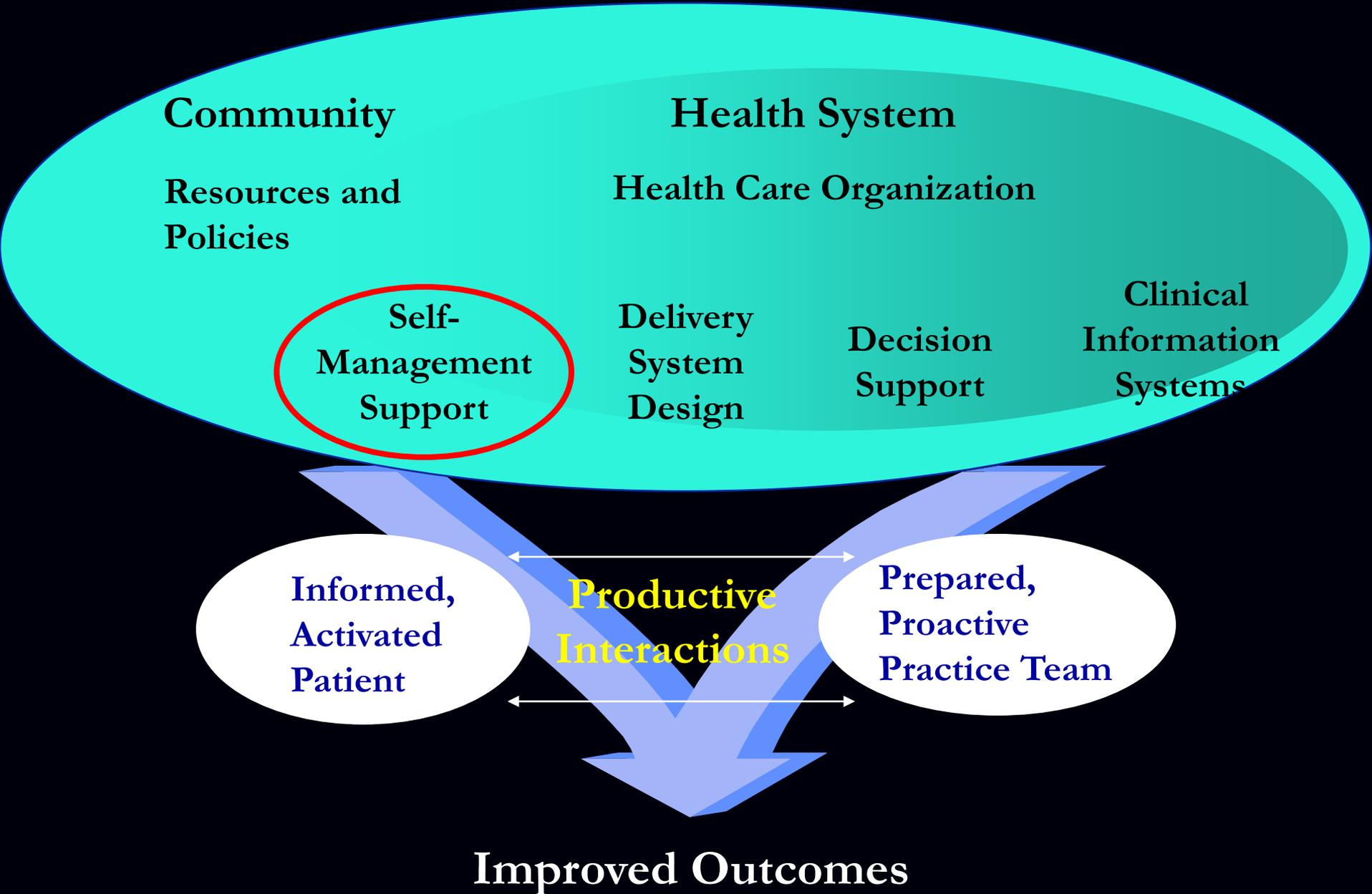


Evolving Context of Self Management Interventions

- ◆ A favorable health care environment is developing to support development, evaluation and implementation
- ◆ Effective models of care are being adopted that incorporate SM



Chronic Care Model (Wagner et al 1996)

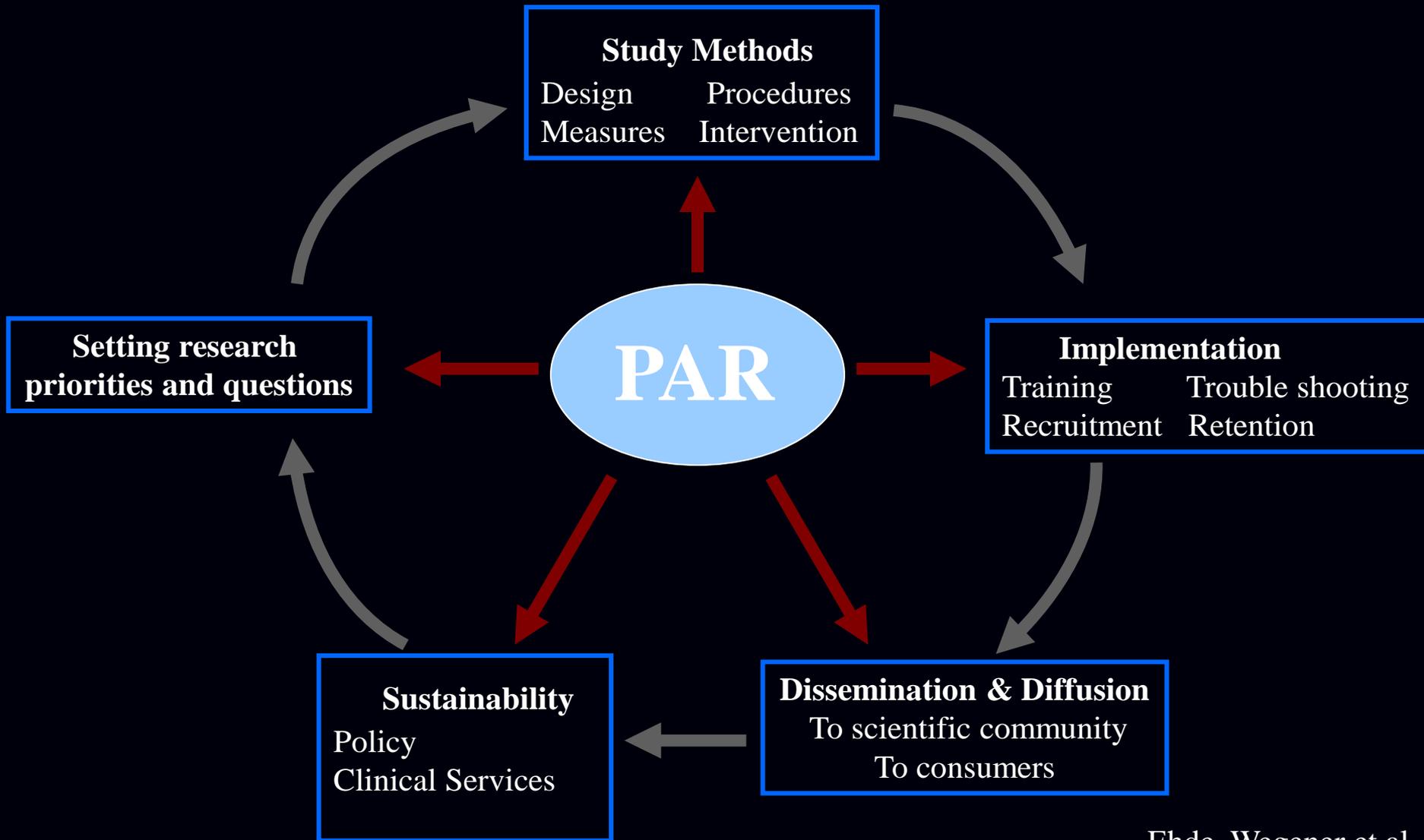


Evolving Context of Self Management Interventions

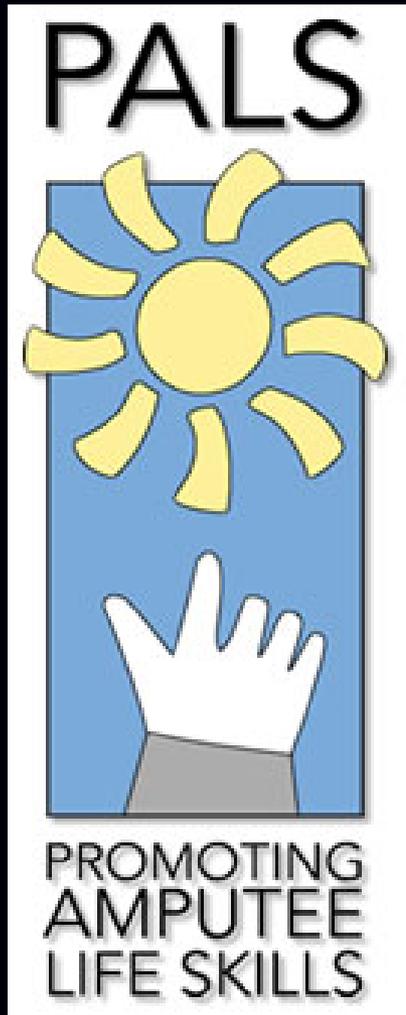
- ◆ A favorable health care environment is developing to support development, evaluation and implementation
- ◆ Effective models of care are available that incorporate SM
- ◆ Use of Participatory Action Research models may be useful in SM content, format, and delivery design to promote utilization of SM pain interventions.



Participatory Action Research



Promoting Amputee Life Skills



JHU School of Public Health

JHU Dept of PM &R

Ellen McKenzie, Patti Ephraim, Stephen Wegener

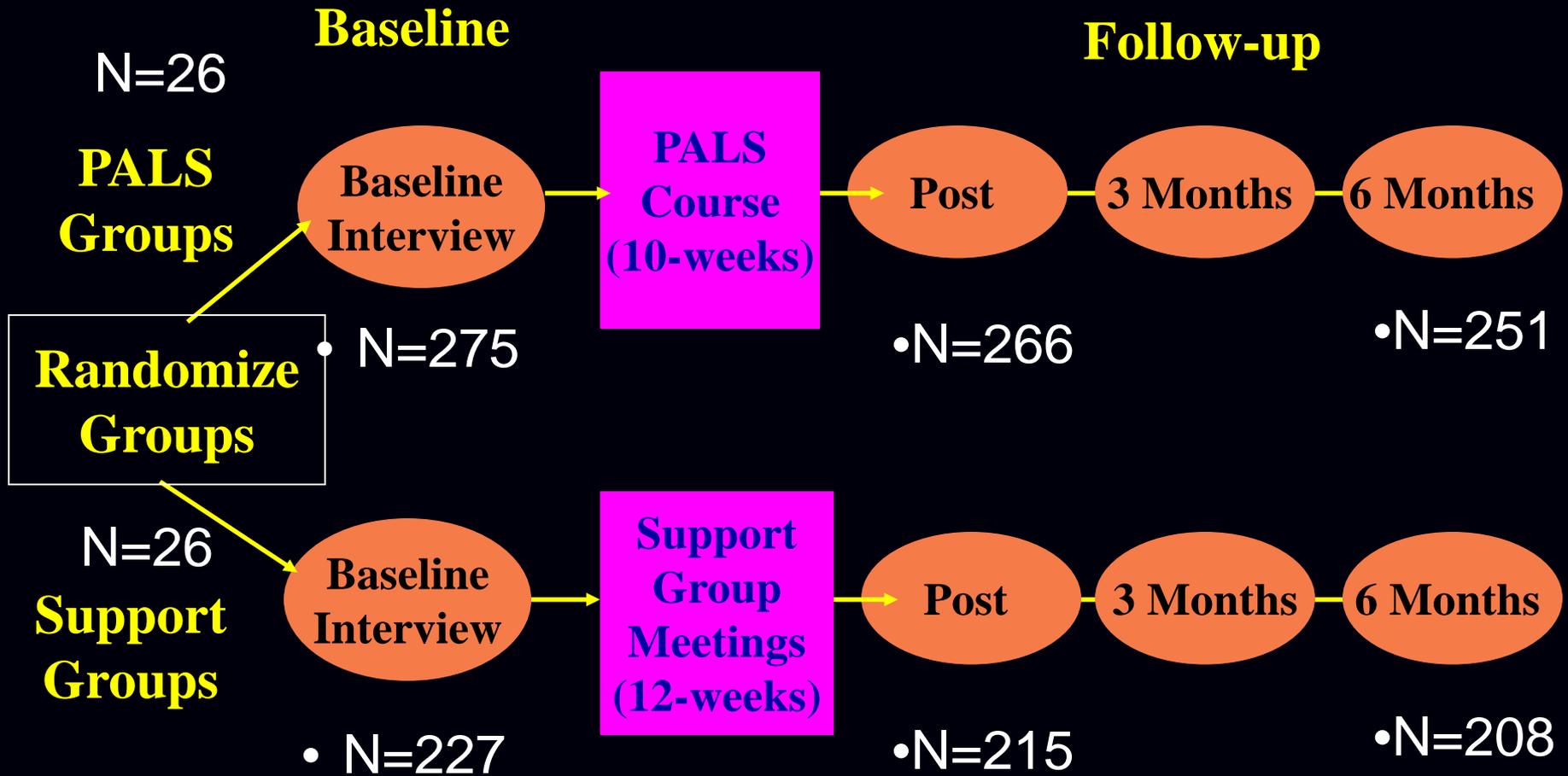
U of Washington Dept of PM&R

Dawn Ehde & Rhonda Williams

Amputee Coalition of America

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RCT of PALS



Evolving Context of Self Management Interventions

- ◆ A favorable health care environment is developing to support development, evaluation and implementation
- ◆ Effective models of care are available that incorporate SM
- ◆ Use of Participatory Action Research models may be useful in SM content, format, and delivery
- ◆ Research data is accumulating to shape interventions, and infrastructures are maturing to support adequately powered effectiveness studies



Knowledge of Behavior Change is Advancing

Meta-analysis of behavior change techniques

- Techniques targeting knowledge (n = 210 studies) and facilitation of behavior (n = 172) were evaluated most frequently.
- Self-monitoring of behavior (positive effects in 56% of the studies), risk communication (52%) and use of social support (50%) were most often effective.
- Providing knowledge, materials and professional support are not sufficient for patients to accomplish change

Achterberg et al., 2010



Timing of SM Delivery

- Qualitative Data based on participant recommendations:
- “Our group of stroke participants concurred that the workshop should be taken early, but the MS group was less in agreement about timing.”
- “They talked more about readiness to receive information”
- Unpredictable course of MS may prevent more concrete recommendations about timing
- “Conversely, in our study individuals with SCI indicated that participating in the CDSM programme early after injury would not be optimal.”
Barlow et al., 2009



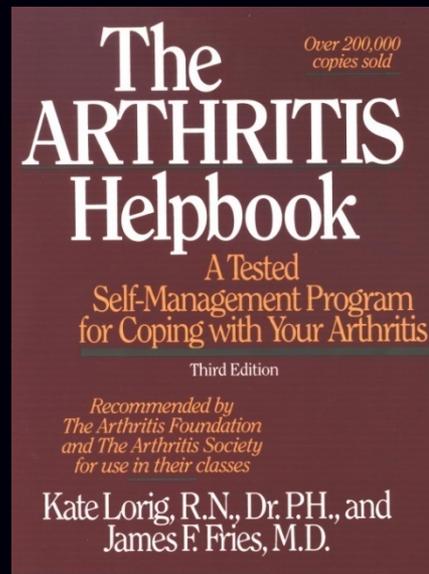
Impressions on Delivering Self Management Interventions

- ◆ A favorable health care environment is developing to support development, evaluation and implementation
- ◆ Effective models of care are available that incorporate SM
- ◆ Use of Participatory Action Research models may be useful in SM content, format, and delivery
- ◆ Research environment and infrastructures are maturing to facilitate well powered effectiveness studies
- ◆ Dissemination, diffusion and sustainability are unmet challenges



Dissemination

Arthritis Self-Help Course in partnership with the
Arthritis Foundation & American College of
Rheumatology

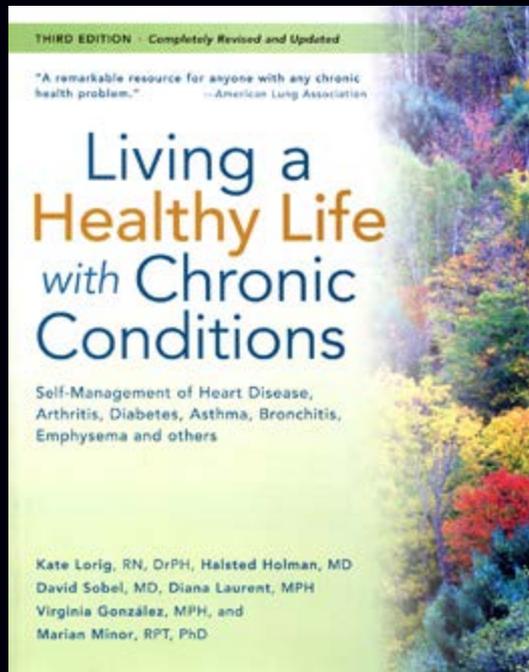


- ◆ Chapters
- ◆ Marketing
- ◆ Research Advocacy
- ◆ Volunteers

- Rx pads
- Scientific Venue
- Research Advocacy
- Training of Providers

Dissemination

Chronic Disease Self-Management Course & the Stanford Patient Education Center



<http://patienteducation.stanford.edu/>



If you build it,



Johns Hopkins



..... Will they come?



Johns Hopkins

Dissemination



5000 letters inviting individuals to participate in SM classes-



Dissemination



5000 letters inviting individuals to participate in SM classes-

16 arrived at the first class



“I don’t know how many people in the public would see a poster or hear about this and seek it out if they’re not already seeking out things. Do you know what I mean?”

The people who don’t seek this stuff out are probably the ones that really need it.”

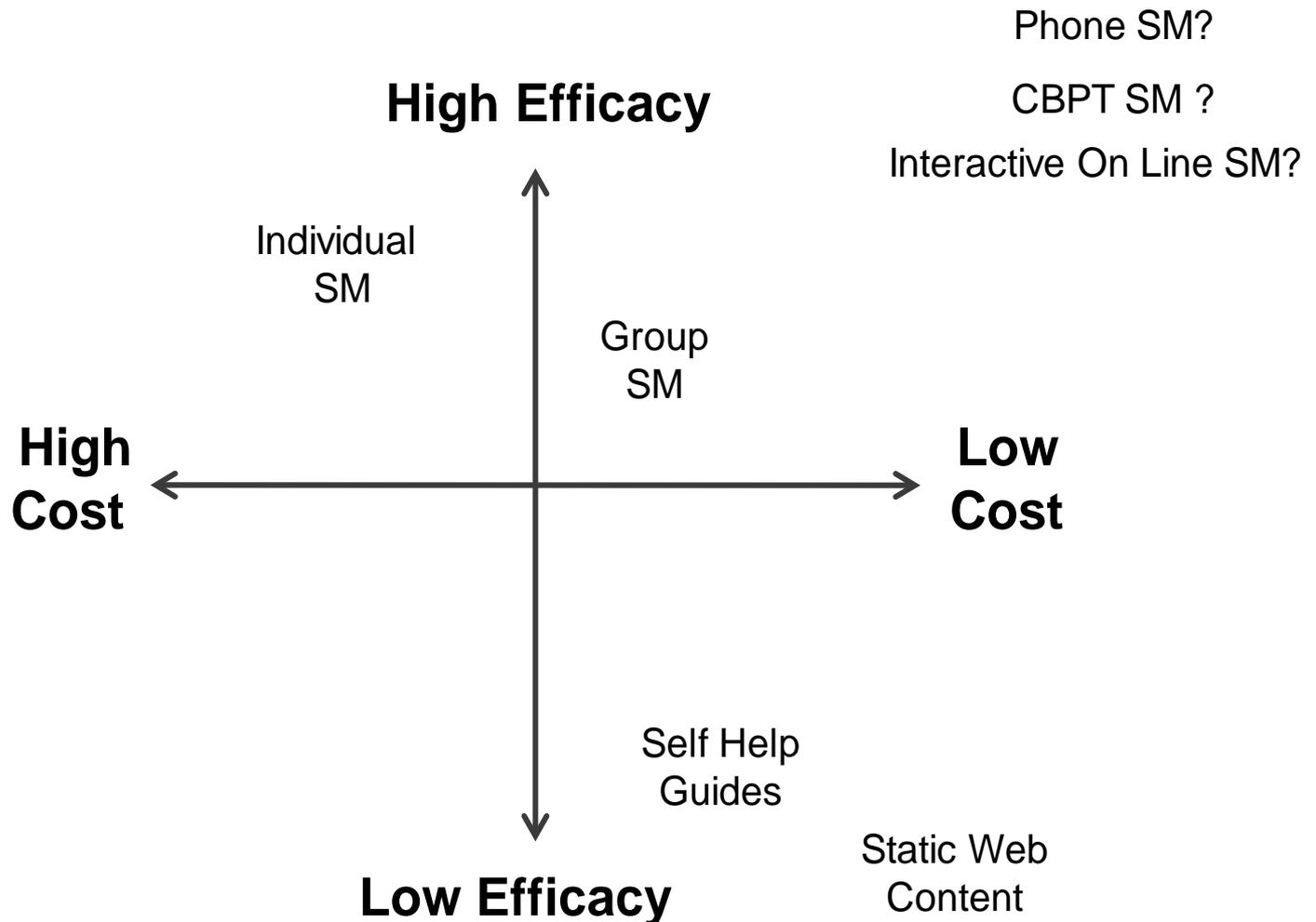
Study participant

Hirsche et al., 2010



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Relative Advantages of Interventions Designed to Modify Health Behavior and Outcomes



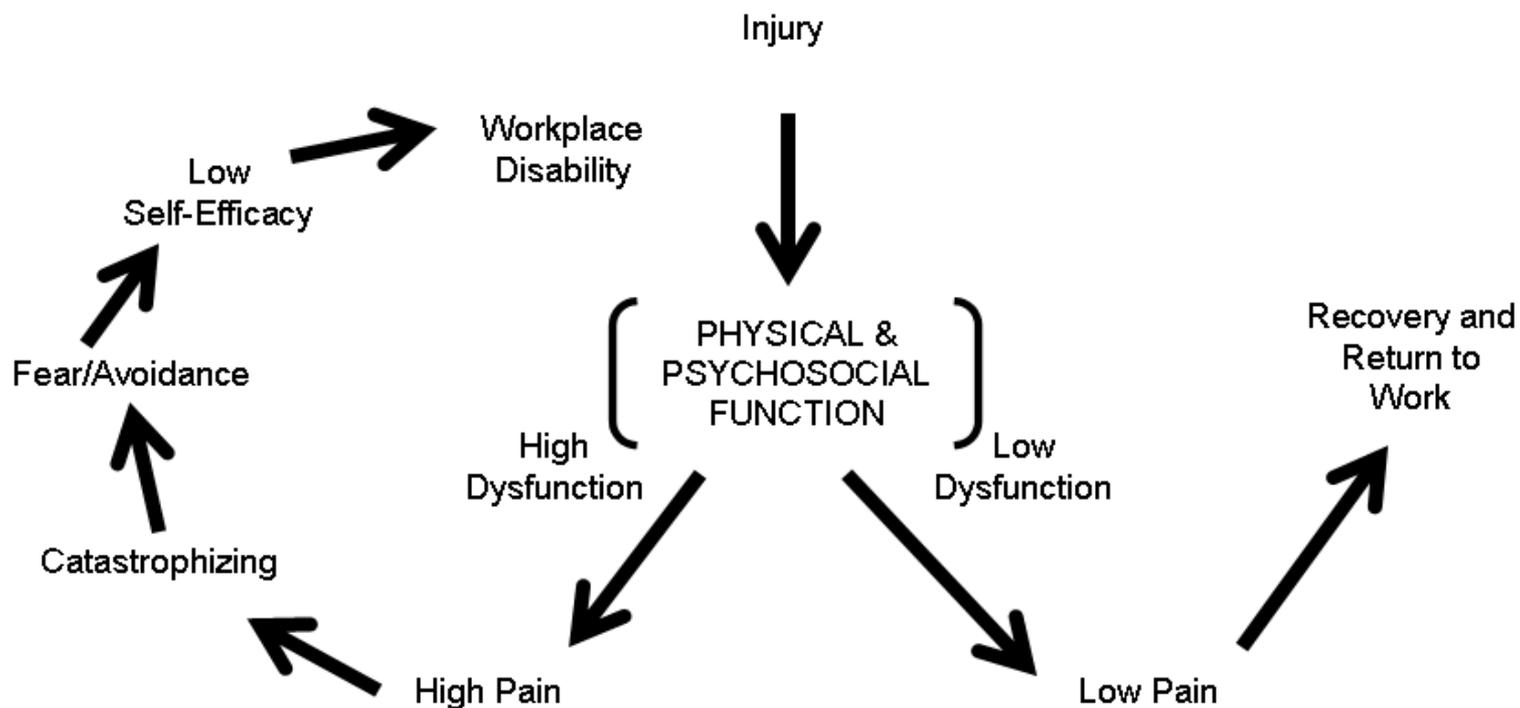
Adapted from www.healthmedia.com

Background

- Musculoskeletal injuries and disorders (MSID) have a major impact on health status, quality of life, and societal productivity.
- High levels of early acute pain place individuals at high risk for poor outcomes.



FIGURE 1: Theoretical Model for Development of Workplace Disability
(adapted from Vlaeyen et al, 1995)



Goal

- The goal of this project is to assess the effectiveness of computer based self-management (CBSM) for reducing pain and improving function in persons with acute musculoskeletal sprain/strain injuries who are at risk for poor outcomes.
- Our overarching hypothesis is that computer-based interventions provided in conjunction with rehabilitation will have a measurable long-term impact on pain, physical and psychosocial functioning and productivity.



Study Design

- A two group randomized controlled clinical trial
 - Control: standard treatment plus computer education
 - Intervention: standard treatment plus computer-based self-management pain intervention
 - Automatic randomization by computer program
- Outcome measures
 - Primary 1) pain intensity; 2) physical functioning and 3) psychosocial functioning.
 - Secondary 1) days away from work, 2) restricted work days, 3) worker's compensation costs
- Assessment done on the computer at baseline, end of treatment, three months and six months



Participant Eligibility

- Acute musculoskeletal sprain/strain injury
- Receiving PT or OT
- Pain score at PT/OT intake $\geq 5/10$
- Date of Injury ≤ 3 months



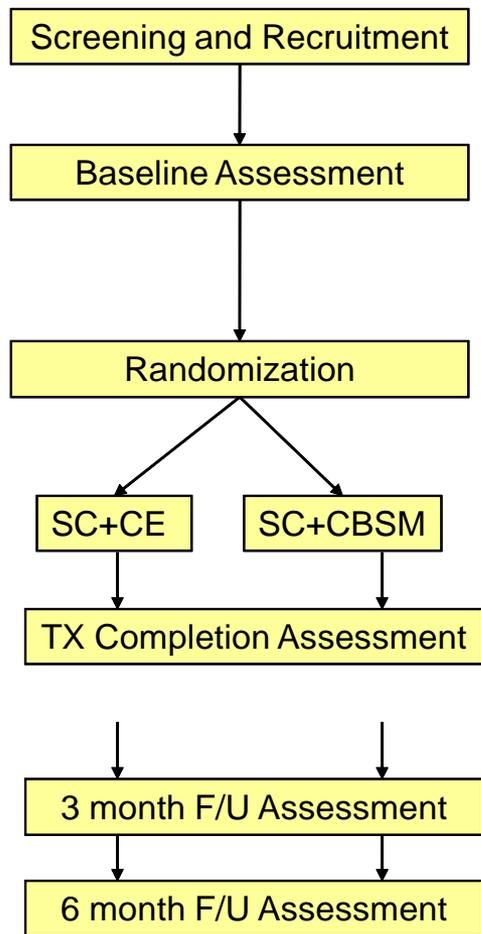
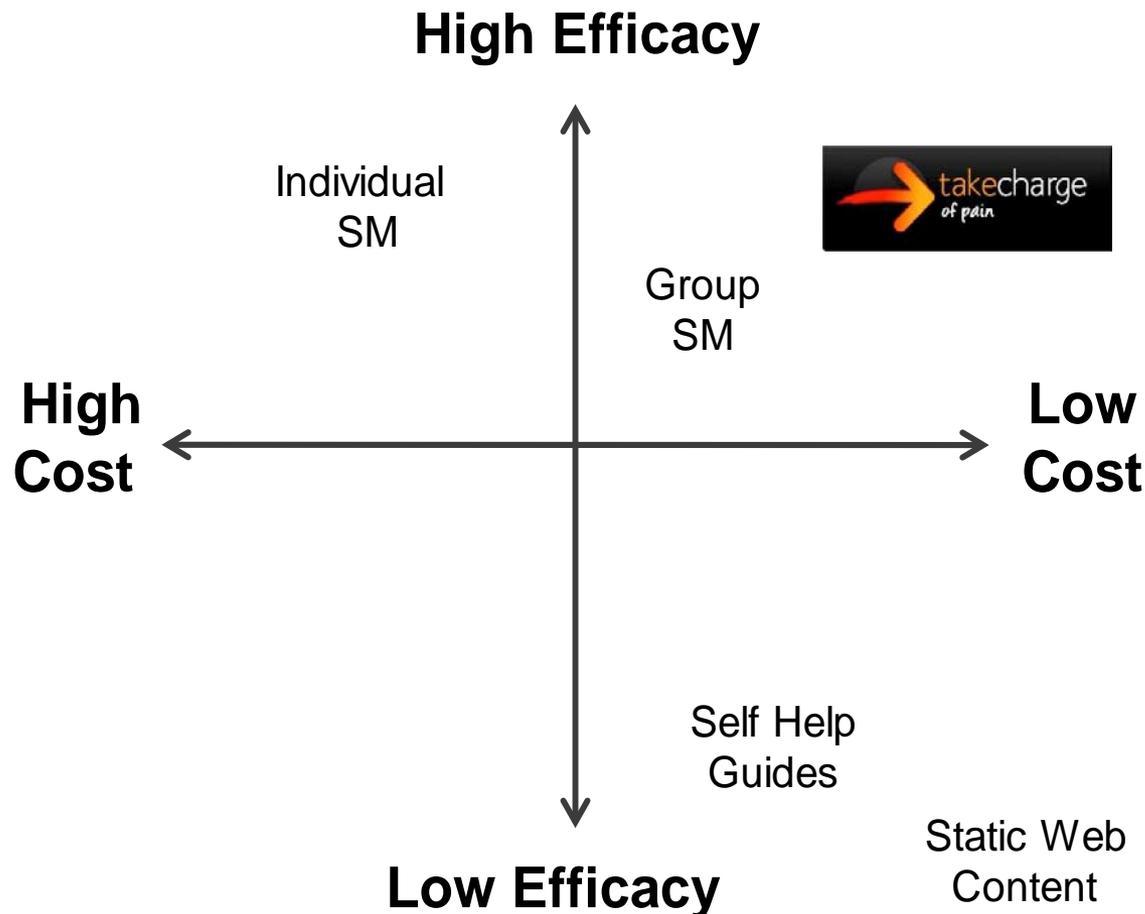
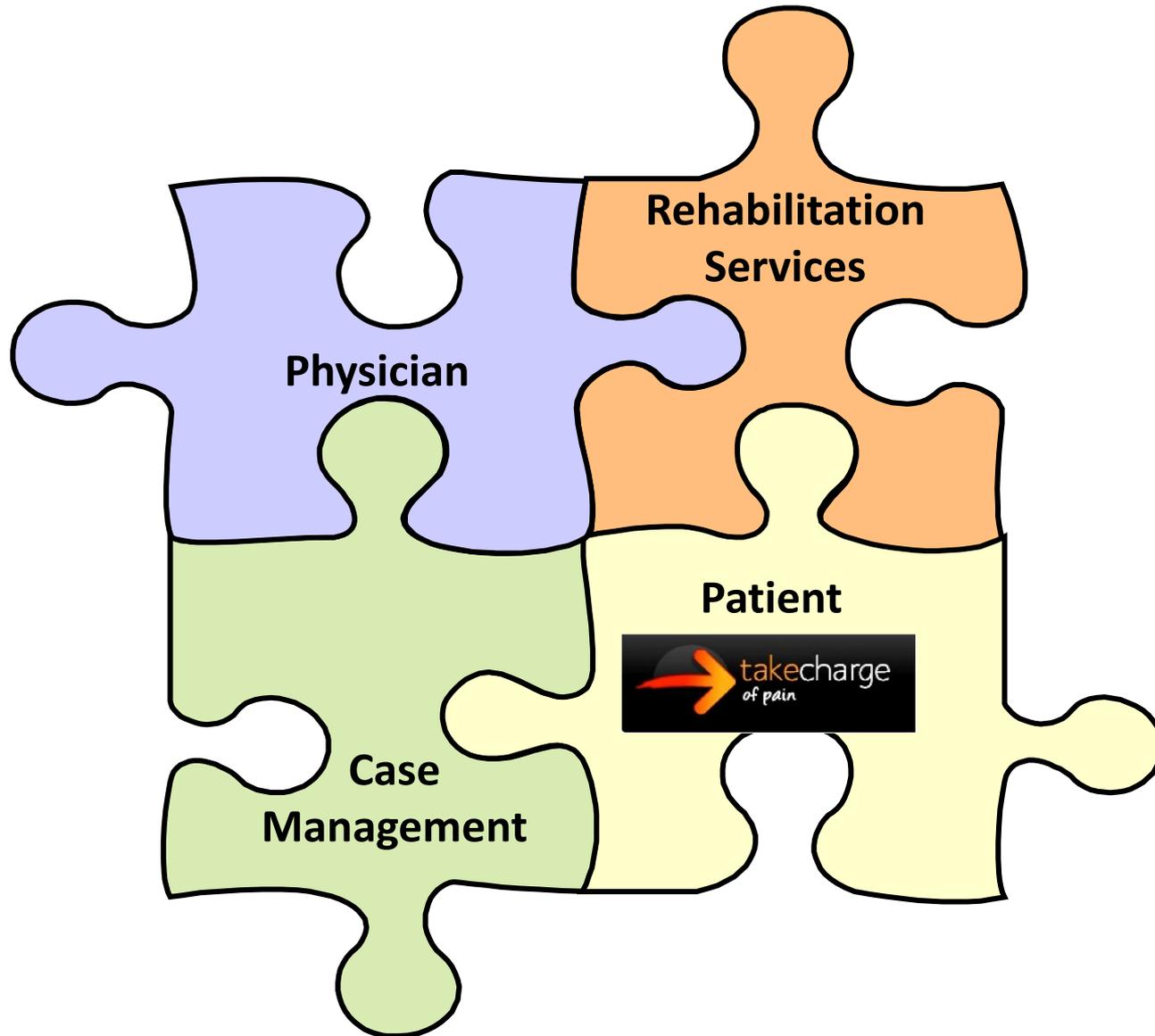


Figure 3. Study Flow

Relative Advantages of Interventions Designed to Modify Health Behavior and Outcomes



Adapted from www.healthmedia.com



A missing piece of the puzzle is having patients take an active role in recovery.

Take Charge is an interactive, online program to help individuals manage pain following an injury. It is designed to work with other treatments to help an individual decrease their pain and improve quality of life.



Take Charge of Pain uses the Self Management (SM) principles of:

- *Knowledge Acquisition*
- *Problem Solving*
- *Skill Acquisition*
- *Self Monitoring*
- *Identifying and Building on Strengths*

Welcome

Take Charge is an interactive program to help you manage pain following an injury or illness. It is designed to work with your other treatments to help you decrease your pain and get back to the life you want.

Pain is not a simple problem. It can affect your body, your mind, and your activity. Pain complicates recovery and can make life difficult. This is where Take Charge comes in. In this program, you will work through a series of lessons on the computer and, with help from your therapist, develop a pain management plan that best meets your needs.

Take Charge recognizes that YOU play an important role in your recovery. You, working with your health care providers can do a lot to decrease your pain, increase your activity, and improve your quality of life. It will help you manage your pain and prevent pain from slowing down your recovery. Take Charge uses techniques that have been scientifically proven to decrease pain and increase your level of activity.

Take Charge is not a substitute for medical care, rehabilitation therapy or individual counseling. It is designed to help you work with your doctors, therapists, and others to prevent pain from controlling your life. Through Take Charge you will discover there are many things you can do to help manage your pain. Here is a [blue link](#).



My pain and emotions were overwhelming...

I wanted to take control of my life.

[Home](#)[Lassand](#)[Tools](#)[Guidance](#)[Help](#)

Assessment 1

As part of our research project, we will ask some questions about your work, your pain and your mood, and your overall health and quality of life. The questionnaire will take roughly twenty minutes. We will ask you to complete this questionnaire at the beginning of this program and at the end. Thank you for your time. Please answer all questions to the best of your ability. Let's begin with some basic questions about you:

What gender do you identify with?

Female

Male

[Next](#)

[Take Charge Home](#) | [Terms of Use](#) | [Credits](#) | [Contact Us](#) | [Beta Tester Feedback Form](#)

Take Charge does not provide medical advice, diagnosis or treatment.

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PROMIS assessment is built in for pre and post assessment which utilizes computer adapted testing to reduce participant burden

Take Charge of Pain Program

Johns Hopkins Medicine



The program consists of 7, 20-minute, interactive lessons delivered on-line. Each session focuses on a specific set of topics and skills.

Lesson 1: Take Charge of Pain

- Learn ways to take charge of pain by setting goals and using pain management tools
- Learn how pain impacts the body, mind and activity

Lesson 2: Stress & Relaxation

- Learn how stress can increase pain and delay healing
- Explore ways to relax the mind and body to manage stress

Lesson 3: Your Brain & Pain

- Explore how to use your brain to reduce pain
- Recognize pain changes over time

Lesson 4: Thinking About Pain

- Explore how negative thinking leads to negative feelings
- Learn how to change how you think

Lesson 5: Rest & Activity

- Understand how balancing rest and activity is about doing things in manageable amounts

Lesson 6: Managing Emotions

- Explore negative emotions that are common among people who experience pain

Lesson 7: Putting It All Together

- Learn about pain traps





Home

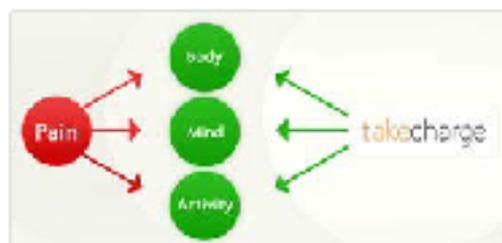
Lessons

Tools

Summaries

Help

Welcome to Take Charge, dессie!



Welcome

Welcome to Take Charge

This program is designed to help you decrease your pain and increase your function. Working on the lessons is just the beginning. Talk to your therapist about what you learn and ask questions. Take time between lessons to put what you learn into practice.



Welcome!

Next: [Assessment 1](#)

Before starting the lessons,

As you know, Take Charge is part of a research study. We want to find out how this program helps people recover from injury. At the beginning and end of the program we will ask you to tell us how you are doing. After you finish all the lessons, we will also ask you what you think about the program. Please take a few minutes now to tell us about yourself.

▶ [Start Assessment 1](#)



Progress Check: Self-monitoring on pain intensity, pain interference, mood and activity level with graphic feedback on progress

Review: Review of Previous Lesson message and home activity

Interactive Learning: A variety of computer based “games” are used to teach and practice skills

Peer Modeling: Videos depict a range of individuals discussing and utilizing the lesson skills

Individual Tailoring: based on participants responses and preferences selected components of the lesson are tailored

Putting It into Practice: An away from computer activity to implement the lesson in daily life

Lesson Summary: Printable lesson summary of individuals input into lesson activity, Take Home Message and Home activity



How does pain show up in my life?

BODY

- Tight muscles
- Less sleep
- Poor appetite
- Spasms
- Low energy
- Stiffness

MIND

- Trouble concentrating
- Poor memory
- Worried
- Irritable
- Angry
- Sad
- Anxious

ACTIVITY

- Doing less
- Not working
- Spending more time lying in bed
- Spending more time sitting down
- Needing more rest
- Playing catch-up and overdoing it on good days

What would I like to get from the program?

- Know what to do if the pain gets worse
- Not so dependent on others
- Better pain control
- Improved health
- Improve how I feel
- Increased confidence
- Don't have to depend only on medicine
- Quicker recovery
- Better quality of life

My Goal I will work out at the gym three times a week.

Take Home Message

1. Pain impacts your body, your mind, and your activities
2. Effective treatment covers each of these
3. You are an active partner in your care
4. There are things **you** can do to help yourself get better

Putting it into Practice

1. Share your goal with your therapist
2. Make sure your goal is specific, measurable, and realistic
3. Work together and revise it if necessary, so that you will be successful

For the study, the program is provided in the context of ongoing physical or occupational therapy

Participants are asked to complete the computer based program either prior to or after their therapy session in the clinic



Therapists and participants are encouraged to discuss the lesson summary and progress in the program

Participants are able to review or redo the lesson at home

Study Participants (N= 260)

- 70% Male
- Mean Age 45
- 64% Caucasian, 29% African American, 2% Asian, 5% Other
- Average time for Intervention Lesson 22 minutes
- Average time for Control lesson 7 minutes
- 44% completed 7 Take Charge lessons



Extending our Reach: Online SM Programs

- ◆ SM can be effective . . . but often difficult to access services due to limited program availability and practical barriers such as transportation, timing of classes
- ◆ Web based interventions can overcome these barriers & provide convenient access to expert information and CBT *supported* by on line communities
- ◆ Growing literature suggests benefits, but more research is needed to establish their efficacy



On line SM Programs

Challenges . . . Opportunities

- ◆ Wide range of participant needs . . . web based platform allows for tailoring
- ◆ Participants at varying levels of computer self-efficacy . . . Also have access to wide range of hardware/connectivity
- ◆ Engaging participants and maintaining their active participation on line vs. in-person
- ◆ High cost of producing materials to meet the needs of technology and media savvy consumers
- ◆ The cutting edge is moving fast !



Contact Information



Building on Our Promise

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