Supplementary Appendix One – Discharge Prescribing Standards

**Discharge prescribing advice for patients undergoing primary, unilateral THA or TKA at the Manukau Surgical Centre**

Discharge prescribing guidance applied to all patients except:

- Those with multiple drug allergies, including patients who are unable to receive either tramadol or NSAID’s.
- Strong opioid use in the community prior to surgery.
- Advanced age (defined as those >80 years).
- ASA Score ≥3 and those with moderate to severe renal, hepatic, or cardiac disease.
- Complicated in hospital course e.g., prolonged length of stay, medical or surgical complications.

In patients who meet one or more of these exceptions, advice should be sought from a Pharmacist or a Specialist from Anaesthesia or Orthopaedic Surgery.

Any new medications should be commenced prior to hospital discharge to allow sufficient time to assess for tolerance and side effects.

**General Package of Care:**

**Paracetamol**

- 1000mg every 6 hours, regularly for four weeks following surgery

**Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) – Celecoxib**

- 100mg twice daily, regularly for 2 weeks following surgery.
- Consider the use of proton pump inhibitors with NSAID’s.

- Absolute or relative contraindications to NSAID therapy include:
  - Allergy or hypersensitivity to NSAID’s or sulphonamide agents
  - Age ≥ 65 years unless clear reasons exist.
- Renal disease with eGFR ≤60ml/min or a recent increase in creatinine
- Peptic ulcer disease or gastrointestinal haemorrhage
- Angina, myocardial infarction, or stroke in the previous three months
- Previous coronary artery bypass grafting
- Peripheral arterial disease
- Heart failure which is symptomatic or on active therapy
- ‘Triple whammy’ of diuretic therapy and ACEi / ARB with NSAIDs

**Tramadol Immediate Release**
- 50mg every 4 hours, as required.
  - Prescribe 50 tablets

- Absolute or relative contraindications to tramadol therapy include:
  - Age ≥75 unless clear reasons exist.
  - Allergy or hypersensitivity to tramadol
  - Seizure disorder or conditions where the seizure threshold is reduced
  - History of Serotonin Syndrome or the use of MAOi, TCA and high doses of SSRIs
  - History of alcohol or central nervous system depressant abuse
- In those on warfarin, tramadol may cause alterations in warfarin metabolism meaning the INR needs to be measured closely on discharge

**Morphine Immediate Release**
- 10mg every 4 hours, as required.
  - Prescribe 20 tablets, no repeats.
  - A controlled drug prescription is required.

- Many patients require a prescription for a strong opiate on discharge, especially where contraindications to NSAID or tramadol use exist.
- Sustained release medications e.g., morphine (M-Eslon) or oxycodone (OxyContin) should not be prescribed unless strong reasons exist e.g., long term use on admission.
  - If these have been started, they should be reduced then ceased prior to discharge.
- Morphine is the preferred strong opiate on hospital discharge:
Consider changing oxycodone-based preparations to morphine prior to discharge.
- In those with renal disease (eGFR ≤30ml/min) consider oxycodone use

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<th>Laxatives</th>
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<td>Coloxyl with senna, 2 tablets at night as required.</td>
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<td>- Prescribe 20 tablets.</td>
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<td>Constipation following surgery is common.</td>
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<td>- Those on opiate therapy experience slowing of gastrointestinal transit</td>
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<td>- Patients should pass a bowel motion prior to hospital discharge</td>
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<th>Additional Medications:</th>
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<tr>
<td>Tramadol Sustained Release</td>
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<td>- 100mg twice daily, regularly.</td>
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<td>- Prescribe 28 tablets.</td>
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<tr>
<td>This drug is only required in patients with severe post-operative pain which cannot be controlled with medications in the ‘General Package of Care’.</td>
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<tr>
<td>Tramadol Sustained Release should be commenced in while in hospital.</td>
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<td>- Similar absolute / relative contraindications exist to the immediate release formulation.</td>
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<td>- In some patients, sustained release tramadol is better tolerated.</td>
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<th>Antiemetics</th>
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<td>Ondansetron 4-8mg three times daily, as required.</td>
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<td>- Prescribe 20 tablets / wafers.</td>
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<td>Used in patients where nausea and vomiting has been problematic in hospital.</td>
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<td>Ondansetron can cause both constipation and headache</td>
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<th>Proton Pump Inhibitor – Omeprazole</th>
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<td>20mg daily while on NSAID therapy</td>
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Consider omeprazole therapy in patients:
- Age ≥ 65 years
- High dose NSAID therapy
- Concurrent use of aspirin, oral anticoagulants or steroid medications
- History of gastritis or uncomplicated ulcer

### Nicotine Replacement Therapy
- If nicotine replacement therapy has been commenced in hospital and the patient has a continued desire to stop smoking, then this therapy should be continued

### Medications to Avoid on Discharge:

#### Gabapentin / Pregabalin
- These medications may be started in those with moderate to severe pain post-operatively.
- Due to the lack of benefit and risk of adverse effects these medications should be ceased prior to discharge.
  - An exception may be patients on long term therapy for neuropathic pain

#### Codeine or Codeine Containing Medications
- Codeine displays variable pharmacokinetics with differences in metabolism between patients.
  - The analgesia produced is variable with a tendency to constipate.
- Those on codeine containing preparations in the community should have these medications ceased and replaced by more effective drugs