Better Pain Management Approaches

Conclusions from a Rapid Review

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Background

- SIRA commissioned the John Walsh Centre for Rehabilitation Research to conduct a "rapid review" on pain management

- What is a rapid review?
  - **Rapid reviews** are a form of knowledge synthesis in which components of the systematic **review** process are simplified or omitted to produce information in a timely manner

- Literature search –
  - Overview of reviews (Cochrane and non-Cochrane)
  - Systematic reviews (Cochrane and non-Cochrane)
  - National clinical guidelines

  Identified via Google Scholar (to 30 March 2019)

Tricco et al. BMC Medicine (2015) 13:224

What is pain?

- International Association for the Study of Pain (IASP), revised definition (July 2020)

- "An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage"
  - … **recognize it is a biopsychosocial experience**

- Chronic pain is defined as pain that lasts or recurs for more than three months
  - … most commonly musculoskeletal, neuropathic or post traumatic

How common is chronic pain in Australia?

- Females 20%, Males 17%
- Prevalence of interference with activities of daily living – females 13.5%, males 11%
- Strongly associated with social disadvantage

Blyth et al 2001

Pain 89 (2001) 127–134

PAIN

www.elsevier.nl/locate/pain

Chronic pain in Australia: a prevalence study

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Aim of the rapid review

To identify the current evidence relating to chronic pain management in a compensable population

- Review question 1: Is pain a problem for people injured at work or on the roads in NSW in compensation schemes?
- Review question 2: What are the risks/harms of pain experienced by people in compensation schemes? (i.e. the impact of pain)
- Review question 3: What interventions are effective in pain management? What works to reduce these harms?

www.sira.nsw.gov.au/fraud-and-regulation/research/better-pain-management-approaches-rapid-reivew

Question 1: Is pain a problem for people injured at work or on the roads in NSW in compensation schemes?

- About 20% of people reporting chronic pain are in receipt of workers compensation benefits
- For people injured in NSW at 6- and 12-months after motor vehicle crashes
  - 21% and 17.5% reported clinically significant pain (Pain Numeric Rating Scale score of ≥5)
  - Key predictors of pain severity ratings over the 12 months were:
    - for less pain - younger age, male sex, more education, being a bicyclist
    - for more pain - claim compensation, poorer physical well-being, greater pain-related catastrophizing, greater pain-related disability, greater trauma-related and general psychological distress

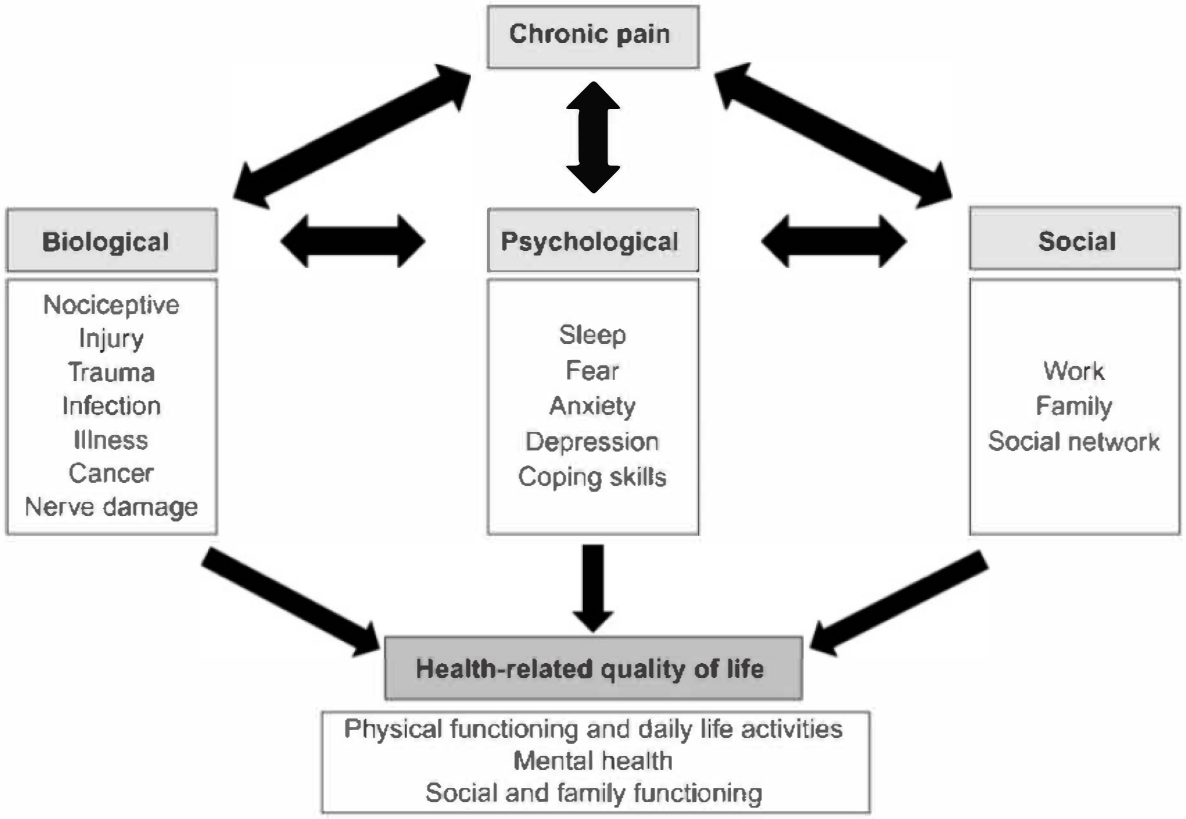
Gopinath B et al. Differential Predictors of Pain Severity Over 12 Months Following Noncatastrophic Injury Sustained in a Road Traffic Crash. J Pain. 2019; 20(6): 676-84.

Question 2: What are the risks/harms of pain experienced by people in compensation schemes? (i.e. the impact of pain)

- Reduced quality of life
- Disability
- Psychological distress
- Adverse effects of medications
- Reduced work involvement (ABS 2016 55% employed if chronic pain, versus 77% employed without chronic pain) – "worklessness"
- Work absenteeism (about 9 days per year)
- Work presenteeism, that is reduced productivity (about 25 days per year)

Applying the biopsychosocial model to chronic pain

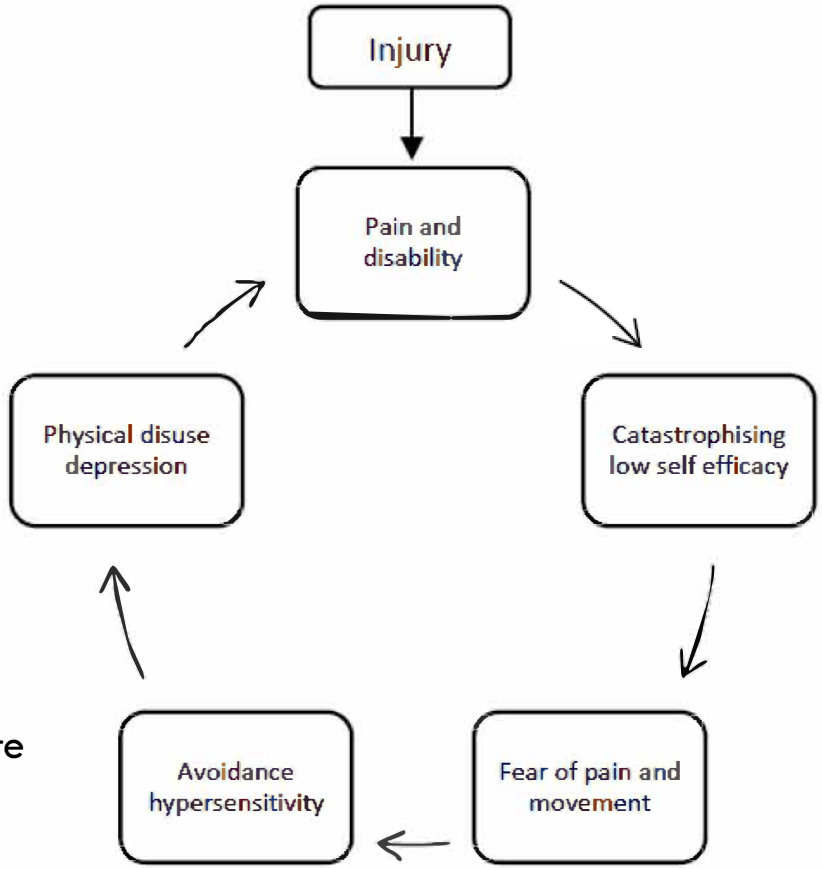
Figure 1 Biopsychosocial model of pain and consequences on the quality of life
Adapted from Jensen 2011.



Jensen MP. Psychosocial approaches to pain management: an organizational framework. Pain 2011; 152: 717-725.

Another application of the biopsychosocial model in chronic pain

Figure 2: A maladaptive cycle predicted by the Fear Avoidance Model of Chronic pain.
Source Vlaeyen 2000



Vlaeyen JW and Linton SJ. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the att. Pain 2000; 85: 317-332

Question 3: What interventions are effective in pain management? What works to reduce the harms?

Active self management

Medical, health practitioner and social support

Components

- Assessment
- Active strategies
- Evidence informed interventions
- Use Clinical Framework principles

Questions 3: What interventions are effective in pain management? What works to reduce these harms?

Acute pain

- Initial assessment and treatment
- Continue usual activity (or as much activity as feasible)
- Screen for risk of limited recovery (use Orebro MPSQ)

Subacute pain

- Resume activities and roles (including return to work)
- For high risk people pursue active interventions
- Cease opioids and other non effective treatments

Chronic pain

- Negotiate for active self management (eg motivational interviewing, Socratic dialogue, other)
- For selected people interdisciplinary interventions

Chronic pain – what is effective?

- "Medical" interventions are generally ineffective in chronic pain
  - Medications
    - Simple analgesics (paracetamol) and non steroidal anti-inflammatory medications (eg ibuprofen) – some effect
    - Anti-neuropathic – some effect
    - Anti-depressants – some effect
    - Muscle relaxants – limited effect
    - Opioids – unlikely to be effective
    - Cannabinoids – limited effect
    - Topical agents (diclofenac, lidocaine) – some effect
  - Nerve blocks and interventional pain management procedures
  - Medications may be used for a time limited phase, then wean and cease as active self-management skills come into play

Chronic pain – what is effective?

- Psychological approaches and interventions can be effective
  - Aim for appropriate social support (adaptive) or try to reduce unhelpful support (maladaptive)
  - Try to achieve relaxation and calmness by reducing psychological distress
  - Recognise that the person's beliefs and expectations will influence the other psychosocial factors and pain. Consider cognitive behavioural approaches to reduce fear avoidance
  - Support cognitive coping, meaning the extent to which the person uses helpful cognitive strategies like acceptance of pain, distraction, optimism, pleasant memories, ignoring pain (all adaptive) or uses unhelpful strategies
  - Support helpful behaviours which might include keeping active physically and socially using a pacing approach
  - Consider specific approaches, for example for driving avoidance

Chronic pain – what is effective?

- Physical therapies can be effective
  - Support active self-management
  - Therapist facilitated activity or exercise program
    - Could include progressive range of motion therapy, muscle strengthening and postural training
  - Promote strategies to increase abilities for work and functioning, performing household duties and enjoying
  - Incorporate cognitive behavioural and motivational interviewing approaches

Chronic pain – what is effective?

- Complementary Alternative Medical (CAM) Therapies might be effective in selected people if linked with active therapy promoting self management

- Pain education can be effective
  - Generally a standard part of multicomponent programs

- Online Internet based pain interventions can be effective

- Public educational programs can be effective

- Note the primary goal is minimisation of disability

NSW Pain Management Network https://www.aci.health.nsw.gov.au/chronic-pain

Chronic pain – what is effective?

Use the Clinical Framework for the Delivery of Health Services

Key principles:

1. Measure and demonstrate the effectiveness of treatment
2. Adopt a biopsychosocial approach
3. Empower the injured person to manage their injury
4. Implement goals focused on optimising function, participation and return to work
5. Base treatment on best available research evidence

https://www.sira.nsw.gov.au/resources-library/motor-accident-resources/publications/for-professionals/clinical-framework-single.pdf

Use the Clinical Framework for the Delivery of Health Services

Table 2: The flags model [4]

Biological Factors	**Red Flags**	Serious pathology Other serious medical conditions Failure of treatment
Mental Health factors	**Orange Flags**	Mental health disorders Personality disorders
Psychological Factors	**Yellow Flags**	Unhelpful beliefs about injury Poor coping strategies Passive role in recovery
Social Factors	**Blue Flags**	Low social support Unpleasant work Low job satisfaction Excessive work demands Non-English speaking Sense of injustice Problems outside of work
Other Factors	**Black Flags**	Threats to financial security Litigation Compensation thresholds

A worker with chronic pain

- Susan, age 55
- Hit head at work 18 months previously
- General health okay
- Persistent headaches, intermittently severe
- Workplace rehabilitation program
- Psychological input
- Inappropriate medical treatment

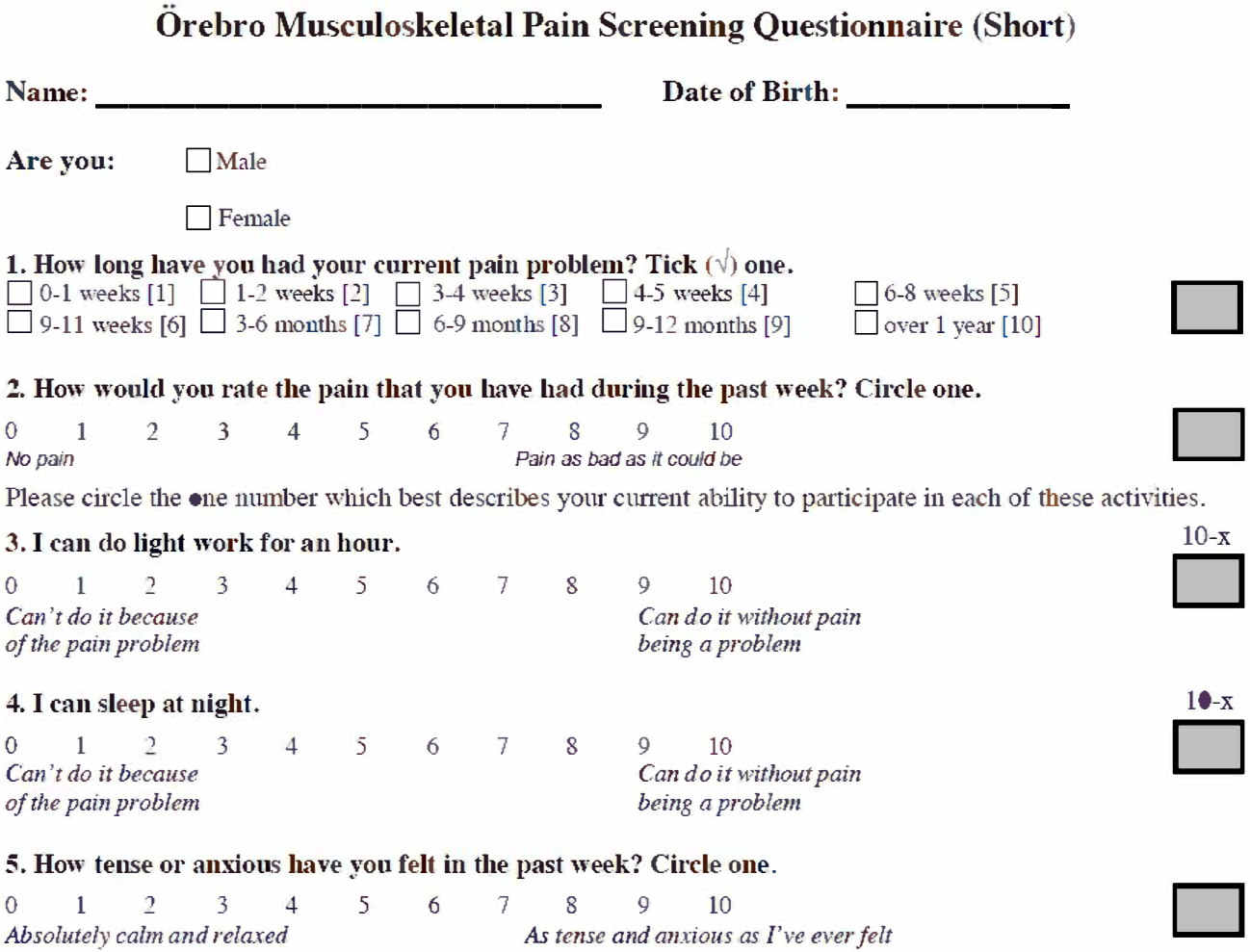
What pain management treatment is appropriate?

Chronic pain – how to reduce the harms?

- Involve and work with the general practitioner
- Opioids have time-limited roles in treatment depending on different type of pain but generally should be ceased where there is chronic pain
- Reduce biomedical treatments, including medications
- Discuss that, in chronic pain, finding a specific treatable cause of the pain is very unlikely
- Acknowledge that pain is present and, in many cases, severe
- Recognition that a healthy lifestyle is still possible despite chronic pain
- Have mechanism to fairly review requests for treatments with limited or no scientific validity (noting that these interventions can cause harm and are less likely to be effective for people participating in insurance programs)
- Recognise risk of overtreatment in compensable situations

Orebro Musculoskeletal Pain Questionnaire short form

- Validated
- Self completion
- Quick



Örebro Musculoskeletal Pain Screening Questionnaire (Short)

Name: _____ **Date of Birth:** _____

Are you: ☐ Male ☐ Female

1. How long have you had your current pain problem? Tick (√) one.

☐ 0-1 weeks [1] ☐ 1-2 weeks [2] ☐ 3-4 weeks [3] ☐ 4-5 weeks [4] ☐ 6-8 weeks [5]
☐ 9-11 weeks [6] ☐ 3-6 months [7] ☐ 6-9 months [8] ☐ 9-12 months [9] ☐ over 1 year [10]

2. How would you rate the pain that you have had during the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10
No pain *Pain as bad as it could be*

Please circle the one number which best describes your current ability to participate in each of these activities.

3. I can do light work for an hour.

0 1 2 3 4 5 6 7 8 9 10
Can't do it because of the pain problem *Can do it without pain being a problem*

10-x

4. I can sleep at night.

0 1 2 3 4 5 6 7 8 9 10
Can't do it because of the pain problem *Can do it without pain being a problem*

10-x

5. How tense or anxious have you felt in the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10
Absolutely calm and relaxed *As tense and anxious as I've ever felt*

www.cesphn.org.au/documents/filtered-document-list/204-oerebro-musculoskeletal-pain-screening-questionnaire/file

Orebro Musculoskeletal Pain Questionnaire short form

- Validated
- Self completion
- Quick

6. How much have you been bothered by feeling depressed in the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10

Not at all *Extremely*

7. In your view, how large is the risk that your current pain may become persistent?

0 1 2 3 4 5 6 7 8 9 10

No risk *Very large risk*

8. In your estimation, what are the chances you will be working your normal duties in 3 months

10-x

0 1 2 3 4 5 6 7 8 9 10

No chance *Very Large Chance*

Here are some of the things which other people have told us about their pain. For each statement please circle one number from 0-10 to say how much physical activities, such as bending, lifting, walking, or driving affect your pain.

9. An increase in pain is an indication that I should stop what I'm doing until the pain decreases.

0 1 2 3 4 5 6 7 8 9 10

Completely disagree *Completely agree*

10. I should not do my normal work with my present pain.

0 1 2 3 4 5 6 7 8 9 10

Completely disagree *Completely agree*

SUM:

Aim for reduction in disability (and pain if possible)

Neck Disability Index

https://www.worksafe.qld.gov.au/__data/assets/pdf_file/0017/77021/neck-disability-index1.pdf

Oswestry Low Back Pain Disability Questionnaire

https://www.worksafe.qld.gov.au/__data/assets/pdf_file/0003/76800/oswestry_-low-back-disability-questionnaire1.pdf

Visual Analogue Pain Scale

https://www.sira.nsw.gov.au/resources-library/motor-accident-resources/publications/for-professionals/whiplash-resources/SIRA08110-1117-396462.pdf

Review findings

- Chronic pain is major population health issue, as well as an insurance scheme issue

BETTER PAIN MANAGEMENT APPROACHES

RAPID REVIEW

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NSW GOVERNMENT

Version 2.1 dated 21 May 2020

- People injured at work or on the roads have a high risk of chronic pain
- Chronic pain is associated with loss of work capacity and impaired quality of life
- Compensation scheme related factors can increase chronic pain

www.sira.nsw.gov.au/fraud-and-regulation/research/better-pain-management-approaches-rapid-reivew

Take home messages

- Active self management approach
- Acknowledge the unpleasantness of the experience of chronic pain
- Minimise disability and understand that some pain will persist
- Use education, aim to assist with health literacy and self efficacy
- Use non medication treatments - exercise, mindfulness, distraction, cognitive behavioural therapy
- Take a broad perspective to pain management in the subacute (1 to 3 months after injury) phase
- Biopsychosocial approach, **not biomedical**
- Aim **not** to use opioids in the chronic phase (> 3 months) after injury
- Work with people with chronic pain to slowly reduce opioids
- Apply the Clinical Framework

A worker with chronic pain

- Susan, age 55
- Persistent headaches
- Workplace rehabilitation program
- Psychological input
- **Liaison with GP**
- **Increase physical activity (gym program)**
- **Vocational retraining**

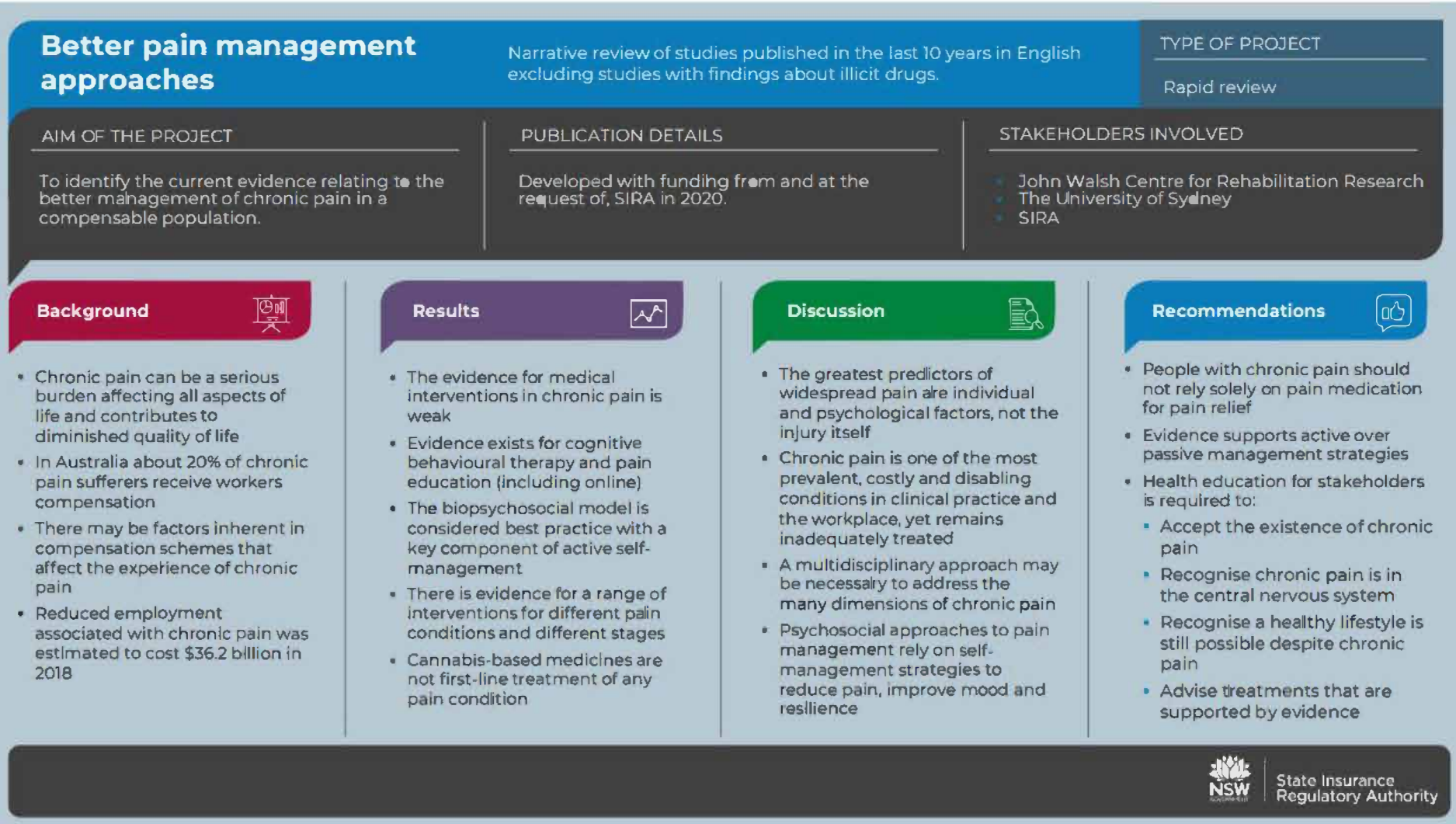
Outcome: Some pain, intermittent inappropriate medical treatment, completed Certificate IV, working in different occupation

Recommendations

- People with chronic pain should not rely solely on pain medications for pain relief
- Evidence supports active over passive management strategies
- Health education for stakeholders is required to:
  - Accept the existence of chronic pain
  - Recognise that chronic pain is in the central nervous system
  - Recognise a healthy lifestyle is still possible despite chronic pain
  - Advise treatments that are supported by evidence

The full review report and a one-page infographic summary are available on the SIRA website

https://www.sira.nsw.gov.au/__data/assets/pdf_file/0007/881899/Infograhic-better-pain-management-rapid-review.pdf



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