

Musculoskeletal Conditions and Chronic Pain Among Working Patients

Andrea Furlan,
Institute for Work & Health

Lynn Cooper,
Canadian Injured
Workers Alliance

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Faculty/Presenter Disclosure

- **Faculty:** Andrea Furlan, MD PhD
 - **Relationships with financial sponsors:**
 - **Grants/Research Support:** Health Canada, CIHR, Ontario Health, Canadian Generic Products Association, WSIB Grants Program, WorkSafe BC, Desjardins Insurance
 - **Speakers Bureau/Honoraria:** No
 - **Consulting Fees:** WSIB Drug Advisory Committee
 - **Patents:** No
 - **Other:** YouTube monetized channel, Amazon affiliate marketing
- Scientist, Institute for Work & Health; Psychiatrist, Senior Scientist, Toronto Rehabilitation Institute, UHN; Associate Professor, Division of Psychiatry, Department of Medicine, University of Toronto; Co-chair ECHO Ontario Occupational and Environmental Medicine

Faculty/Presenter Disclosure

- **Presenter:** Lynn Cooper, BES
Lived Experience – work injury & persistent pain
- **Relationships with financial sponsors:**
 - **Grants/Research Support:** No
 - **Speakers Bureau/Honoraria:** Dalhousie, Manitoba, McMaster
 - **Consulting Fees:** No
 - **Patents:** No
 - **Other:** Employee of Canadian Injured Workers Alliance

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- Potential for conflict(s) of interest:
 - None

Mitigating Potential Bias

- The information presented in this program is based on recent information that is explicitly “evidence-based”.
- This Program and its material is peer reviewed and all the recommendations involving clinical medicine are based on evidence that is accepted within the profession; and all scientific research referred to, reported, or used in this CME/CPD activity in support or justification of patient care recommendations conforms to the generally accepted standards

Learning Objectives

By the end of this session, participants will be able to:

- 1) Describe an approach to examine a person with a musculoskeletal (MSK) problem
- 2) Explain the indications of opioids for nociceptive, neuropathic and nociplastic chronic pain
- 3) Cite 10 evidence-based treatments for low back pain
- 4) Understand the impact of working with chronic pain on the person

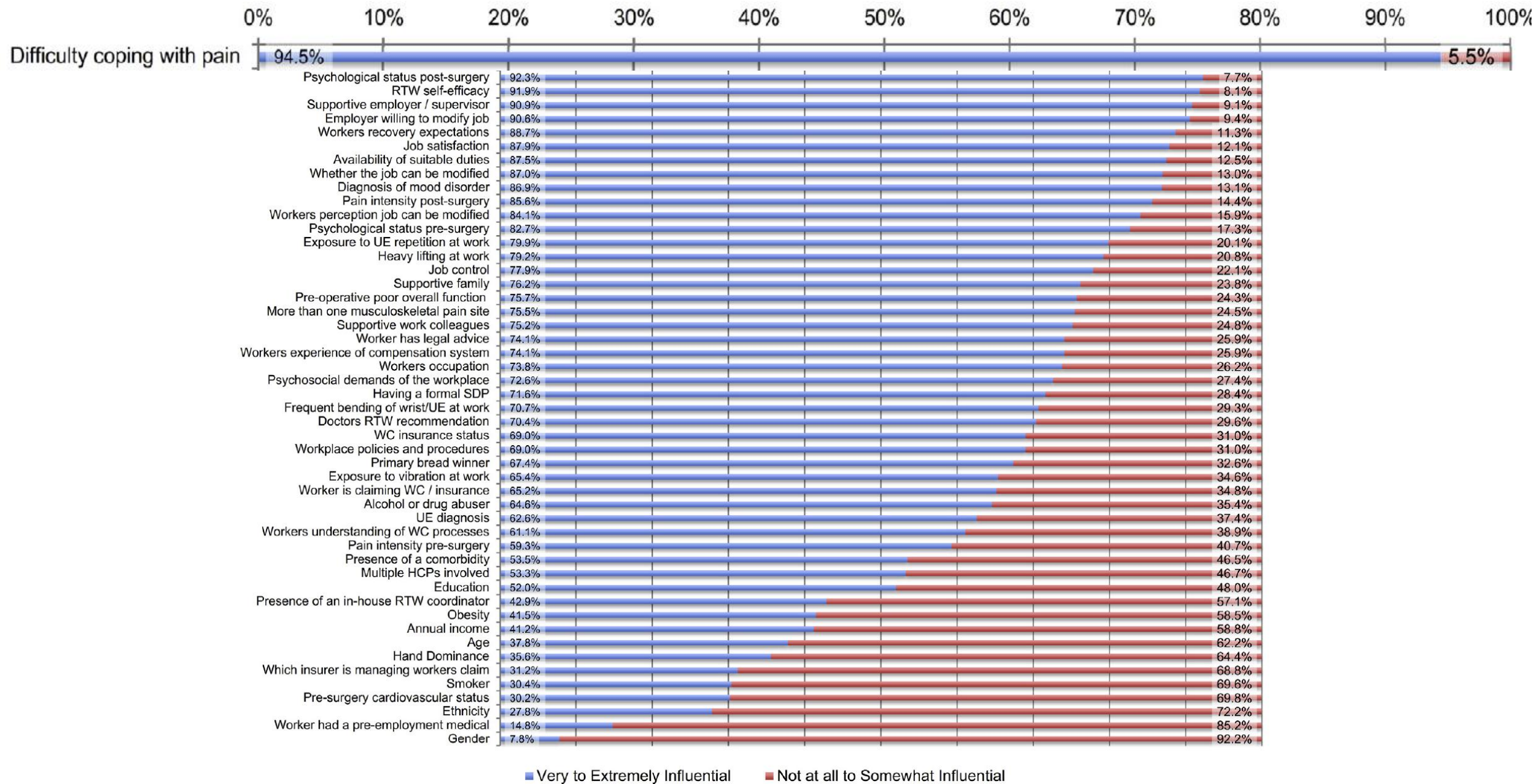
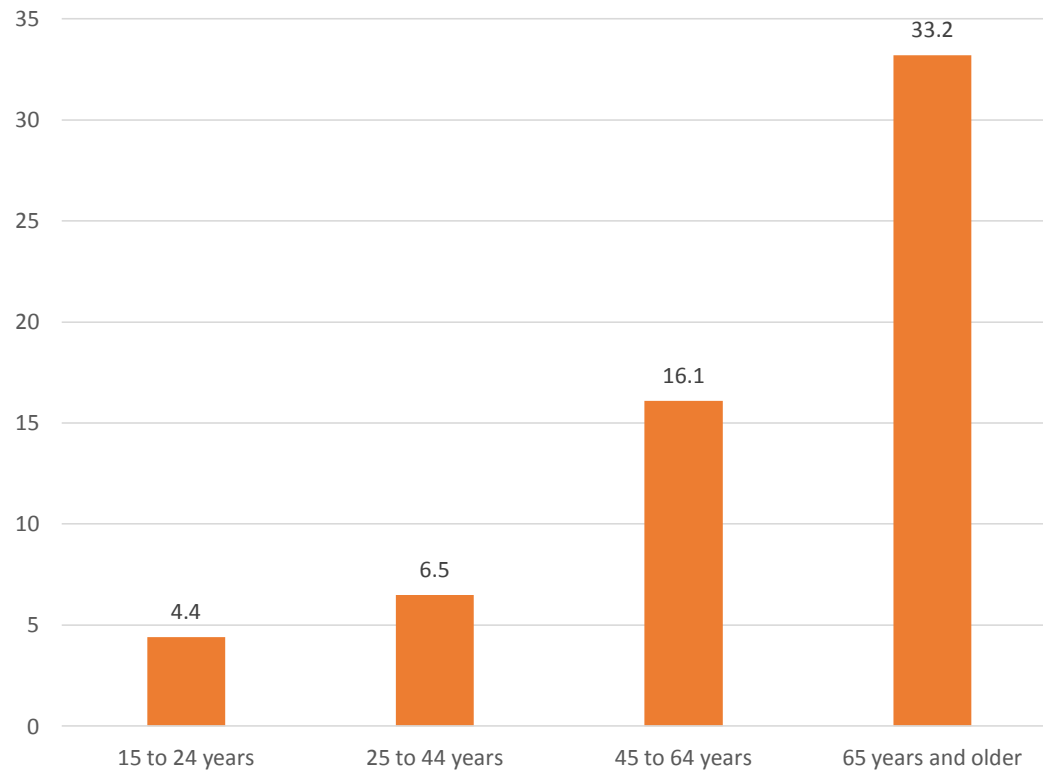


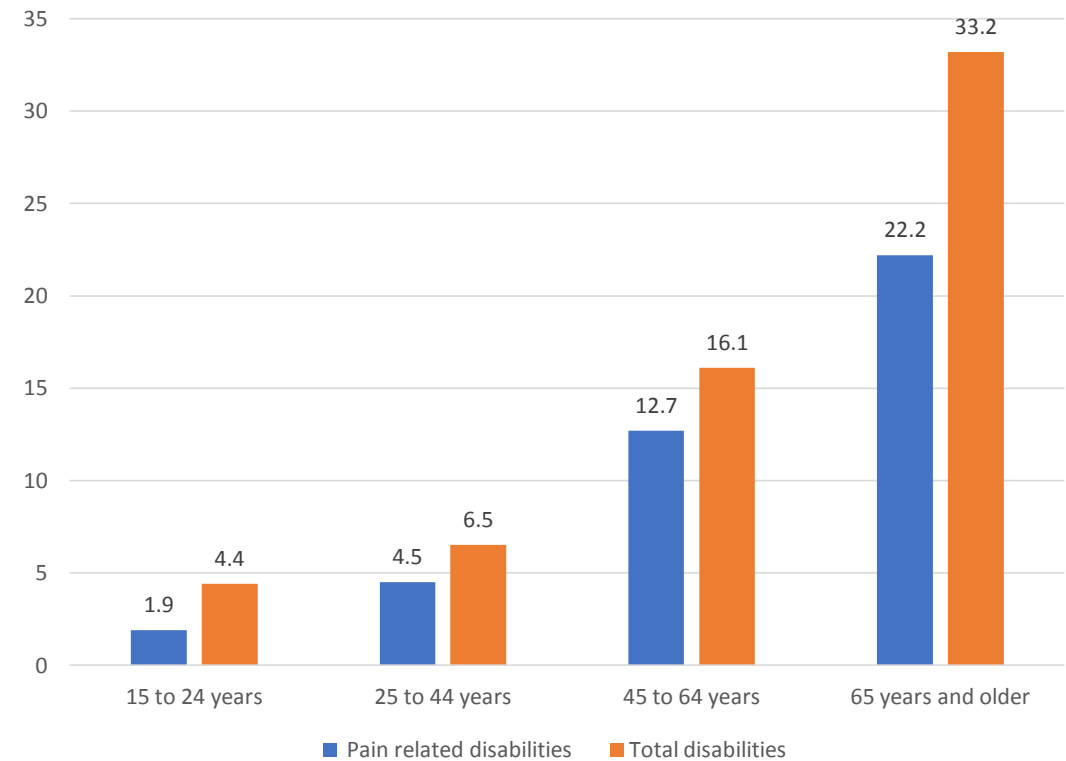
Fig. 2. Stakeholders' rating of factors influencing return to work. RTW = return to work; UE = upper extremity; HCP = health-care provider; SDP = suitable duties program; WC : workers' compensation.

Prevalence of Disability by Age Group, Canada

Prevalence of Disabilities by age group,
Canada 2012



Prevalence of Disabilities by age group,
Canada 2012



The most prevalent underlying pain-related conditions reported by those with pain-related disabilities were arthritis, dorsalgia, and dorsopathy.

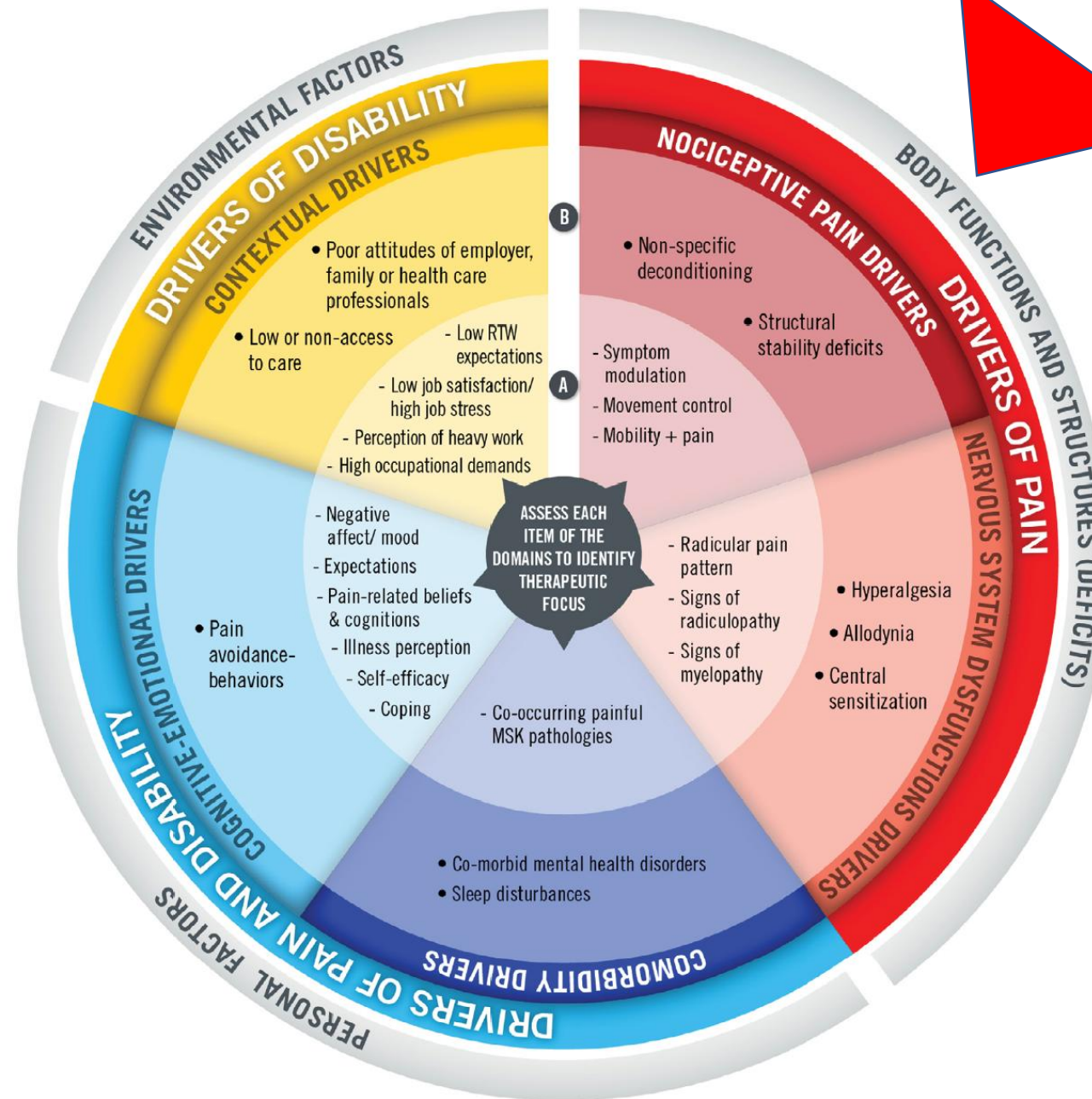


Figure 1 Pain and disability driver management model. **(A)** refers to more common and/or modifiable elements; **(B)** refers to elements that are more complex and less modifiable, and that will prompt more aggressive or require interdisciplinary care to effectively address the problematic domain.

Abbreviations: RTW, return to work; MSK, musculoskeletal.

MSK Lesions

Strain	
Sprain	
Contusion	

Dislocation	
Subluxation	

Synovitis	
Bursitis	

Rupture	
Tear	

Tendinopathy	
Tenosynovitis	
Tendinitis	
Calcific tendinitis	
Tendinosis	

Overuse syndrome	
Cumulative trauma disorder	
Repetitive strain injury	

MSK Lesions

Strain	Overexertion in a muscle/tendon Grades: I (mild), II or III (rupture)
Sprain	Injury to a ligament Grades: I (mild), II or III (rupture)
Contusion	Capillary rupture, bleeding

Dislocation	Displacement with soft tissue damage
Subluxation	Partial dislocation

Synovitis	Inflammation of synovial membrane
Bursitis	Inflammation of a bursae

Rupture	Rupture and Tear are synonyms. Partial = pain; Complete = painless
Tear	

Tendinopathy	General term for tendon injury
Tenosynovitis	Inflammation of synovial membrane covering a tendon
Tendinitis	Inflammation of tendon
Calcific tendinitis	Tendinitis with calcium deposit
Tendinosis	Degeneration due to repetitive microtrauma

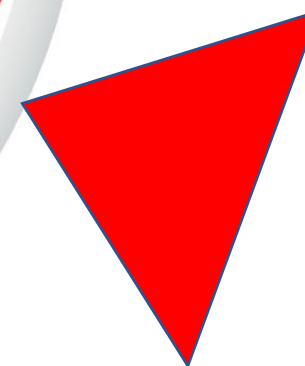
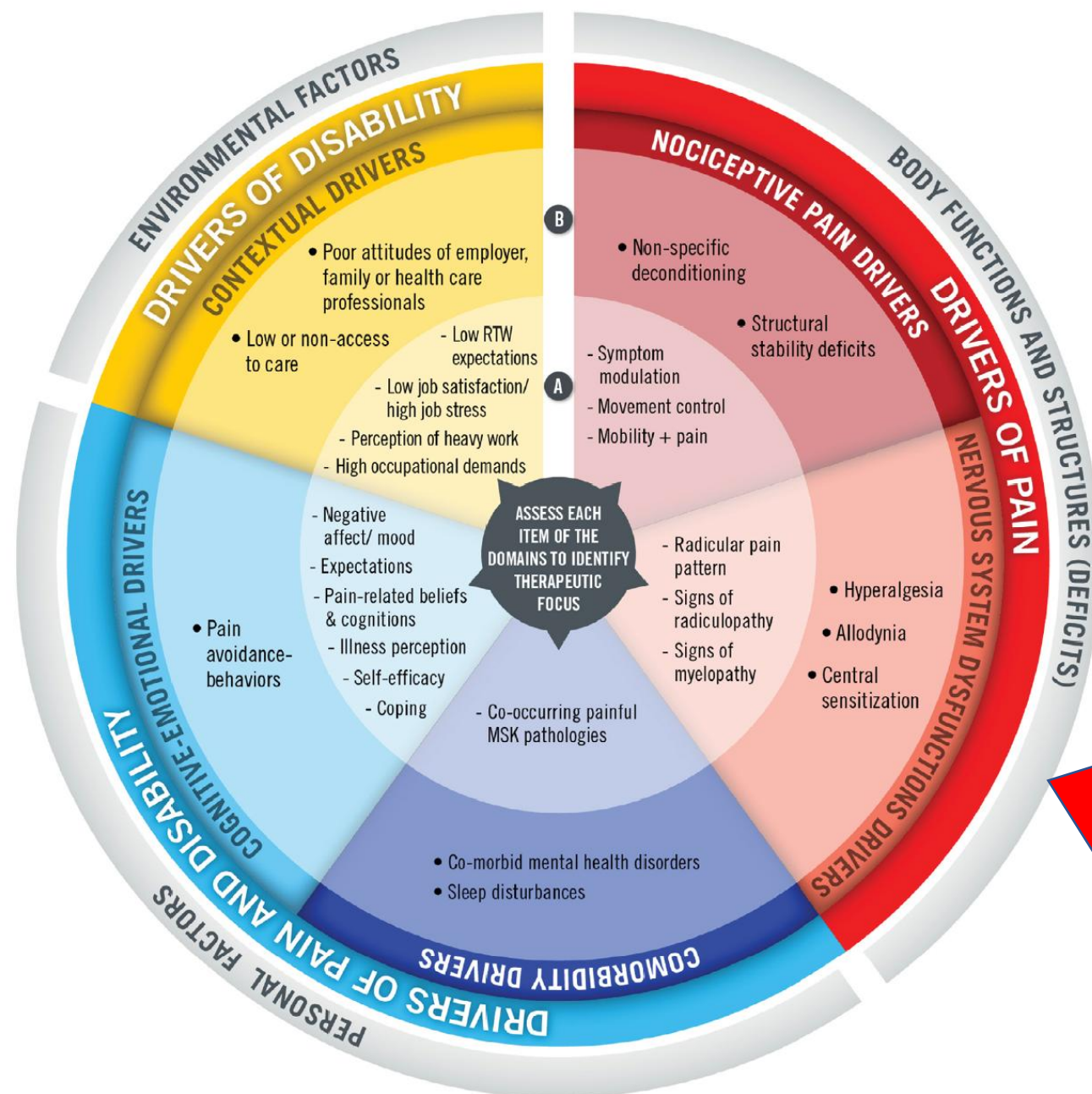
Overuse syndrome	Repeated, <u>submaximal</u> overload and/or frictional wear to a muscle or tendon resulting in inflammation and pain.
Cumulative trauma disorder	
Repetitive strain injury	

MSK Lesions – Time to Heal

	weeks						months						
	1	2	3	4	5	6	2	4	6	8	10	12	18
Muscle Tendon Ligament injury		Grade 1 (mild)											
							Grade II						
										Grade III (tear)			

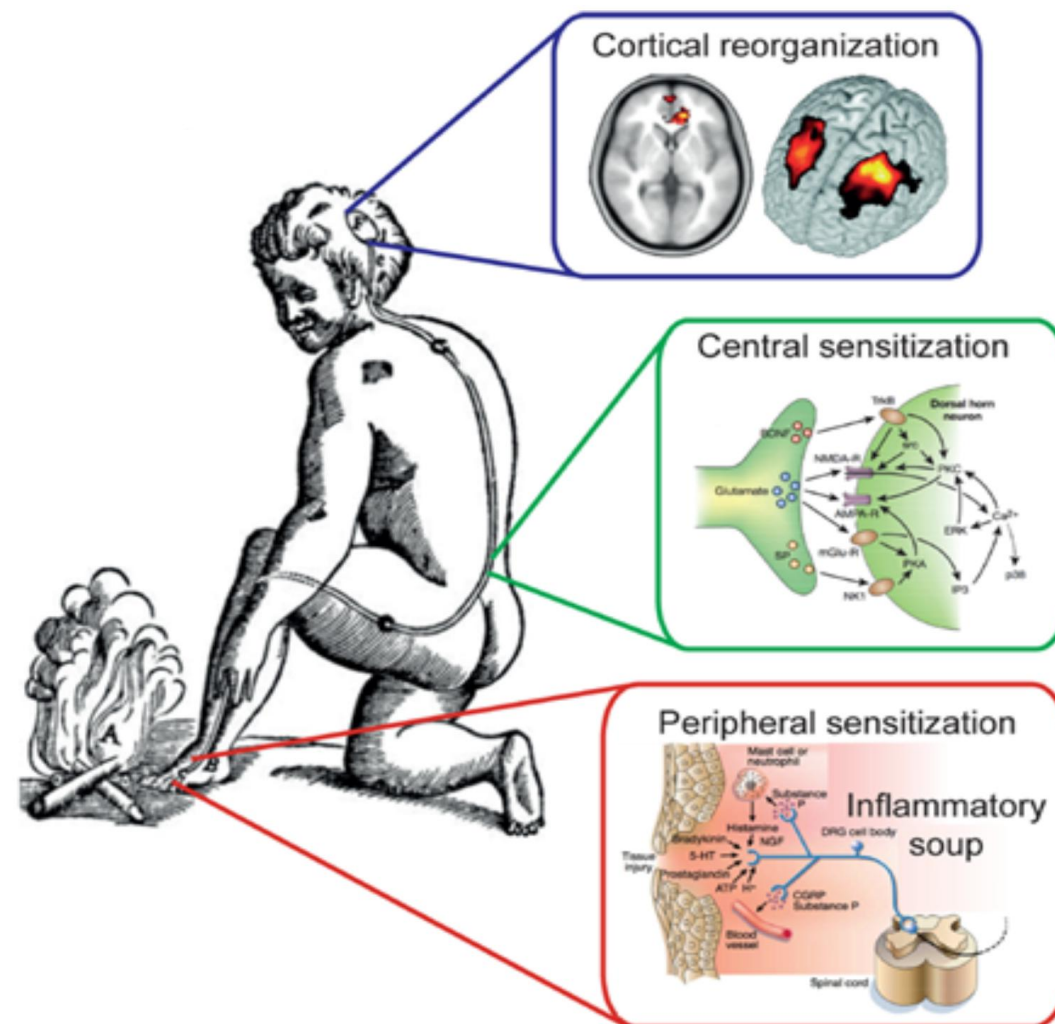
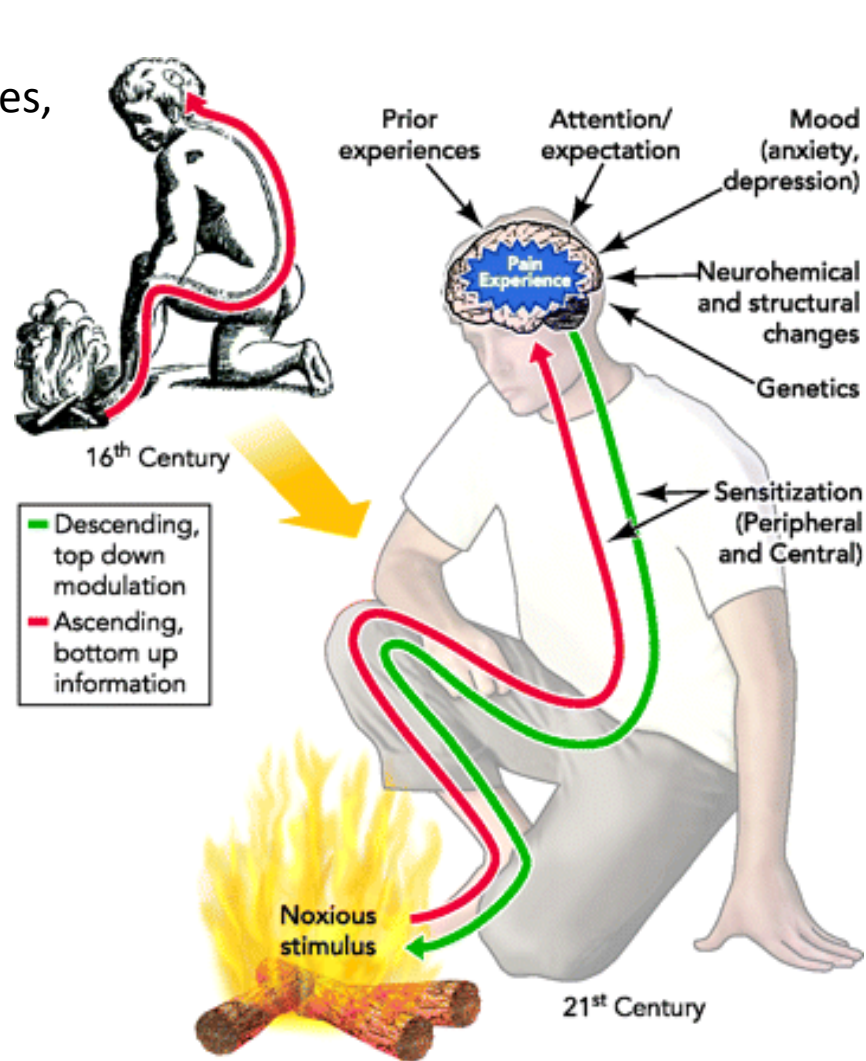
Shoulder	Subluxation												
							Dislocation						
									Frozen Shoulder				
	Forming calcific tendinitis (no pain)							Little pain		Severe pain		No pain	

Nerve				Post carpal tunnel release									
			Sciatica										



What is Pain?

Descartes,
1644



Chronic pain is a Disease

Chronic pain was recently recognized by the World Health Organization (WHO) as a disease in its own right, resulting in revisions to the latest (11th) version of the International Classification of Diseases (ICD-11).

According to ICD-11, chronic pain can be further classified as **chronic primary pain** or chronic secondary pain.

Chronic primary pain is pain in one or more anatomical regions that:

1. Persists or recurs for longer than 3 months; and,
2. Is associated with significant emotional distress (e.g., anxiety, anger, frustration, depressed mood) and/or significant functional disability (interference in activities of daily life and participation in social roles); and,
3. The symptoms are not better accounted for by another diagnosis (Nicholas et al., 2019).

Chronic primary pain includes the following sub-diagnoses: chronic widespread pain, complex regional pain syndrome, chronic primary headache or orofacial pain, chronic primary visceral pain, and chronic primary musculoskeletal pain.

Symptoms of Central Sensitization (CS)



Hypersensitivity to
bright light, noise,
touch, pesticides,
food, mechanical
pressure, medication,
temperature, weather



Widespread
pain



Fatigue
(physical and
mental)



Sleep
disturbance



Numbness



Swelling
sensations



Low libido



Low mood

Confirmation with physical exam
(sensory examination)

Opioids at the WSIB

REMEMBER: Management of (primary) chronic pain: TAPER OPIOIDS SLOWLY TO THE LOWEST POSSIBLE DOSE (Canadian Opioid Guideline recommendation #9)

Approach based on 2 key principles:

- Authorization of opioids for workers should support treatment goals that include improvement in function, pain relief, quality of life, and safe and sustained return to work
- Management of pain is consistent with current best practice

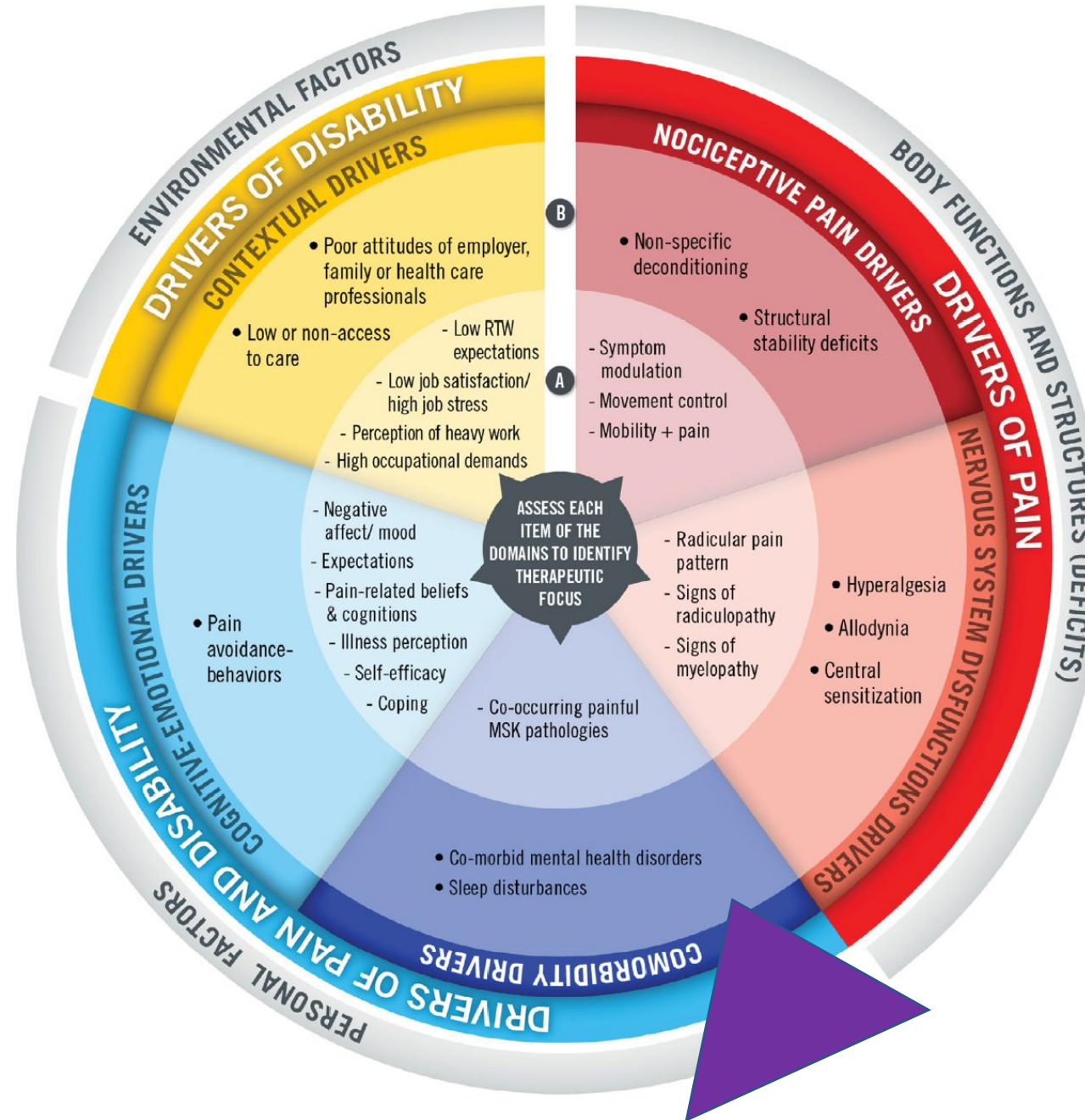
→ Allow prescriptions for a maximum of 12 weeks

→ Opioid coverage beyond 4 weeks will be subject to clinical review

→ Endorse the 2017 Canadian Opioid Guideline

“5M IS” of Management of Chronic Pain with CS

Mind	Move	Modalities Manual	Medications	Interventional	Surgery
CBT, MI, group sessions, written emotional expression, psychomotor therapy, MBSR, EMG-biofeedback, distraction, hypnosis, guided imagery, mind-body therapies, Transcranial magnetic stimulation (TMS)	Aerobics, strengthening, water, home based, group based, Pilates, relaxation, Tai Chi, Qigong, Yoga, Tui Na	Complementary and Alternative Medicines (CAMs) (?), Chinese herbs Acupuncture, Hydrotherapy, spa-therapy Manipulation Mobilization Massage	Lower dose rational polypharmacy Simple analgesics Serotonin Gaba Tramadol Low-dose naltrexone THC/CBD?	Trigger point injections Nerve blocks Nerve ablation Intra-articular injections Capsular distension Neuromuscular junction Regenerative medicine	Joint replacements Spinal cord stimulator Deep brain stimulator Intrathecal pumps FMguidelines.ca



Presence of painful symptoms reduce the probability of recovery from depression: 9% versus 47% (Arango-Davila, 2018)

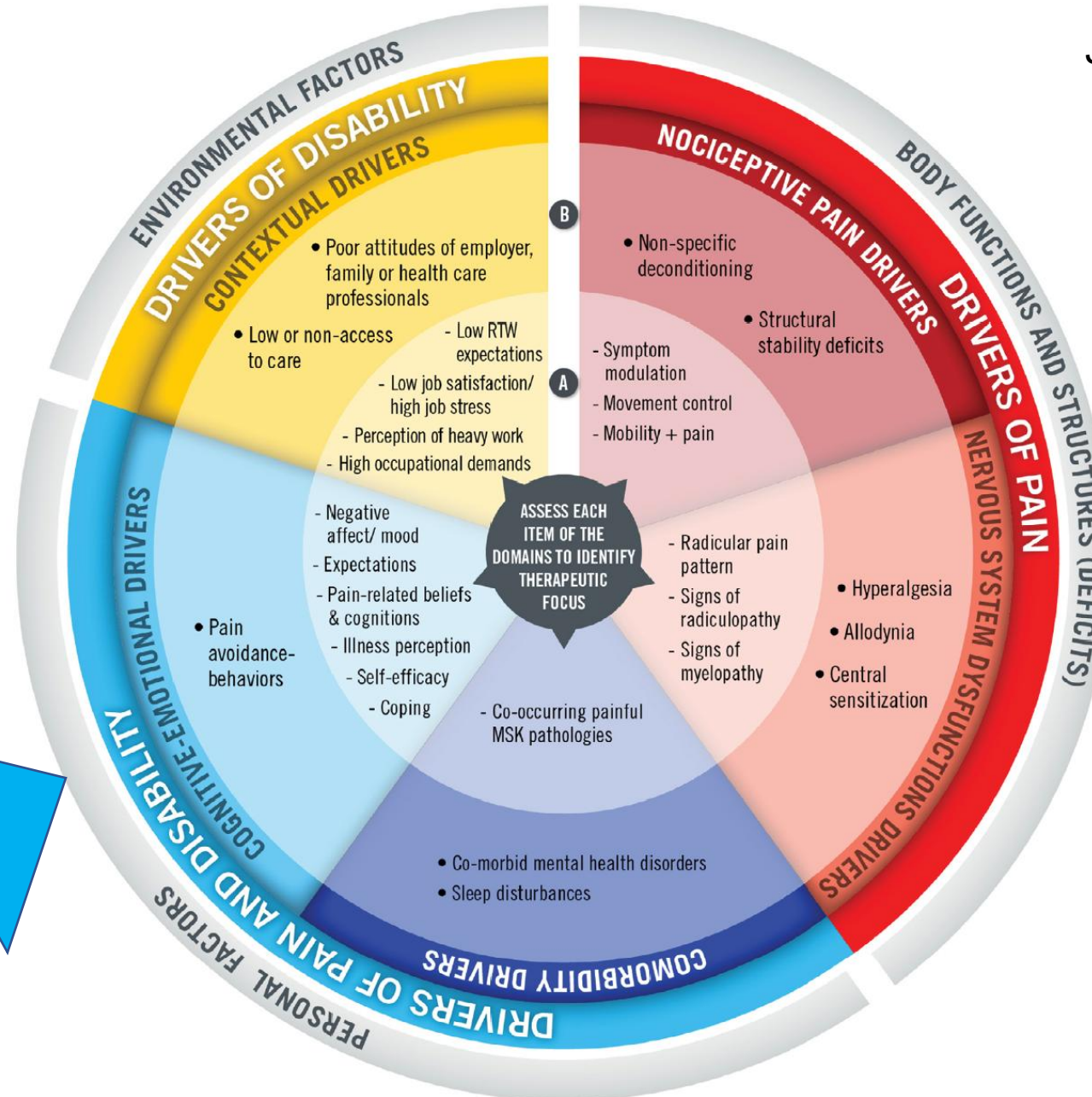
Chronic Pain and Comorbidities

Insomnia

- Prevalence in the general population:
 - 9% chronic
 - 30% occasional
- Prevalence among persons with chronic pain: 65% to 89%

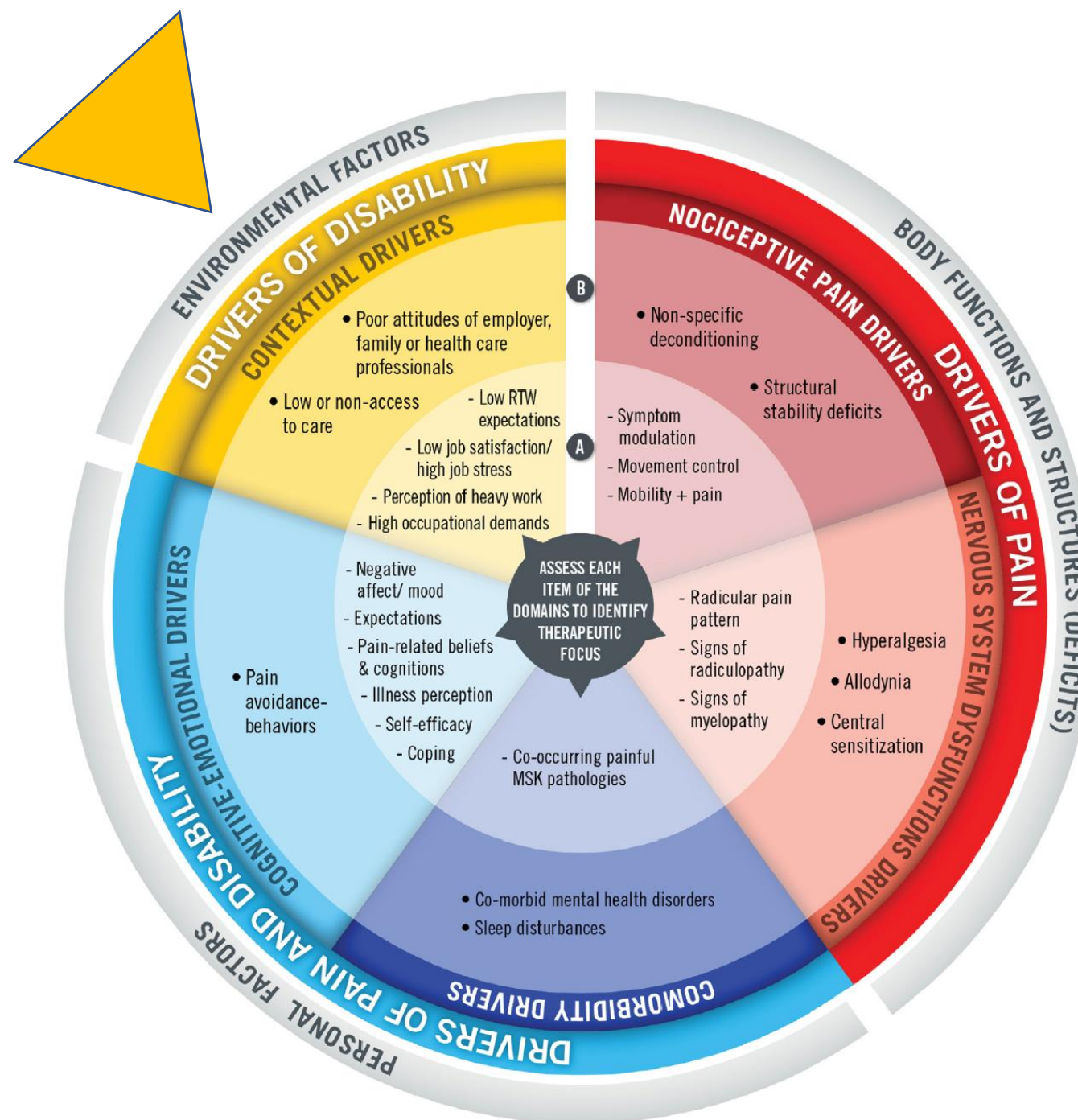
Anxiety

- Stressful situations in healthy individual → analgesia
- Stressful situations in an individual with central sensitization → hyperalgesia




Catastrophizing was the strongest and most consistent psychosocial factor associated with persistence of pain and poor function in persons with chronic pain, even after controlling for depression.

Catastrophizing is a modifiable risk factor (Arango-Davila, 2018)



Flag system for prognosis in low back pain


	Issue	Description	Actions
Red	Medical issues	Neurological (cauda equina), Infection, Fracture, Tumour, Inflammation → NIFTI	Admit to hospital Refer to specialist
Orange	Psychiatric Issues	Major personality disorder, Substance Use Disorder, PTSD, Psychosis, High levels of anxiety, distress	Refer to psychiatry consult
Yellow	Psychological Behavioural	Poor coping strategies, Low self-efficacy, Fear avoidance, maladaptive behaviours and beliefs, Family reinforcement, litigation, compensation	Refer to multidisciplinary pain management team
Blue	Perception of work	Not working, fear of re-injury, poor work satisfaction, work-related stress	Address issues in collaboration with employer
Black	Actual work conditions	Poor work conditions, manual work, unsociable hours	Consultation with employer and policy makers



LET'S TALK ABOUT PAIN
Dr. Andrea Furlan

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VITAMIN D & PAIN
ANDREA FURLAN, MD PHD
PAIN DOCTOR
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Vitamin D and Chronic Pain by Dr. Andrea Furlan MD PhD


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EXERCISES FOR RHEUMATOID ARTHRITIS of the HAND
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17:07

9 Exercises for Rheumatoid Arthritis of the Hands, by Dr...


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OMEGA-3 FISH OIL FOR PAIN
8:51

Omega 3 for chronic pain, by Dr Andrea Furlan MD PhD...


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MAGNESIUM & PAIN
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PAIN DOCTOR
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Magnesium and Pain by Andrea Furlan MD PhD


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10 exercises for Spinal Stenosis
Dr. Andrea Furlan
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10 home-based exercises for Lumbar Spinal Stenosis by...


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STAIRS EXERCISES FOR BALANCE AND STRENGTH
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EXERCISES FOR PINCHED NERVE in the NECK
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ANTI-INFLAMMATORY DRUGS
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Anti-inflammatory drugs: "Aspirin", naproxen, ibuprofe...


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10 Questions about GABAPENTIN (Neurontin) f...


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Glucosamine Chondroitine
Andrea Furlan, MD PhD
13:23

Glucosamine and Chondroitine for...


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TURMERIC CURCUMIN INFLAMMATION
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TURMERIC and CURCUMIN for inflammation by Dr....

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10 Questions about TRAMADOL for pain: uses,...

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Thank you!

Email
afurlan@iwh.on.ca

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