PROTOCOL FOR CHRONIC PAIN MEDICATION THERAPY MANAGEMENT

Pharmaceutical Services Division
Ministry of Health Malaysia
[2016]
# TABLE OF CONTENT

1. Introduction 4
2. Objectives 8
3. Scope of Service 8
4. Manpower Requirement 8
5. Appointments 9
6. Procedures 10
7. Pain Medication Therapy Management (Chronic Pain) Workflow 14
8. Appendixes:
   - Appendix I: Pharmacy Assessment Form: Chronic Pain 16
   - Appendix II: Pain Evaluation & Medication Review List 18
   - Appendix III: Indication, Education & Counselling Checklist 19
   - Appendix IV: Consent Form/ Borang Kebenaran 20
   - Appendix V: Counselling Points & Monitoring 22
   - Appendix VI: Strong Opioids 28
9. References 33
ADVISOR
Abida Haq bt Syed M. Haq
Director of Pharmacy Practice & Development
Ministry of Health Malaysia

CONTRIBUTORS
Nurul Adha Othman Pharmaceutical Services Division, MOH
Noor Liyana Yusup Pharmaceutical Services Division, MOH
Nik Nuradlina Nik Adnan National Cancer Institute, Putrajaya
Nur Irnawaty Zainol Hospital Selayang
Chevena Arunasalam Hospital Tengku Ampuan Rahimah, Klang
Jason Wong Soon Keong Hospital Tuanku Fauziah, Kangar
Azzira Liliati Salim Hospital Raja Permaisuri Bainun, Ipoh
Ummi Kalsum Lambak Hospital Melaka
Nurul Sahida Rani Hospital Sultanah Nur Zahirah, Terengganu
Sugendiren a/I Segeran Hospital Putrajaya
Munira Mohd Izat Hospital Kuala Lumpur
Izzati Abdul Halim Zaki Hospital Queen Elizabeth II, Kota Kinabalu

REVIEW PANEL
Dr Mary Suma Cardosa
Consultant Anaesthesiologist and Pain Management Specialist, Hospital Selayang

Rosminah Mohd Din
Pharmaceutical Services Division, MOH

Noraini Mohamad
Pharmaceutical Services Division, MOH
A. INTRODUCTION

Overview of pain

Generally pain is defined as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”. Pain is subjective and the patient’s self report is essential for appropriate management. The pain condition could lead to negative impact on social aspects including depression and loss of job.\textsuperscript{1,2} A basic approach to pain management should include the ability to RECOGNISE pain, ASSESS the type of pain and be able to provide appropriate TREATMENT either pharmacologically or non-pharmacologically.\textsuperscript{3}
Classification of Pain

On a practical basis, pain classification depends on four different systems which are; pathophysiological, based on pain duration, etiological and anatomical classification.

Pathophysiological classification is divided into two major types of pain, nociceptive and neuropathic. Nociceptive pain can be further subdivided into somatic and visceral pain, arises when tissue injury activates nociceptors which are very sensitive to noxious stimuli such as heat, cold, vibration, stretch stimulation, tissue disruption and inflammation. On the other hand, neuropathic pain is caused by structural damage and nerve cell dysfunction in the nervous system. In addition, nerve compression or abnormal pain signals may also lead to neuropathic pain.\(^2\)

Classification based on pain duration are commonly known as acute or chronic pain. Cancer or noncancer pain is another type of classification, but will not be further discussed here. Differentiating features of acute and chronic pain are further explained in Table 1 below.
<table>
<thead>
<tr>
<th></th>
<th><strong>Acute Pain</strong></th>
<th><strong>Chronic Pain</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td>A symptom of underlying damage or disease. No central nervous system involvement.</td>
<td>A chronic disease of nervous system. Central nervous system may be dysfunctional.</td>
</tr>
<tr>
<td><strong>Onset</strong></td>
<td>Begins suddenly, usually due to an injury.</td>
<td>Might have originated with an initial trauma/injury or infection, or there might be an ongoing cause of pain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>However, onset may be insidious and many people suffer chronic pain in the absence of any past injury or evidence of body damage.</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Less than 3 months, resolves when the injury heals and/or when the underlying cause of pain has been treated.</td>
<td>Usually more than 3 months. Chronic pain persists despite the fact that the injury healed.</td>
</tr>
<tr>
<td><strong>Characteristics of Pain</strong></td>
<td>Severity correlates with amount of damage.</td>
<td>Severity will not correlate with the amount of damage. The nature of the disease is that the pain level may be worse on some days and better on others so that patients have ‘bad days’ and ‘good days’.</td>
</tr>
<tr>
<td><strong>Psychological Effects</strong></td>
<td>Less but unrelieved pain can cause anxiety and sleep deprivation (which improves after pain is relieved).</td>
<td>Often may cause depression/anxiety, anger, fear, sleep disturbances and social withdrawal.</td>
</tr>
<tr>
<td><strong>Presence of Signal</strong></td>
<td>Acute pain serves as a warning sign of damage such as injury, disease or threat to the body.</td>
<td>Chronic pain does not signal damage.</td>
</tr>
<tr>
<td><strong>Common Causes</strong></td>
<td>Surgery, fracture, burns or cuts, labour and childbirth, myocardial infarction and inflammation such as abscess and appendicitis.</td>
<td>Headache, low back pain, cancer pain, arthritis pain, chronic pancreatitis, chronic abdominal pain from ‘adhesion colic’.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neuropathic pain such as post herpetic neuralgia, diabetic peripheral neuropathy, post spinal cord injury pain and central post-stroke pain.</td>
</tr>
</tbody>
</table>
Pain Medication Therapy Management Clinic

Pain Medication Therapy Management Clinic is an ambulatory care service which is conducted by pharmacists in collaboration with other healthcare providers. The main aim of this clinic is to help patients to manage and control their pain symptoms using pharmacotherapy management.

Patient assessment and treatment should be a multidisciplinary team approach, to ensure optimal management of all aspects of pain problems. Treatment should aim to improve pain and/or pain management, and also to improve patient physical, psychological, work and social role functioning.

Healthcare providers should be familiar with all relevant treatment, and these should be considered in planning clinical activities. The clinic staff should routinely collect and summarise data on the characteristics and outcomes (including pain intensity, psychological distress, function, and quality of life) of the patients evaluated and treated, and should engage in continuous quality improvement efforts.²

This protocol is to assist pharmacists in conducting chronic pain medication therapy management clinic.
B. OBJECTIVES

1. To maximise the benefits of medication therapy and minimise adverse effects or complications resulting from drugs used (opiates, non-steroidal inflammatory drugs, etc).
2. To educate patients and/or caregivers about the use of medications for chronic pain management, proper self-management, and to increase patients’ understanding at taking medications for chronic pain.
3. To improve the well-being of patients and reduce the misuse of drugs to control pain.
4. To provide consultative services to the physician and other healthcare professionals on medication related issues.

C. SCOPE OF SERVICE

1. The service shall operate in the pain clinic area during the clinic days.
2. Activities in the clinic should be structured according to the suggested workflow.

D. MANPOWER REQUIREMENT

At least one pharmacist should be on duty in the clinic on a clinic day.
E. APPOINTMENTS

1. Initial Visit:
   Appointments are based on the doctor’s appointments (usually within 2 weeks to 2 months intervals). Initial assessment is to be done on patients’ initial visit. Refer to Appendix I.

2. Subsequent Visits:
   After the initial interview, the pharmacist may follow up with the patient during subsequent visits (minimum of 2 visits) on clinic days for pain evaluation and medication review using the respective forms (Appendix II).

3. Missed Visits:
   If the patient is unable to come for the appointment, the pharmacist may contact the patient for a follow up session via telephone interview.
F. PROCEDURES

1. Patient Selection

Patients selected may be based on any of the criteria listed below;

a) Patients who are newly started on analgesia.
b) Patients with changes to pain regimen.
c) Patients who are experiencing side effects or complications in relations to their pain medications.
d) Patients who are on strong opioids.
e) Patients who are referred by the pain specialist.

2. Initial Assessment

After a patient is selected, the initial assessment consists of the following:

a) Patient’s consent need to be obtained upon agreeing to enroll into the Pain Medication Therapy Management Clinic (Appendix IV).
b) History of underlying co-morbidities and related medications.
c) Pain history and assessment
   • Identify location of pain and mark the pain site(s) on the body chart.
   • Identify pain aggravating and relieving factors.
   • Evaluate pain intensity using the pain assessment tools below (Figure 1 and Figure 2).
     i. Individualised pain intensity score should be evaluated by taking into consideration the minimum, maximum and average score.
     ii. The Numerical Rating Scale (NRS) / Visual Analog Scale (VAS): MOH pain scale. This is used in adults and in children more than 7 years old.
iii. Wong Baker faces Pain Rating Scale. This is applicable for paediatric patients who are less than 7 years old.

![MOH Pain Scale](image1.png)

**Figure 1**: MOH Pain Scale. The picture above is the side that faces the patient while below is the side that faces the paramedic/doctor.

![Wong Baker Faces Pain Rating Scale](image2.png)

**Figure 2**: Wong Baker Faces Pain Rating Scale. ([www.wongbakerFACES.org](http://www.wongbakerFACES.org))

d) Past medication history
   - Any previous analgesics given and their efficacy.
   - Any traditional or complimentary medications.
   - Any over-the-counter products.
   - Prescribed medications for chronic illness.

e) Patients’ allergy status.
f) Relevant laboratory values (if applicable).

g) Medication review (pain regimen)
   - Review current pain regimen started by the pain physician.
   - To communicate with the physician if any interventions needed.

3. Medication education and counselling
   a) A thorough explanation on the individualised pain regimen will be conducted by the pharmacist. (For detailed medication education and counselling, refer to Appendix III & V):
      - Treatment goals and medication adherence.
      - Name of medication.
      - Indication, function, dosage and frequency of each medication.
      - Common side effects / adverse drug reactions related to each medication and how to manage them.
      - Proper storage of the medications.
      - Precautions and contraindications.
      - Highlighting on the importance of around the clock vs when necessary dosage administration timing.
      - Actions to be taken when missed a dose, under dose or when pain is not relieved.
   b) Follow up counselling may be done during scheduled appointments.

4. Pharmaceutical review
   a) Pharmaceutical care issues
      - Pharmacists should identify any pharmaceutical care issues at the earliest opportunity for every patient.
• Pharmacists should carefully assess the patient and obtain all information required to ascertain if any intervention or recommendation has to be made.

• Drug related issues:
  i. Identify available therapeutic alternatives and consider the pros and cons of each alternative.
  ii. Formulate a patient-specific action plan with the patient as well as other healthcare providers, including identification of specific pain therapy goals and other means (drug or non-drug) to achieve them.
  iii. Take a holistic approach to patient care (i.e., consider the patient’s medical, social, and financial needs) in establishing action plans.
  iv. Emphasise on the non-pharmacological therapy options that may help to manage pain or drug related problems.
  v. Safety concern in opioid use. Refer to Appendix VI as a guide for pharmacist.

b) Pharmacist’s recommendations

• Based on the pain score, pain aggravating and relieving factors, other drug related issues, pharmacists should do some intervention or make recommendations such as using alternative drugs, dosage adjustment, add-on another drugs or refer to other healthcare professionals for non-pharmacological alternatives. These recommendations should be discussed with the patient’s physician for further action in order to achieve the optimum outcome.
G. PAIN MEDICATION THERAPY MANAGEMENT (CHRONIC PAIN) WORKFLOW

First Visit

NURSES

DOCTOR

PHARMACIST

Registration

Initial Assessment

Refer to Pharmacist

Physiotherapist

Psychologist / Psychiatrist

Occupational therapist

**Initial Assessment (Appendix I)**
- Patient selection & consent
- Underlying co-morbidities
- Medication history
  - Prescribed medications for chronic illness
  - Analgesics
  - Traditional & complementary medicine
  - OTC
- Pain history & assessment
- Medication review (pain regimen)

To communicate with physician if any interventions are needed.

PHARMACIST

Medication education & counselling

PHARMACIST

Documentation

To document in patient’s file as well as in the pharmacy assessment forms.
**Subsequent Visit**

**NURSES**

Registration

**DOCTOR**

Follow up Assessment

**PHARMACIST**

Follow Up Assessment *(Appendix II)*
- Pain assessment & outcomes
- Pharmaceutical review
  - Pharmaceutical care issues
  - Interventions & outcomes
  - Medication knowledge assessment
- Reassurance and reinforcement of adherence to pain medications
- Medication review (pain regimen)

To communicate with physician if any interventions are needed.

**PHARMACIST**

Medication education & counselling

**PHARMACIST**

Documentation

To document in patient’s file as well as in the pharmacy assessment forms.

- Physiotherapist
- Psychologist / Psychiatrist
- Occupational therapist
PHARMACY ASSESSMENT FORM: CHRONIC PAIN  
*(Initial Visit)*

<table>
<thead>
<tr>
<th>DEMOGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong> ____________________</td>
</tr>
<tr>
<td><strong>Age:</strong> _______</td>
</tr>
<tr>
<td><strong>Race:</strong> Malay/Chinese/Indian/_________</td>
</tr>
<tr>
<td><strong>Contact No.:</strong> ____________________</td>
</tr>
</tbody>
</table>

**Diagnosis:**

**Medical History:**

**Social/ family history:**

<table>
<thead>
<tr>
<th>PAST MEDICATION HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medication History:</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAIN HISTORY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional complementary medicines:</strong></td>
</tr>
<tr>
<td><em>Including acupuncture, Chinese medicines etc</em></td>
</tr>
</tbody>
</table>

**Location of Pain:** *Circle the areas where the pain exists*
<table>
<thead>
<tr>
<th>LABORATORY VALUES</th>
<th>Normal Value</th>
<th>DATE</th>
<th>DATE</th>
<th>DATE</th>
<th>DATE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure (mmHg)</td>
<td>&lt;130/80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RENAL PROFILE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Na (mmol/L)</td>
<td>135-145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K (mmol/L)</td>
<td>3.5-5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SrCreatinine (µmol/L)</td>
<td>57-130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFR (ml/min)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIVER FUNCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T Protein (g/L)</td>
<td>66-87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albumin (g/L)</td>
<td>35-52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globulin (g/L)</td>
<td>20-36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T.Bilirubin (µmol/L)</td>
<td>0-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT (IU/L)</td>
<td>0-42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALP (IU/L) (&gt;15yrs)</td>
<td>34-104</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALP (IU/L) (3-15yrs)</td>
<td>98-369</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAIN EVALUATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain Score</td>
<td>Max</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ave</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain Aggravating Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain Relieving Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CURRENT MEDICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacist’s Name/Signature:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# PAIN EVALUATION & MEDICATION REVIEW LIST

(Subsequent Visit)

<table>
<thead>
<tr>
<th>Date:</th>
<th>Visit No.:</th>
<th>Date:</th>
<th>Visit No.:</th>
</tr>
</thead>
</table>

**Chief Complain:**

<table>
<thead>
<tr>
<th>Pain Score</th>
<th>Max</th>
<th>Ave</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Score</td>
<td>Max</td>
<td>Ave</td>
<td>Min</td>
</tr>
</tbody>
</table>

**Pain Aggravating Factors**

**Pain Relieving Factors**

<table>
<thead>
<tr>
<th>Medications</th>
<th>D</th>
<th>F</th>
<th>I</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total %**

**Pharmaceutical Care Issues:**

**Pharmacist Intervention:**

**Outcome/Plan:**

**Pharmacist’s Name/ Signature:**

---

How to calculate the score:

Score (%) = No of column with yes x 100%

Total no of column

Key: D = Dose       F = Frequency       I = Indication       T = Method of Administration
**INDICATION, EDUCATION & COUNSELLING CHECKLIST**

Medication counselling should include the outline below:

<table>
<thead>
<tr>
<th>First Visit</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment goals and medication adherence.</td>
<td></td>
</tr>
<tr>
<td>Pain score</td>
<td></td>
</tr>
<tr>
<td>Name of medication.</td>
<td></td>
</tr>
<tr>
<td>Indication and function of each medication.</td>
<td></td>
</tr>
<tr>
<td>Dosage, frequency and duration of each medication.</td>
<td></td>
</tr>
<tr>
<td>Method of administration.</td>
<td></td>
</tr>
<tr>
<td>Possible side effects/ adverse drug reactions.</td>
<td></td>
</tr>
<tr>
<td>Proper storage of medication.</td>
<td></td>
</tr>
<tr>
<td>Precaution</td>
<td></td>
</tr>
<tr>
<td>Contraindication</td>
<td></td>
</tr>
<tr>
<td>Action to be taken when missed a dose, under dose, or when pain was not relieved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsequent Visit</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision of treatment goal.</td>
<td></td>
</tr>
<tr>
<td>Other therapeutic goals (if necessary).</td>
<td></td>
</tr>
<tr>
<td>Specific medication counselling.</td>
<td></td>
</tr>
<tr>
<td>Patient’s concern.</td>
<td></td>
</tr>
<tr>
<td>Evaluating the pain score vs. medication</td>
<td></td>
</tr>
<tr>
<td>Monitor signs of addiction, misuse and tolerance of drugs.</td>
<td></td>
</tr>
</tbody>
</table>
Participant’s/Caregiver Consent Form

Pain Medication Therapy Management Clinic

I am ________________ with I/C No ________________ agree to participate in the Pain Medication Therapy Management Clinic program offered by the Pharmacy Department, Hospital ________________. The program will be conducted by the Pharmacist and I will give my full cooperation. Full explanation about the program has already been explained by the Pharmacist In-charge and I understand it well. I agree and allow the Pain Management Pharmacist to do the needful.

____________________________  ______________________________
Name     :                Name     :
I/C No.   :                I/C No.  :
Date       :                   Date    :

Pharmacist In-charge

____________________________
Name     :
Stamp    :
Date     :
Borang Kebenaran Menjadi Peserta

Pain Medication Therapy Management Clinic

Saya ___________________ No. K/P ___________________ bersetuju untuk mengikuti program Pain Medication Therapy Management Clinic anjuran Jabatan Farmasi, Hospital ______________. Program ini akan dijalankan oleh Pegawai Farmasi dan saya akan memberikan kerjasama sepenuhnya. Saya telah diberi penerangan berkaitan program ini dan faham penjelasan yang telah diberikan. Saya juga membenarkan Pegawai Farmasi yang terlibat menjalankan aktiviti berkaitan sekiranya perlu.

__________________________________________________________________________
Nama : ____________________________ Nama : ____________________________
No. K/P : ____________________________ No. K/P : ____________________________
Tanggal : ____________________________ Tanggal : ____________________________

Pegawai Farmasi yang bertanggungjawab

__________________________________________________________________________
Nama : ____________________________
No. K/P : ____________________________
Tanggal : ____________________________
# MEDICATION COUNSELLING POINTS & MONITORING

## Non-opioid Analgesic:

<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Potential Adverse Effects</th>
<th>Counselling Points</th>
<th>Monitoring</th>
</tr>
</thead>
</table>
| **1. Paracetamol** | • Hepatic – increased bilirubin and alkaline.⁵  
• Renal – increased ammonia.  
• Allergic reactions, skin rash | • May be taken regardless of food intake.  
• Do not consume more than 8 tablets (4g) in 24 hours.  
• Abstain from heavy alcohol consumption if paracetamol is a necessary component of their drug therapy or try not to exceed 2g/day of paracetamol if they cannot abstain from drinking.⁶ | • Liver Function Test |
| **2. Non-selective NSAIDs:** Ibuprofen, Diclofenac, Naproxen, Indomethacin, Mefenamic Acid, Meloxicam, Ketoprofen. | • Dyspepsia, GI bleeds, GI disturbances, ulcer, abdominal pain, nausea, vomiting, dizziness, renal impairment.⁷  
• Increased risk of stroke and myocardial infarction.⁸ | • To be taken after food.  
• Patients who are at risk of GI complications should be prescribed with proton pump inhibitor or H2 receptor antagonists as pharmacological prophylaxis.⁹ | • Careful monitoring of side effects.  
• Renal function test  
• INR |
| **3. Selective COX2 Inhibitors:** Celecoxib, Etoricoxib, Parecoxib. | • GI disorders  
• COX2 inhibitors can also lead to renal impairment and adverse cardiovascular effects, particularly with long term use.⁸ | • To be taken after food | • Careful monitoring of side effects. |
### Opioid Analgesics

<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Potential Adverse Effects</th>
<th>Counselling Points</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tramadol</td>
<td>• Sweating, nausea, dizziness, vomiting, dry mouth, GI disturbances, and cerebral convulsions.</td>
<td>• Do not handle machinery activity due to reduced level of consciousness.</td>
<td>• Close monitoring for signs of respiratory depression.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drowsiness and dizziness may be potentiated by alcohol and other CNS depressants.</td>
<td></td>
</tr>
<tr>
<td>2. Dihydrocodeine, codeine</td>
<td>• GI disturbances, headache, drowsiness, nausea, vomiting, confusion, vertigo, respiratory depression.</td>
<td>• Do not consume alcohol.</td>
<td>• Close monitoring for signs of respiratory depression.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Do not take for longer than directed by your prescriber.</td>
<td>• Monitoring for signs of misuse, tolerance, or addiction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Taking dihydrocodeine regularly for a long time can lead to addiction, which might cause you to feel restless and irritable when you stop the tablets.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dihydrocodeine produces sedation and may also cause changes in vision, including blurred or double vision. If affected, patients should not drive or operate machinery. The effects of alcohol are enhanced by opioid analgesics.</td>
<td></td>
</tr>
<tr>
<td>Name of Medication</td>
<td>Potential Adverse Effects</td>
<td>Counselling Points</td>
<td>Monitoring</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
• GI: Bowel obstruction, constipation, nausea, vomiting.  
• Neurologic: Dizziness, headache, loss of consciousness, somnolence, confusion, depression, insomnia, nervousness. | • Apply patch to dry, non-irritated, hairless area on upper torso.  
• Replace every 7 days. Do not use more than 2 patches each time regardless of the strength. When wearing patch, do not allow coming into contact with direct heat sources (e.g. heat pads, heat lamps, and sauna). Refer to the patient information leaflet for the application instructions of the patch.  
• Do not handle machinery activity due to reduced level of consciousness. | • Liver Function Test for patients with hepatic impairments.  
• Renal Function Test                                                                                                                                                                                                 |
| 4. Morphine                | • Cardiovascular: Peripheral Oedema  
• Dermatologic: Pruritus, Rash, Sweating  
• GI: Abdominal pain, Constipation, Diarrhoea, Nausea and Vomiting  
• Musculoskeletal: Backache  
• Neurologic: Asthenia, Dizziness, Headache, Insomnia, Somnolence, Paraesthesia, Depression  
• Ophthalmic: Amblyopic, Myosis  
• Renal: Urinary retention  
• Respiratory: Dyspnoea | • Controlled release tablets should be swallowed whole, do not crush or chew them.  
• Take medication as directed. | • Close monitoring for signs of respiratory depression.  
• Monitoring for signs of misuse, tolerance, or addiction.                                                                                                                                                                                                 |
<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Potential Adverse Effects</th>
<th>Counselling Points</th>
<th>Monitoring</th>
</tr>
</thead>
</table>
| 5. Oxycodone       | • Dermatologic: Pruritus, Sweating  
• GI: Constipation, Nausea, Vomiting, Xerostomia  
• Neurologic: Asthenia, Dizziness, Somnolence  
• Cardiovascular: Postural hypotension  
• Respiratory: Dyspnoea, Respiratory depression | • Do not break, crush or chew the controlled release tablet. | • Close monitoring for signs of respiratory depression.  
• Monitoring for signs of misuse, tolerance or addiction. |
| 6. Fentanyl transdermal patch | • Immune System Disorders: Hypersensitivity  
• Metabolism and Nutrition Disorders: Anorexia  
• Psychiatric Disorders: Insomnia, Somnolence, Depression, Anxiety, Confusional state, Hallucination  
• Nervous System Disorders: Dizziness, Headache, Tremor, Paraesthesia  
• Cardiac Disorders: Palpitations, Tachycardia  
• Vascular Disorders: Hypertension  
• Respiratory, Thoracic and Mediastinal Disorders: Dyspnoea  
• GI: Nausea, Vomiting, Constipation, Diarrhoea, Dry mouth, abdominal pain, Dyspepsia. | • The medicine is likely to affect the ability to drive, do not drive until you know how the medicine affects you.  
• Do not cut the fentanyl patches without the prescriber’s advice. A patch that has been divided, cut or damaged in any way should not be used. | • Close monitoring for signs of respiratory depression.  
• Monitoring for signs of misuse, tolerance, or addiction. |
**Adjuvant Analgesics**

<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Potential Adverse Effects</th>
<th>Counselling Points</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Antidepressant: Tricyclics (Amitriptyline, Nortriptyline).</strong></td>
<td>Sedation, confusion, nausea, vomiting, seizures, tachycardia, arrhythmia, anticholinergic effects (dry mouth, blurred vision, urinary hesitancy).</td>
<td>Report worsening depression and unusual behavioral changes.</td>
<td>Careful monitoring of side effects.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patients to avoid activities requiring mental alertness until drug effects are realised.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patients to report use of a monoamine-oxidase inhibitor within 14 days prior to initiating drug therapy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>To report signs and symptoms of serotonin syndrome, and jaundice or any signs/symptoms of liver toxicity in the elderly.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Careful monitoring of side effects.</td>
<td>Liver Function Test.</td>
</tr>
<tr>
<td><strong>2. Antidepressant: SNRI (Duloxetine).</strong></td>
<td>GI disorders, excessive sweating, CNS disorders (dizziness, sleepy, headache, fatigue, insomnia, somnolence, blurred vision, dysuria), hepatotoxicity, suicidal thought, palpitation.</td>
<td>If there are suicidal thoughts at any time, contact the prescriber or go to a hospital straight away.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>May be taken with or without food.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not handle machinery activity due to reduced level of consciousness.</td>
<td></td>
</tr>
<tr>
<td><strong>3. Anticonvulsant: Carbamazepine, Sodium Valproate, Gabapentin, Pregabalin.</strong></td>
<td>Somnolence, dizziness, headache, nervousness, tremor, fatigue, mood changes, confusion.</td>
<td>Do not handle machinery activity due to reduced level of consciousness.</td>
<td></td>
</tr>
<tr>
<td><strong>4. N-Methyl-D-Aspartate (NMDA) Receptor Antagonists: Ketamine.</strong></td>
<td>Hypertension, tachycardia, tremor, nystagmus, diplopia, airway resistance, myocardial depression.</td>
<td>Ketamine should only be used in consultation with a specialist in pain medicine, anaesthesia or palliative care.</td>
<td></td>
</tr>
<tr>
<td>Name of Medication</td>
<td>Potential Adverse Effects</td>
<td>Counselling Points</td>
<td>Monitoring</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
</tbody>
</table>
| **5. Biphosphonates:** Pamidronate, Zoledronate, Clodronate. | • Hypomagnesaemia, hypocalcaemia, hypokalaemia, hypophosphatemia, nausea, diarrhoea, constipation.  
• Renal toxicity.  
* | • Calcium and vitamin D supplements may be considered if dietary intake is insufficient.  
9 | • Calcium level monitoring.  
• Renal function test.  |
| **6. Corticosteroids:** Dexamethasone, Prednisolone. | • Hyperglycaemia, increased appetite, weight gain, oedema, cushingoid habitus, dyspepsia, delirium, insomnia, agitation.  
* | • To be taken after food.  
9 | • Blood glucose level.  |
| **7. Anticholinergic:** Hyoscine Butylbromide. | • Somnolence, dizziness, hypotension, dry mouth.  
* | • May be taken before food to increase absorption.  
9 | |

*For dosage of each drug, please refer to the relevant references of particular disease.*
The use of opioid therapy for chronic noncancer pain has increased substantially. However, there are also potential serious harmful effects associated with opioids and these include opioid-related adverse effects, opioid abuse, addiction and diversion. Opioid risk tool (ORT) is one of the screening and diagnostic tools available designed to predict the probability of a patient displaying aberrant behaviours when prescribed opioids for chronic pain.

**Using Strong Opioids**

**Figure 3: Risk Assessment Tool – Opioid Risk Tool (ORT)**

<table>
<thead>
<tr>
<th>Item Score</th>
<th>Item Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>If Female</td>
<td>If Male</td>
</tr>
<tr>
<td>1. Family History of Substance Abuse</td>
<td>Alcohol</td>
</tr>
<tr>
<td></td>
<td>Illegal Drugs</td>
</tr>
<tr>
<td></td>
<td>Prescription Drugs</td>
</tr>
<tr>
<td>2. Personal History of Substance Abuse</td>
<td>Alcohol</td>
</tr>
<tr>
<td></td>
<td>Illegal Drugs</td>
</tr>
<tr>
<td></td>
<td>Prescription Drugs</td>
</tr>
<tr>
<td>3. Age (Mark box if 16-45)</td>
<td></td>
</tr>
<tr>
<td>4. History of Preadolescent Sexual Abuse</td>
<td></td>
</tr>
<tr>
<td>5. Psychological Disease</td>
<td>Attention Deficit Disorder</td>
</tr>
<tr>
<td></td>
<td>Obsessive Compulsive Disorder</td>
</tr>
<tr>
<td></td>
<td>Bipolar</td>
</tr>
<tr>
<td></td>
<td>Schizophrenia</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Total Score Risk Category**

- **Low Risk** 0-3
- **Moderate Risk** 4-7
- **High Risk** ≥ 8

Date:  
Patient Name:

Mark each box that applies


total: [ ]

Appendix VI
Education

Common side effects and management.

* Refer to medication counselling points and monitoring table of the opioid analgesics.


1. Overmedication/ overdosing - Opioids can cause overdose and death if they are not used correctly.
   a) Overmedication warning signs:
   • Intoxicated behavior - confusion, slurred speech, stumbling.
   • Feeling dizzy or faint.
   • Feeling or acting very drowsy or groggy, or nodding off to sleep.
   • Unusual snoring, gasping, or snorting during sleep.
   • Difficulty waking-up from sleep and becoming alert or staying awake.
   b) Overdose poisoning:
   • Person cannot be aroused or wakened, or is unable to talk if awakened.
   • Any trouble with breathing; such as shortness of breath, slow or light breathing, or stopped breathing.
   • Gurgling noises coming from mouth or throat.
   • Body is limp, seems lifeless. Face is pale, clammy.
   • Fingernails or lips turned blue/purple.
   • Slow, no unusual heartbeat or stopped heartbeat.
c) If there are warning signs of opioid overmedication, patient should:

- **Stop taking** the opioid medicine.
- **Stay awake** and move around. Do not just go to sleep thinking that the effects will wear off (you may never wake up).
- **Call** the healthcare provider.

2. Issues – Patients taking opioids as directed to relieve pain seldom become addicted to the medicines.

a) Addiction:

- Most commonly develops when a person misuses, or abuses opioid drugs. That is, the person takes opioids more for the mind-altering effects they produce such as to feel ‘high’, calm or relaxed, or in a ‘good mood’ rather than for pain relief itself.
- After a while, if the person tries to cut back or to quit misusing the opioids, it causes uncomfortable feelings both physically and mentally. This could lead to overpowering cravings or urges to take more opioids.

b) Withdrawal

- May occur naturally after you get used to having a steady amount of opioid medicine in your body to feel and function well. If the amount of opioid medicine is quickly decreased or suddenly stopped entirely, you may feel the effects of opioid withdrawal.
## Symptoms & Signs of Opioid Withdrawal

<table>
<thead>
<tr>
<th>Muscle and joint aches</th>
<th>Irritable, restless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stomach cramps</td>
<td>Diarrhoea</td>
</tr>
<tr>
<td>Rapid breathing</td>
<td>Vomiting</td>
</tr>
<tr>
<td>Racing heartbeat</td>
<td>Tremors or shakes</td>
</tr>
<tr>
<td>Repeated yawning</td>
<td>Heavy sweating</td>
</tr>
<tr>
<td>Runny nose and eyes</td>
<td>Loss of appetite</td>
</tr>
<tr>
<td>Enlarged (dilated) pupils</td>
<td>Craving for opioid</td>
</tr>
<tr>
<td>Drooling</td>
<td>Confusion</td>
</tr>
<tr>
<td>Goose bumps</td>
<td>Chills</td>
</tr>
<tr>
<td>Trouble sleeping</td>
<td>Hot flashes</td>
</tr>
</tbody>
</table>

**Everyone does not experience all of these effects during opioid withdrawal, at all times or to the same extent.**

c) **Abrupt Discontinuation**

- Abrupt discontinuation of opioid is not allowed. Ideally, slow and gradual process called ‘tapering’ is recommended (With the prescriber’s advice).

- Drink a lot of fluid, try to stay calm and keep reassuring yourself that the withdrawal effects will pass with time and you will eventually feel better.
Opioids Storage & Supply

1. Advice to patients:
   a. Storage
      • Keep at cool, room temperature
      • Keep away from children / pets
      • Ensure containers are properly labelled and sealed tightly
      • Preferably, place in your personal, locked cabinet
      • NEVER share your opioid medications with others
      • Bring along adequate supply upon travelling, or to work
   b. Supply:
      • You will be given exact supplies as according to orders made by your pain specialist until your next scheduled appointment with the pain clinic.
      • Pill counting will be performed by the pharmacist at every visits.
      • You are expected to return back any balance of supplies to the healthcare facilities if there are changes in the pain medication regimen or there are any unexpected casualties (death).

2. Recording
   a. All supplies given will be officially recorded by the pharmacist for documentation purposes.
   b. All recordings must adhere to Poison (Psychotropic Substances) Regulations 1989.

3. Points to consider
   a. Prescription orders according to weeks (e.g. 4 weeks vs. 1 month).
REFERENCES


