

### **Agenda**

Nov. 7 Part 1

- · Introduction: enacted scenario: James
- Persistent pain overview
   WorkSafeBC programs and community resources
  - Case 1: Sue: demonstrating a bio-psycho-social approach
  - Non-pharmacological modalitiesQ&A

Nov. 14 Part 2

- · Case 2: Phillip: complex chronic pain requiring integration of pharmacological and non-pharmacological pain management strategies including opioid tapering; variations
- Putting it all together: James follow-up
  Q&A

#### **Disclosures**

- · Dr. Peter Rothfels
  - · Salary paid entirely by WorkSafeBC
  - No financial interest or affiliations with any pharmaceutical, medical device, or communications company
- · Dr. Launette Rieb
  - · No financial interest or affiliations with any pharmaceutical, medical device, or communications company
  - · Consultant for ActumHealth, and St. Paul's Hospital Rapid Access Addictions Clinic
  - $\cdot$   $\,$  Presents at accredited CME event; including those for WorkSafeBC  $\,$
  - · No perceived bias to mitigate

### Learning objectives

- Develop confidence to have **difficult conversations** related to broadening pain education and treatment options beyond the prescription pad
- Apply key pharmacological principles including **tapering** of opioids, initiating **substitution therapy** and medication **exit** strategies
- Identify community and regional resources and supports, including WorkSafeBC programs

**Introduction:** enacted scenario - James

### Pathways to Safer Opioid Use online training



Created by the Office of Disease Prevention and Health Promotion (health.gov)

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Created by the Office of Disease Prevention and Health Promotion (health.gov)

Persistent pain overview

#### Poll question

Pain education can alter perception and function as much as medication and exercise

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R Fals

### Pain

is an **unpleasant sensory** and **emotional experience** associated with **actual or potential tissue damage** 

### **Challenge - Pain is primal**

- Pain is a primitive and essential warning system
- It serves to alter behaviour keep still, fight, avoid
- · Feeling pain maximizes your chance at survival
- Numerous pathways keep pain systems alert
- Pain, mood, and addiction pathways overlap
- Highly adaptive for acute pain not chronic pain

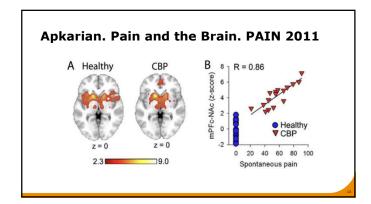


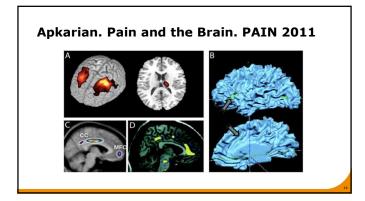
### Persistent pain

**Chronic non-cancer pain** 

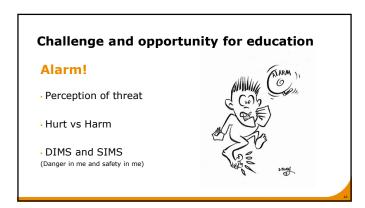
- · A different disease from acute pain
- Associated with alterations in brain centers involved with emotions, reward, and executive function, as well as central sensitization of nociceptive pathways across several CNS areas
- Influenced by environmental and psychological factors
- Persists over a long period of time and can be resistant to stand-alone pharmacological treatments – pain changes the brain





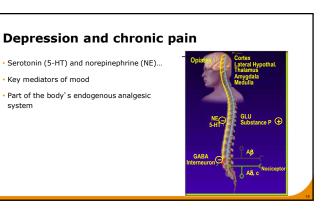


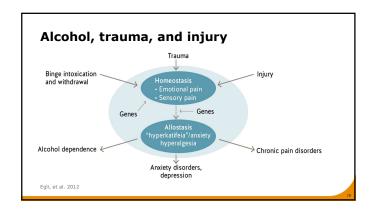


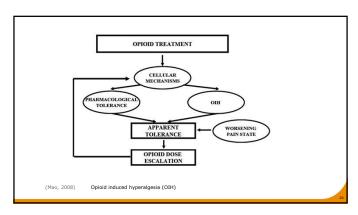


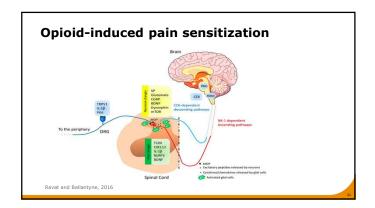
· Key mediators of mood

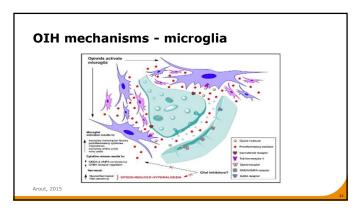




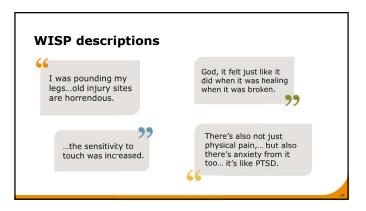












### Opioids: A double-edged sword

#### Pain relief, but also pain from...

- Opioid induced hyperalgesia (OIH)
- Withdrawal-induced hyperalgesia (WIH)
- Withdrawal-associated injury site pain (WISP)
- General myalgias and arthralgias of withdrawal

#### **Primary mechanisms**

- Neuroinflammatory/neuroimmune changes
- Microglia activation
- · NMDAr glutamate pathway activation

#### Possible mitigators of OIH

 NSAIDS, gabapentinoids, alpha blockers, NMDAr blockers, TLR-4 antagonists, naltrexone, neurosteroids, opioid rotation, opioid lowering, detoxification

# Guidelines for opioid prescribing for chronic non-cancer pain

- CPSBC practice standard, 2022 <a href="mailto:cpsbc.ca/files/pdf/PSG-Safe-Prescribing.pdf">cpsbc.ca/files/pdf/PSG-Safe-Prescribing.pdf</a>
- Canadian guideline for opioid therapy and chronic noncancer pain, 2017 <u>cmaj.ca/content/189/18/E659</u>
- US CDC guideline for prescribing opioids for chronic pain, United States, 2016 cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm
- Draft US CDC guideline for prescribing opioids for chronic pain, United States, 2022 cdc.gov/media/releases/2022/s0210-prescribing-opioids.html

### Addiction to pain medications

- Those at highest risk:
- Active SUD
- Past Hx of SUD
- Family Hx of SUD
   Active psychiatric illness
- Early childhood trauma history
- Youth
- Past minor injuries requiring prolonged opioid Rx
- Tight contracts, follow-up, and collateral



### **Analgesic Efficacy of Opioids**

- Average 20-30% analgesia (Ballantyne, 2006)
- Only 1 in 7-11 get relief for CNCP (Busse, 2018)
  - The non-responders should be taken off right away, not left on with other medications added
  - Fantasy that endless dose escalations will provide further reductions in pain

# Factors associated with unintended persistent opioid use for CNCP

- Depression
- Anxiety
- Previous SUD
- $\cdot$  # pills given at first prescription or after surgery
- $\bullet$  # days of opioid prescription given at 1st prescription or after surgery
- $\bullet$  N.B. Degree of pain and the type of surgery are not predictive

#### Dose dependent risk of opioid addiction

- One study of a large claim database found long-term prescribed opioid use (>90 days' supply) associated with increased risk of an opioid abuse or dependence diagnosis vs. no opioid treatment
  - Low dose (1-36 mg MED/day): OR 15
  - Moderate dose (36–120 mg MED/day): OR 29
  - High dose (≥120 mg MEDD): OR 122

Edlund MJ. Clin J Pain 2014;30:557

#### Prescription opioid treatment for non-cancer pain and initiation of injection drug use

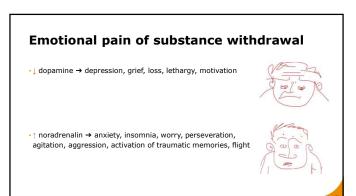
- · Large retrospective cohort study
- Chronic opioid prescription users: 4% became injection users
- · Episodic opioid users: 1.3%
- · Acute opioid users: 0.7%
- No hx prescription opioid use: 0.4%
- Higher opioid dose and younger age increased risk
   The risk of initiation of IDU was 8.4 X higher in those with chronic prescription opioid use than those who were opioid naïve (95% CI, 6.4-10.7)

Wilton J, et. Al. BMJ 2021; 375:e066965 doi: https://doi.org/10.1136/bmj-2021-066965

### **Factors Associated with OD**

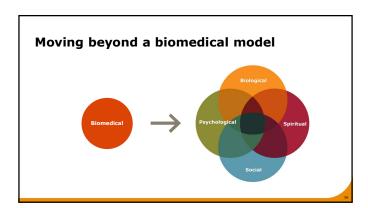
- Aberrant behaviors
- Recent initiation of opioids
- Methadone
- · Concomitant use of benzodiazepines
- · Obtaining opioid prescriptions from multiple providers
- Substance abuse and other psychological comorbidities
- · Higher dose

# Dose-related risk of opioid overdose Risk of adverse event -Bohnert 2011 <20 mg/day 50-99 mg/day >=100 mg/day Dose in mg MED Courtesy Gary Franklin



### Common Tx goals for pain and SUD

- Correct sleep disturbance
- · Stabilize mood
- · Eliminate unnecessary medications
- · Restore function



WorkSafeBC programs and community resources

### WorkSafeBC outpatient programs

- · Occupational Rehabilitation 1 (OR1)
  - Kin and PT, 4 hours/day, 5 days/week (6 weeks)
- · Occupational Rehabilitation 2 (OR2)
  - · Counsellor, Kin, OT, PT 6 hours/day, Physician available, 5 days/week (10 weeks)
- Pain and Medication Management program (PMMP)
  - Physician, Psychologist, Kinesiologist, OT, PT, 6 hours/day, 5 days/week (8-12 weeks)
- Concurrent Care Program (CCP)

   Addiction Psychiatrist, Addiction Medicine Specialist, Psychologist, Clinical counselor, PT, OT, Kin 4-6 hours per day (8-12 weeks), access to residential treatment
- Community Pain and Addiction Services (CPAS)
  - Addiction Medicine assessments referral to treatment and some outpatient services

### WorkSafeBC Physician's line

- · Information line for health care providers treating an injured worker with chronic pain
- · We can help with information on the following:
- · Opioid and sedative/hypnotic prescribing practices
  - · Tapering strategies and alternative (pharmacological and non-pharmacological) treatment strategies for injured workers with chronic pain
  - · Treatment resources, such as pain or medication management programs and addiction treatment programs

WorkSafeBC Physician's line 1.855.476.3049

at 1.855.476.3049 WORK SOFE

### **Community resources**

**Self-Management BC** 

- selfmanagementbc.ca
- ·Call toll free: 1.866.902.3767
- · Patient self-referral
- · Self-management support consists of techniques and strategies that can be used by health professionals in clinical practice to encourage healthy behaviours
- · Visit the website to find local self-management programs (Tool Kit for Active Living)



#### Local multidisciplinary groups

- · If a formal program is not available, consider forming an informal group
- · Groups can include:
  - · Physicians
  - Nurse practitioners
  - Kinesiologists
  - Pharmacists
  - Physiotherapists · Occupational therapists
  - Therapists (e.g., psychologists, clinical counsellors)
- Other support
  - Online CBT, mindfulness, sleep programs



### **Community resources**

**Self-Management tools and resources** 

- Free Cognitive Behavioral Therapy For Insomnia, CBTI freecbti.com
  - · Free sleep apps include sleep hygiene, mindfulness, and meditation
- Pain BC: Live Plan Be liveplanbe.ca
  - · 6 12 weeks coaching



### **Community resources**

#### **Bounce Back**

- Canadian Mental Health, BC Division <u>cmha.bc.ca/programs-services/bounce-back/</u>
- Guided self-help with telephone interview overcoming depression low mood and anxiety
- Cognitive behavioral interpersonal skills manual
- GP who consults Bounce Back can bill community patient conferencing fee

### Bounce Back

1.866.639.0522

### Other community resources

- PainBC painbc.ca
- American Pain Society painmed.org/american-pain-society/
- Dr. Lorimer Moseley's
  - Tame the Beast It's time to rethink persistent pain (video) tamethebeast.org
  - Pain, the brain and your amazing protectometer (YouTube video)
- Addiction medicine resource access numbers
  - Bc211 Phone: 211 bc211.ca
  - Rapid Access Addiction Clinic (RAAC) Phone:604.806.8867
     providencehealthcare.org/rapid-access-addiction-clinic-raac
  - Rapid Access to Consultative Expertise (RACE) Phone: 604.696.2131 / toll-free: 1.877.696.2131

### Other community resources

- · Alcoholics Anonymous (AA)
  - Surrey & North Delta district42aa.com
- Narcotics Anonymous (NA) <u>bcrna.ca</u>
- · Books:
  - Explain Pain by Drs. David Butler and Lorimer Mosely
  - · Nice Recovery by Susan Juby
  - · Pain Chronicles by Melanie Thernstrom
  - Painful Yarns by Dr. Lorimer Mosely

### Medical return-to-work reference guidelines

- Canadian National Opioid Use Guideline Group <a href="https://ncbi.nlm.nih.gov/pmc/articles/PMC3215602/">ncbi.nlm.nih.gov/pmc/articles/PMC3215602/</a>
- Railways Workers Medical Guides (RAC) <u>railcan.ca</u>
- Law Enforcement Officer Guides (ACOEM) <u>acoem.org</u>
- Drivers Medical Fitness Guidelines (CMA) cma.ca
- ACOEM Practice Guidelines: Opioids and Safety-sensitive work acoem.org
- ACOEM Guidelines: Marijuana in the Workplace: Guidance for Occupational Health Professionals & Employers accem.org
- Aeronautics Act Pilots & Air Traffic Control | laws-lois.justice.gc.ca/eng/acts/a-2/page-1.html

Clinical case 1: Sue

### Case study: Sue

- · 35 years old
- · Geologist doing well inspection
- · Hit head off truck mirror
- No symptoms initially
- Later that day nausea, dizzy, and neck pain, right arm non-dermatomal paresthesia
- 6 months later still c/o cervical occipital neck pain and right arm pain; has not returned to full duties however remains work attached performing modified work





#### Taking a pain history

Pain is the key reason for 30% of presentations to primary care

- · Mechanism of injury
- Pain onset, location, quality, exacerbating and relieving factors, pros/cons to 0-10 pain rating
- · Pain interference on QOL and function
- Beyond the initial history and queries about medication response, it is counterproductive to ask patients to rate their pain or keep a pain diary.
- Focus should be on functional gains and activity achievements despite pain

## Gathering sleep history

- · Time the patient gets into bed
- Sleep onset
- · Wakenings (when, how long)
- · Further sleep
- Time awake finally
- Time up out of bed for the day
- Napping
- Signs of sleep apnea (snoring, apneic spells, choking, wakenings)
- Symptoms of sleep issues/disorders: Restless leg syndrome, nightmares, night terrors, sleep walking



### Screening/assessment tools - pain & psych

#### n-:--

- Brief Pain Inventory (BPI)
- Pain Disability Index (PDI)
- Orebro Musculoskeletal Pain Screening Questionnaire
   Predicts long term disability and failure to return to work

#### Psychiatric

- Adverse Childhood Experiences (ACE)
- Generalized Anxiety Disorder (GAD7)
- Patient Health Questionnaire 9 (PHQ) screens for major depressive disorder
- · Beck Depression Inventory (BDI)
- Pittsburgh Sleep Quality Assessment (PSQI)
- PTSD Checklist (PCL) or the Davidson Trauma Scale (DTS)

#### Screening/assessment tools - addiction

#### Addiction

- · CAGE (Cut, Annoyed, Guilty, Eye) alcohol
- Alcohol Smoking and Substance Involvement Screening Test (ASSIST)
- Screens for problem or risky substance use in adults
- Alcohol Use Disorder Identification Test (AUDIT-C) 3 questions
   Cannabis Use Disorder Identification Test Revised (CUDIT-R)
- Drug and Alcohol Screening Test (DAST)
- ${\boldsymbol{\cdot}}$  Current Opioid Misuse Measure (COMM) current prescription opioid use for pain
- Opioid Risk Tool (ORT) prescreen and current prescription opioid use for pain
- Screener and Opioid Assessment for Patients with Pain (SOAPP-R)
- $\bullet \ \, \text{Geriatric Screener and Opioid Assessment for Patients with Pain (GSOAPP-R)}$
- Diagnosis Intractability Risk and Efficacy Score (DIRE) used before initiating prescription opioids for pain or during current use to evaluate risk

### Single question screening tool for drug use

How many times in the past year have you used an illegal drug or prescription medication for non-medical reasons?

Ref: Arch. Intern Med 2010 Jul 12 170(13) 1155-1160

#### **Poll question**

When taking a history from a chronic pain patient, which of the following would you consider to be a "Yellow flag" (warning sign) statement or condition?

- A. Belief that activity will cause more pain and therefore more harm
- B. Patient frustration that his/her chronic pain has not been cured
- C. Persistent low or negative mood
- D. Social and/or work withdrawal
- E. All of the above

### Yellow flags to watch for

- Work problems or poor job satisfaction
- · Frustrated with current treatment
- Belief that pain and activity will cause physical harm
- Excessive reliance on rest, time off work or dependency on others
- · Persistent low or negative moods, social withdrawal
- · Belief that passive treatments are key to recovery
- Non-supportive, dysfunctional or dependent family relationships
- · Exaggerated pain symptoms
- · Personal/family Hx of SUD and/or chronic pain

### Sue's biopsychosocial interview

- · Sue had a prior concussion 8 months earlier
- · Red flags ruled out
- Headaches low level constant, with episodic flare incapacitating
- · Non-dermatomal pattern of arm pain
- Still managing to work but is very fatigued afterwards
- Has stopped going out of the house outside of work and groceries
- · She lives alone with her cat



### Sue's initial yellow flags

- · Lives alone
- Past history of MDD currently ruminating thoughts
- · Poor sleep initiation and maintenance, non-restorative, snoring
- · No longer engaging in social activities, isolated
- · Family hx: Father AUD, mother fibromyalgia

### Sue's testing for psychiatric conditions

- · Rating disability due to pain: PDI score moderate
- · Anxiety: a GAD score moderate
- Depressive symptoms with rumination: PHQ9 score high
- · Addiction screening CUDIT score at risk for cannabis use disorder
- · Catastrophizing: Orebro Musculoskeletal Pain Questionnaire score high

### **Gathering medication history**

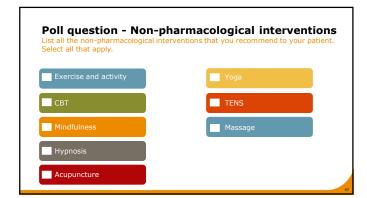
- · Bring in all medications used currently and left over
- Show PharmaNet profile as you talk
- · Mention both the generic and trade names
- Ask current dose and highest dose ever tried
- · Ask about benefits and adverse side effects
- ${\color{blue} \bullet}$  Sort out the reason for discontinuations
- Detail usage (starting dose, how it was titrated, maximum dose reached, duration of trial)
- Explore patient's belief around a medication



#### Sue's medications and substances

- Acetaminophen (Tylenol arthritic): 650 mg 2 TID "Little bit" of pain relief
- Melatonin: 5 mg HS helps her fall asleep but not stay asleep
- · St. John's Wort: 2-3 days a week when feeling "stressed"
- Alcohol: 5 standard drinks twice weekly "to get to sleep", no craving, consequences, or loss of control
- Cannabis: 2 joints a day weekdays after work, 3-4 joints per day on weekends, can't recall a day without, temporarily decreases anxiety, pain, and nausea, yet decreases motivation to do other things

Non-pharmacological treatment modalities





### Non-pharmacological treatments

#### **Exercise and activity (including physiotherapy)**

- Activity that enhances and/or maintains muscle strength, physical fitness, and overall health
- High quality evidence that exercise improves pain and functional outcomes immediately after exercise.
   Moderate support of some sustained pain and function for over 6 months
- · Aerobic exercise in FM  $\spadesuit$ Quality of life and function,  $\blacktriangledown$  pain



Cochrane Review Bidonde, 2017

### Non-pharmacological treatments

#### Psychological (CBT, Mindfulness, Hypnosis)

- Therapy whose aim is to re-frame and/or restructure the way someone has been thinking about a problem
- · Focuses on adopting positive ways of coping with pain
- Cochrane Reviews
  - CBT  $\Psi$ depression, disability, pain (Williams, 2020)
  - Mindfulness Meditation as good as CBT (Cherkin, JAMA2016)
- Internet-based psychotherapies may have some improvement in pain and disability
  - moodgym.com.au,
  - https://www2.gov.bc.ca/gov/content/health/practitionerprofessional-resources/bc-guidelines/depression-in-adults
- Clinical management has effect



### Non-pharmacological treatments

#### **Complementary therapies**

- Acupuncture low quality studies demonstrating short-term and mid-term benefit
- Yoga some evidence to support improved socialization, decreased absenteeism, and psychological benefit in the short  $% \left( 1\right) =\left( 1\right) \left( 1\right$
- TENS Inadequate evidence
- Massage Some evidence of short-term benefit for low back pain
- · Cochrane Reviews:

  - dite Keviews:
    TENS conflicting (Khadilkar, 2008); AP ∳tension H/A (Linde, 2016)
    Massage ∳ pain , esp combined with stretching/ed (Furlan 2008)
    Spinal manipulation for CLBP no better/worse than tx like
    PT/exercise, unclear compared to sham (Rubinstein 2011)



#### **Review**

- · Herbal Medicine for Pain Management: Efficacy and Drug Interactions
- Behdad Jahromi 1, Iulia Pirvulescu 1, Kenneth D. Candido 1,2,3 and Nebojsa Nick Knezevic 1,2,3,\*

Pharmaceutics 2021, 13, 251. https://doi.org/10.3390/ pharmaceutics13020251

#### **Herbal treatments**

- If your patient is interested in herbal treatments, your pharmacist can run herbal databases to look for drug-herb interactions + evidence for benefits/ side effects
- . The first 8 are covered in the previous study:

1	St. John's Wort	10	Arnica
2	Ginger	11	Bromelain
3	Turmeric	12	Valerian root, Hops, Chamomile (for sleep)
4	Omega 3 fatty acids	13	Gamma linolenic for RA
5	Capsaicin	14	Gum resin – avocado-soybean for OA
6	Butterbur	15	Cayenne
7	Feverfew	16	Devil's claw
8	Willow bark	17	Comfrey root
9	Menthol	18	Lavender and essential oils





#### Review

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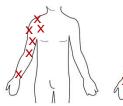
### **Physical examination**

- No neurological findings
- Myofascial trigger and tender points in his neck including radiation into arm and head



### Sue's pain diagram

Triggered with myofascial trigger points in neck and shoulder girdle

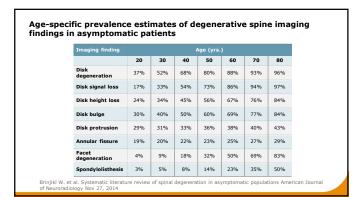




### Physical examination and reexamination

- Emotional overlay and perception of threat can create pain behaviours that are counterproductive to functional progress and can distract the clinician  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($
- Observe the patient's emotional state, reactivity, mental flexibility, movements and posture throughout the encounter
- Include non-threatening exam techniques (e.g., seated straight leg raise)
- Do a thorough neurological and MSK exam walking the patient through what you are doing, what you find, and the implication of the findings

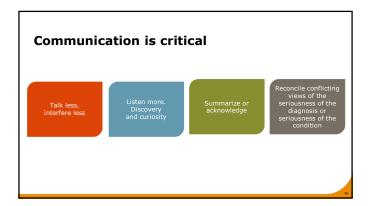




### Sue's summary to date

- · Chronic non-cancer pain myofascial
- · Unresolved mild concussive symptoms
- Symptomatology consistent with moderate MDD with anxious features
- · Poor sleep efficiency, rule out sleep apnea
- · Ineffective medication regime that may be contributing to symptoms
- Drinking above low risk guidelines
- Significant likelihood of a cannabis use disorder that may be contributing to symptoms
- Social isolation, high perception of disability, catastrophizing and functionally limited
- In her favour Positive that she remains at work, and has a cat







### Goal

- Sustained improvements in function including a return to work within a specified time period
- Meaningful reduction in pain may not happen but pain experience will improve

### Shifting focus from pain to function

#### COACH patients in the following cognitive shifts:

- · At a certain point, pain becomes MALADAPTIVE
- As pain persists it is less and less useful it is an abnormal and pathological signal unto itself – like static on the line – that you can learn to turn down or tune out with practice
- Explain you are going to help them retrain their brain to decrease attending to the pain signal, and increase other aspects of wellness, including a focus on function and activities
- Returning to work decreases depression, poverty, relationship breakup, and suicide rates



#### Sue's treatment

- $\bullet$  Over the next 6 months step-wise engagement in a bio-psycho-social treatment plan including pain education on hurt vs harm
- Topical diclofenac 10% with menthol 4% TID for pain
- · Nortriptyline 10 mg hs for sleep along with CBTi
- · Bounce Back CBT manual and refer to local mental health
- Massage X 3 with an RMT who taught myofascial self-release techniques, back hook, rollers, breathing techniques
- · Decrease alcohol to 2 drinks 2 nights a week
- Refer to SMART for cannabis education and reduction
- Neil Pearson Life is Now online modules



### Sue's follow-up

- Neck pain 5/10 (30% improvement), arm pain 3/10 (40% improvement)
- · Headaches now only 3 days per week, rarely severe
- •GAD 7 normal
- PHQ 9 mild. Finished Bounce Back manual, on wait list for counsellor
- ·Sleeping at least 6.5 hours per night
- Marijuana Saturday evenings and considering quitting, alcohol 4 drinks per week
- ·Walking 3km 5 times per week
- Started meditation/mindfulness, notes decreased workplace tension



#### **Summary**

- · Chronic pain is not acute pain
- Remember biopsychosocial approach to management
- · Communication includes active listening
- · Brief Action Planning
- Acceptance and commitment therapy- create a rich and meaningful life and accept the pain that goes with it
- Exercise/Activity is crucial
- Staying at work or returning to work is therapeutic
- $\ensuremath{^{\bullet}}\xspace$  Use a ladder approach to treatment
- · Attempt first to do no harm

Questions ?

### Join us again on November 14

Part 2 webinar

Date: Monday, November 14, 2022

Time: 6:30 - 8:00 pm (PST)

- Case 2: Phillip: complex chronic pain requiring integration of pharmacological and non-pharmacological pain management strategies including opioid tapering; variations
- Putting it all together: James follow up
- Q&A



## Phillip

54 years old right hand dominant ironworker with chronic pain: thumb, hand, shoulder

- Sustained a work-related hyperextension injury of right thumb in 2008, seen in 2017
- ${\boldsymbol{\cdot}}$  Volar plate for MCP joint, and arthrodesis
- · Carpel tunnel release
- · Residual symptoms of neuropathic pain
- Surgeon said "avoid narcotics at all costs" yet on opioids
- Severe depression, nightmares, with PTSD from war experience in Iran as journalist
- Walking his dogs helps not working



**Thank you** for attending