Pain management in older persons: An evidence-based approach

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May 15, 2013

About ISMP Canada

ISMP Canada is an independent not-for-profit organization dedicated to reducing preventable harm from medications.
Our goal is the creation of safe and reliable systems for managing medications in all environments.

www.ismp-canada.org
Canadian Medication Incident Reporting and Prevention System (CMIRPS)

**ISMP Canada is a key partner in CMIRPS** with Health Canada, the Canadian Institute for Health Information (CIHI), with support from the Canadian Patient Safety Institute (CPSI)

**Goals of CMIRPS:**
- Collect data on medication incidents;
- Facilitate the implementation of reporting of medication incidents;
- Facilitate the development and dissemination of timely, targeted information designed to reduce the risk of medication incidents (*e.g.* ISMP Canada Safety Bulletins); and
- Facilitate the development and dissemination of information on best practices in safe medication use systems.

We encourage you to report medication incidents

**Practitioner Reporting**
https://www.ismp-canada.org/err_report.htm

**Consumer Reporting**
www.safemedicationuse.ca/
To Keep Up to Date with the Latest News on Medication Safety Follow Us on:
Twitter @SafeMedUse
Facebook:
www.facebook.com/MedicationSafety
UPCOMING WORKSHOPS

Multi- Incident Analysis Workshop
   May 16th, 2013 - Toronto, ON

BPMH Training for Pharmacy Technicians
   June 11th and September 18th, 2013 - Toronto, ON

Root Cause Analysis (RCA) Workshop for Pharmacists
   September 26th, 2013 – Toronto, ON

Failure Mode and Effects Analysis (FMEA) for Pharmacists
   September 27, 2013 - Toronto, ON

Questions

1. Raise your hand. If you have a phone icon by your name we will un-mute your phone and you can ask your question.

2. Type your question in the chat box.

3. Email your question to webinars@ismp-canada.org

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on Use in Older Persons Information Page

**Rationale**

This information page is intended for healthcare providers, caregivers, and older persons themselves. It aims to provide guidance on how to safely manage medications in older persons, who are at higher risk of adverse drug events due to age-related factors.

**Content Overview**

1. **Medication Use in Older Persons**
   - **Overview**: Importance of medication management in older persons.
   - **Guidelines**: General principles for medication use in older adults.
2. **Common Drug Interactions**
   - **Overview**: Identification and management of common drug interactions in older adults.
3. **Medication Safety Tips**
   - **Tips for Providers**: Practical strategies for improving medication safety in older patients.
   - **Tips for Patients**: Steps older adults can take to reduce medication errors.
4. **Resources**
   - **Online Resources**: Links to further information and educational materials.
   - **Print Resources**: Materials for providers and patients.

**For Feedback**

If you have comments or suggestions on this page, please contact us at info@safepractice.ca.

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**On Use in Older Persons Information Page

**Links to Relevant Resources**

- **HTMA Communities of Practice websites on Medication Safety in LTC**
  - [Link to HTMA website]

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**HTMA Communities of Practice websites on Medication Safety in LTC**

1. **Importance of Medication Use in Older Persons**
   - [Part 1: Q&A, February 2019](#)
   - [Part 2: Understanding the Importance, November 2019](#)
   - [Part 3: Assessing the Results, October 2019](#)
   - [Part 4: Association with Reduced Hospitalization, September 2019](#)
   - [Part 5: Culture in Healthcare, December 2019](#)
   - [Part 6: Medication Use Process, October 2020](#)
   - [Part 7: Improving Medication Management, November 2020](#)

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**On Use in Older Persons Information Page**

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**Medication Use in Older Persons**

- [Importance of Medication Use in Older Persons, March 21, 2013](#)
- [Q&A Session, February 2019](#)
- [Understanding the Importance, November 2019](#)
- [Assessing the Results, October 2019](#)
- [Association with Reduced Hospitalization, September 2019](#)
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- [Medication Use Process, October 2020](#)
- [Improving Medication Management, November 2020](#)
MEDICATION SAFETY COMMUNITY OF PRACTICE

The goal of the Medication Safety Community of Practice (COP) is to improve medication safety within Long Term Care (LTC) homes in Ontario. To receive some of the best available resident medication guidelines, check out "Read More..." below.

The role of the MedSafe COP is to:
- Improve medication safety in LTC homes through the development of tools and resources for practitioners.
- Support the implementation of evidence-based practices in LTC homes.
- Facilitate knowledge exchange and collaboration among practitioners.

Scope of Practice:
- Medication Adherence
- Medication Education
- Medication Management
- Medication Safety
- Medication Use

Objectives:
- To improve medication safety in LTC homes.
- To support the implementation of evidence-based practices in LTC homes.
- To facilitate knowledge exchange and collaboration among practitioners.

Key Findings:
- Medication errors are common in LTC homes.
- Compliance with medication regimens is often poor.
- Lack of adequate monitoring and follow-up can lead to adverse events.

Conclusions:
- The development of a comprehensive approach to medication safety is essential.
- Regular review and update of medication protocols are necessary.
- Education and training of staff on medication safety are crucial.

Figure 1: Types of incidents in long-term care facilities that result in harm to residents. (A) The figure shows a visual analysis of aggregate data from the COP’s medication incident database. The data represents incidents reported in LTC homes in Ontario. The figure highlights the types of incidents that contribute to resident harm. The most common types of incidents are:
- Medication errors
- Inadequate monitoring
- Medication administration
- Medication storage

Figure 2: Pie chart showing the distribution of medication incidents. The chart indicates that medication errors alone make up a significant portion of incidents. Other common types of incidents include inadequate monitoring and medication administration.

Footnotes:
- Data from COP’s medication incident database. (2011)
Speaker – Dr Zacharias

Dr. Zacharias obtained his Doctorate of Medicine from the University Of Western Ontario in 1980. He is currently the Medical Director and attending physician at the Village of Erin Meadows, a 180 bed Long Term Care home. He is the Director of Clinical Services for the Schlegel Villages which includes 11 LTC facilities caring for over 2500 seniors in Ontario. He is also the Medical Director of the Chronic Pain Management Unit at Hamilton Health Sciences. In 2012 he was appointed as a Coroner in the Province of Ontario.

Speaker - Diane MacEachern

Diane MacEachern graduated with a Bachelor of Science in Nursing from McMaster University in 1991. After four years of working for both the Scarborough Health Department and the Oshawa General Hospital she returned to York University and in 1997, graduated from the Ontario Primary Care Nurse Practitioner Program. Diane is currently a member of NPSTAT, the CE LHIN’s nurse practitioner long-term care outreach team. She is also the primary care provider to the fifty residents on the assisted care floor at The Village of Taunton Mills Retirement Home in Whitby. Diane returned to York University two years ago to pursue her Master of Science in Nursing with a focus in education and leadership which she will complete this summer. She has a keen interest in education and has preceptored students, lectured and tutored in the Ontario NP program. She has also been a Clinical Instructor in the Faculty of Health Sciences, BScN program at UOIT.
Speaker - Seh-Hwan Ahn

Seh-Hwan Ahn graduated from the University of Toronto Faculty of Pharmacy in 2003. After working several years in the community as a pharmacist, he has worked over 5 years as a consultant pharmacist in long term care for MediSystem Pharmacy.

Pain management in the older person: An evidence-based approach

Presented By:

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Diane MacEachern RN(EC) NP-PHC BScN MScN(c)

May 2013
Dr. Ramesh Zacharias
Disclosures:

- Unrestricted education grant:
  - Sanofi-Aventis
- Speakers honoraria:
  - Schering-Plough, Sanofi-Aventis, Pfizer, Janssen, Purdue Pharma
- Consulting projects:
  - Ontario MOHLTC, Atlantic Region Ministries of Health and Education, CIDA Inc., Ministries of Health Malaysia and Kerala India
Key Learning Objectives:

- Recognition of pain in older persons
- Principles of pain assessment and available tools for the cognitively well and cognitively impaired older persons.
- Pain management including pharmacological and non-pharmacological approaches.
- Monitoring to ensure effectiveness of treatment.

“Pain is whatever the experiencing person says it is, existing whenever he/she says it does”.

~McCaffery (1968)

“Defining pain, distinguishing between the different types of pain, and understanding the way in which noxious stimuli are transmitted from the periphery to the part of the brain where pain is perceived, are essential to assessing pain and providing adequate pain relief.”

~McCaffery & Pasero, 1999
Case VG

- 88 year old female
- History of Diabetes, CAD, Peripheral Vascular, Alzheimer’s Disease, Hypertension, Arthritis
- Required a below knee amputation for gangrene in left foot and then 6 months later in her right foot

Case VG medications:

- acetaminophen 500mg TID
- citalopram 20mg daily
- donepezil 10mg daily
- ferrous fumarate 300mg OD
- metformin 500mg BID
- Novolin 30/70 inject 12 units QAM
- hydrochloride 10mg daily
- ramipril 2.5mg daily
- rosuvastatin 5mg daily
- rabeprazole 20mg
- vitamin D 1000 units daily
- lorazepam 0.5mg qhs,
- quetiapine 12.5mg at 12:00 & 25mg at 19:00
Epidemiology of pain in older persons:

- Chronic pain is a complex problem with both clinical and psychological implications.

- Chronic pain affects 20% of Canadians and jumps to 60% of those over 65. Chronic Pain in Canada: Prevalence, Treatment. Impact and Role of Opioid Analgesia, Moulin, D et al., Pain Research and Management, 2002. 7:179-84.

- Epidemiologic studies show a very high prevalence of persistence pain, often exceeding 50% of community dwelling older patients and up to 80% of nursing home resident. Gibson, SJ, Expert Review of Neurotherapeutics. 7(6): 627-35, 2007 June.


- The impact of poorly managed chronic pain on the quality of life of elderly patients and the problems related to its management are widely acknowledged. Auret K et al. Drugs and Aging. 22(8): 641-54, 2005.
As high as 83% of LTC residents struggle with daily pain

Without standardized pain assessment methods: caregivers are unaware which of their patients experience daily pain

44.2% of participants: pain level during vital sign assessment was the same as on admission/completion of initial pain history form

Keeney C. et al. (2008). Initiating and sustaining a standardized pain management program in long-term care facilities. JAMDA. 10, 347-353

Educational needs of health care providers working in LTC facilities with regard to pain management

Y Tousignant-Laflamme et al. Pain 2012Research and Management Vol 17 No 5 September/October

- Recognition
- Assessment
- Treatment
- Monitoring

Pain in older persons: Recognition

Non-specific signs and symptoms suggestive of pain:

- Frowning, grimacing, fearful facial expressions, grinding of teeth
- Bracing, guarding, rubbing
- Fidgeting, increasing or recurring restlessness
- Striking out, increasing or recurring agitation
- Eating or sleeping poorly
Inadequate pain treatment in older persons...

- Consequences of untreated pain
  - Depression/social isolation
  - Suffering
  - Sleep disturbance
  - Behavioral problems
  - Anorexia, weight loss
  - Deconditioning, increased falls

Pain and the cognitively impaired patient:

- Pain is underappreciated and undertreated in the elderly with cognitive impairment
- Consider pain as an independent source of agitation
- Rule out delirium (may overlap dementia)
- Do not assume that the quiet non-communicative patient is not in pain
  - Assessing pain behaviours may be more useful than using self-report scales alone

Ferrell BA. Consult Pharm. 2010;25 Suppl A:5
Assessment:

The most common reason for unrelieved pain is the failure of staff to routinely assess pain and pain relief.


- comprehensive and systematic assessment is essential before prescribing any treatment to alleviate pain and related suffering.

(Hadjistavropoulos et al, 2007)

Assessment and the older person...

- in addition to the general issues that affect the pain assessment and management of people of any age, specific concerns include:
  1. the myth that having pain is “natural” for older adults
  2. The myth older adults perceive less pain than younger adults
  3. unjustified fears about possible addiction to opioids
  4. sensory and cognitive impairments
  5. increased stoicism that makes many seniors less likely to report pain
  6. fear of inducing respiratory depression or fear of giving the last or lethal dose of opioids

(Hadjistavropoulos et al, 2012; Tousignant-Laflamme et al, 2012)
Key principles of pain assessment and management include...

- Patients/residents have the *right* to the best pain relief possible.
- Unrelieved acute pain has *consequences* and pain should be *prevented* where possible.
- Effective pain assessment and management is *multidimensional* in scope and requires coordinated *interdisciplinary* intervention.
- Clinical *competency* in pain assessment and management demands ongoing *education.*

(RNAO, 2009)

Generally...

- Self-report is the primary source of assessment for verbal, cognitively intact persons. Family/caregivers reports may be included for those unable to self-report.
- Select a systematic, validated assessment tool to assess basic parameters of pain.
- Use a standardized tool with established validity to assess *intensity* of pain (i.e. verbal scale, faces scale, behaviour scale, visual analogue scale *VAS* or numeric rating scale *NRS*).
- If one is unable to give self-report, pain assessment may include behavioral indicators using standardized measures (i.e. Checklist of Nonverbal Pain Indicators *CNPI*).

(RNAO, 2007)
Baseline assessment of pain...

- **Identify location of pain**
- **Identify PQRST characteristics:**
  - P - provocating and precipitating factors, relieving factors
  - Q - quality of pain (eg. burning, stabbing, gnawing, shooting, lancinating, aching)
  - R - radiation
  - S - severity (use an appropriate intensity scale)
  - T - timing
- **Identify the effects of pain on function and activities of daily living.**

(RNAO, 2009)

### Pain Assessment Tools

#### Unidimensional scales
- Numeric Rating Scale
- Verbal Rating Scale
- Visual Analog Scale
- Faces Pain Rating Scale

#### Multidimensional scales
- Brief Pain Inventory
- McGill Pain Questionnaire
- Neuropathic Pain Scale

Comprehensive assessment should include:

- Physical exam, lab tests, other diagnostic data
- Effect and understanding of current illness
- History of pain, meaning of pain/distress caused by pain; coping responses to pain and stress; effects of pain of ADLs
- Psychosocial and spiritual effects; psychological effects (anxiety/depression)
- Situational factors (culture, language, ethnic factors, financial impact of pain and treatment)
- Individual preferences and extractions/beliefs/myths re: tx, preference and response to education r/t condition and pain (RNAO, 2007)
What about the resident/patient with poor cognitive functioning?

- pain problems are often overlooked, under-assessed and mis-assessed, especially among seniors with dementia.
- under-treatment of pain among seniors and inadequate assessment of pain among people with cognitive impairments create difficult ethical situations for pain clinicians

(Hadjistavropoulos et al., 2007)
Checklist of Nonverbal Pain Indicators:

- **Facial expression** (sad, frightened, grimacing, squinting)
- **Verbalizations, vocalizations** (moaning, groaning, calling out, noisy breathing)
- **Body movements** (rigid, tense, guarding, rocking, pacing, restricted movement, rubbing a body part)
- **Changes in interpersonal interactions** (aggressive, combative, restless, resisting care, withdrawn)
- **Changes in activity patterns or routines** (changes in appetite, sleep, increased wandering)
- **Mental status changes** (crying, increased confusion, irritability, agitation)

(Feldt, 2000)

<table>
<thead>
<tr>
<th>Cognitive Status</th>
<th>Practical Suggestions for Scale Selection</th>
<th>Comments and References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older people with no significant cognitive/communication impairment and older people with mild to moderate cognitive/communication impairment</td>
<td>Numeric graphic rating scale. Verbal rating scale. Numerical rating scale (0-10)</td>
<td>High validity and reliability in older people. Can be used in mild/moderate cognitive impairment. Vertical as opposed to horizontal orientation may help to avoid misinterpretation in the presence of visuo-spatial neglect, e.g. in patients with stroke.</td>
</tr>
<tr>
<td>Cognitive Status</td>
<td>Practical Suggestions for Scale Selection</td>
<td>Comments and References</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Older people with moderate to severe cognitive/communication impairment</td>
<td>Pain Thermometer</td>
<td>Easy to use</td>
</tr>
<tr>
<td></td>
<td>Colored Visual Analogue Scale</td>
<td>Validity has not been fully evaluated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Well understood in early and mid-stage state of Alzheimer’s disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Older people with severe cognitive/communication impairment (no single recommendation currently possible) - observational pain assessment helpful</td>
<td>Abbey Pain Scale</td>
<td>Short and easy to apply scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requires more detailed evaluation.</td>
</tr>
</tbody>
</table>

**Multidimensional assessment**
Older people with minimal cognitive impairment

<table>
<thead>
<tr>
<th>Practical Suggestions for Scale Selection</th>
<th>Comments and References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief Pain Inventory</td>
<td>15- item scale assessing: severity, impact on daily living, impact on mood and enjoyment of life.</td>
</tr>
</tbody>
</table>
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>

Observed Changes Associated with Pain Cont’d:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbalisations/vocalisations</td>
<td>Sighing, grunting, groaning, moaning, screaming, calling out, aggressive/offensive speech</td>
</tr>
<tr>
<td>Interpersonal interactions</td>
<td>Aggression, withdrawal, resisting</td>
</tr>
<tr>
<td>Changes in activity patterns</td>
<td>Wandering, altered sleep, altered rest patterns</td>
</tr>
<tr>
<td>Mental status changes</td>
<td>Confusion, crying, distress, irritability.</td>
</tr>
</tbody>
</table>
Ideal treatment of persistent pain:

Physical / Rehabilitative

(CAM)

Psychological

Medical

Pharmacological

Interventional
Treatment: Pain Management Goals:

- Decrease pain
- Improve function
  - Physical
  - Psychological
  - Social
- Minimize risk
  - Patient
  - Physician
  - Society

Goal: Optimal Pain Relief

Risks
Tolerability
Patient Characteristics

Safety
Efficacy
Function/QOL

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

## Pain Prevalence in Older Adults and Gaps in Treatment Across Care Setting: *Courtesy Dr Keela Herr*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Prevalence of pain</th>
<th>No Pain Treatment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Home (551 OA/6 NHs)</td>
<td>51.4% intact 47.7% impaired</td>
<td>20% intact 44% impaired</td>
</tr>
<tr>
<td>(Reynolds et al., 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital (367 OA/8 hosp)</td>
<td>67% pain present</td>
<td>51% no treatment or inadequate for intensity</td>
</tr>
<tr>
<td>(Gianni et al., Arch Geront &amp; Geriatrics, 2010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emerg Dept (1454 &gt;65 hip fx)</td>
<td>Mean pain intensity=7</td>
<td>40% patients no analgesic ordered</td>
</tr>
<tr>
<td>(Herr &amp; Titler, Emerg Nsg, 2009)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Care (2779 OA)</td>
<td>48% daily pain</td>
<td>22%</td>
</tr>
<tr>
<td>(Maxwell et al., 2008)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Barriers to Pharmacological Pain Management
*Courtesy Dr Keela Herr*

- **Provider Knowledge Gaps**
  - No consistent training on geriatrics and/or pain in professional education
  - Knowledge to balance benefits/risk for best treatment plan

- **Knowledge Gaps Re: Analgesic Use in Older Adults**
  - Strength of evidence in existing pain guidelines for older adults
  - Limited research on analgesic use in older adults, specifically the complex including cog impaired

- **Political/Regulatory Climate**
  - National Public Health Concerns Re Opioid Misuse/Abuse (CDC)
  - Federal concern re: safe and effective analgesic use (FDA; NIA; NIH Pain Consortium)
  - PROP—physicians for responsible opioid prescribing

(Kaasa et al., 2010, 2012; Taylor, Lemtounti, Weiss & Pergolizzi, 2012, Current Geron & Ger Res,12; Chou et al., 2009, J Pain, 10(2):133-138)
Barriers to Pharmacologic Pain Management in Older Adults: Patient Issues

- **Multidrug Regimens**
  - Drug-drug Interactions
  - Adverse reactions
  - Compliance issues

- **Cognitive Impairment**
  - Ability to request Administration
  - Adherence

- **Opiophobia**
  - Fear of addiction and side effects

- **Physiologic Changes**
  - Frailty System declines Comorbidities
  - Effect on analgesia

Non-Pharmacological Methods of Pain Control...

- **Heat & Cold** - it works well for some patients, works quickly, adverse effects are virtually non-existent, may provide some patients/families with a sense of control over the relief of pain.
- **Relaxation** - may be appropriate for almost any type of pain with a goal of reducing muscle tension and anxiety.
- **Guided Imagery** – may help by taking attention away from pain, but caution should be used in using relaxation and imagery with patients who are, confused, drowsy, have a poor grasp of the language of the relaxation therapist, have a significant psychiatric history including auditory or visual hallucinations
- **Distraction**
- **Other** – music, therapeutic touch, massage, reflexology, Reiki and aromatherapy

(RNAO, 2009)
AGS Recommendations 2009

- Acetaminophen as initial and ongoing pharmacotherapy particularly musculoskeletal pain
- NSAIDS AND Cox-2 selective inhibitors may be considered rarely and with extreme caution
- Opioids for all patients with moderate-to-severe pain

Opioid Guideline 2010

- Opioid therapy for elderly patients can be safe and effective (Grade B) with appropriate precautions, including lower starting doses, slower titration, longer dosing interval, more frequent monitoring, and tapering of benzodiazepines (Grade C).
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
- M-Eslon can be opened and put in G-Tubes

Opioid treatment in older persons:

- Transdermal fentanyl patch is another option for patients requiring around-the-clock pain control
- 2005 FDA advisory: “should only be used in patients who are already receiving opioid therapy, who have demonstrated opioid tolerance and require a daily dose of at least 25 mcg/hr”
- Transdermal buprenorphine recently available in Canada —once weekly for moderate pain safe in opioid naïve patients
Chronic Neuropathic Pain
Guidelines from CPS

FIRST LINE
- Tricyclic antidepressants (Amitriptyline, nortriptyline)
- Gabapentinoids (gabapentin, pregabalin)
- Carbamazepine and oxycarbazepine in TN

Clin Interv Aging, 2008 March; Clair Haslam and Turo Nurmikko

Neuropathic Pain—Cont’d

SECOND LINE
Serotonin Noradrenaline Reuptake Inhibitors
- Venlafaxine
- Duloxetine
- Topical Lidocaine mixtures
Neuropathic Pain Cont’d

THIRD LINE
- Opioids (Morphine, oxycodone, hydromorphone, methadone)
- Tapentadol CR
- Tramadol
- Citalopram and paroxetine
- Capsaicin

Neuropathic Pain Cont’d

FOURTH LINE
- Cannabinoids
- Methadone
Topical Analgesic Agents:

Lidocaine 5%, Amitriptyline 5%,

Ketoprophen 7.5%, Ketamine 10%

In PLO Gel or Lidoderm TID-QID

Newer Drugs:

- Transdermal buprenorphine – good for moderate pain in opioid naïve. Patch changed every 7 days
- Oxycodone Hydrochloride /Naloxone Hydrochloride
- Oxycodone hydrochloride controlled release tablets
- Tapentadol – IR/CR
- Fentanyl buccal soluble film - oral patch for breakthrough palliative care
Fentanyl and the Opioid Naive

- Because of the risk of life-threatening hypoventilation leading to death, fentanyl patch at any dose, including 12mcg/hours formulation, is **contraindicated in opioid-naive individuals**.
- Fentanyl should only be used in opioid tolerant (i.e. those who have been taking AT LEAST 60 mg of oral morphine daily, or 30 mg of oral oxycodone daily, or 8 mg of oral HYDROMorphone daily, or equianalgesic dose of another opioid daily, for a period of at least one week).
- Fentanyl may have altered pharmacokinetics in elderly, cachectic, or debilitated individuals, due to poor fat stores, muscle wasting or altered clearance. Therefore, it may be appropriate, according to clinical judgment, to initiate the dose at a level lower than recommended in conversion table (next slide).

### Table 1: Recommended dose conversion from current opioid to fentanyl Patch

<table>
<thead>
<tr>
<th>Current Analgesic</th>
<th>Daily dose (mg/day)</th>
<th>Recommended FENTANYL Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Morphine</td>
<td>60–134</td>
<td>25 mcg/h</td>
</tr>
<tr>
<td>IM/IV Morphine</td>
<td>20–44</td>
<td>25 mcg/h</td>
</tr>
<tr>
<td>Oral Oxycodone</td>
<td>30–66</td>
<td>37 mcg/h</td>
</tr>
<tr>
<td>Oral Codeine</td>
<td>150–447</td>
<td>50 mcg/h</td>
</tr>
<tr>
<td>Oral Hydromorphone</td>
<td>8–16</td>
<td>62 mcg/h</td>
</tr>
<tr>
<td>IV Hydromorphone</td>
<td>4.0–8.4</td>
<td>75 mcg/h</td>
</tr>
</tbody>
</table>

*Table 1 should not be used to convert from fentanyl patch to other opioids

NA (not applicable) – reflects insufficient data available for guidance. If needed, prescribers should make these conversions very carefully and conservatively.

Avoid in Elderly (Beer’s List)

- Demerol (Meperidine)
- Talwin (Pentazocine)
- Long acting benzodiazepines
- High dose Tylenol, no more than 2.6g/day
- NSAIDS & Indomethacin
- Pentazocine
- Skeletal Muscle Relaxants
- Codeine

Demerol (meperidine): Not an effective oral analgesic in dosages commonly used; may cause neurotoxicity

Talwin (Pentazocine): Opioid analgesic that causes CNS adverse effects, including confusion and hallucinations, more commonly than other narcotic drugs

Long acting benzodiazepines: Older adults have increased sensitivity to benzodiazepines and slower metabolism of long-acting agents. In general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle accidents in older adults

High dose Tylenol (acetaminophen), no more than 2.6g/day
NSAIDS: (eg Aspirin >325mg/d, Diclofenac, Ibuprofen, Meloxicam, Naproxen, etc.) & Indomethacin

Increases risk of GI bleeding and peptic ulcer disease in high-risk groups, including those aged > 75 or taking oral or parenteral corticosteroids, anticoagulants, or antiplatelet agents. Use of proton pump inhibitor or misoprostol reduces but does not eliminate risk. Upper GI ulcers, gross bleeding, or perforation caused by NSAIDs occur in approximately 1% of patients treated for 3–6 months and in approximately 2–4% of patients treated for 1 year. These trends continue with longer duration of use.

Pentazocine: Opioid Analgesic that causes CNS adverse effects. Including confusion and hallucinations, more commonly than other narcotic drugs

Skeletal Muscle Relaxants (eg. Cyclobenzaprine, Methocarbamol, Orphenadrine, etc): Most muscle relaxants are poorly tolerated by older adults because of anticholinergic adverse effects, sedation, risk of fracture; effectiveness at dosages tolerated by older adults is questionable
**Codeine:**
- Note: Not on the Beer's List
- Codeine is bioactivated by CYP2D6 into Morphine in body
- Great genetic/interethnic differences in metabolizing codeine
- CYP2D6 ultra-rapid metabolism phenotypes may have more active metabolite than expected leading to serious adverse drug reactions
- Conversely, slow metabolizers may have no analgesic effect from codeine and no pain relief
- Risk of overdose also when combined with the inhibition of CYP3A4 by other medications and the accumulation of active metabolites because of renal failure

**Side Effect Monitoring**

When using analgesics, things to watch for are:
- Sedation & falls
- Nausea/Vomiting
- Constipation
- Myoclonus
- Confusion or agitation
- Dry mouth
Side Effect Management

Nausea/Vomiting

• **dimenhydrinate** 25-50mg po / 50-100mg pr q4-6h prn or scopolamine transdermal patch q48-72h
• **prochlorperazine** 5-10mg po/pr q4-6h prn
• **metoclopramide** 10-15mg po/sc/ or domperidone 10mg po tid-qid, if gastric motility reduced
• Add / try **haloperidol** 0.5-5mg po/sc bid-tid

Side Effect Management

Constipation

Regular doses of agents:
1. Avoid stool softener (**docusate**) – not effective
2. Stimulant laxative (e.g. **biscacodyl** 10-15mg or **sennosides** 2 tabs at qhs, up to 8 tabs qhs, can use bid or tid
Additive, stepwise progression:
3. **Lactulose** 15-30mL up to q3h till BM / Milk of magnesia 30-60mL daily
4. **Fleet / mineral oil** enemas +/- mineral oil
Side Effect Management

**Myoclonus** (involuntary twitching of a muscle or group of muscle)
- Decrease opioid dose slightly
- If severe, switch to another opioid (more common with meperidine)
- **lorazepam** 1-2mg sl or **diazepam** 5mg po/pr q6-8h

Side Effect Management

**Confusion or agitation**
- More often due to concurrent use of sedative meds (benzodiazepines)
- Usually occur during first weeks of therapy (7-14 days)
- Tolerance with continued use frequently develops once stable dosing is achieved
Side Effect Management

**Dry mouth**
- Common with potent opioids
- Frequent sips of water, ice chips
- **Biotene** toothpaste & mouthwash
- **Moi-stir** spray, **Oral Balance**
- Avoid OTC mouthwashes that contain alcohol

Back to Case Study: VG

Analgesics being used are:

- Gabapentin 200mg Q8H
- hydromorphone 1mg QAM
Efficacy of treating pain to reduce behavioural disturbances in nursing home residents with Dementia


[Graph showing the comparison between Control and Stepwise protocol for treatment of pain over 12 weeks]

Funding from The Mayday Fund

http://www.geriatricpain.org
Summary:

- Systematic and comprehensive assessment is critical for highest quality care
- 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

Pain in older people...

- Ask about pain regularly
- Assess pain systematically
- Believe the patient’s and family’s reports of pain and what relieves it
- Choose appropriate pain control options
- Deliver interventions in a timely, logical and coordinated fashion
- Empower patients and their families
We all must die  
But if I can save Him from days of  
Torture, that is what I feel is my great and  
Ever new privilege  
Pain is a more terrible lord of mankind  
than  
Even death himself  

~Albert Schweitzer, 1939.

References

- http://www.geriatricpain.org
Thank you for your participation...

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UPCOMING WORKSHOPS

Multi- Incident Analysis Workshop
May 16th, 2013 - Toronto, ON

BPMH Training for Pharmacy Technicians
June 11th and September 18th, 2013 - Toronto, ON

Root Cause Analysis (RCA) Workshop for Pharmacists
September 26th, 2013 – Toronto, ON

Failure Mode and Effects Analysis (FMEA) for Pharmacists
September 27, 2013 - Toronto, ON

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