

Prescribing protocols for optimal pain management in dentistry

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At the start of this year our dental profession, alongside other health professionals, witnessed a change in the availability of codeine-based pharmaceuticals. From 1 February 2018, all over-the-counter (OTC) medicines containing codeine became unavailable without a prescription. This decision, formally passed on 20 December 2016, resulted in all codeine-based Schedule 2 and 3 products being up-scheduled to Schedule 4 (*prescription-only*) medications. These included popular pain-relieving products such as Nurofen Plus, Panadeine, Panadeine Extra and Mersyndol. While the consequences of the legislative change will be seen in the coming months, a few seem to instantly resonate within the dental profession.

Decreasing the availability of codeine based products may see some patients resort to inappropriate products (*i.e. legal & illegal*), or forced to endure poorly controlled or uncontrolled pain. Patients self-medicating at home with incomplete antibiotic courses, in the hope of dulling their pain and discomfort, may lead to a rise in community-acquired resistance and side effects. It is expected the number of patients presenting to our practices with heightened and less controlled pain will increase significantly.

The topic of pain management has been clouded since the methodology of assessing pain is difficult, subjective and varies substantially amongst clinicians. Moreover, the knowledge and understanding of medications and their indications, dosing schedule, interactions and side effect profiles seem to be lacking. Selecting an appropriate class of medication(s) with the most beneficial dose regimen to correctly reflect an individual's pain severity, while still prescribing within an evidence-based approach is challenging. Equally as important is the category of patients you're treating (e.g. adult, teen, child, cognitively impaired individual).

Pain scales differ substantially based on the patient category (AMH - Australian Medicines Handbook, 2018):

- **Numerical rating scales**, e.g. from 0 (no pain) to 10 (worst pain imaginable);
- **Visual analogue scale**, e.g. 10 cm

unmarked line with LHS= no pain to RHS= worst pain imaginable;

- **Verbal rating scale**, e.g. none, mild, moderate, severe, worst possible
- **Wong-Baker FACES Pain Rating Scale**, faces with various expressions to better rate pain (used in children >3 years);
- **Observational assessment tools**:
 - CRIES pain rating scale for neonates;
 - FLACC behavioural scale for infants and children;
 - Abbey Pain Scale for dementia patients.

The World Health Organisation (WHO) has published an evidence-based approach for coupling a patient's pain severity with various drug classes, known as the '*analgesic ladder*' (refer Fig 1). Used in the management of both nociceptive and neuropathic pain, it tailors analgesics to the type and severity of a patient's pain. Importantly, note that the *steps* are an *additive approach* and as you progress to stronger medications for the various pain severities and episodes of breakthrough pain, the clinician must ensure that all medication(s) and dose regimens prescribed on the previous step are continued, instead of a *substitution approach* which would imply swapping them.

Treatment begins at the step appropriate for the pain severity (mild, moderate or severe) and is adjusted based on the patient's increasing or decreasing severity including accounting for any episodes of breakthrough pain. The systematic approach is categorised into:

- 1) **Mild pain**: non-opioid (regular paracetamol or NSAID);
- 2) **Moderate pain**: an opioid (tramadol, low-dose codeine or oxycodone), with a non-opioid (*usually paracetamol*);
- 3) **Severe pain**: potent opioid (*usually morphine*) with a non-opioid (*usually paracetamol*).

Included in the *WHO analgesic ladder* is a category for *Adjuvant medications* which are specific for neuropathic pain or cancer associated symptoms. The subset includes anxiolytics, antidepressants, hypnotics and anticonvulsants amongst other medications. The effectiveness of each drug class described can differ substantially between nociceptive and neuropathic pain hence correct diagnosis is key (Refer Table 1).

By taking a comprehensive pain history and correctly evaluating the presenting pain severity, we as clinicians can utilise the *WHO analgesic ladder* to our advantage in optimising our patient pain management protocol (PPMP) in daily practice.

Figure 1: is the WHO analgesic ladder still valid? Twenty-four years of experience; Can Fam Physician. 2010 Jun;56(6): 514-517



Table 1: Pain types and effective drug classes (AMH - Australian Medicines Handbook, 2018)

| Drugs | Acute Pain (nociceptive) | Neuropathic pain | Chronic pain (nociceptive with/without neuropathic) |
|---|--------------------------|-------------------------------|---|
| paracetamol | effective | less effective | effective |
| NSAIDs | effective | less effective | effective |
| antidepressants (eg TCAs) | | | |
| antiepileptics (eg gabapentin, pregabalin, carbamazepine) | rarely used | may be effective; first line | may be effective if neuropathic component |
| opioids | effective | may be effective; second line | may be effective but limited or no benefit >90 days treatment for non-cancer pain |