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
Disclosure of Commercial Support

• This program has received financial support from Regional Geriatric Program of Eastern Ontario in the form of Honorarium.

• This program has received in-kind support from Regional Geriatric Program of Eastern Ontario in the form of Organisation logistical support.

• 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.
Mitigating Potential Bias

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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

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

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

#### Chronic/Persistent
- Not a symptom
- Meaningless
- Normal delay for healing is overdue
- It’s a disease
- Lasts > 3-6 months
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, “ache”, 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/ uloric 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

- Pain-centered life
- Analgesia Education
- Active coping Self Management Skills
- Improved Social Functioning
- Decreased Anxiety, depression, anger
- Increased activity
- Physical reconditioning
- Function-centered Life

Adapted from: http://prc.canadianpaincoalition.ca/en/self_management.html
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.

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

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

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

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</table>
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.

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<th>%</th>
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<tr>
<td></td>
<td>No relief</td>
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<td>80%</td>
<td>90%</td>
<td>Complete relief</td>
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9 Circle the one number that best describes how, during the past 24 hours, pain has interfered with your:

A General activity

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C Walking ability

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

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G Enjoyment of life

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

- nausae
- 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

<table>
<thead>
<tr>
<th>No Pain</th>
<th>Please rate your pain by circling the one number that best describes your pain on average</th>
<th>Pain as bad as you can imagine</th>
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<td>1 2 3 4 5 6 7 8 9 10</td>
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Global assessment: PGI-Improvement

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

- 1 Very much better
- 2 Much better
- 3 A little better
- 4 No change
- 5 A little worse
- 6 Much worse
- 7 Very much worse

Prior Research: An average pain reduction of 2 points or 30% represents a clinically important difference to patients\(^1,2\)

DPNP  
**Unidimensional Pain Assessment Scales**

**Verbal Pain Intensity Scale**

- No pain
- Mild pain
- Moderate pain
- Severe pain
- Very severe pain
- Worst possible pain

*Incapacitating, God awful, soul stealing*

**0-10 Numerical Rating Scale**

- 0: No pain
- 1: Moderate pain
- 10: Worst possible pain

*Limits people to 11 “intensities”*

**Visual Analog Scale**

- No pain
- Pain as bad as it could be

*Length of line is irrelevant beyond discrimination*

**Faces Rating Scale**

- 0: No hurt
- 1: Hurts little bit
- 2: Hurts little more
- 3: Hurts even more
- 4: Hurts whole lot
- 5: Hurts worst

*Intended for children; “used” with nonverbal patients*

McLafferty E, Farley A. Nursing Standard 2008;22:42
Pain in Older People: Goals

- Achieve comfort with minimal (least) side effects

- 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

- Safety
- Efficacy
- Function/QOL

- Risks
- Tolerability
- Patient Characteristics

*Quality/frequency of assessments
*Optimized nondrug approaches
*Balance risk/benefits and optimize use
*Minimize ADR/misuse/abuse
*Monitor & document outcomes

## 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?
<table>
<thead>
<tr>
<th>PEARLS in pain management of patients with Dementia, able swallow or not</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Use Consistently Assessment TOOL (eg Abbey pain scale) to IDENTIFY PAIN, to MONITOR PAIN RELIEF pre- post treatment.</td>
</tr>
<tr>
<td>- Use PAIN WHO (modified) LADDER, Use MORE Topical pain medications</td>
</tr>
<tr>
<td>- Treat LOCALIZED pain LOCALLY (eg. Right OA Knee flare-up with local Cortisone injection, Ice, topical pain meds, ortho)</td>
</tr>
<tr>
<td>- For patients with DYSPHAGIA with moderate pain, BUTTRANS patch 7-days is an option for Opioid naïve-patient, think also s/c route, intra-rectal route</td>
</tr>
</tbody>
</table>
Clinical Case: Mary 85 years

Mary takes Butrans patch 5mch/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 toAbbeypain 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)

Refer to Product Monograph for complete dosing and administration recommendations. *Not until after 3 days.
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%, Amitriptilline 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomic Changes</td>
<td>Pallor, sweating, tachypnoea, altered breathing patterns, tachycardia, hypertension.</td>
</tr>
<tr>
<td>Facial Expressions</td>
<td>Grimacing, wincing, frowning, rapid blinking, brow raising, brow lowering, cheek raising, eyelid tightening, nose wrinkling, lip corner pulling, chin raising, lip puckering.</td>
</tr>
<tr>
<td>Body Movements</td>
<td>Altered gait, pacing, rocking, hand wringing, repetitive movements, increased tone, guarding, <em>bracing</em></td>
</tr>
</tbody>
</table>
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](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
    Absent 0 Mild 1 Moderate 2 Severe 3

Q2. Facial expression
    eg looking tense, frowning, grimacing, looking frightened
    Absent 0 Mild 1 Moderate 2 Severe 3

Q3. Change in body language
    eg fidgeting, rocking, guarding part of body, withdrawn
    Absent 0 Mild 1 Moderate 2 Severe 3

Q4. Behavioural Change
    eg increased confusion, refusing to eat, alteration in usual patterns
    Absent 0 Mild 1 Moderate 2 Severe 3

Q5. Physiological change
    eg temperature, pulse or blood pressure outside normal limits,
    perspiring, flushing or pallor
    Absent 0 Mild 1 Moderate 2 Severe 3

Q6. Physical changes
    eg skin tears, pressure areas, arthritis, contractures,
    previous injuries
    Absent 0 Mild 1 Moderate 2 Severe 3

Add scores for 1 - 6 and record here

Now tick the box that matches the Total Pain Score

<table>
<thead>
<tr>
<th>Total Pain Score</th>
<th>0 - 2</th>
<th>3 - 7</th>
<th>8 - 13</th>
<th>14 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
<td></td>
</tr>
</tbody>
</table>

Finally, tick the box which matches the type of pain

Chronic Acute Acute on Chronic
**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](http://www.geriatricpain.org)
Helping nurses assess and manage pain in older adults

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

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
The ideal treatment of CNCP*

MEDICINE
Medications & Interventions

MOVEMENT
Physical / Rehabilitative

SELF MANAGEMENT
www.painbc.ca

MIND
Psychological

MEDICINE
Medications & Interventions

*(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.livinghealthychamplain.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

<table>
<thead>
<tr>
<th>Physical</th>
<th>Psychologic</th>
<th>Pharmacologic</th>
<th>Interventional</th>
</tr>
</thead>
</table>
| - Normal activities  
- Splinting / Taping  
- Aquafitness  
- Physio  
- Passive  
- Active  
- Stretching  
- Conditioning  
- Weight training  
- Massage  
- TENS  
- Transcranial Magnetic Stimulation  
- Chiropractic  
- Acupuncture  
- Chair exercises  
(DVD Get Moving: Active Sitting Program Ottawa public Health Order 613 580-6744) | - Stress Management  
- Cognitive-Behavioural  
- Family therapy  
- Psychotherapy  
- Mindfulness-Based Stress Reduction  
- Hypnosis | - OTC medication  
- Alternative therapies  
- Topical medications  
- NSAIDs / COXIBs  
- DMARDs  
- Immune modulators  
- Tricyclics  
- Anti-epileptic drugs  
- Opioids  
- Local anesthetic  
- congener  
- Muscle relaxants  
- Sympathetic agents  
- NMDA blockers  
- CGRP blockers | - 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

Increasing pain intensity

- **Level 1**
  - Pharmacotherapy: Acetaminophen, NSAIDs, topical analgesia (cold/heat, nsaid, capsaicin)

- **Level 2**
  - Pharmacotherapy: Codeine, Tramadol, Anticonvulsants, antidepressants (tricyclics, SNRI)

- **Level 3**
  - Pharmacotherapy: Traditional Opioids (morphine, hydromorphone, oxycodone)
  - and Newer opioids buprenorphine (BuTrans®), tapentadol (Nucynta®), cannabinoids

- **Level 4**
  - Fentanyl, Methadone, Interventional Anesthesia

**Physical therapies** – active (eg. physio) vs passive (acup.)

**Psychological Intervention** – CBT, Mindfullness

**Patient Self Management**  www.painbc.ca

**Mild**  **Moderate**  **Severe**
Analgesic LADDER  modified WHO 2013

Adapted from The WHO 3-Step Analgesic Ladder, Cancer Pain Relief, 2nd Edition, World Health Organization
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**

<table>
<thead>
<tr>
<th>Tramadol only</th>
<th>Weak or strong opioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fibromyalgia</td>
<td>• Lumbar radiculopathy</td>
</tr>
<tr>
<td></td>
<td>• Chronic Low-back pain</td>
</tr>
<tr>
<td></td>
<td>• Chronic Neck pain</td>
</tr>
<tr>
<td></td>
<td>• Osteoarthritis</td>
</tr>
<tr>
<td></td>
<td>• Diabetic neuropathy</td>
</tr>
<tr>
<td></td>
<td>• Postherpetic neuralgia Peripheral neuropathy</td>
</tr>
<tr>
<td></td>
<td>• Phantom limb pain</td>
</tr>
<tr>
<td></td>
<td>• Spinal cord injury with pain below the level of injury</td>
</tr>
<tr>
<td></td>
<td>• Rheumatoid arthritis</td>
</tr>
<tr>
<td></td>
<td>• Headache</td>
</tr>
<tr>
<td></td>
<td>• Whiplash</td>
</tr>
<tr>
<td></td>
<td>• Repetitive strain injury</td>
</tr>
<tr>
<td></td>
<td>• Irritable bowel syndrome</td>
</tr>
<tr>
<td></td>
<td>• Pelvic pain</td>
</tr>
<tr>
<td></td>
<td>• Temporomandibular joint dysfunction</td>
</tr>
<tr>
<td></td>
<td>• Atypical facial pain</td>
</tr>
<tr>
<td></td>
<td>• Non-cardiac chest pain</td>
</tr>
<tr>
<td></td>
<td>• Lyme disease</td>
</tr>
</tbody>
</table>

*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/](http://nationalpaincentre.mcmaster.ca/opioid/)*
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.
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 (e.g., 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.
## Opioid (SHORT-acting) Indications in acute pain management

<table>
<thead>
<tr>
<th>Product</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUCYNTA®* IR</td>
<td>Is indicated for the management of moderate to severe acute pain in adults.</td>
</tr>
<tr>
<td>TYLENOL®* with Codeine No.1,2, 3,4 TRAMADOL (Ultram, Tramacet)</td>
<td>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.</td>
</tr>
<tr>
<td>OXY IR</td>
<td>Is indicated for the relief of moderate to severe pain.</td>
</tr>
<tr>
<td>STATEX</td>
<td>is indicated for the symptomatic relief of severe chronic pain.</td>
</tr>
<tr>
<td>DILAUDID</td>
<td>Is indicated for the relief of moderate to severe pain. For post operative relief of pain.</td>
</tr>
</tbody>
</table>
# Simplified Opioid Equivalency

<table>
<thead>
<tr>
<th>Morphine</th>
<th></th>
<th>Codeine</th>
<th>Oxycodone</th>
<th>Tramadol</th>
<th>Hydromorphone</th>
<th>Methadone</th>
<th>Tapentadol</th>
<th>Buprenorphine</th>
<th>Fentanyl patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mg</td>
<td></td>
<td>10 mg</td>
<td>1 mg</td>
<td>50 mg</td>
<td>1 mg</td>
<td>1 mg</td>
<td>50 mg</td>
<td>15 mcg/hr</td>
<td>25 mcg/hr</td>
</tr>
<tr>
<td>2 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 mg</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 mg</td>
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<td></td>
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<tr>
<td>15 mg</td>
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<td></td>
<td></td>
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<tr>
<td>30 mg</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>60 mg</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Reference: Elsevier “Opioid Rotation in Chronic Pain Management “ Clinical companion
## Long-acting potent opioids in Canada: Comparison in duration of action

<table>
<thead>
<tr>
<th>Opioid Long-acting</th>
<th>Name of product</th>
<th>Technology</th>
<th>Duration of action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ORAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydromorphine</td>
<td>Jurnista</td>
<td>OROS® Push-Pull Granules with polymeric coating</td>
<td>24 hours 12 hours</td>
</tr>
<tr>
<td></td>
<td>Hydromorph Contin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morphine</td>
<td>MS Contin</td>
<td>Granules with polymeric coating (All 3 meds)</td>
<td>12 hours 12 hours 24 hours</td>
</tr>
<tr>
<td></td>
<td>M-Eslon</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kadian SR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tapentadol</td>
<td>Nucynta CR</td>
<td>Granules with polymeric coating</td>
<td>12 hours</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>OxyNeo®</td>
<td>Matrix Patch Granules with polymeric coating</td>
<td>12 hours</td>
</tr>
<tr>
<td></td>
<td>OxyContin generic</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSDERMAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fentanyl Buprenorphine</td>
<td>Fentanyl Patch</td>
<td>Matrix Patch</td>
<td>3 days, 72 hours 7 days, 168 hours</td>
</tr>
<tr>
<td></td>
<td>Butrans patch®</td>
<td>Matrix Patch</td>
<td></td>
</tr>
</tbody>
</table>
## Treatment of Common Opioid Side Effects

<table>
<thead>
<tr>
<th>SIDE EFFECT</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAUSEA AND VOMITING</strong></td>
<td>• Dimenhydrinate prn</td>
</tr>
<tr>
<td></td>
<td>• Alternatives</td>
</tr>
<tr>
<td></td>
<td>– Metoclopramide 10-20 mg qid</td>
</tr>
<tr>
<td></td>
<td>– Domperidone 10-20 mg qid</td>
</tr>
<tr>
<td><strong>CONSTIPATION</strong></td>
<td>• Use dietary measures first (bran, flax, prunes)</td>
</tr>
<tr>
<td></td>
<td>• Osmotics-MOM, PEG 3350, lactulose</td>
</tr>
<tr>
<td></td>
<td>• Stool softeners - docusate</td>
</tr>
<tr>
<td></td>
<td>• Stimulants-senna, bisacodyl</td>
</tr>
<tr>
<td></td>
<td>• Suppositories-dulcolax</td>
</tr>
<tr>
<td></td>
<td>• Enemas</td>
</tr>
</tbody>
</table>
### Treatment of Common Opioid Side Effects 2

<table>
<thead>
<tr>
<th>ADVERSE EFFECT</th>
<th>MANAGEMENT</th>
</tr>
</thead>
</table>
| Somnolence, drowsiness and other cognitive issues   | • 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 |
| • May present at initiation or with dose increase    |                                                                                                                                             |
| • More frequent in those with underlying cognitive dysfunction |                                                                                                                                             |
| Pruritis                                            | • Often self-limiting; may benefit from opioid rotation/dose reduction, cool compresses & moisturizers  
• Symptomatic management may include non-sedating antihistamines |
| • Usually transient; histamine release              |                                                                                                                                             |
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, Duloxetin 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?

→ 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 = 0.6 – 0.7 > 0.8

Refer to VASCULAR SURGEON local wound care
Moderate compression with 3 layer bandage system
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

- **Treat the cause**
  - Revascularization ABI
  - Compression
  - Treat infection if present

- **Treat the wound**
  - Moist wound healing if adequate blood supply to heal
  - PREmedicate analgesia 30-60 min BEFORE dressing change

- **Treat the patient**
  - Pain
  - Compliance
  - Education
  - Manage anemia and protein malnutrition
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.

Symptoms (numbness, prickling, pain)

- ↓ Nerve conduction velocity
- ↓ Vibratory sensation
- ↓ Reflexes
- ↓ Pressure sensation, ↓ temperature sensation
- Foot ulcer
- Amputation

Subclinical | Clinical

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 upon\(^1\)
  - Accurate diagnosis of any underlying etiology
  - Preventive treatment of underlying etiology (eg, diabetes and joint inflammation) if possible

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).

### Guidelines Neuropathic Pain management

**1st Line**
- Gabapentinoids
  - Gabapentin
  - Pregabalin
- Antidepressants tricyclics (ADT) or tetracyclics
  - *Tertiary Amines:*
    - Amitriptyline
    - Clomipramine
    - Imipramine
  - *Secondary Amines:*
    - Nortriptyline
    - Desipramine
  - *Tetracyclic:*
    - Maprotiline
- Local Anesthetics
  - Topical Lidocaine 10 %.

**2nd Line**
- SNRI
  - Venlafaxine
  - Duloxetine
- Cannabinoids
  - Dronabinol
  - Nabilone
- THC/CBD by mouth

**3rd Line**
- ISRS
  - Citalopram
  - Paroxetine
- Other antidepressant
  - Bupropion
- Other anticonvulsants
  - Topiramate
  - Carbamazepine
  - Levétiracétam
  - Lamotrigine

**4th Line**
- Methadone
- Kétamine
- Mexilétine
- Baclofène
- Clonidine
- Clonazépam

**AVOID**
- Meperidine
- Phenytoïne
Diabetic Peripheral Neuropathic Pain: A Frequent and Debilitating Complication

- 10%-20% of patients with diabetic peripheral neuropathy develop pain\(^1\)
- This pain broadly interferes with daily functioning and quality of life\(^1-4\)
  - 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

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

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 (SHT)

5. Descending way Inhibition of ascending pathways

Inhibition of ascending pathways

- opioids
- Local Anesthetics
- Antiepileptics
- NSAIDs/Acetaminophen

Inhibition of descending pathways

- SNRI Inhibitor of reuptake of norepinephrine
- SSRI Inhibitor of reuptake of serotonine
- Antidepressant tricyclics
- Opioids

Ascending way

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. AINS = anti-inflammatoires non stéroïdiens


Mechanisms of Action of Selected Analgesics

Inhibition of pain signal transmission in ascending pathways

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

Enhancement of pain modulation by descending pathways

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

Adjuvants for Specific Chronic Pain Disorders

- Fibromyalgia
  - Duloxetine, pregabalin, amitriptyline

- Osteoarthritis
  - Duloxetine

- Migraines
  - Topirimate, amitriptyline, B Blockers
Adjuvants for Specific Chronic Pain Disorders

- **Trigeminal Neuralgia**
  - Carbamezepine 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
<table>
<thead>
<tr>
<th>Adjuvants most used, Most frequent side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tricyclics (eg amitriptyline, nortriptiline)</strong></td>
</tr>
<tr>
<td>- Anticholinergic side effects (dry mouth, constipation, dizziness, urinary retention, cardiovascular…). Can do nortriptiline blood levels</td>
</tr>
<tr>
<td><strong>SNRIs (eg Duloxetine) have equal pain efficacy to Tricyclics for the most part and less side effects (GI nausea, loose BM,…)</strong></td>
</tr>
<tr>
<td><strong>Anticonvulsivants (carbamazepine, gabapentin, pregabalin)</strong></td>
</tr>
<tr>
<td>- Carbamezapine (confusion, pulmon edema, nausea/vo,) Narrow therapeutic window, please do blood levels</td>
</tr>
<tr>
<td>- Gabapentin and Pregabalin (sedation, weight gain/edema,…). Pregabalin better tolerated than gabapentin</td>
</tr>
</tbody>
</table>
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
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

Revised by Dr. Cuong Ngo Minh, Feb 4th 2014
INTERNET RESOURCES FOR PAIN

Health Care Providers

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

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

www.managingpaitogether.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