

Challenges and Solutions in Pain Management in the Elderly

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Perley Rideau Veteran's Health Centre

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Faculty/Presenter Disclosure

- **Faculty: Dr Cuong Ngo-Minh**
- **Relationships with commercial interests:**
 - **Grants/Research Support:** NIL
 - **Speakers Bureau/Honoraria:** Jansenn, Johnson and Johnson, Lilly, Pfizer, Medical Futures Inc, Paladin, Purdue Pharma, Valeant
 - **Consulting Fees:** Medical Futures Inc.
 - **Other:** NIL

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- **Potential for conflict(s) of interest:**
 - Dr Cuong Ngo-Minh has received Honorarium from **Regional Geriatric Program of Eastern Ontario**
 - Pain medications products from these pharmaceutical companies (Jansenn, Johnson and Johnson, Lilly, Pfizer, Medical Futures Inc, Paladin, Purdue Pharma, Valeant) Will be discussed in this program.

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Learning Objectives

At the end of this presentation, the participant will be able to:

- ☑ Able to use TOOLS to ASSESS Pain in the Elderly who are cognitively impaired or not.
 - ☑ Recognize Causes of Chronic nociceptive vs neuropathic pain, understand how pain is transmitted.
 - ☑ Apply the concept of multimodal analgesia
 - ☑ Be Informed of treatment modalities options including non-pharmacological (eg ice, physio) and pharmacological (topicals, pills, injection, ...)
-

Pain in Older People: **UNDERTREATMENT**

- May be confused and/or have difficulty communicating
- Given non-opioids or weak doses of medications with SUB-OPTIMAL pain relief/function
- Have other chronic diseases and more than one source of pain
- Are at increased risk for drug-drug interactions, drug-disease interactions



Classification of Pain

Non Cancer Pain

Acute

- Symptom of danger
- Helps to heal/survive
- Meaningful
- It will end

Nociceptive

In response to tissue injury and the resulting inflammatory process

- **Somatic:** constant or intermittent, aching, localized, superficial or deep
- **Visceral:** constant, aching, squeezing, cramping, poorly localized and sometime referred

Cancer Pain

Chronic/Persistent

- Not a symptom
- Meaningless
- Normal delay for healing is overdue
- It's a disease
- Lasts > 3-6 months

Neuropathic

In response to damage or dysfunction of either peripheral or central nervous system

- Constant burning, paresthesias, tingling, occasionally radiates
- Lancinating, shooting

Pain Characteristics

- Neuropathic Pain - pain associated with damage in the peripheral or central nervous system
 - Burning, tingling, pins-and-needles, electric shocks, numbness, hot or cold
 - 1. Peripheral (eg Shingles, Diabetic neuropathy)
 - 2. Central (eg. Multiple Sclerosis pain, post-stroke pain)
- Nociceptive Pain - pain associated with actual or perceived tissue damage
 - Sharp, piercing, stabbing, Dull, “achey”, throbbing
 - A) Somatic (eg Arthritis, MSK problem)
 - B) Visceral (eg. Kidney/gallbladder stone, liver metastases)

Comprehensive Pain History

- When/How did the pain start (acute vs progressive) ?
- Injury, at work (WSIB?) accident or illness?
- Location (s), radiating?
- Constant vs crampy, intermittent or colicky
- Characteristics of the pain
- What makes the pain worse - better?
- How Pain Interferes with Daily Activities/Function?

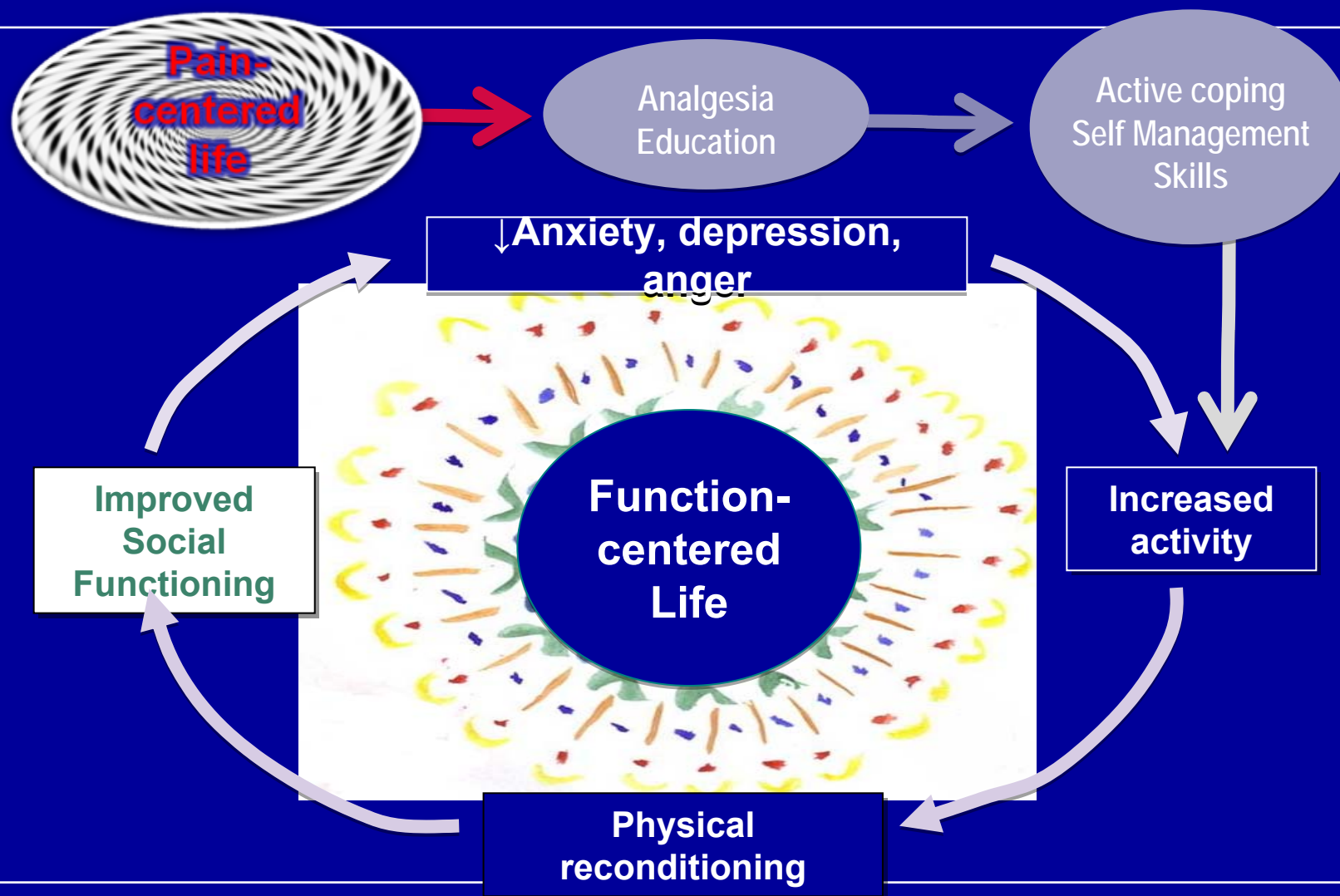
Comprehensive Pain History – other key information

- Past treatment trials including pharmacological (duration, doses tried –pharmacist can Fax you drug history!), and non pharmacological. Coverage for Rx and non-Rx
- Past medical (Diabetes?, Gout, Shingles), Surgical , Psych (depression, anxiety,...) history
- Current medications (prescribed and Over-The-Counter)
- Hx Recreational Substance Use/ Addiction screening
- Social history/support including marital status, children, what the patient likes to do for fun/relax

FEW Words about Pain “Prevention”

- If you can safely prevent “flare-up” of painful conditions please do so (eg. Plaquenil for Rheumatoid Arthritis; allopurinol/ uric for recurrent gout)
- Treat cause of pain (eg glaucoma eye drops)
- Zostavax immunization to prevent Shingles and post-herpetic neuralgia
- Use LONG-ACTING pain medication formulation for Chronic pain conditions

CHANGING THE CHRONIC PAIN SPIRAL: FUNCTION- CENTRED LIFE



Assessing Function (vs BASELINE FUNCTIONAL Status)

- Important to assess function on current therapies
- Help your patients to set goals and monitor their progress
- BPI (Brief Pain Inventory) tool for function may also be helpful
- SMART goals

Assess Functional SMART Goals

Reassess attainment of **SMART** goals/expectations at each visit

- ☑ S pecific
- ☑ M easurable
- ☑ A ction-oriented / Achievable
- ☑ R ealistic / Relevant
- ☑ T ime-Dependent goals

➔ Think of treatment modalities

What can he/she expect to do that he/she cannot do now?



Brief Pain Inventory (BPI) – Short Form

- ♦ Self-assessment measure of severity of pain and the interference of pain with function
 - Severity and interference ratings range from 0 (no pain/does not interfere) to 10 (pain as bad as can imagine/completely interferes)
 - Patients assess pain severity of 4 types:
 - worst pain, least pain, 24-hr average pain, pain right now
 - Patients assess interference of pain on 7 functions:

1. General activity
2. Walking ability
3. Normal work
4. Sleep

5. Mood
6. Relationships with others
7. Enjoyment of life





BRIEF PAIN INVENTORY SELF REPORT

The purpose of the questionnaire is to tell us about the severity of your pain and how the pain affects your day to day activities

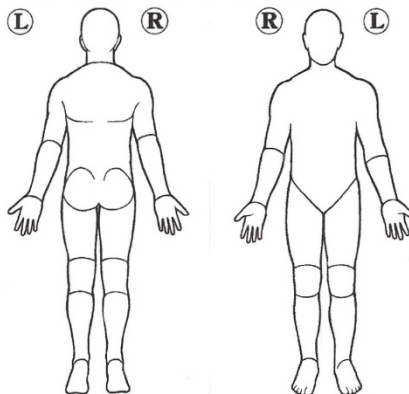
Completed by: ☐ patient ☐ family/care giver
DATE

1 Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?

☐ yes

☐ no

2 On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



ADDITIONAL TOH ASSESSMENTS

Circle the words that best describe your pain.

tingling	cramping	exhausting
shooting	heavy	continuous
stabbing	aching	nagging
burning	throbbing	excruciating
deep	sharp	unbearable
numb		

3 Please rate your pain by circling the one number that best describes your pain at its **WORST** in the past 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

4 Please rate your pain by circling the one number that best describes your pain at its **LEAST** in the last 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

5 Please rate your pain by circling the one number that best describes your pain on **AVERAGE**.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

6 Please rate your pain by circling the one number that tells how much pain you have **RIGHT NOW**.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

7 What treatments or medications are you receiving for your pain?

8 In the past 24 hours, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much **RELIEF** you have received.

0 % 10 % 20 % 30 % 40 % 50 % 60 % 70 % 80 % 90 % 100 %
No relief Completely relief

9 Circle the one number that best describes how, during the past 24 hours, pain has interfered with your:

A General activity

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

B Mood

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

C Walking ability

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

D Normal work (includes both work outside the home and housework)

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

E Relations with other people

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

F Sleep

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

G Enjoyment of life

0 1 2 3 4 5 6 7 8 9 10
Does not interfere Completely interferes

10 Please circle any other symptoms that you may have. **ADDITIONAL TOH ASSESSMENTS.**

nausea vomiting constipation diarrhea urinary problems
indigestion sweating feeling drowsy tiredness itching



Do Improvements in Pain Ratings Correspond to Patients Actually Feeling Better?

♦ Pain assessment: BPI Average Pain Severity

No Pain	Please rate your pain by circling the one number that best describes your pain on average									Pain as bad as you can imagine
0	1	2	3	4	5	6	7	8	9	10

♦ Global assessment: PGI-Improvement

Check one box that best describes how you have felt overall since you began taking this medication

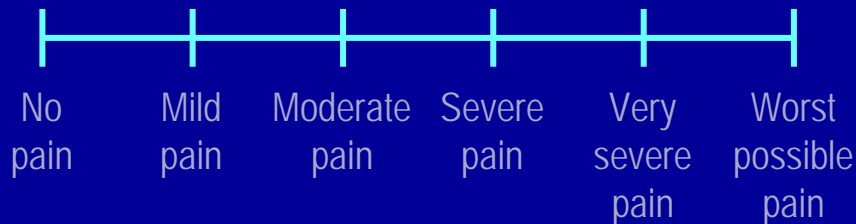
<input type="checkbox"/> 1 Very much better	<input type="checkbox"/> 3 A little better	<input type="checkbox"/> 5 A little worse
<input type="checkbox"/> 2 Much better	<input type="checkbox"/> 4 No change	<input type="checkbox"/> 6 Much worse
		<input type="checkbox"/> 7 Very much worse

♦ Prior Research: An average pain reduction of 2 points or 30% represents a clinically important difference to patients^{1,2}



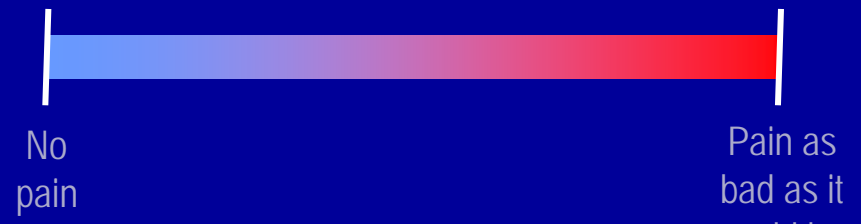
Unidimensional Pain Assessment Scales

Verbal Pain Intensity Scale



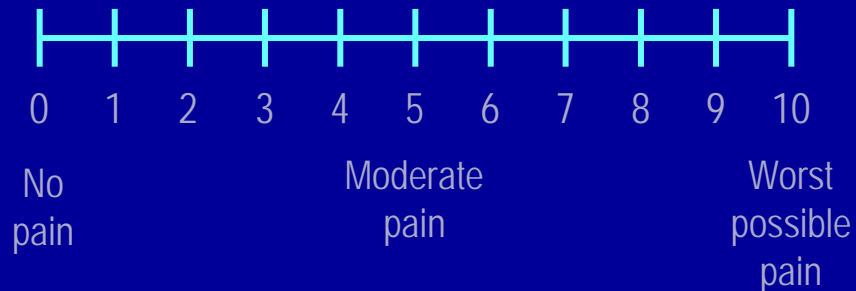
*Incapacitating, God awful, soul stealing

Visual Analog Scale



* Length of line is irrelevant beyond discrimination

0-10 Numerical Rating Scale



*Limits people to 11 "intensities"

Faces Rating Scale



*Intended for children; "used" with nonverbal patients

Pain in Older People: Goals

- ◆ Achieve comfort with minimal (least) side effects

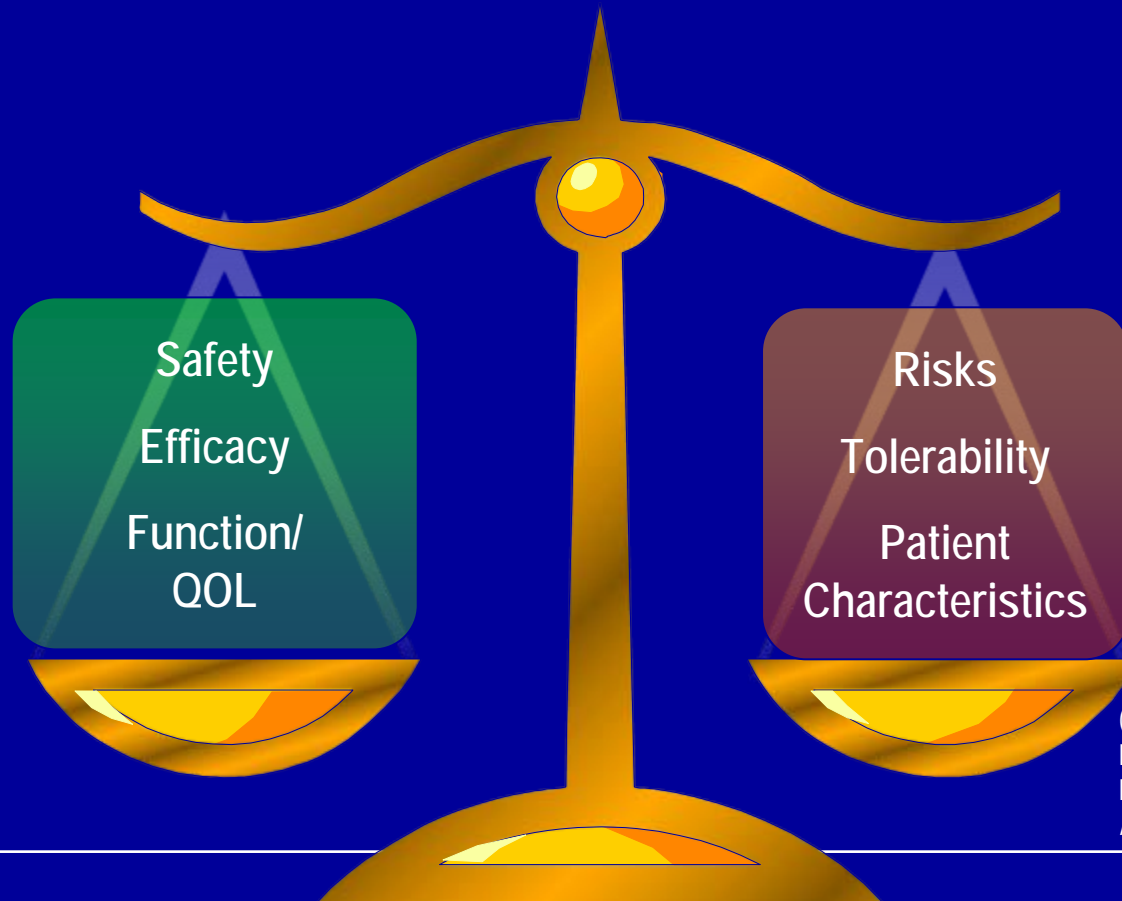
American Geriatrics Society Panel on Chronic Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc.* 1998;46:635-651.

- ◆ Restore function as fully as possible
- ◆ Maintain patient's autonomy, dignity and cognitive capacity
- ◆ Provide relative freedom from pain and relief from pain-associated anxiety and depression



Treatment Considerations for Persistent Pain in Older Adults

Goal: Optimal Pain Relief



*Quality/frequency of assessments

*Optimized nondrug approaches

*Balance risk/benefits and optimize use

*Minimize ADR/misuse/abuse

*Monitor & document outcomes

(AGS Panel on the Pharmacological Management of Persistent Pain in Older Persons. *JAGS*, 2009;57(8):1331-1346; Arnstein. *Pain Manage Nsg*; 11(2):S11-S22; Bruckenthal P, et al. *Pain Medicine*. 2009;10(S2):S67-S78)

FACTORS Influencing the CHOICE of A Pain Med



FACTORS

Related to the Patient

Diagnostic(s), etiology, pain (nociceptive, neuropathic, mixed, central vs peripheral)

SEVERITY of pain and degree of FUNCTIONAL impairment

Renal Function (Creat Clear > or < 30ml/min) and hepatic function >3X

Comorbidities

Prior therapeutic trials, secondary effects

Preference/requested by patient

Financial capacity (in medication is not covered)



FACTORS

Related to chosen Medication

Official indications (monograph CPS)

In vivo efficacy /tolerability/ profile secondary SIDE EFFECTS

Potential DRUG INTERACTIONS/ metabolism (in case POLYPHARMACY)

Availability (or not) of generic

Availability of short acting and/or long acting

Cost; Provincial formulary or not

Guidelines recommendations and local experts

Clinical case 1 : Mary 85 years

OA Right Knee pain, Spinal stenosis affecting walking/transfers, Recent CVA/UNABLE swallow safely pills, Dementia progressive MMSE 10/30

Past Medical History:

- Dementia progressive no significant behavior , lives LTC x 4 years
- Recent Fall Diagnosed Acute CVA/stroke few days ago in Emergency. Dysphagia on pills
- Long standing Hx Right Knee Osteoarthritis (not surgical candidate), spinal stenosis causing mobility impairment and pain

Social & Personal:

- Widow x 5 years, in LTC x 4 years . Enjoys music, animals
- POA care Daughter, 2 grandchildren

Medications:

- Was taking Acetaminophen 650mg po q6h before CVA/stroke with dysphagia

Question: HOW to assess her pain and Manage pain relief in patient with Dementia, UNABLE to swallow pills?

PEARLS in pain management of patients with Dementia, able swallow or not

- ◆ Use Consistently Assessment TOOL (eg Abbey pain scale) to IDENTIFY PAIN, to MONITOR PAIN RELIEF pre- post treatment.
- ◆ Use PAIN WHO (modified) LADDER, Use MORE Topical pain medications
- ◆ Treat LOCALIZED pain LOCALLY (eg. Right OA Knee flare-up with local Cortisone injection, Ice, topical pain meds, ortho)
- ◆ For patients with DYSPHAGIA with moderate pain, BUTRANS patch 7-days is an option for Opioid naïve-patient, think also s/c route, intra-rectal route

Clinical Case: Mary 85 years

Mary takes Butrans patch 5mcg/h on skin every 7 days, Dulcolax 10mg suppository every 2 days. Voltaren Emulgel topical QID PRN on Right knee and low back, Acetaminophen 650mg intra-rectal q6h PRN. She walks again from room-to-dining room, sleep well.

- ✓ Pain relief is adequate with good function.
- ✓ Side effects are well tolerated.
- ✓ According to Abbey pain scale

Pain Intensity ↓ 30% (score from 12 to 8/18)

Functional capacity ↑ 30%

Therapeutic trial of opioid is positive, long term use requires monitoring:

- ☐ Long term goals, pain relief, maintain optimal functional capacity
- ☐ Side Effects
- ☐ Complications
- ☐ Aberrant Behaviours



Buprenorphine 7-days patch (BuTrans[®]), no generic): Start Low, Go Slow

- ◆ Start with Buprenorphine 7-days patch (BuTrans[®]) 5 mcg/hr (lowest dose)
- ◆ May use for opioid naive patient with moderate pain
- ◆ Assess pain levels after 7 days*
 - If necessary, titrate up until effective analgesia is achieved with acceptable side effects
- ◆ Maximum dose is 20 mcg/hr
- ◆ No dose adjustment required for renal impairment or mild to moderate hepatic impairment (do not use in severe hepatic impairment)

List of TOPICAL Analgesics (other than Ice/Heat) LEVEL 1

With prescription:

- 1) Penssaid® (topical diclofenac drops) QID applications
- 2) Zuacta® (**Zucapsaicin**) TID applications
- 3) Mix Lidocaine 5%, Amitriptyline 5%, Ketamine 10%, Ketoprofen 7.5% in Lidoderm (or PLO Gel) apply mix TID-QID (look for compounding pharmacies eg Desjardins)

Without prescription:

- 1) Antiphlogistine (eg A535® 'hot' , 'cold') QID
 - 2) Voltaren Emulgel® QID
 - 3) 'Tiger Balm®' and SalonPass® skin patch(Camphor, Menthol) QID
 - 4) Capsaicin (not zucapsaicin) topical (Over-the-counter) QID
-

Pain in Older People: Dosing Principles

- ◆ Right route — usually oral (but some clients can't)
- ◆ Right analgesic and/or adjuvant
- ◆ Right schedule — usually around-the-clock (ATC)
- ◆ Right dose — start low then increase as tolerated, comfort with minimal side effects

Signs of Pain in Older Adults with Dementia

- ◆ Facial expressions that indicate pain — such as frowning, looking frightened, grimacing, keeping eyes tightly closed, rapid blinking
- ◆ Moaning, groaning, sighing, grunting, chanting, calling out or calling for help, breathing noisily, being verbally abusive
- ◆ A rigid, tense body posture, fidgeting, pacing, rocking, or changes in the way he/she walks, moves
- ◆ Changes in eating, sleeping habits, or usual routines
- ◆ Increased confusion, irritability, distress, wandering

Observational Changes Associated with Pain

Type	Description
Autonomic Changes	Pallor, sweating, tachypnoea, altered breathing patterns, tachycardia, hypertension.
Facial Expressions	Grimacing, wincing, frowning, rapid blinking, brow raising, brow lowering, cheek raising, eyelid tightening, nose wrinkling, lip corner pulling, chin raising, lip puckering.
Body Movements	Altered gait, pacing, rocking, hand wringing, repetitive movements, increased tone, guarding, *bracing*

PAIN ASSESSMENT TOOLS in Dementia

- ◆ ABBEY Pain Scale: measures the severity of pain experienced by patients with late-stage dementia (re MMSE/Folstein $\leq 14/30$)
- ◆ Assessment of Discomfort in Dementia (ADD): systematic approach for individuals with difficult behaviours in order to make a differential assessment and treatment plan for physical pain and affective discomfort.
- ◆ For more details: <http://www.geriatricpain.org>

Abbey Pain Scale

For measurement of pain in people with dementia who cannot verbalise.

How to use scale : While observing the resident, score questions 1 to 6.

Name of resident :

Name and designation of person completing the scale :

Date : **Time :**

Latest pain relief given was.....**at**.....**hrs.**

- | | | |
|---|-----------|----------------------|
| Q1. Vocalisation
eg whimpering, groaning, crying
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q1 | <input type="text"/> |
| Q2. Facial expression
eg looking tense, frowning, grimacing, looking frightened
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q2 | <input type="text"/> |
| Q3. Change in body language
eg fidgeting, rocking, guarding part of body, withdrawn
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q3 | <input type="text"/> |
| Q4. Behavioural Change
eg increased confusion, refusing to eat, alteration in usual patterns
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q4 | <input type="text"/> |
| Q5. Physiological change
eg temperature, pulse or blood pressure outside normal limits,
perspiring, flushing or pallor
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q5 | <input type="text"/> |
| Q6. Physical changes
eg skin tears, pressure areas, arthritis, contractures,
previous injuries
<i>Absent 0 Mild 1 Moderate 2 Severe 3</i> | Q6 | <input type="text"/> |

Add scores for 1 - 6 and record here



Total Pain Score

**Now tick the box that matches the
Total Pain Score**



0 - 2 No pain	3 - 7 Mild	8 - 13 Moderate	14 + Severe
------------------	---------------	--------------------	----------------

**Finally, tick the box which matches
the type of pain**



Chronic	Acute	Acute on Chronic
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ASSESSMENT TOOLS in Dementia CONTINUED...

- ♦ Checklist for Nonverbal Pain Indicators (CNPI):
quantifies pain behaviours in the elderly cognitively impaired.
- ♦ Doloplus 2: French developed in order to provide a
multidimensional assessment of pain in non-verbal elders.
- ♦ For more details: <http://www.geriatricpain.org>

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Helping nurses assess and manage pain in older adults

Free evidence-based tools and best practices for nurses who work in nursing homes.

[How to use this website](#)

Geriatric Pain Overview

The purpose of this Web resource is to share best practice tools and resources with nurses responsible for pain care in older adults who reside in nursing homes.

Learn about the [Center for Nursing Excellence in Long-Term Care](#).

[Give your opinion about this resource](#).

Coming Soon!

[Community Discussion Forum](#)

[Competencies and Evaluation Exam](#)

Pain Resources

The first step to assure quality pain care is good and appropriate pain assessment.

Access tools developed by experts to help plan and implement an effective plan of care.

Announcements

[Early success with use of transdermal lidocaine patch](#)

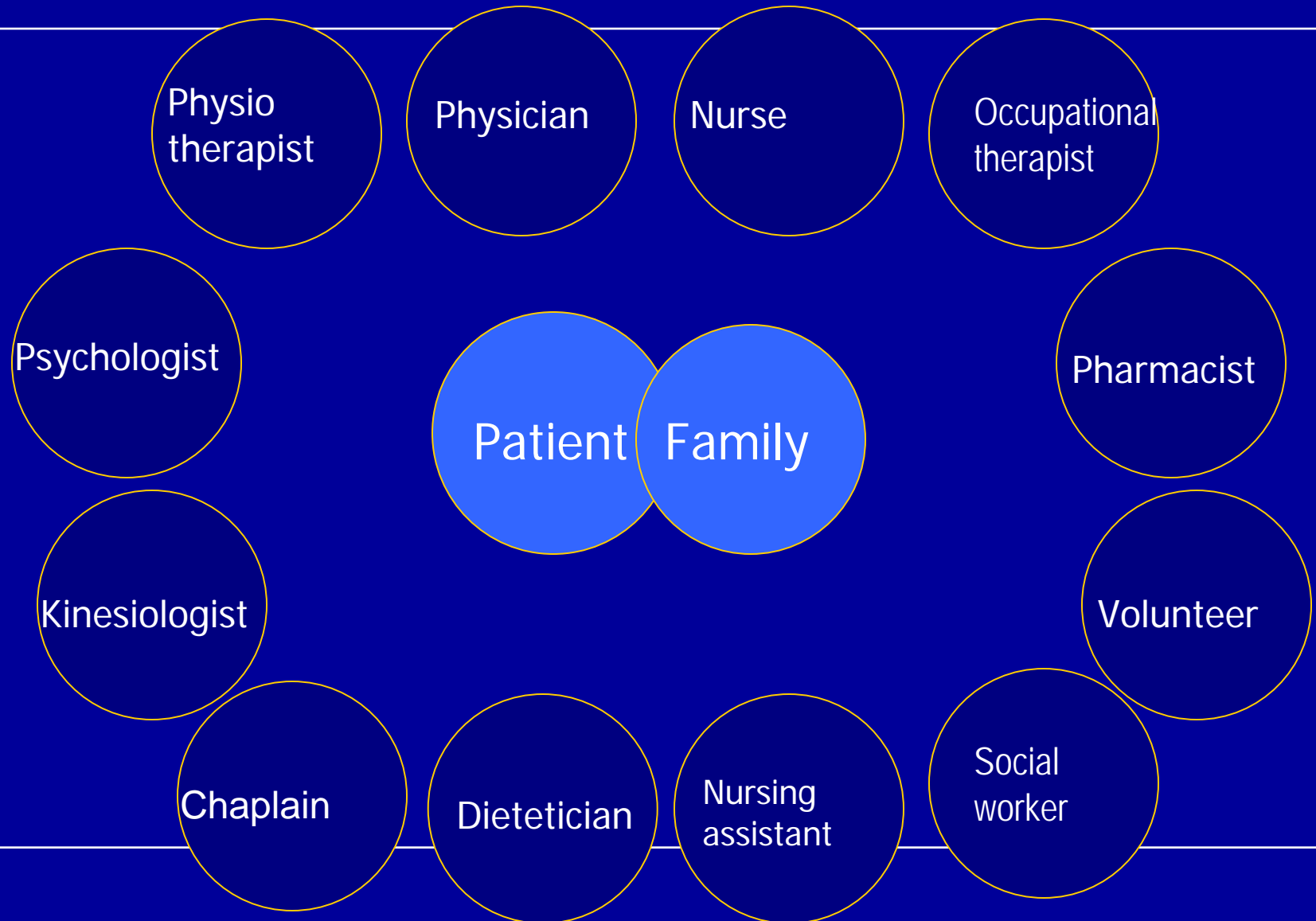
[FDA Announcement regarding Acetaminophen in Prescription Drugs](#)

[Questions and comments](#) - contact us to suggest additional resources.

[Sign-up](#) - for e-mail updates

Funding from The Mayday Fund

Interdisciplinary management



The ideal treatment of CNCP*



*(R Jovey, Canadian Pain Society, 2009-with input from R. Dubin)

Also see: Action Plan for the organization and delivery of chronic pain services in Nova Scotia, 2006

Chronic Pain Self Management Program (FREE, www.painbc.ca)
<http://patienteducation.stanford.edu/programs/cpsmp.html>
www.livinghealthyhamplain.ca (search Chronic pain)

- Standardized program
 - Community-delivered
 - 2.5 hrs /wk for 6 weeks
 - Train-the-trainer model of dissemination
 - Leaders – Peers or HCPs
 - Pain workbook and exercise audio CD
 - (Active Sitting Program DVD)
- Ottawa Public Health order 613 580-6744)

LeFort, S et al 1998 *Pain*, 74, 297-306

Dubin, R and King Van Vlack 2010 *Pain Res Manage* 15: 361-368

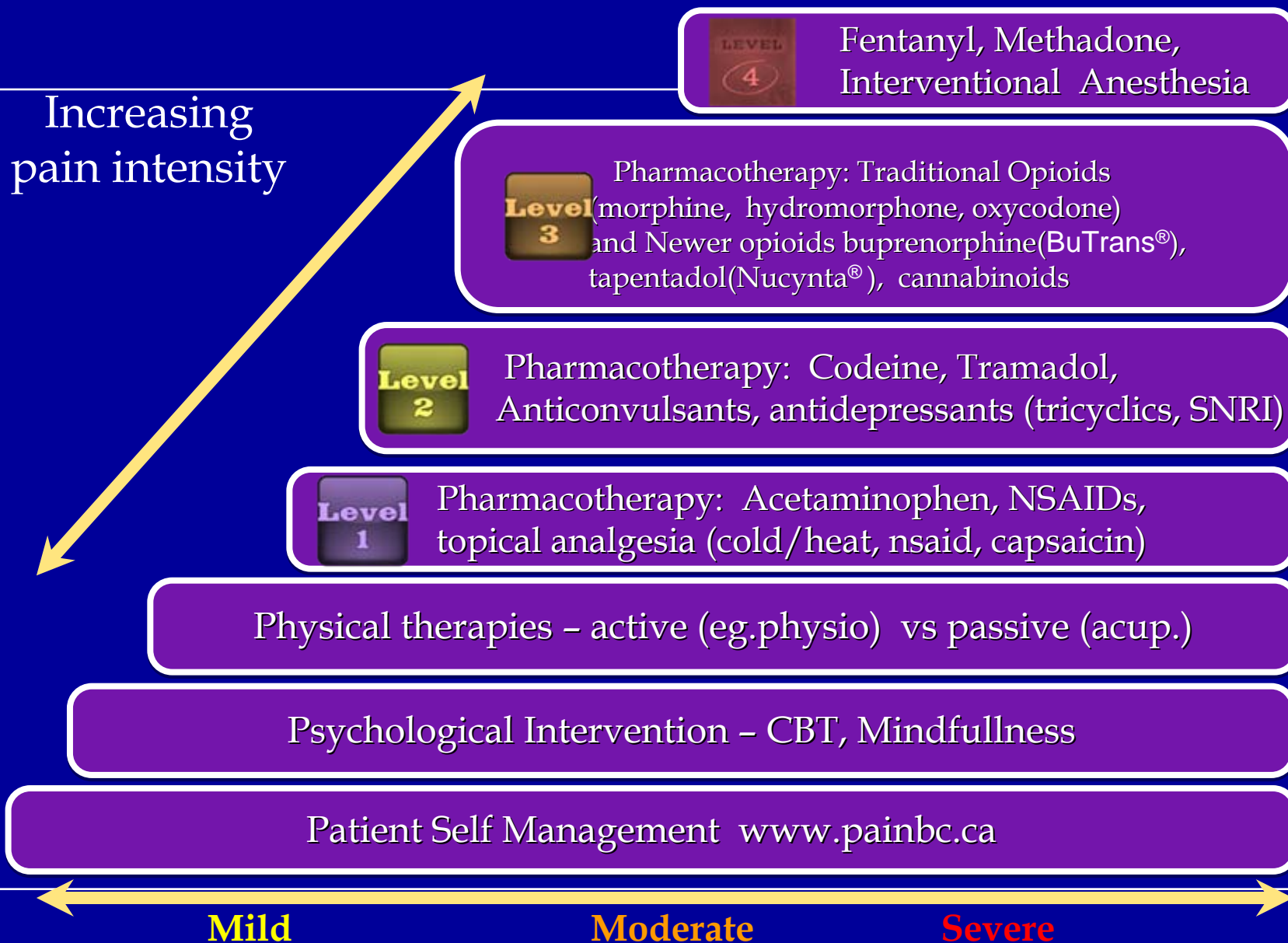




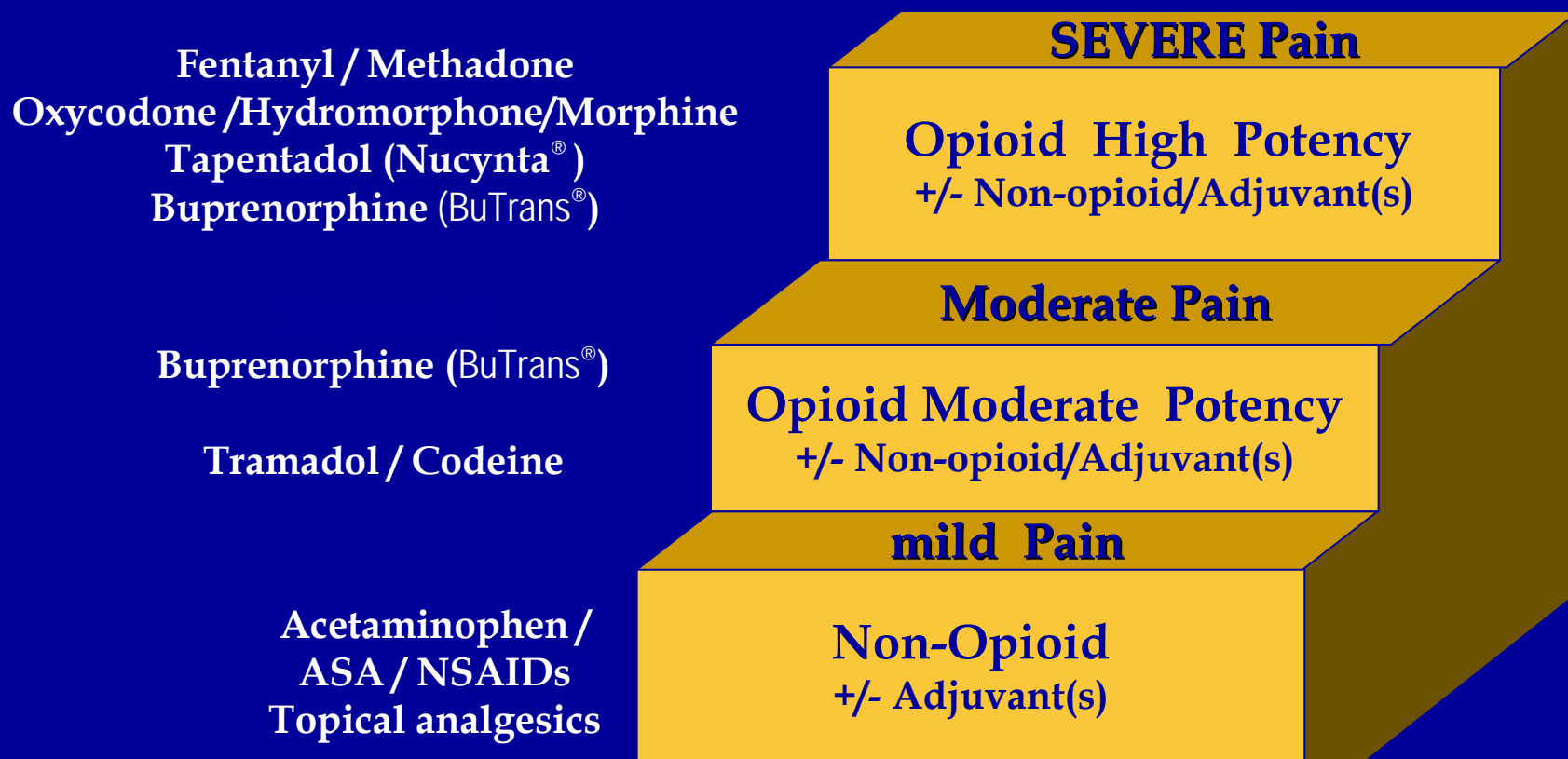
Multimodal Treatment (Non-pharmacological and pharmacological) Options For Chronic Pain

Physical	Psychologic	Pharmacologic	Interventional
<ul style="list-style-type: none">• Normal activities• Splinting / Taping• Aquafitness• Physio• Passive• Active• Stretching• Conditioning• Weight training• Massage• TENS• Transcranial Magnetic Stimulation• Chiropractic• Acupuncture <p>• Chair exercises (DVD Get Moving: Active Sitting Program Ottawa public Health Order 613 580-6744)</p>	<ul style="list-style-type: none">• Stress Management• Cognitive-• Behavioural• Family therapy• Psychotherapy• Mindfulness- Based Stress Reduction• Hypnosis	<ul style="list-style-type: none">• OTC medication• Alternative therapies• Topical medications• NSAIDs / COXIBs• DMARDs• Immune modulators• Tricyclics• Anti-epileptic drugs• Opioids• Local anesthetic congeners• Muscle relaxants• Sympathetic agents• NMDA blockers• CGRP blockers	<ul style="list-style-type: none">• I.A. steroids• I.A. hyaluronan• Trigger pt. therapy• IntraMuscular stim.• Prolotherapy• Nerve blocks• BOTOX• Epidurals• Orthopedic surgery• Radio frequency facet neurotomy• Neurectomy• Implantable neurostimulators• Implantable pain pumps

Management of CNCP 2013



Analgesic LADDER modified WHO 2013



The Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain

<http://nationalpaincentre.mcmaster.ca/opioid/>



1. Start with a **comprehensive assessment** to ensure opioids are a reasonable choice and to identify risk/benefit balance for the patient.
2. Set **effectiveness goals** with the patient and **inform patient** of their role in safe use and monitoring effectiveness
3. Initiate with a low dose, increase gradually, monitor **'opioid effectiveness'** and recognize **'optimal dose'**. Track daily dose in morphine equivalents (MEQ) per day – flag the **'watchful dose'** (200mg MEQ).
4. Watch for any emerging risks/complications to **prevent unwanted outcomes** including misuse and addiction
5. **Stop opioid therapy** if it is not effective or risks outweigh benefits

Evidence of Opioid Efficacy

Examples of CNCP conditions for which opioids were shown to be EFFECTIVE in placebo-controlled trials*		Examples of CNCP conditions that have NOT been studied in placebo-controlled trials
Tramadol only	Weak or strong opioid	
<ul style="list-style-type: none"> Fibromyalgia 	<ul style="list-style-type: none"> Lumbar radiculopathy Chronic Low-back pain Chronic Neck pain Osteoarthritis Diabetic neuropathy Postherpetic neuralgia Peripheral neuropathy Phantom limb pain Spinal cord injury with pain below the level of injury Rheumatoid arthritis 	<ul style="list-style-type: none"> Headache Whiplash Repetitive strain injury Irritable bowel syndrome Pelvic pain Temporomandibular joint dysfunction Atypical facial pain Non-cardiac chest pain Lyme disease

*A limitation of these trials was that the duration of opioid therapy was a maximum of three months. From a systematic review update. Available at: <http://nationalpaincentre.mcmaster.ca/opioid/>

Canadian Guideline For Safe and Effective Use of Opioids For Chronic Non-Cancer Pain: R17

- ◆ Opioid therapy for elderly patients can be safe and effective with appropriate precautions, including lower starting doses, slower titration, longer dosing interval, more frequent monitoring, and tapering of benzodiazepines
- ◆ Opioids are generally safe in the elderly if carefully titrated. As a class, opioids cause less organ toxicity than NSAIDs, and in single-dose studies, they appear to cause less cognitive impairment than benzodiazepines. Clinics caring for elderly patients with well-defined pain conditions have found very low rates of abuse and addiction
- ◆ Controlled-release (CR) formulations are recommended for the elderly for reasons of compliance even though there is no evidence CR formulations are more effective than immediate-release (IR) formulations

OPIOID TREATMENT IN OLDER PERSONS

- ◆ Presence of renal insufficiency also influences choice of opioids
- ◆ Oxycodone, morphine, propoxyphene, and meperidine all have active metabolites excreted renally.
- ◆ Dose adjustments are necessary for patients with renal insufficiency
- ◆ Hydromorphone a possible choice in patients with renal impairment

WHEN to REFER to specialist for pain in Elderly?

- ◆ INVESTIGATE, TREAT specific cause of pain (eg cancer tumor causing pain) . Refer for Non-pharmacologic treatment
- ◆ When pain is moderate-to-severe intensity, NOT relieved by current treatment plan, tramadol (NP can prescribe) and non-opioids analgesics (including adjuvants) . Requiring “strong opioids” prescription.
- ◆ When requiring injections (spine , neck, joints, epidural, botox , ...)
- ◆ Refer for complex cases, comorbidities, for second opinion



Product	Indication
NUCYNTA®* IR	Is indicated for the management of moderate to severe acute pain in adults.
TYLENOL®* with Codeine No.1,2, 3,4 TRAMADOL (Ultram, Tramacet)	Is indicated for the relief of mild to moderate pain associated with conditions such as headache, dental pain, myalgia, dysmenorrhea, pain following trauma, and pain following operative procedures.
OXY IR	Is indicated for the relief of moderate to severe pain.
STATEX	is indicated for the symptomatic relief of severe chronic pain.
DILAUDID	Is indicated for the relief of moderate to severe pain. For post operative relief of pain.

Simplified Opioid Equivalency

■ Morphine	1 mg	Codeine 10 mg
■ Morphine	2 mg	Oxycodone 1 mg
■ Morphine	3mg	Tramadol 50mg
■ Morphine	5 mg	Hydromorphone 1 mg
■ Morphine	10 mg	Methadone 1 mg
■ Morphine	15 mg	Tapentadol IR 50mg
■ Morphine	30 mg	Buprenorphine 15 mcg/hr
■ Morphine	60mg	Fentanyl patch 25mcg/hr

(Please note there is range-of-equivalency for Fentanyl, methadone, buprenorphine, tramadol, tapentadol)

Long-acting potent opioids in Canada: Comparison in duration of action

Opioid Long-acting	Name of product	Technology	Duration of action
ORAL			
Hydromorphone	Jurnista Hydromorph Contin	OROS® Push-Pull Granules with polymeric coating	24 hours 12 hours
Morphine	MS Contin M-Eslon Kadian SR	Granules with with polymeric coating (All 3 meds)	12 hours 12 hours 24 hours
Tapentadol	Nucynta CR	Granules with polymeric coating	12 hours
Oxycodone	OxyNeo® OxyContin generic	Matrix Granules with polymeric coating	12 hours
TRANSDERMAL			
Fentanyl Buprenorphine	Fentanyl Patch Butrans patch®	Matrix Patch Matrix Patch	3 days, 72 hours 7 days, 168 hours



Treatment of Common Opioid Side Effects 1

SIDE EFFECT	TREATMENT
NAUSEA AND VOMITING	<ul style="list-style-type: none">• Dimenhydrinate prn• Alternatives<ul style="list-style-type: none">- Metoclopramide 10-20 mg qid- Domperidone 10-20 mg qid
CONSTIPATION	<ul style="list-style-type: none">• Use dietary measures first (bran, flax, prunes)• Osmotics-MOM, PEG 3350, lactulose• Stool softeners - docusate• Stimulants-senna, bisacodyl• Suppositories-dulcolax• Enemas



Treatment of Common Opioid Side Effects 2

ADVERSE EFFECT	MANAGEMENT
Somnolence, drowsiness and other cognitive issues <ul style="list-style-type: none">• May present at initiation or with dose increase• More frequent in those with underlying cognitive dysfunction	<ul style="list-style-type: none">• Dose reduction, opioid rotation, slower increases in dose; symptomatic management may be necessary• Avoid/eliminate concomitant usage of alcohol, benzodiazepines and other sedating drugs• Advise patient not to drive until there is no sedation
Pruritis <ul style="list-style-type: none">• Usually transient; histamine release	<ul style="list-style-type: none">• Often self-limiting; may benefit from opioid rotation/dose reduction, cool compresses & moisturizers• Symptomatic management may include non-sedating antihistamines

Optimal Dose

- ◆ The **optimal dose** is reached with a **BALANCE of 3 factors**
 - **Effectiveness**: improved function or at least 30% reduction (2 points on 10 points scale) in pain intensity
 - **Plateauing**: increasing the dose yields negligible benefit
 - **Adverse effects/complications**: adverse effects or complications are manageable
- ➔ NOUGG watchful dose 200 mg of morphine or equivalent

Adapted from: <http://nationalpaincentre.mcmaster.ca/opioid>

Clinical case 2 : Herby 78 years

Right foot ulcer worsening size/pain despite Silvercell wound dressing change

Past Medical History:

- Diabetes type 2 x 15 years, Chronic Neuropathic pain feet worse x 1 year
- Coronary Artery Disease with CABG 2010 , Hypertension , Transient Ischemic Attack, Smoking 15 cig/day . Dyslipidemia
- Depression

Social & Personal:

- Recent admission LTC from Home (had CCAC assistance) , caregiver stress
- Divorced , 2 adult children with total 3 grandchildren
- Hobbies: cycling and Miniput golf

Medications:

- Insulin Levemir 30 units s/c daily, Rosuvastatin 10mg po qHS, Bisoprolol 2.5mg po qHS
 - Ramipril 5mg po daily, Nifedepine XL 60mg po daily, Clopidogrel 75mg po daily
 - Pregabalin 75mg po qHS, Duloxetine 30mg po daily (Vomiting / Nausea ++ with 60mg)
 - Hydromorph Contin 3mg po q 12h + Hydromorphone 1mg po q4h PRN if pain
 - Senokot 2 tabs po 3 times per week M-W-F
-

PEARLS in pain management of leg ulcers in the diabetic patient

- ◆ PRE-Medicate analgesia 30-60min BEFORE dressing change (prevent incidental dressing pain)
- ◆ Request ABI/ refer for revascularization (earlier is better) (CCAC form, good wound care practice, OHIP covered)
- ◆ Treat patient (not only ulcer) & risk factors
 - smoking
 - hypertension
 - hyperlipidemia
 - obesity
 - Cardiovascular disease

Clinical Case: Herby 78 years

Herby appreciate pre-medication Hydromorphone 1mg PRIOR to each dressing change. ABI done= 0.45 (<0.5), referred to Vascular Surgeon who did Arterial doppler and revascularization successful Right Fem-pop. After 4 weeks, ulcer healed completely. Pain well managed with same medications. Herby able to walk from room-to-dining room and do stationnary cycling without significant pain.

- ✓ Pain relief is adequate with good function.
- ✓ Side effects are well tolerated.
- ✓ According to Brief Pain Inventory

Pain Intensity ↓ 30% (score from 7 to 4/10)
Functional capacity ↑ 30%

Therapeutic trial of opioid is positive, long term use requires monitoring:

- ☐ Long term goals, pain relief, maintain optimal functional capacity
- ☐ Side Effects
- ☐ Complications
- ☐ Aberrant Behaviours

DN4: A validated diagnostic tool for Neuropathic pain clinical practice

➔ INTERVIEW OF THE PATIENT ◀

1. Does the pain have any of the following characteristics?
 - 1. Burning 2. Painful cold 3. Electric shocks
2. Is the pain associated with any of the following symptoms in the same area?
 - 4. Tingling 5. Pins and needles 6. Numbness 7. Itching

➔ EXAMINATION OF THE PATIENT ◀

1. Is the pain located in an area where examination reveals either of the following?
 - 8. Hypoesthesia to touch 9. Hypoesthesia to pinprick
2. Is the pain provoked or increased by the following?
 - 10. Brushing

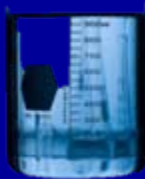


A positive answer to at least 4 of the 10 components leads to a diagnosis of neuropathic pain

Focused Physical Examination (Localized, referred pain, dermatome, neuro exam, DDx) for Chronic Pain

TOOLS:

- ◆ Cotton balls
- ◆ Safety pin
- ◆ Paper clip
- ◆ Brush
- ◆ Tuning fork
- ◆ Warm and cold water
- ◆ Your hands



Patient presents with leg ulcer



History, physical, wound assessment



Signs of infection, culture wound

Necrotic tissue: Debride

Wound care management: cleanse, protect, absorb excess exudate



Palpate pedal pulses/request ABI (Ankle Brachial Index)



ABI: < 0.5 or =



Refer to VASCULAR SURGEON
local wound care

$0.6 - 0.7$



Moderate compression
with 3 layer bandage
system

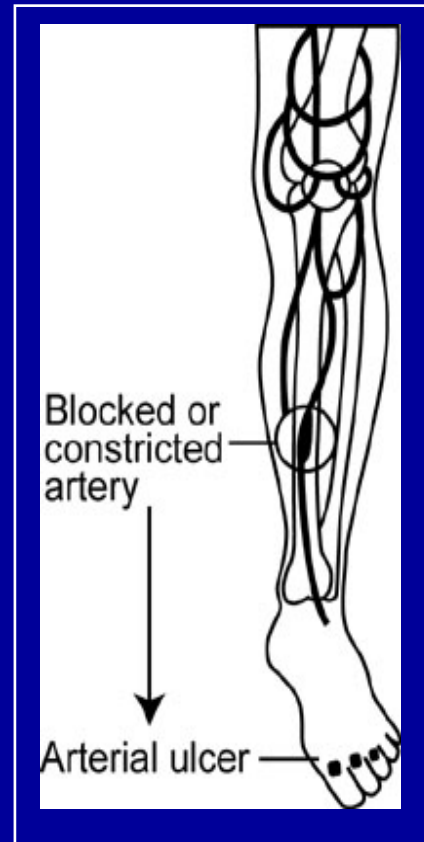
>0.8



High compression
with 4 layer bandage
system, 1 Profore kit

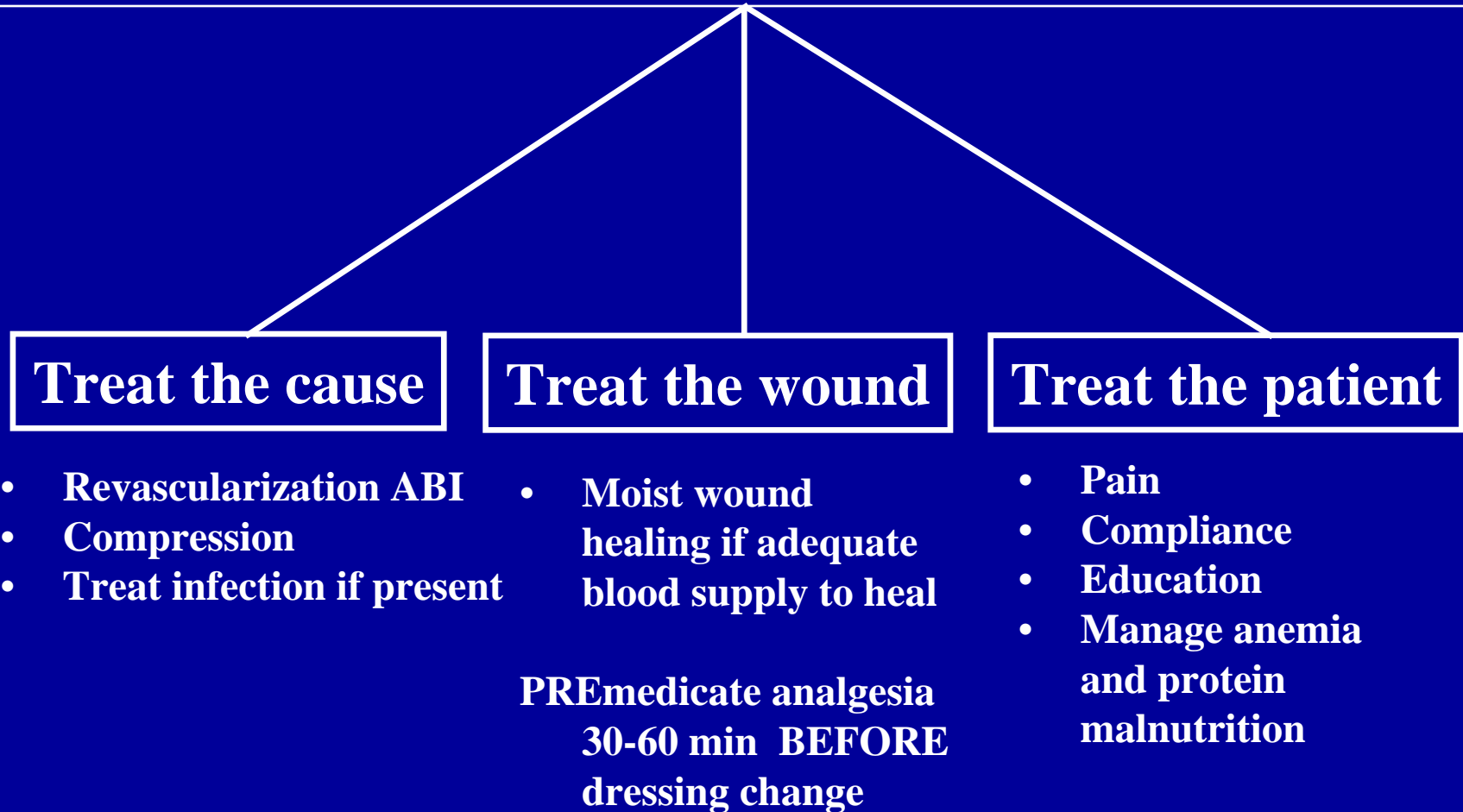
Arterial disease: signs/symptoms

- **Pain** — worsens upon walking (intermittent claudication) or elevation (rest pain)
- **Pallor**
- **Cool extremity**
- **Absent pulse**
- **Loss of hair distally**
- **Thickened nails**



What are the clinical signs of the arterial leg ulcer?

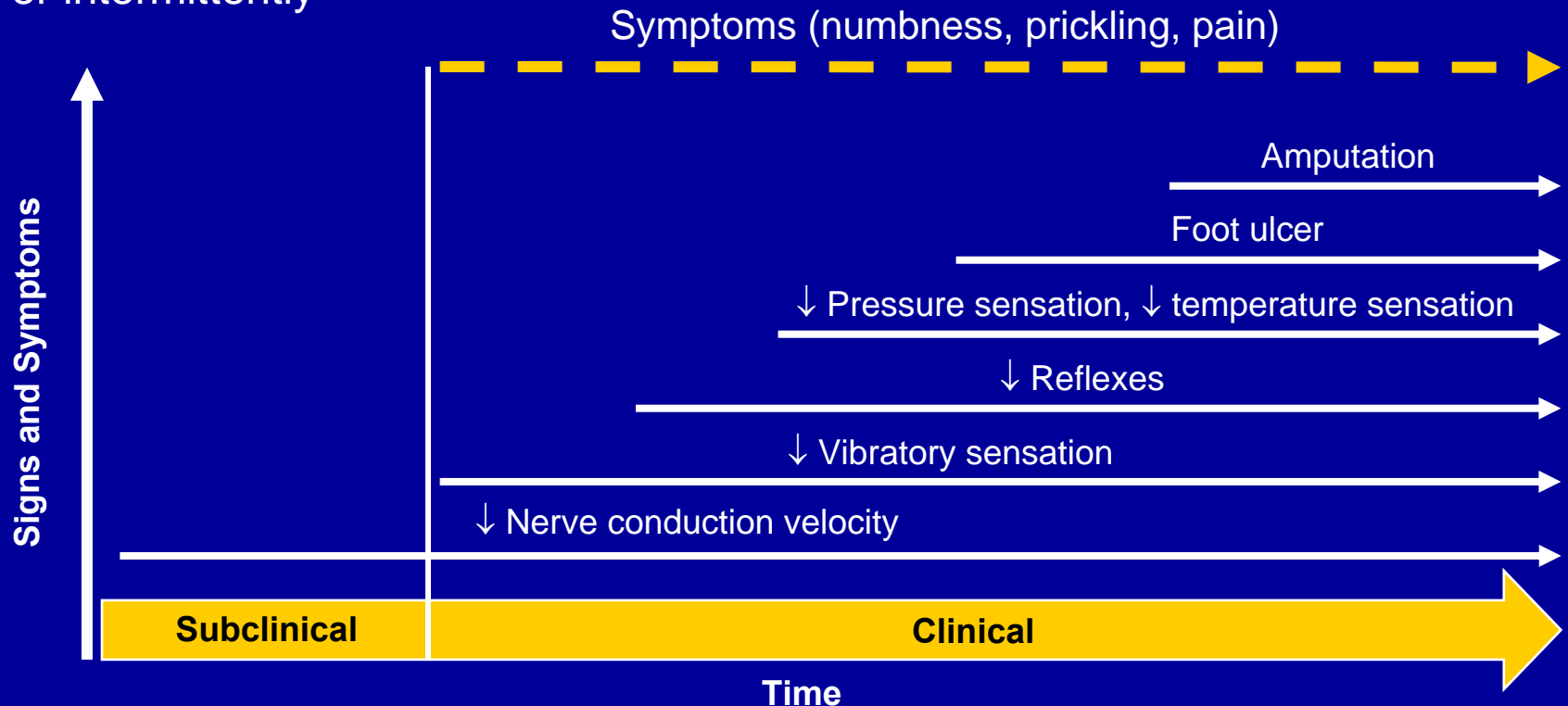
Management strategies: leg ulcers





Diabetic Peripheral Neuropathy (DPN): Clinical Stages

- ◆ DPN is a progressive disease starting with diminished nerve conduction velocity and ending with amputation
- ◆ Symptoms occur in approximately 25% of patients and may occur any time and/or intermittently





Goals of Neuropathic Pain Treatment

- ◆ Primary goal: reduction in pain^{1,2}
- ◆ Secondary goals^{1,2}
 - Improvement in physical function
 - Reduction in affective distress
 - Improvement in quality of life
 - Maintenance of positive outcomes
 - Education of patient and providers
- ◆ Achieving these goals depends upon¹
 - Accurate diagnosis of any underlying etiology
 - Preventive treatment of underlying etiology (eg, diabetes and joint inflammation) if possible

Guidelines Neuropathic Pain management

1st Line

Gabapentinoids

Pregabalin
Gabapentin

Antidepressants tricyclics (ADT) or tetracyclics

Tertiary Amines:

Amitriptyline
Clomipramine
Imipramine

Secondary Amines:

Nortriptyline
Desipramine

Tetracyclic:

Maprotiline

Local Anesthetics

Topical Lidocaine 10 %.02

2nd Line

SNRI

Venlafaxine
Duloxetine

Cannabinoides

Dronabinol
Nabilone
THC/CBD by mouth

3rd Line

ISRS

Citalopram
Paroxetine

Other antidepressant

Bupropion

Other anticonvulsants

Topiramate
Carbamazépine
Lévétiracétam
Lamotrigine

4th Line

Methadone
Kétamine
Mexilétine
Baclofène
Clonidine
Clonazépam

AVOID

Meperidine
Phénytoïne

Opioids and tramadol

For opioids and tramadol:

Use short acting in 1st line in association with the other agents of 1st line for these situations:

- Fast relief during titration of 1st line drugs (until effective dosage);
- Flare-up episodes of pain / acute neuropathic pain / Cancer related neuropathic pain

Use in 2nd line in monotherapy or in association (when long term use is considered, favor long-acting formulation).



Diabetic Peripheral Neuropathic Pain: A Frequent and Debilitating Complication

- ◆ 10%-20% of patients with diabetic peripheral neuropathy develop pain¹
- ◆ This pain broadly interferes with daily functioning and quality of life¹⁻⁴
 - General activity
 - Walking
 - Energy level
 - Social and leisure activities
 - Ability to sleep
 - Change in mood, feelings of depression and anxiety
 - Overall enjoyment of life

Multimodal Analgesia

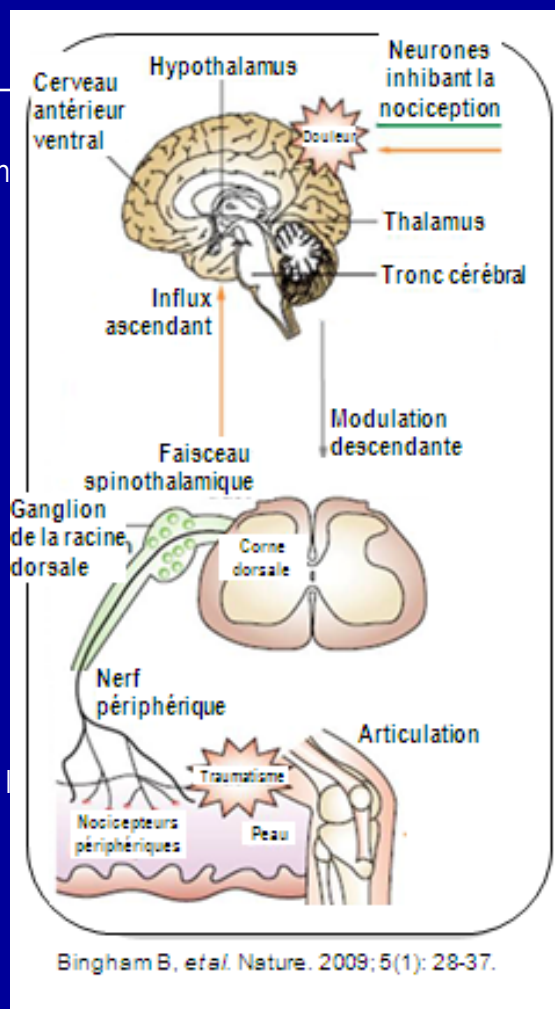
- ♦ Transmission of pain afferents signal from peripheral receptors toward somatosensory cortex activate multiple receptors and depend on many neurotransmitters.
- ♦ Blockade of one of those pathways does NOT inhibit all pain afferent signals.
- ♦ To effectively relieve pain, it is necessary to block many pain pathways by using chemicals with complementary or synergic modes of action.

Multiple Pathways of Pain Transmission Provide Multiple Targets for Pain Relief

Inhibition of ascending pathways^{1-4,6}

- Opioids[†] • Local Anesthetics • Antiepileptics⁷
- NSAIDs / Acetaminophen

1. Pain stimuli are detected by nociceptive receptors and transmit pain signals to CNS
2. Synapse : Peripheral nociceptors form synapses with the SNC in the dorsal horn of the bone marrow
3. Ascending pain signals are transmitted from the bone marrow to somatosensory in the brain



Ascending way

Descending Way

4. Descending ways start from the brain and modulate pain in the dorsal horn

Descending way Inhibition dampens pain transmission by the release of norepinephrine (NE) and serotonin (5HT)

Activation of descending ways^{1,3-5}

- SNRI Inhibitor of reuptake of norepinephrine • SSRI Inhibitor of reuptake of serotonin • Antidepressant tricyclics • Opioids[†]

National Pharmaceutical Council, Joint Commission on Accreditation of Healthcare Organizations. <http://www.npcnow.org/resources/PDFs/painmonograph.pdf>; 2. Pyati S, Gan TJ. *CNS Drugs* 2007;21:185; 3. Vanderah TW. *Med Clin N Am* 2007;91:1; 4. Woolf CJ. *Ann Intern Med* 2004;140:441; 5. Pertovaara A, Almeida A. Dans : Cervero F, Jensen TS, éd. *Pain: Handbook of Basis of Therapeutics*. 11^e éd. New York, NY, McGraw-Hill; 2006: 6.

Knotkova H, Pappagallo M. *Med Clin N Am* 2007;91:113.

* Modes d'action théoriques. [†]Il est bien établi que les opioïdes inhibent la transmission ascendante des signaux nociceptifs. D'autres mécanismes ont été mentionnés dans les publications, notamment l'activation des voies inhibitrices descendantes et la modulation de l'activité du système limbique^{1,3,4,6}.

AINS = anti-inflammatoires non stéroïdiens

Mechanisms of Action of Selected Analgesics

✓ Inhibition of pain signal transmission in ascending pathways¹⁻⁵

- Acetaminophen
- NSAIDs
- Anticonvulsant drugs
- Opioids
- Local anesthetics



✓ Enhancement of pain modulation by descending pathways^{2-4,6}

- Tricyclic antidepressants
- Serotonin/norepinephrine reuptake inhibitors
- Anticonvulsant drugs
- Opioids

μ Agonists

Opioids

BuTrans[®] /buprenorphine

Duragesic/ Fentanyl[®]

Hydromorph Contin,
Jurnista[®]
(Dilaudid/Hydromorphone)

Kadian, Meslon, MSContin
(Statex/ Morphine)

Oxy Contin, OxyNeo[®], Targin[®]
(Oxycodone)

Tapentadol

Nucynta CR

Nucynta IR

NRI

SNRI

Tramadol

(Tramacet)
(Ultram)

Durela,
Ralivia
Tridural
Zytram XL

Cymbalta
Effexor

TCA/Tricyclic

Aventyl
Elavil, etc.

SSRI

CANNABINOIDS

ACETAMINOPHEN NSAID

Ibuprofen, Celebrex,
Naproxen, etc.

ANTICONVULSANTS

Lyrica, Neurontin

Adjuvants for Specific Chronic Pain Disorders

- Fibromyalgia
 - Duloxetine, pregabalin, amitriptyline
- Osteoarthritis
 - Duloxetine
- Migraines
 - Topiramate, amitriptyline, B Blockers

Adjuvants for Specific Chronic Pain Disorders

- Trigeminal Neuralgia
 - Carbamazepine remains drug of first choice

- Diabetic Neuropathy
 - Pregabalin and duloxetine
 - Gabapentin, amitriptyline, valproic acid and tramadol

- Post Herpetic Neuralgia
 - TCAs
 - Gabapentin, pregabalin and topical lidocaine

Adjuvants most used, Most frequent side effects

- Tricyclics (eg amitriptyline, nortriptyline)
 - Anticholinergic side effects (dry mouth, constipation, dizziness, urinary retention, cardiovascular...). Can do nortriptyline blood levels
- SNRIs (eg Duloxetine) have equal pain efficacy to Tricyclics for the most part and less side effects (GI nausea, loose BM,...)
- Anticonvulsivants (carbamazepine, gabapentin, pregabalin)
 - Carbamazepine (confusion, pulmonary edema, nausea/vomiting) Narrow therapeutic window, please do blood levels
 - Gabapentin and Pregabalin (sedation, weight gain/edema,...) Pregabalin better tolerated than gabapentin

SUMMARY 1

- ◆ Options/ Views about management of pain in the elderly have changed in recent years
- ◆ It is an expectation that pain be recognized and managed appropriately
- ◆ MOHLTC 2009: Pain management a required program
- ◆ Pain can be effectively treated in the long-term care setting

SUMMARY 2

- ♦ A combination of non-pharmacologic and pharmacologic interventions can effectively reduce pain and its burden
- ♦ Consider physiological characteristics in older patients
- ♦ Pharmacologic modalities can be used safely and effectively to treat pain in older patients

INTERNET RESOURCES FOR PAIN

Patients

www.painbc.ca

(Download FREE pain toolbox self-management, excellent)

www.managingpaintogether.com (excellent)

www.managingmypain.com

www.pipain.com

(People in pain Network)

www.canadianpaincoalition.ca/index.php

www.chronicpaincanada.com

www.canadianpainsociety.ca

www.paintoolkit.org

www.faceofpain.ca

www.arthritis.ca (The Arthritis Society) www.Fibrocentre.ca

www.cirpd.org/PainManagement

INTERNET RESOURCES FOR PAIN

Health Care Providers

<http://giic.rgps.on.ca/pain> (excellent practical resources)

<http://www.geriatricpain.org> (tools pain assessment in dementia)

www.managingpaintogether.com
(Excellent for teaching)

www.nationalpaincentre.mcmaster.ca
(Canadian Guidelines for Opioid use for pain 2010)

www.painexplained.ca
(Good review on pain pathways and physiopathology)

www.iasp-pain.org
www.arthritis.ca (the Arthritis Society)

www.painCare.ca
(Many practical tools)

Revised by Dr. Cuong Ngo Minh, Feb 4th 2014