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Evaluating the Effectiveness of Motivational Interviewing in Injured Workers with Musculoskeletal Disorders

Submission date
03/02/2015

Recruitment status
No longer recruiting

Registration date
12/02/2015

Overall study status
Completed

Last Edited
08/03/2023

Condition category
Musculoskeletal Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol

Background and study aims
Musculoskeletal (MSK) disorders are conditions of muscles, bone and joints that often lead to pain and disability. MSK disorders can be incredibly disruptive to an individual's life if not managed appropriately. Current work rehabilitation guidelines indicate that most MSK disorders generally take 4 to 6 weeks to fully recover. However, for approximately 20% of injured workers who experience a MSK disorder, substantial issues arise causing a delay in return to work and lead to social, psychological, financial and employment stresses that overtake the typical recovery process. This often leads to frustration, disagreements and questions between the injured worker, employer, and health care service providers. Motivational Interviewing (MI) is a client-centered practice focusing on patients' intrinsic motivation for change whereby a health care provider guides the patient towards behavioural change by assisting them in identifying and resolving conflicts of ideas or attitudes. The aim of this study is to evaluate the effectiveness and utility of MI for injured workers and work rehabilitation professionals. We will conduct a randomized clinical trial to determine if MI has an impact on ambivalence about return-to-work, work-related recovery expectations, return-to-work rates and satisfaction with care for injured workers with MSK disorders who have experienced barriers to recovery from their injury.

Who can participate?
Workers' compensation claimants with musculoskeletal injuries undergoing rehabilitation at Millard Health Centre in Edmonton, Canada.

What does the study involve?
Two groups of claimants will be formed, one group made of people who are treated with motivational interviewing as part of their occupational rehabilitation program and the second group made of people who are treated with routine occupational rehabilitation. After rehabilitation, we will follow claimants for one year to determine their work status. Return-to-work outcomes will be compared between the two groups using appropriate statistical techniques.

What are the possible benefits and risks of participating?
Minimal risks are associated with this study. Motivational interviewing is not associated with any know adverse effects. There will be no other direct benefits to participants, but we will be gaining knowledge related to the effectiveness of motivational interviewing for injured workers.

Where is the study run from?
The study will be undertaken at Millard Health in Edmonton, Alberta, Canada. Hundreds of workers are treated at this facility annually.

When is the study starting and how long is it expected to run for?
October 2014 to December 2016

Who is funding the study?
Workers' Compensation Board of Alberta, Canada

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
N/A

Study information

Scientific Title

Evaluating the Effectiveness of Motivational Interviewing in Injured Workers with Musculoskeletal Disorders: A Cluster Randomized Controlled Trial

Study objectives
We hypothesize MI will reduce ambivalence regarding RTW in non-job attached claimants and increase their RTW expectations. MI is an intervention that specifically targets these important psychological barriers to RTW and we anticipate improvements will be seen over the course of rehabilitation. We also hypothesize that improvements in ambivalence and RTW expectations will lead to increased RTW rates subsequent to program discharge (i.e. secured employment with a new employer and sustained suspension of wage replacement benefits). Lastly, we hypothesize that improvements in claimant psychological and work status will lead to improved claimant satisfaction with care received at Millard Health. These hypotheses are based on the current literature indicating that MI has a significant and clinically relevant effect for other behavior-related health conditions in approximately 75% of the studies reviewed (53/72 randomized controlled trials).

Ethics approval required
Old ethics approval format

Ethics approval(s)
University of Alberta Health Research Ethic Board. 20/12/2014, Study ID Pro00050492

Study design
A pragmatic, cluster randomized controlled trial (RCT) design will be used with analysis planned at the level of individual claimant.

Primary study design
Interventional

Secondary study design
Cluster randomised trial

Study setting(s)
Other

Study type(s)
Treatment

Participant information sheet

Health condition(s) or problem(s) studied
Musculoskeletal (MSK) disorders

Interventions
Motivational Interviewing (MI) is a client-centered practice focusing on patients' intrinsic motivation for change whereby a health care provider guides the patient towards behavioural change by assisting them in identifying and resolving conflicts of ideas or attitudes. The aim of this study is to evaluate the effectiveness and utility of MI for injured workers and work rehabilitation professionals.

Intervention Type
Behavioural

Primary outcome measure
Return-to-work outcomes and rehabilitation program outcomes will be compared between the two groups using appropriate statistical techniques.

Work Disability Outcomes: The key outcome measures currently used in the rehabilitation programs at Millard Health include the percentage of clients who are no longer receiving wage replacements benefits. These are surrogate indicators of recovery and RTW, but are often used as outcome measures in studies of worker's compensation claimants. We will obtain these outcomes for all claimants in our study to provide an indirect but meaningful indication of the proportion of claimants who RTW in both the intervention and control groups. The follow-up period for these measures will be 1,3, and 6 months after discharge from Millard Health.

Secondary outcome measures
Current secondary outcome measures as of 11/01/2018:
We will also evaluate changes in claimant self-reported readiness to return-to-work and expectations of return-to-work.

Ambivalence and Readiness to Change: Each participant will complete the Readiness for Return to Work (RRTW) scale befor and after participating in rehabilitation, which will identify each claimant's readiness for work by categorizing the workers into specific stages of change identified in the Transtheoretical Model of Change. These stages include precontemplation, contemplation, prepared for action (self-evaluative) and prepared for action (behavioural). The stages of change identified by this scale are consistent with the stages of change used in MI. The RRTW scale will allow us to determine the stage of change each claimant is in to help identify ambivalence about RTW and improvements in this psychological state. Claimants who have reduced ambivalence at the end of rehabilitation are anticipated to progress within the stages. Completing the RRTW scale as part of this study will also provide an opportunity to determine the reliability/validity of this scale in identifying the accurate stage of readiness for RTW for each participant and its potential utility in work rehabilitation.

Work-Related Recovery Expectations: The RTW expectations questionnaire that will be used in this study was developed and tested at Millard Health by the lead investigator. It has previously demonstrated adequate internal consistency and has been shown to correlate moderately with measures of pain intensity and reported disability in patients with low back pain.11 It has also demonstrated some predictive validity in claimants with chronic low back pain.12 Subjects are asked to use a 5-point Likert scale (1=strongly disagree, 5=strongly agree) to rate their agreement with three statements about their likelihood of RTW. We anticipate that claimants who overcome ambivalence at the end of rehabilitation will also experience improved RTW expectations as indicated by higher scores.

Previous secondary outcome measures:
We will also evaluate changes in claimant self-reported readiness to return-to-work and expectations of return-to-work.

Claimant Satisfaction: In addition to recovery indicators indicated above, we are interested in claimant satisfaction with the rehabilitation process. For purposes of program evaluation at Millard Health, all claimants complete a satisfaction survey at time of program discharge. Satisfaction on a number of items including "clinician explained what to expect", "concern for

safety", and "confidence in staff skills" are rated using a 5-point scale. To maintain anonymity, claimants are not required to provide names or claim numbers on the survey, but treating clinicians will indicate on the survey whether the claimant was in the MI group or not. This will allow us to examine differences between study groups, but we will be unable to link satisfaction scores with other data available on study subjects.

Ambivalence and Readiness to Change: Each participant will complete the Readiness for Return to Work (RRTW) scale befor and after participating in rehabilitation, which will identify each claimant's readiness for work by categorizing the workers into specific stages of change identified in the Transtheoretical Model of Change. These stages include precontemplation, contemplation, prepared for action (self-evaluative) and prepared for action (behavioural). The stages of change identified by this scale are consistent with the stages of change used in MI. The RRTW scale will allow us to determine the stage of change each claimant is in to help identify ambivalence about RTW and improvements in this psychological state. Claimants who have reduced ambivalence at the end of rehabilitation are anticipated to progress within the stages. Completing the RRTW scale as part of this study will also provide an opportunity to determine the reliability/validity of this scale in identifying the accurate stage of readiness for RTW for each participant and its potential utility in work rehabilitation.

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Overall study start date
01/10/2014

Completion date
01/12/2016

Eligibility

Key inclusion criteria
Workers' compensation claimants with musculoskeletal injuries being treated at Millard Health Centre in Edmonton, Canada. Specific inclusion criteria for this study consist of the following:
1. Injured workers 18 years and older who have an open WCB-Alberta claim
2. Off work 3 to 12 months post injury
3. Not job attached or have experienced an unsuccessful gradual RTW
4. Participating in a provider-based RTW program with integrated vocational services
5. Not scheduled for surgery
6. No major psychological or psychiatric diagnosis (including severe depression, psychosis, brain injury or traumatic psychological injury)

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
To test the effect of group status while controlling for 9 potential confounders, we will require 100 claimants per group or 200 total.

Key exclusion criteria
1. Injured workers less than 18 years old who have an open WCB-Alberta claim
2. Off work more than 12 months post injury
3. Have a job to return to
4. Not participating in a provider-based RTW program with integrated vocational services
5. Scheduled for surgery
6. Major psychological or psychiatric diagnosis (including severe depression, psychosis, brain injury or traumatic psychological injury)

Date of first enrolment
01/10/2014

Date of final enrolment
01/06/2015

Locations

Countries of recruitment
Canada

Study participating centre
Workers' Compensation Board Alberta - Millard Health Centre
131 Airport Road
Edmonton
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Sponsor information

Organisation
Workers' Compensation Board of Alberta

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Sponsor type
Other

Website
http://www.wcb.ab.ca/public/research_program.asp

ROR
https://ror.org/00ns6x030

Funder(s)

Funder type
Other

Funder Name
Workers' Compensation Board of Alberta

Results and Publications

Publication and dissemination plan
Upon completion of the study in late 2016 or early 2017, the researchers will submit the completed manuscript for publication in a peer-reviewed journal (likely Journal of Occupational Rehabilitation) so results of the study can contribute to further clinical practice and/or research. Additionally, results will be provided to key stakeholders in the form of a written report to share information with those that will benefit the most from results of this study.

Intention to publish date
31/12/2017

Individual participant data (IPD) sharing plan
Participant level data will not be made publicly available due to the legal and ethical requirements for claimant data within the Alberta Workers' Compensation jurisdiction. Data will be held on secure computers in Dr. Gross' lab in Corbett Hall at the University of Alberta.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Basic results		15/12/2017	11/01/2018	No	No
Results article		01/12/2017	08/03/2023	Yes	No
Results article		26/05/2017	08/03/2023	Yes	No