Evaluation of a Peer Coach-Led Intervention to Improve Pain Symptoms (ECLIPSE): Results from a Study of Peer Supported Pain Self-Management for Veterans with Chronic Pain

MARIANNE S. MATTHIAS, PHD

RESEARCH SCIENTIST

VA HSR&D CENTER FOR HEALTH INFORMATION AND COMMUNICATION, INDIANAPOLIS, IN

HSR&D
Health Services Research & Development Service

CHIC | Center for Health Information and Communication

What is your role in research?

Clinician investigator

Non-clinician investigator

Data manager, analyst, or programmer

Project coordinator or research assistant

Clinician (non-research)

Other (please describe via Q&A function)

How many years of experience do you have working with the VA?

One year or less

More than 1, less than 3 years

At least 3, less than 7 years

At least 7, less than 10 years

10 years or more

Disclosures

The views expressed here are mine and do not represent those of the Department of Veterans Affairs or the United States Government.

I have no financial conflicts to disclose.

Acknowledgements

Co-Investigators

- Matthew Bair, M.D., M.S.
- Marina Kukla, Ph.D.
- Alan McGuire, Ph.D.
- Joanne Daggy, Ph.D.
- Michele Heisler, M.D. (Ann Arbor VAMC)

Study Team

- Jasma Adams, M.P.H., Project Manager
- Tetla Menen, Research Assistant
- Carol Kempf, R.N., Study Nurse/Peer Supervisor
- Emilee Pierce, B.S., Peer Supervisor
- Susan Ofner, M.S., Biostatistician

Funding: VA Health Services Research and Development, IIR 14-070

Background

Chronic pain is prevalent, especially among Veterans (up to 65% of Veterans have chronic pain)

Requires effective, consistent self-management

- Self-management: the ability to manage the symptoms, treatment, physical and psychosocial consequences and life-style changes inherent in living with a chronic condition
- Self-management includes treatment adherence, behavioral change, adapting life roles, managing negative emotions, and coping skills.
- Self-management is recognized by National Academy of Medicine and VHA as critical ingredient in chronic pain management.

Background

Self-management requires support

- Patient-identified barriers to pain self-management:
  - Lack of support/encouragement
  - Lack of motivation to maintain activities
- Facilitators—having someone to:
  - Help troubleshoot when self-management activities do not help
  - Listen when they talk about pain or frustrations with self-management
  - Provide reinforcement and encouragement to “keep going” with self-management activities

Background

Self-Management Support

- Providing by a study nurse in prior studies
- Not always feasible outside of a research setting with busy clinics and other responsibilities
- Presents a barrier to implementation

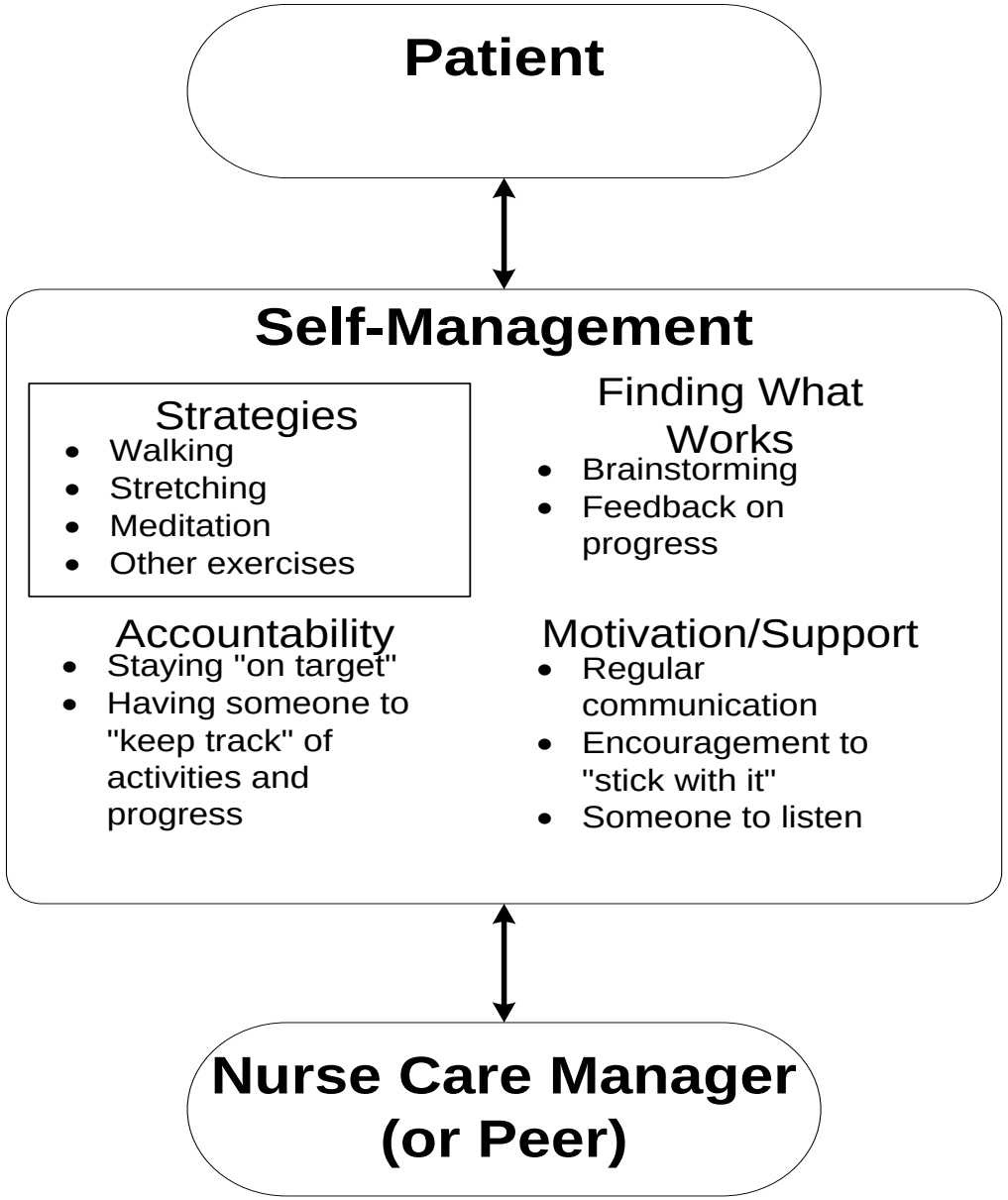
Background

Peer coaches

- Can provide support and many of the same benefits as a nurse
- But with greater implementation potential
  - Patients with pain more plentiful than nurses
  - Potential to be self-perpetuating as patients who are coached go on to become coaches themselves

Peer support in other contexts

- Diabetes
- Mental healthcare



Matthias, et al. (2012). An expanded view of self-management: Patients' experiences with self-management education and support in an intervention for chronic musculoskeletal pain. *Pain Medicine*, *13,* 1018-1028.

Pilot Study: Improving Pain Using Peer-Reinforced Self-Management Strategies (IMPPRESS)

VA QUERI-funded Rapid Response Project

20 Veteran peer coaches, who had participated in a prior intervention with chronic pain self-management

20 Veterans with chronic musculoskeletal pain persisting ≥ 6 months, with at least moderate pain severity (pain ≥ 5 on 0-10 scale)

Pre-test/Post-test Design

IMPPRESS Intervention

4-month intervention period

Each coach was paired with 2 Veterans

Peer coaches were asked to do the following:

- Help their Veterans to set goals
- Follow up on goals at next meeting
- Discuss relevant parts of the pain self-management manual
- Provide encouragement, share personal experiences, engage in social talk where appropriate

Peer coaches received regular supervision calls

IMPPRESS Measures

Primary outcome: pain intensity and interference

- PROMIS pain and interference measures
- 3-question version of the Brief Pain Inventory (PEG)

Secondary outcomes: depression, anxiety, patient activation, self-efficacy, social support, negative pain cognitions (pain catastrophizing and pain centrality)

Results

9/10 peer coaches and 17/20 patients completed study (90% and 85% retention rates)

All participants were male

Peer Coach Ages: 50-71 (M=60, SD=7)

Pain conditions: Low back pain (8), neck (6), knees (1), shoulders (1), “everywhere” (1)

Results

Measure	N	Baseline Mean	Baseline SD	4-Month Mean	4-Month SD	r	Effect Size	p-value	ICC
PROMIS	17	64.04	5.32	61.64	8.20	.54	-.35	.17†	-
PEG	17	22.53	4.03	21.29	5.59	.58	-.25	.33	.28
Depression	17	11.01	8.03	9.82	5.75	.58	-.17	.47†	-
Anxiety	17	7.61	5.98	5.71	4.43	.65	-.36	.11†	-
Self-Efficacy	17	4.35	2.20	5.58	1.86	0	.60	.16	.56
Patient Activation	17	41.22	5.69	44.00	5.58	.44	.49	.12	.40
Social Support	16	59.29	18.87	66.25	18.45	.62	.37	.11†	-
Centrality of Pain	17	34.00	8.03	28.71	8.98	.47	-.62	.06	.32
Pain Catastrophizing	17	29.24	11.13	24.12	13.28	.45	-.42	.12†	-

Limitations of Pilot

Pre-test/Post-test design

All male Veterans

Shorter (4 months) intervention period (due to 12-month pilot grant duration)

Small sample size

- Allowed greater selectivity of peer coaches
- Facilitated more personalized attention for peer coaches from study staff

Follow-up Study

Evaluation of a Peer Coach-Led Intervention to Improve Pain Symptoms (ECLIPSE)

4-year Randomized Controlled Trial

VA IIR 14-070

Clinical Trials Registration: NCT02380690

ECLIPSE Aims

Hybrid Type 1 Design (feasibility for implementation + effectiveness)

Aim 1 (primary aim)**:** To compare 6-month (primary endpoint) and 9-month (sustained) effects of peer-supported chronic pain self-management versus controls on overall pain (intensity and function).

Aim 2 (secondary aim)**:** To compare 6- and 9-month effects of peer-supported chronic pain self-management versus controls on self-efficacy, social support, pain coping, patient activation, health-related quality of life, and health service utilization.

Aim 3 (pre-implementation aim): To explore facilitators and barriers to implementation of peer support for chronic pain, intervention costs, and fidelity to the model.

Study Overview

6-month peer coaching self-management intervention vs. control group with 2-hour pain self-management class.

Eligible participants:

- MSK pain in low back, cervical spine, or extremities for ≥ 3 months
- At least moderate (≥5 on 1-10 scale) pain severity
- Willingness to engage in phone or in-person contact with another
- Exclusions included recent psychiatric hospitalization, severe medical conditions, and current participation in another pain study

Peer Coaches

Peer coaches

- participants in past pain self-management studies
- recommendations of primary care providers
- (later) ECLIPSE intervention completers
- Had MSK pain diagnosis but did not have to have a minimum pain score

Coaches recruited in “waves” as needed

After a 2-3 hour in-person training session, peer coaches were assigned at least one Veteran to mentor.

- Coaches chose how many Veterans to work with
- Almost half worked with just one

Peer Coach Monitoring

Monthly “booster” sessions to reinforce skills, answer questions, and troubleshoot problems

Regular one-on-one check-in calls from one of the peer coach supervisors

Check-in calls with Veterans to ensure coaches were contacting them and identify any issues

The ECLIPSE Intervention

Patients/coaches matched on 1) gender and 2) pain location

Meet/talk 2x/month—total of 12 sessions over 6 months

Could choose phone or in-person, encouraged to meet in-person the first time

Sessions were guided by a manual on pain self-management

- Coaches were instructed to be flexible and were encouraged to discuss their own experiences with pain management and how they overcame challenges (to the extent they were comfortable)
- Goal-setting: revisit and refine goals in sessions

ECLIPSE Manual Content Summary

Self-Management Knowledge	How to be a Peer Coach (Coach Manual Only)
Chronic Pain Basics	What is a Peer?
Relaxation Skills	Cultural Competence
Activity Pacing	Communication Skills
Cognitive Behavioral Skills	Managing Crisis and Emergency Situations
Self-Care Skills	Motivational Strategies
Interpersonal Skills	

Outcome Measures

Baseline, 6 months, 9 months

Both patients and coaches (to ascertain the effect of peer coaching on coaches)

Primary Outcome: Brief Pain Inventory (BPI) total score

- 0-10 scale
- Subscales: pain interference, pain intensity

Secondary Outcomes:

- Depression (PHQ-8)
- Anxiety (GAD-7)
- Self-Efficacy
- Pain Catastrophizing
- Patient Activation
- Healthcare Utilization

Statistical Considerations

Powered to detect a .45 effect size on primary outcome (total BPI) at 6 months

Intent-to-treat approach

Linear mixed model for primary and secondary outcomes

Adjusted for multiple comparisons in secondary outcomes

Exploratory Analyses: intervention dose

Results

215 enrolled

- 2 withdrew after consent but prior to completing BL assessments, leaving N=213
- 119 randomized to intervention; 94 to control

Balanced between groups on BL characteristics

Demographics

- Mean age: 56.7
- Male: 81%
- White: 62%

Results

Primary Outcome—BPI total

- 6 Months: No significant decrease
  - 5.8 BL → 5.6 (Both groups)

- 9 months
  - Intervention: 5.8 BL → 5.4, p = .018
  - Control: 5.8 BL → 5.3, p = .006

What happened?

(Well, not much happened, but *why*?)

Adherence was low, despite staff efforts

- Of the 84 with data on # of contacts
- 11 (13%) had prescribed 12 (or more) meetings with peer coach
- 30 (36%) met at least 6 times
- 43 (63%) met 5 or fewer times
  - 10 (8%) who reported no meetings with coaches

Exploratory analyses with dose

Why was adherence low? Was it the Coaches?

Should we have paid coaches?

- Other successful peer coaching models, including in VA (e.g., diabetes), offered some form of stipend or salary.
- VA peer specialists—paid VA employees
  - Not available outside of mental healthcare at time of ECLIPSE
- Volunteer model—high implementation potential if successful

But the qualitative data adds to our understanding…

Barriers (from Peer Coach Interviews)

Veteran engagement!!! (i.e., low adherence)

- Difficulty reaching Veterans—did not return calls
- Focus on socializing rather than self-management content
- Veterans didn’t want to talk about goals

"They were just not into the program. I don't think they really wanted to be committed to it…[it was] their negativity." *Peer Coach*

"I'm doing all the talking. They don't give me feedback…And I really get upset when a guy asks me about the gift card." *Peer Coach*

"I had to redirect her into what we were here for. I think she was more interested in doing social activity than doing the self-management part." *Peer Coach*

"[The veteran] just wants to socialize versus really wanting to know about pain management…it definitely feels more like a social outlet for that veteran." *Peer Coach*

"I told [study nurse], I'm going to try one more time this week. I called. I don't even get a call back anymore …I want to meet with them." *Peer Coach*

Engagement

"I try to see if they're interested in setting up a goal, and goals were like dirty words. [They say] 'I just don't like goals. It's just another thing that I have to work toward, and I'm tired, and I hurt, and I don't wanna work'…So I don't wanna bring it up." *Peer Coach*

"I think they were set in their ways, so it wasn't really about changing. I think it was more about complaining." *Peer Coach*

OTHER BARRIERS

"Maybe the program really wasn't working for them because they didn't wanna set goals. They didn't wanna do goals." *Peer Coach*

"It's hard to really know what they're going through while on the phone…you need to look in their eyes." *Peer Coach*

"A lot of times I didn't return calls." *Veteran*

"It was more just conversation. I don't recall [peer coach] being systematically helpful, even though we had a great time." *Veteran*

"It's tough to get to know somebody over the phone. I think maybe if it had been face-to-face, it might have been a little different for me." *Veteran*

Barriers (Veterans)

However…

Facilitators

Fellow Veterans

Having a “good” peer coach

- Listens
- Is attentive
- Offers good advice
- Doesn’t judge

FACILITATORS

"He's a veteran. It's easier to talk to veterans about veteran things…Being a veteran is like being part of a brotherhood." *Veteran*

"[Peer coach] was pretty well-versed about how to get me where I thought that I wanted to be , and then if I didn't get to where I wanted to be, he encouraged me to take it a step further." *Veteran*

"He wasn't pushy…He was an active listener…He would not interrupt and would just nod or [say] 'I understand'…He was focused on me. *Veteran*

Benefits

Not feeling alone in one's pain

Having someone to be accountable to for self-management activities

Someone to listen

Providing optimism/hope

BENEFITS

"I enjoyed feeling that other people have the same issues…I felt like I was out there by myself doing [pain management]. *Veteran*

"Having somebody else that was going through similar things…he [peer coach] always had a positive spirit…just keep going. [That] made things more tolerable." *Veteran*

"The biggest thing I came away with was that there's options other than pain pills." *Veteran*

"Some of the things I've been taught is to view things a different way…if you don't have a peer coach, who is going to tell you? Especially if you're like me and you're single and live by yourself. There's not anybody to keep bugging you." *Veteran*

"The main thing that I like about this program is just the communication with another person…just hearing you out and knowing they have experienced that, and they can give you some guidance or suggestions on things to make it better. Now that's reassurance to me." *Veteran*

"I can see a little ray of hope, and I try to focus on that and not think about all the negatives that go along with my pain. Before it was like doom and gloom." *Veteran*

"The relationship was really good, and we still speak with each other…I think you would say that we're friends." *Peer Coach*

"I think that [being a peer coach] helped me stay active socially…Being retired, I think that it's beneficial to have some contact with other people, especially people you can relate to and who have the same problems." *Peer Coach*

"I was giving suggestions…I started thinking that you're telling them to do that, why aren't you doing it? So I started practicing what I preach, and I was feeling better. *Peer Coach*

BENEFITS (coaches)

"The best part is when you're talking to them and they say, 'Man, I like talking to you', and you give them some ideas, and you call back and they say, 'Hey, some of that stuff works'. It's just pleasant." *Peer Coach*

In Summary

Negatives

- Low Adherence/Engagement
- Difficulty focusing on curriculum
- Those who used phone had extra challenges
- Did not produce measurable changes in pain or secondary outcomes

Positives—for patients and coaches

- Encouragement/motivation
- Social contact/friendship
- Learning new ideas for pain management
- Having someone to talk to/listen

Bottom Line

Peer coaching for pain self-management did not produce measurable changes in outcomes.

But, peer coaching appears to have helped some people, even if these benefits didn't show up in our traditional measures.

So, is peer coaching worth another try, or should we forget about it?

What could help peer coaching work in pain management?

Don’t have peer coaches deliver content/curriculum

- Have a clinical (or research) team member provide content for pain self-management (possibly in a group format)
- Use peer coaches to *encourage* and *reinforce messages* from team member

Leverage VHA Peer Specialists (now that they have expanded beyond mental healthcare)

- Allows more training, higher accountability
- More control over structure and frequency of meetings
- Fewer peers to manage—higher patient to peer ratio (since peers are paid employees)

Shorten intervention period

- 6 months may be too long

Next Steps

Finish some exploratory analyses

Analyze qualitative data

ECLIPSE Publications to date

Matthias, M.S., Bair, M.J., Ofner, S., Heisler, M., Kukla, M., McGuire, A.B., Adams, J., Kempf, C., Pierce, E., Menen, T., McCalley, S., Johnson, N., Daggy, J. (in press). Peer support for self-management of chronic pain: The Evaluation of a peer Coach-Led Intervention to improve Pain Symptoms (ECLIPSE) trial. *Journal of General Internal Medicine.* (Main Outcomes Paper)

Matthias, M.S., Daggy, J., Ofner, S., McGuire, A.B., Kukla, M., & Bair, M.J. (2020). Exploring peer coaches' outcomes: Findings from a clinical trial of patients with chronic pain. *Patient Education and Counseling, 103(7),* 1366-22. DOI: 10.1016/j.pec.2020.02.007

Matthias, M.S., Daggy, J., Adams, J., Menen, T., McCalley, S., Kukla, M., McGuire, A.B., Ofner, S., Pierce, E., Kempf, C., Heisler, M., & Bair, M.J. (2019). Evaluation of a Peer Coach-Led Intervention to Improve Pain Symptoms (ECLIPSE): Rationale, Study Design, Methods, and Sample Characteristics, *Contemporary Clinical Trials, 81,* 71-79. DOI: 10.1016/j.cct.2019.04.002

Shue, S., McGuire, A.B., & Matthias, M.S. (2018). Facilitators and barriers to implementation of a peer support intervention for patients with chronic pain: An exploratory qualitative study. *Pain Medicine*, DOI: 10.1093/pm/pny229.

Thank you!

QUESTIONS?