Context

Patients who require opioids for chronic pain management might need to be switched to another opioid due to:

- lack of patient response to a particular opioid, or
- lack of availability of the medication (e.g., discontinuation of a particular opioid, change in insurance coverage or back order from the manufacturer).

Management

Ambulatory setting:

- Ideally switching opioids should not be attempted in walk-in clinics or emergency rooms unless follow up can be assured.
- Consider using the National Pain Centre Opioid Manager.
- Use medication reconciliation or best possible medication history (BPMH) to inform decisions. Refer to the Institute for Safe Medication Practices Canada (ISMP).

Communication:

- Communication between prescribers and dispensers is paramount.
- Regular communication with the patient is vital. The patient’s actual medication use may be different from information contained in records or on the prescription vial. It is important to communicate more frequently (i.e., at least once a week) with the patient when there are medication or dosage changes.

About Opioid Conversion

General Guidelines

- Determine the daily opioid dose in morphine equivalent dose (MED). If the dose is greater than 200 mg MED per day reassess the need for such a high dose.
- Refer to the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain:
  - Chronic non-cancer pain can be managed effectively in most patients with dosages at or below 200 mg/day of morphine or equivalent (Grade A). Consideration of a higher dosage requires careful reassessment of the pain, the risk for misuse along with frequent monitoring with evidence of improved patient outcomes (Grade C).
  - For patients experiencing unacceptable adverse effects or insufficient opioid effectiveness from one particular opioid, try prescribing a different opioid or discontinuing therapy (Grade B).

Important Notice: This Opioid Advice resource is intended to provide general information on prescription narcotics, and should be used for informational purposes only. This resource does not provide any medical diagnoses, symptom assessments or medical opinions for individual users.
About Opioid Conversion (cont’d)

Switching Opioids
Because of unpredictable and incomplete cross-tolerance from one opioid to another, suggested initial doses of the new opioid are as follows:

<table>
<thead>
<tr>
<th>If previous opioid dose was:</th>
<th>Then, SUGGESTED new opioid dose is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>50% or less of previous opioid (converted to morphine equivalent)</td>
</tr>
<tr>
<td>Moderate or low</td>
<td>60 – 75% of the previous opioid (converted to morphine equivalent)</td>
</tr>
</tbody>
</table>

Adjust dose up or down as necessary to relieve withdrawal symptoms without inducing sedation. Consider daily observed dosing if necessary and feasible.

Key safety issues for consideration
1. The cross tolerance to opioids is not complete.
2. All health care providers should advise the patient of the risk of overdose and the signs and symptoms of intoxication from opioids.
3. Physicians should indicate NEW or SWITCH on the prescription to alert the pharmacist that the opioid is being switched.
4. Consider switching an opportunity to re-evaluate benefits and risks of opioids for pain.
5. Pharmacists should check the conversion based on previous doses of opioids prescribed (when available) and how the medication was being taken before the switch.
6. Morphine equivalent dose is recommended based on best possible medical history (BPMH). Speak to patients but communication between prescribers is crucial.
7. Check for medication interactions that can cause inhibition of metabolic pathways. Medication interactions can lead to toxicity. Medications may increase or decrease elimination of the new opioid via either the hepatic or renal route.
8. Carefully monitor the use of other substances that may potentiate the sedative/respiratory depressant effects of opioids (e.g., alcohol, benzodiazepines, barbiturates).
9. As a rule, under-replace and titrate up after three to five half-lives to prevent overdose.
10. Special consideration should be given when converting to fentanyl (see table below).

Advice to family members and caregivers:
- The patient should take medications as prescribed.
- No unauthorized increases to the dose.
- Watch for sedation, slurred speech, slowed breathing. If they appear drowsy, don’t let them fall asleep and get them to an ER by calling 911.
- If the individual is already asleep and is making an unusual or loud snoring sound, this may be a sign of overdose. Attempt to wake them and get them to an ER by calling 911.
- Note: Patients can be aggressive when in withdrawal. Maintain safety and request external help if necessary.
Opioid Conversion Worksheet

Use the following worksheet to calculate the dose equivalent:

Patient name: ____________________________ Today’s date: _____ / _____ / _____
Switching from ____________________________ to ____________________________
Start switching on Monday: _____ / _____ / _____

Current opioid(s) regimen:
(1) Opioid name, dose and frequency: ____________________________________________
(2) Opioid name, dose and frequency: ____________________________________________
(3) Opioid name, dose and frequency: ____________________________________________

Current total daily dose of opioid: _____/day

Switching from current opioid to morphine equivalent:
Morphine to morphine: multiply by 1
Oxycodone to morphine: multiply by 1.5
Hydromorphone to morphine: multiply by 5
Current morphine equivalence dose: _____/day

Switching to the new opioid: □ 50% □ 60% □ 75% □ other: ____________________________
Total morphine equivalents that will be converted to the new regimen: _____/day

Switching from morphine equivalent to the new opioid:
Morphine equivalent to morphine: multiply by 1
Morphine equivalent to oxycodone: multiply by 0.667
Morphine equivalent to hydromorphone: multiply by 0.2

From morphine equivalent to the new opioid:
The total daily dose of the new opioid is: _____/day

New opioid regimen:
(1) Opioid name, dose and frequency: ____________________________________________
(2) Opioid name, dose and frequency: ____________________________________________
(3) Opioid name, dose and frequency: ____________________________________________

Comments: ____________________________

_______________________________
_______________________________

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Opioid Advice:
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Oral Opioid Analgesic Conversion Table (National Pain Centre)

- The table is based on oral dosing for chronic non-cancer pain.
- The figures are based on the *Compendium of Pharmaceutical & Specialties* (Canadian Pharmacists Association 2008) and a systematic review by Pereira (2001). Wide ranges have been reported in the literature.
- These equivalences refer to analgesic strength of oral opioids, and not psychoactive effects or effectiveness in relieving withdrawal symptoms.

<table>
<thead>
<tr>
<th>Oral Opioid Analgesic</th>
<th>Equivalence to Oral Morphine 30 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equivalence to Oral Morphine 30 mg:</td>
</tr>
<tr>
<td>Morphine</td>
<td>30 mg</td>
</tr>
<tr>
<td>Codeine</td>
<td>200 mg</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>20 mg</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>6 mg</td>
</tr>
<tr>
<td>Meperidine</td>
<td>300 mg</td>
</tr>
<tr>
<td>Methadone and tramadol</td>
<td></td>
</tr>
</tbody>
</table>

**Equivalence between Oral Morphine and Transdermal Fentanyl**

- 60 – 134 mg morphine = 25 mcg/h
- 135 – 179 mg = 37 mcg/h
- 180 – 224 mg = 50 mcg/h
- 225 – 269 mg = 62 mcg/h
- 270 – 314 mg = 75 mcg/h
- 315 – 359 mg = 87 mcg/h
- 360 – 404 mg = 100 mcg/h

*Formulations include 12, 25, 50, 75 and 100 mcg/hour patches, but the 12 mcg/hour patch is generally used for dose adjustment rather than initiation of fentanyl treatment.*

Reproduced with permission from the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain @ 2010 National Opioid Use Guideline Group (NOUGG).
Opioid Advice:  
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### Formulary listing of Opioids

<table>
<thead>
<tr>
<th>Opioid Active Ingredient</th>
<th>Product Names</th>
<th>Drug Coverage under the Ontario Public Drug Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTORPHANOL</td>
<td>APO-BUTORPHANOL</td>
<td>Yes – EAP</td>
</tr>
<tr>
<td></td>
<td>ATASOL</td>
<td>Yes, generics only</td>
</tr>
<tr>
<td></td>
<td>292 TABLETS</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>CODEINE CONTIN-CONTROLLED RELEASE</td>
<td>Yes – Limited Use</td>
</tr>
<tr>
<td></td>
<td>TYLENOL WITH CODEINE NO. 2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>TYLENOL WITH CODEINE NO. 3</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>TYLENOL WITH CODEINE NO. 4</td>
<td>Yes</td>
</tr>
<tr>
<td>CODEINE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DURAGESIC</td>
<td>Yes, generics only – Limited Use (Note: not all strengths are covered)</td>
</tr>
<tr>
<td>FENTANYL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HYDROCODONE</td>
<td>HYCODAN</td>
<td>Yes</td>
</tr>
<tr>
<td>HYDROMORPHONE</td>
<td>DILAUDID</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>HYDROMORPHONE CONTIN-CONTROLLED RELEASE</td>
<td>Yes</td>
</tr>
<tr>
<td>MEPERIDINE</td>
<td>DEMEROL</td>
<td>Yes – Limited Use</td>
</tr>
<tr>
<td>METHADONE</td>
<td>METHADONE</td>
<td>Yes</td>
</tr>
<tr>
<td>MORPHINE</td>
<td>MS CONTIN</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>M-ESLON</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>KADIAN</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>STATEX</td>
<td>Yes</td>
</tr>
<tr>
<td>OXCODONE</td>
<td>OXCODONE IMMEDIATE RELEASE</td>
<td>Yes – EAP</td>
</tr>
<tr>
<td></td>
<td>OXCODONE CONTROLLED RELEASE</td>
<td>Yes – EAP (Note: not all strengths are covered)</td>
</tr>
<tr>
<td></td>
<td>PERCODAN</td>
<td>Yes, generics only</td>
</tr>
<tr>
<td></td>
<td>ENDOCET</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>SUPEUDOL</td>
<td>Yes – EAP</td>
</tr>
</tbody>
</table>

Note:
- General Benefit: no specific criteria for reimbursement; available to all ODB-eligible patients.
- Limited Use: prescriber must confirm that the patient meets certain criteria, which are listed on the formulary.
- Exceptional Access Program (EAP): Requests are only considered for a drug or indication which has been approved for funding by the Executive Officer. Specific clinical criteria for each of these drugs/indications must be met in order for EAP requests to be considered.

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Resources and links

Important Contact Information:
- Ontario Poison Control Centre: (416) 813-5900 (local) or 1-800-268-9017
- Addiction Clinical Consultation Service (CAMH) 1-888-720-2227
- Connex Ontario: 1-800-565-8603

Opioid Guidelines:
- National Opioid Use Guideline Group (NOUGG) recommendations (National Pain Centre@McMaster University)
- Canadian Guideline Practice Toolkit for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain (National Pain Centre@McMaster University)

Opioid Conversion:
- Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, R13 Recommendation Statement: Opioid tapering and switching
- OPA and OMA Message to Pharmacists re Opioid Conversion, 2012-02-23

Addiction Treatment and Protocols:
- Primary Care Addiction Toolkit (CAMH)
- Overview of Methadone Maintenance Treatment (CAMH KnowledgeX)
- RNAO Best Practice Guideline: Supporting Clients on Methadone Maintenance Treatment (available in English and French)
- Suboxone withdrawal management protocol (St. Joseph’s Health Centre)

Other:
- See the Ministry of Health and Long-Term Care's Ontario’s Narcotics Strategy homepage for a list of resources and references.

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