



National Prescribing Service Limited

25 August 2006



000004 000  
Dr Sam Sample  
99 Sample Street  
SAMPLETOWN NSW 0000



## Prescribing Practice Review

### No. 35 Analgesic choices in persistent pain

Dear Dr Sample,

Persistent pain is one of the most common and challenging conditions seen in general practice. Analgesics are very familiar drugs, yet finding an appropriate and effective one for a patient is rarely straightforward.

This *Prescribing Practice Review* looks at analgesic choices in persistent pain. In particular, it considers the role of nonsteroidal anti-inflammatory drugs (NSAIDs) in light of concerns over their risks, and discusses when it is appropriate to start strong opioids in persistent non-cancer pain. The key messages are:

**Use paracetamol as ongoing therapy: the modified-release formulation offers convenience**

**Use NSAIDs where cardiovascular, renal and gastrointestinal risks are acceptable**

**Consider an opioid when non-opioids offer inadequate pain control or NSAIDs are unsuitable**

**Tramadol's role in mild-to-moderate pain is limited by drug interactions and CNS adverse effects**

For more information, see *NPS News 47*. Your confidential prescribing feedback is attached along with practice points for your review. You may also like to participate in the clinical audit, *Analgesics in persistent pain*, to identify patients at risk of adverse effects from analgesics; see inside for enrolment details.

Yours sincerely,

Dr Roger Boyd  
Chair, National Prescribing Service Limited

NPS is an independent, Australian organisation for Quality Use of Medicines,  
funded by the Australian Government Department of Health and Ageing.

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## Your confidential prescribing data

The data shown here from the Medicare Australia database include all prescriptions dispensed for concession cardholders and items above the co-payment dispensed for general patients.

Paracetamol, most conventional NSAIDs and tramadol are below the co-payment. Most COX-2 selective NSAIDs and opioids are above the co-payment except lower strengths of some products (for full details see www.nps.org.au/healthpro). Rofecoxib was withdrawn in September 2004.



### Paracetamol<sup>a</sup> use 2005

	You		All GPs nationally
	Number and percentage of prescriptions		Percentage of prescriptions
Paracetamol immediate release, oral liquid and suppositories	285	99%	97%
Paracetamol modified release 665 mg tablet	2	1%	3%

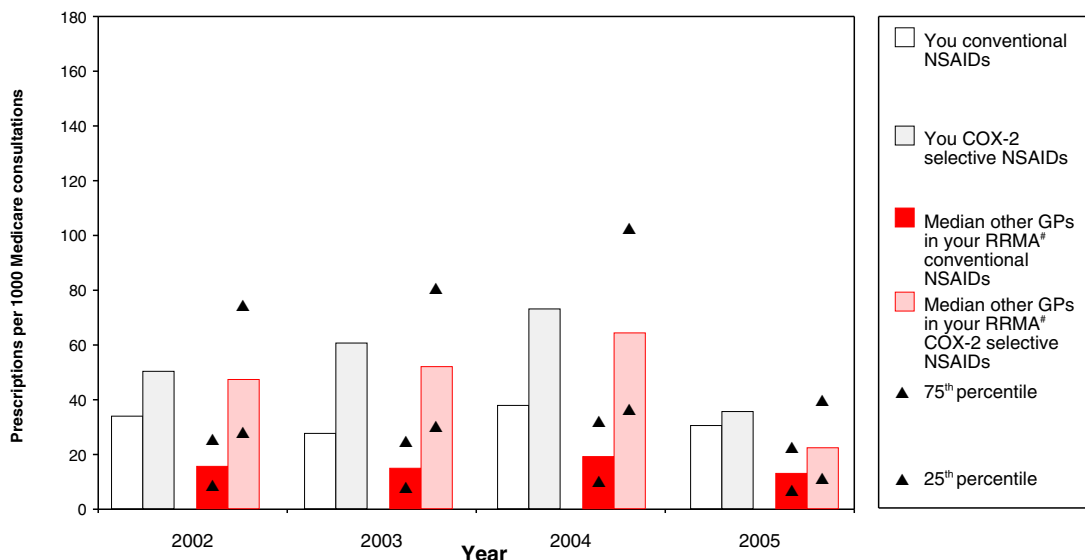
<sup>a</sup> Includes palliative care item numbers

### Practice points

- Paracetamol remains the analgesic of choice, particularly in mild-to-moderate pain because of its good efficacy and safety profile.
- Advise patients to use adequate paracetamol doses.
- Consider prescribing modified release paracetamol 665 mg (Panadol Osteo, Duatrol SR)<sup>b</sup> to allow round the clock pain control with eight hourly dosing.

<sup>b</sup> PBS listed for osteoarthritis. Panadol Osteo carries a \$4.72 brand premium (at August 2006)

### Conventional and COX-2 selective<sup>c</sup> NSAID use



### Practice points

- For people at low risk of adverse gastrointestinal (GI), cardiovascular and renal effects, NSAIDs are valuable analgesics.
- Now that the benefits and harms of COX-2 selective NSAIDs are clearer, how has your prescribing changed?

<sup>c</sup> Celecoxib, meloxicam and rofecoxib

### Selected<sup>d</sup> NSAID use and risk of serious gastrointestinal events

	You		Median other GPs in your RRMA <sup>d</sup>	
	Percentage of selected <sup>d</sup> NSAID prescriptions		Percentage of selected <sup>d</sup> NSAID prescriptions	
	2004	2005	2004	2005
<b>Low GI risk</b> Celecoxib, diclofenac, ibuprofen	71%	63%	84%	79%
<b>Medium GI risk</b> Diflunisal, indomethacin, naproxen, sulindac	19%	19%	10%	13%
<b>Higher GI risk</b> Ketoprofen, piroxicam	11%	18%	6%	8%

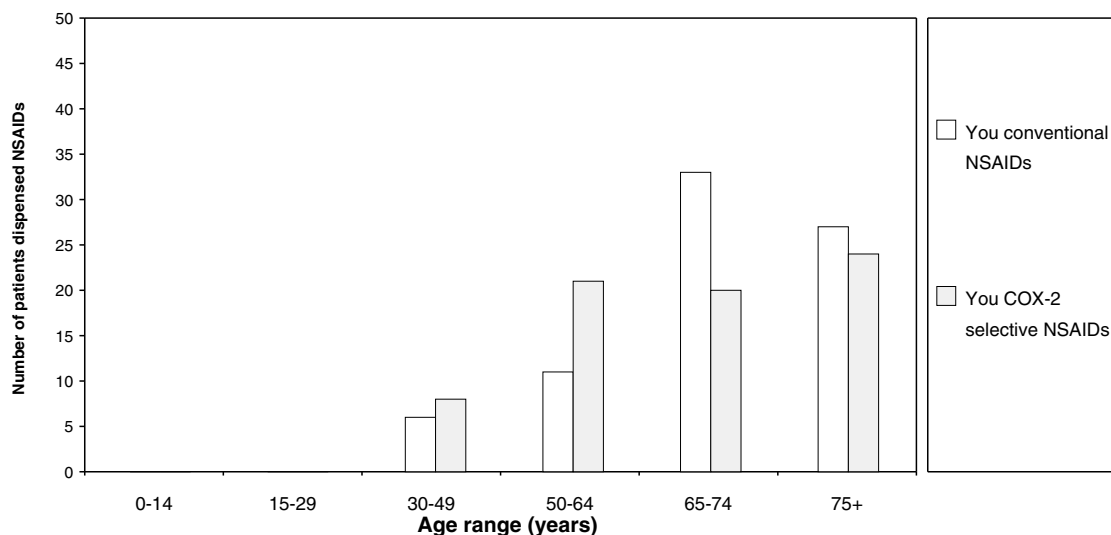
#### Practice points

- COX-2 selective rather than conventional NSAID use is most justified in those with risk factors for GI adverse effects (age ≥ 65 years, history of ulcer, concomitant use of anticoagulants or corticosteroids, presence of serious comorbidity).
- Use lower GI risk conventional or COX-2 selective NSAIDs to minimise serious GI events.

<sup>d</sup> Meloxicam, tiaprofenic acid and mefenamic acid are not included here as comparable GI safety clinical outcome trials are not available

### Conventional and COX-2 selective NSAID use by patient age 2005

In 2005, 622 PBS-subsidised prescriptions written by you for NSAIDs were dispensed for 134 patients.



#### Practice point

- Elderly patients are at increased risk of adverse effects from NSAIDs, in particular heart failure, GI ulceration and renal impairment.

## Individual opioid use (oral, injectable, rectal and transdermal)

	You				Median other GPs in your RRMA <sup>#</sup>			
	Number and percentage of total opioid prescriptions				Number and percentage of total opioid prescriptions			
	2004		2005		2004		2005	
Codeine ± paracetamol	331	40%	211	34%	68	44%	59	42%
Morphine	76	9%	42	7%	14	9%	13	8%
Oxycodone	127	16%	141	23%	17	10%	18	13%
Pethidine	15	2%	13	2%	2	1%	2	1%
Tramadol	206	25%	177	29%	44	27%	39	28%
Others <sup>°</sup>	63	8%	32	5%	4	2%	3	2%

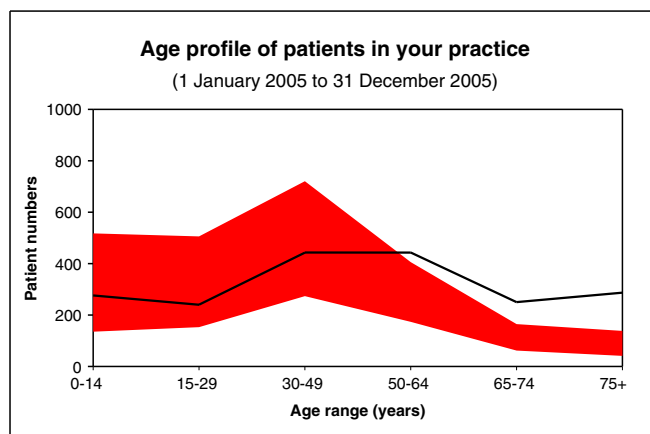
<sup>°</sup> Others: fentanyl, hydromorphone and methadone

### Practice points

- Consider adding a weak opioid (codeine or tramadol) as an alternative to an NSAID when pain relief with paracetamol alone is inadequate, particularly for people at high risk of NSAID-induced adverse effects.
- The potential for tramadol to interact with other drugs or cause serious adverse effects makes it unsuitable for some patients.
- Use strong opioids when other analgesics do not provide sufficient pain relief or are unsuitable due to adverse effects. Morphine is the strong opioid of first choice because of familiarity, cost and the range of formulations available.
- Pethidine has no place in primary care analgesia because of greater adverse effects. Morphine is the preferred injectable opioid.

### Practice profile

The data below, based on Medicare claims, are provided to help you review your prescribing data within the profile of your practice. The number of concession cardholders given provides an indication of the limitations of the data capture for under co-payment items.



The black line represents the age profile of patients in your practice. 25% to 75% of other GPs in your RRMA<sup>#</sup> fall within the shaded area.

**Medicare patients and concession cardholders in your practice**  
(1 April 2005 to 30 June 2005)

Patients	You	Median other GPs in your RRMA <sup>#</sup>
<b>Total Medicare</b>	1,078	686
<b>Concession cardholders<sup>##</sup></b>	283	137

(<sup>##</sup>includes those reaching Safety Net)

Data from a three month period (1 April 2005 to 30 June 2005) that best represent your patient mix have been provided.

### Notes

@ Data shown are an aggregate for all your provider locations.

# The comparator group "other GPs in your RRMA" includes all prescribers who are currently located in a similar geographical region i.e 1. capital cities, 2. other metropolitan centres, 3. large rural centres, 4. small rural centres, 5. other rural centres, 6. remote centres and 7. other remote centres.

Your RRMA peer group is 1.

▲ 25% to 75% of "other GPs in your RRMA" fall in the range shown by the triangular symbols.

## Analgesic choices in persistent pain

### Key Messages

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- Use paracetamol as ongoing therapy: the modified-release formulation offers convenience
  - Use NSAIDs where cardiovascular, renal and gastrointestinal risk is acceptable
  - Consider an opioid when non-opioids offer inadequate pain control or NSAIDs are unsuitable
  - Tramadol's role in mild-moderate pain is limited by drug interactions and CNS adverse effects
- 

### Use paracetamol as ongoing therapy: modified release offers convenience

Use regular paracetamol at an adequate dose

Paracetamol is effective and has an excellent safety profile and so remains the analgesic of choice, particularly in mild-to-moderate pain.

Around-the-clock pain control depends on taking adequate doses regularly. Ask people who report insufficient pain control with paracetamol about the dose and frequency they have used to date. The recommended dose for immediate-release paracetamol is 500–1000 mg at 4–6 hourly intervals to a maximum of 4 g per day.

Modified-release paracetamol may be useful

Modified-release paracetamol tablets are available on the PBS for osteoarthritis. The modified-release tablets may be more convenient for patients who are reluctant to take 4 doses per day; the recommended dose is 2 × 665 mg tablets every 6–8 hours to a maximum of 6 tablets per day.

Two bioequivalent brands of modified-release paracetamol, Panadol Osteo and Duatrol, are on the PBS for osteoarthritis. Panadol Osteo has a \$4.88 premium, which doubles its price for people with concession cards.

### Use NSAIDs where cardiovascular, renal and gastrointestinal risk is acceptable

Do the potential benefits of adding an NSAID outweigh the potential harms?

If paracetamol is insufficient to control pain, consider prescribing a non-steroidal anti-inflammatory drug (NSAID). Assess the patient's risk of gastrointestinal, cardiovascular and renal adverse effects — people at high risk should avoid NSAIDs if possible.

For people at low risk of these adverse effects, NSAIDs are valuable analgesics. For those with risk factors for one or more adverse effects, assessing the balance of benefit and harm will be more complex and should involve discussing the risks with the patient and considering alternative analgesics, such as opioids.

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**Prefer NSAIDs with a low risk of gastrointestinal adverse effects**

NSAIDs with a lower risk of gastrointestinal adverse effects are diclofenac and ibuprofen, and the COX-2 selective NSAIDs celecoxib and lumiracoxib.

COX-2 selective NSAIDs have equivalent efficacy and a similar range of adverse effects to conventional NSAIDs, so they are not preferred routinely to conventional NSAIDs. Using a COX-2 selective NSAID rather than a conventional NSAID is most justified in those with risk factors for gastrointestinal adverse effects (age  $\geq$  65 years, history of ulcer, concomitant use of anticoagulants or corticosteroids, presence of serious comorbidity). Alternatively, consider adding a gastroprotective agent (a proton pump inhibitor or misoprostol) to a conventional NSAID. For more information about gastroprotective options, see *NPS News 46: Proton pump inhibitors* ([www.nps.org.au/healthpro](http://www.nps.org.au/healthpro) — go to 'Newsletter Index' in the left-hand panel).

A new COX-2 selective NSAID, lumiracoxib, has recently been PBS listed. The *NPS RADAR* review 'Lumiracoxib (Prexige) for osteoarthritis' at [www.npsradar.org.au](http://www.npsradar.org.au) details its PBS listing and its place in therapy.

**Assess cardiovascular risk before prescribing an NSAID**

Use the most caution when prescribing NSAIDs for people at high cardiovascular risk (such as those with established cardiovascular disease, diabetes plus renal impairment, familial hypercholesterolaemia or diagnosed left ventricular hypertrophy) because they will have the largest absolute increase in risk of myocardial infarction or stroke when taking an NSAID.

Since the withdrawal of rofecoxib in 2004, evidence for an increased risk of vascular events with COX-2 selective NSAIDs has continued to emerge.<sup>1-3</sup> A meta-analysis has estimated that taking a COX-2 selective NSAID is associated with a 42% increase in relative risk of a first serious vascular event compared with placebo, or an extra 3 people having a vascular event per 1000 per year.<sup>4</sup> Several epidemiological studies have implied an increased risk of vascular events with conventional NSAIDs.<sup>1,2,5-9</sup>

**Monitor for renal impairment and symptoms of heart failure in patients at risk**

Avoid or use NSAIDs with caution in people with risk factors for impaired renal function, which include:

- volume depletion
- age > 60 years
- salt-restricted diet
- concomitant use of diuretics, ACE inhibitors, angiotensin II receptor blockers, cyclosporin or aspirin
- glomerular filtration rate  $\leq$  60 mL/min
- cirrhosis
- congestive heart failure.<sup>10</sup>

NSAIDs also increase the risk of developing or exacerbating symptoms of heart failure. In a recent study, patients aged > 60 years using an NSAID had a 30% increase in the risk of hospital admission for heart failure. In those with established heart failure, the relative risk of hospitalisation was 8.6 (95% confidence interval 5.3 to 13.8) in users of NSAIDs compared with non-users without heart failure.<sup>11</sup>

In patients at risk of these adverse effects who cannot avoid taking an NSAID, assess plasma sodium, potassium and creatinine levels, blood pressure, weight, the presence of oedema and symptoms and signs of heart failure at baseline, 2-4 weeks after initiation and at regular intervals during treatment.<sup>10,12</sup>

Use NSAIDs at the lowest effective dose for the shortest possible duration

Studies suggest that the risk of cardiovascular and gastrointestinal events is associated with dose and duration of NSAID use.<sup>1,3-6,13</sup>

To limit exposure, add an NSAID to ongoing regular paracetamol as intermittent as-needed treatment during exacerbations in pain. Periodically evaluate the need to continue NSAID treatment.

## Consider an opioid when non-opioids offer inadequate pain control or NSAIDs are unsuitable

Starting opioids

An opioid is an alternative if an NSAID fails to control pain adequately or is unsuitable because of an unacceptable risk of adverse effects.

Weak opioids have similar efficacy to NSAIDs and offer modest additional analgesic efficacy when added to paracetamol.<sup>14-16</sup> They produce the same range of adverse effects as strong opioids but with lower efficacy.

Choosing a weak opioid: codeine, dextropropoxyphene or tramadol?

Codeine is the most frequently used weak opioid, although about 10% of Caucasian people and 1–2% of Asian people will have little or no response as they cannot metabolise codeine to morphine.<sup>17</sup> Switch non-responders to an alternative opioid. A short half-life and lack of a sustained-release formulation also limit the usefulness of codeine for persistent pain. It may be of greatest use in controlling incident pain or other short-lived mild-to-moderate pain.

Ensure that an adequate dose of codeine is used — trials have demonstrated the efficacy of codeine 60 mg added to paracetamol.<sup>15,16</sup> The lowest effective dose is not established but it is thought that doses below 30 mg are unlikely to be effective.

Maintain effective paracetamol doses when adding codeine. If a combination tablet containing paracetamol and codeine is prescribed, this means two tablets per dose to achieve 1000 mg paracetamol. The resulting codeine dose may be associated with intolerable adverse effects, particularly constipation. Adding codeine as a separate prescription allows more flexible dosing.

Avoid dextropropoxyphene because regular use leads to accumulation of the parent drug (causing dizziness and confusion) and its cardiotoxic metabolite.

Tramadol's role in mild–moderate pain is limited by drug interactions and CNS adverse effects

Tramadol's potential for serious drug interactions and adverse effects precludes its use in some. It may cause serotonin syndrome (particularly when combined with other serotonergic drugs, such as most antidepressants). Seizures have been reported and appear to be most likely in people taking drugs that lower the seizure threshold, or who have a history of seizures.<sup>18-20</sup> Tramadol is often poorly tolerated — up to 20% of patients in trials discontinued treatment due to adverse effects such as nausea, vomiting, dizziness and drowsiness.<sup>21-28</sup>

Use strong opioids for pain not controlled by other analgesics

Strong opioids have a role in persistent pain that is not adequately controlled by weak opioids or NSAIDs. Morphine is usually considered the strong opioid of first choice because of familiarity, cost and the range of formulations available. Other strong opioids include oxycodone, hydromorphone, fentanyl, buprenorphine and methadone. Oral, controlled-release formulations are preferred.

## Starting opioids in the community

Changes to the PBS prescribing requirements mean that subsidised opioid analgesics for persistent non-cancer pain can now be started in the community. If possible, refer patients to a multidisciplinary pain clinic or a pain specialist before prescribing a strong opioid. However, it may be inappropriate to delay prescribing effective pain control until an appointment can be scheduled. Telephone advice from a specialist may be helpful in such cases.

To obtain an authority to continue the opioid for more than 12 months, the prescriber needs to seek review of the patient's pain management by a second doctor (who may be a general practitioner or a specialist) to confirm the clinical need for ongoing opioid analgesics. Consider scheduling a clinic or specialist appointment so this review can be used to fulfil the PBS criteria for ongoing opioid supply.

## Addiction and dependence are distinct entities

The fear that patients will become addicted appears to be a major barrier to the use of opioids in persistent pain<sup>29–33</sup>, yet this may partly stem from misunderstanding of the meaning of addiction.<sup>30,34</sup> Addiction is defined as compulsive use of drugs for non-medical purposes, in spite of harm to the user. This is distinct from physical dependence, which is adaptation of the body to the presence of an opioid, characterised by the development of withdrawal symptoms when the opioid is stopped. In contrast to addiction, dependence is a predictable and normal physiological response to repeated opioid use.

Being judged to be at high risk of opioid abuse or addiction is not an absolute contraindication to being prescribed opioids for pain relief — all patients have a right to effective pain treatment. However, in patients thought to be at risk of abuse (such as those with a previous history of substance abuse), referral to or advice from a pain clinic or addiction specialist should be sought.

## Reviewer

Associate Professor Milton Cohen, Department of Medicine, St Vincent's Clinical School, Sydney

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Online citations available at [www.nps.org.au/healthpro](http://www.nps.org.au/healthpro)

*The information contained in this material is derived from a critical analysis of a wide range of authoritative evidence. Any treatment decisions based on this information should be made in the context of the clinical circumstances of each patient.*



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NPSP0154

## PBS availability and co-payment status\* of analgesics for persistent pain

Period covered: January 2002–December 2005 (unless specified)

(\*Source: Pharmaceutical Benefits Schedule)

The confidential prescribing data provided to individual prescribers in the *NPS Prescribing Practice Review 35 – Analgesic choices in persistent pain* – are from the Medicare Australia database and include all prescriptions dispensed for concession card holders and items above the co-payment dispensed for general patients. Paracetamol, most conventional NSAIDs and tramadol are below the co-payment. Most COX-2 selective NSAIDs and opioids are above the co-payment except lower strengths of some products; for full details see below.

### Paracetamol

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Paracetamol	Tablet 500 mg	April 2005		Below
Paracetamol	Tablet 665 mg (modified release)	April 2005		Below
Paracetamol	Tablet 500 mg			Below
Paracetamol	Oral liquid 120 mg per 5 mL, 100 mL			Below
Paracetamol	Oral liquid 240 mg per 5 mL, 200 mL			Below
Paracetamol Palliative care	Tablet 665 mg (modified release)	April 2005		Below
Paracetamol Palliative care	Suppositories 500mg, 24	February 2004		Below
Paracetamol Palliative care	Tablet 665 mg (modified release)	April 2005		Below
Paracetamol Palliative care	Suppositories 500mg, 24	February 2004		Below

### Conventional NSAIDs

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Diclofenac sodium	Tablet 25 mg (enteric coated)			Below
Diclofenac sodium	Tablet 50 mg (enteric coated)			Below
Diclofenac sodium	Suppository 100 mg			Below
Diclofenac sodium with misoprostol	Tablet 50 mg-200 micrograms			Above
Diclofenac potassium	Tablet 50 mg 20		April 2004	Below
Diflunisal	Tablet 250 mg			Below
Diflunisal	Tablet 500 mg			Below
Ibuprofen	Tablet 200 mg			Below
Ibuprofen	Tablet 400 mg			Below
Ibuprofen	Tablets 400 mg, 20			Below
Indomethacin	Suppository 100 mg			Below
Indomethacin	Capsule 25 mg			Below
Ketoprofen	Suppository 100 mg			Below
Ketoprofen	Capsule 200 mg (sustained release)			Below
Mefenamic acid	Capsule 250 mg			Below
Naproxen	Oral suspension 125 mg per 5 mL,		November	Below

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
	474mL		2002	
Naproxen	Tablet 750 mg (sustained release)			Below
Naproxen	Tablet 500 mg			Below
Naproxen	Tablet 250 mg			Below
Naproxen	Tablet 1 g (sustained release)			Below
Naproxen sodium	Tablet 550 mg			Below
Naproxen	Suppository 500 mg		November 2002	Below
Piroxicam	Dispersible tablet 10 mg			Below
Piroxicam	Capsule 10 mg			Below
Piroxicam	Dispersible tablet 20 mg			Below
Piroxicam	Capsule 20 mg			Below
Sulindac	Tablet 100 mg			Below
Sulindac	Tablet 200 mg			Below
Tiaprofenic acid	Tablet 300 mg			Below
Tiaprofenic acid	Tablet 200 mg		November 2003	Below

### COX-2 selective NSAIDs

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Celecoxib	Capsule 100 mg			Above
Celecoxib	Capsule 200 mg			Above
Meloxicam	Tablet 7.5 mg			Above up to December 2004. Below from January 2005
Meloxicam	Tablet 15 mg			Above
Rofecoxib	Tablet 12.5 mg		Withdrawn September 2004	Above
Rofecoxib	Tablet 25 mg		Withdrawn September 2004	Above
Rofecoxib	Oral suspension 12.5 mg per 5 ml 150ml		Withdrawn September 2004	Above
Rofecoxib	Oral suspension 25 mg per 5 ml 150ml		Withdrawn September 2004	Above

## Opioids

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Codeine phosphate	Tablet 30 mg	April 2005		Below
Codeine phosphate with paracetamol	Tablet 30 mg-500 mg			
Codeine phosphate with paracetamol	Tablet 30 mg-500 mg			
Codeine phosphate with paracetamol	Tablet 30 mg-500 mg			
Fentanyl	Transdermal patch 10 mg (releasing approximately 100 micrograms per hour) (original formulation)			Above
Fentanyl	Transdermal patch 2.5 mg (releasing approximately 25 micrograms per hour) (original formulation)			Above
Fentanyl	Transdermal patch 7.5 mg (releasing approximately 75 micrograms per hour) (original formulation)			Above
Fentanyl	Transdermal patch 5 mg (releasing approximately 50 micrograms per hour) (original formulation)			Above
Hydromorphone hydrochloride	Injection 2 mg in 1 ml			Below
Hydromorphone hydrochloride	Injection 10 mg in 1 ml			Below
Hydromorphone hydrochloride	Injection 50 mg in 5 ml			Above
Hydromorphone hydrochloride	Injection 500 mg in 50 ml			Above
Hydromorphone hydrochloride	Oral liquid 1mg per ml, 473 ml			Above up to December 2004. Below from January 2005
Hydromorphone hydrochloride	Tablet 2 mg			Below
Hydromorphone hydrochloride	Tablet 4 mg			Below
Hydromorphone hydrochloride	Tablet 8 mg			Above up to January 2003. Below from February 2003
Methadone hydrochloride	Tablet 10 mg	April 2003		Below
Methadone hydrochloride	Injection 10 mg in 1 ml	April 2003		Below up to November 2005. Above from December 2005
Morphine hydrochloride	Oral solution 2 mg per ml, 200 ml			Below
Morphine hydrochloride	Oral solution 5 mg per ml, 200 ml			Below

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Morphine hydrochloride	Oral solution 10 mg per ml, 200 ml			Below
Morphine sulfate	Tablet 5 mg (controlled release)			Below
Morphine sulfate	Tablet 10 mg	November 2003		Below
Morphine sulfate	Tablet 20 mg	November 2003		Below
Morphine sulfate	Tablet 30 mg			Below
Morphine sulfate	Tablet 10 mg (controlled release)			Below
Morphine sulfate	Tablet 30 mg (controlled release)			Above up to December 2004. Below from January 2005
Morphine sulfate	Tablet 60 mg (controlled release)			Above
Morphine sulfate	Tablet 100 mg (controlled release)			Above
Morphine sulfate	Capsule 20 mg (containing sustained release pellets)			Below
Morphine sulfate	Capsule 100 mg (containing sustained release pellets)			Above
Morphine sulfate	Sachet containing controlled release granules for oral suspension, 30 mg per sachet			Above up to December 2004. Below from January 2005
Morphine sulfate	Capsule 10 mg (containing sustained release pellets)			Below
Morphine sulfate	Sachet containing controlled release granules for oral suspension, 60 mg per sachet			Above
Morphine sulfate	Sachet containing controlled release granules for oral suspension, 100 mg per sachet			Above
Morphine sulfate	Tablet 15 mg (controlled release)			Below
Morphine sulfate	Sachet containing controlled release granules for oral suspension, 20 mg per sachet			Below
Morphine sulfate	Capsule 30 mg (controlled release)			Below
Morphine sulfate	Capsule 60 mg (controlled release)			Above up to December 2004. Below from January 2005.
Morphine sulfate	Capsule 90 mg (controlled release)			Above
Morphine sulfate	Capsule 120 mg (controlled release)			Above
Morphine sulfate	Capsule 50 mg (containing sustained release pellets)			Above
Morphine sulfate	Injection 15 mg in 1 ml			Below
Morphine sulfate	Injection 30 mg in 1 ml			Below
Morphine sulfate (Doctor's bag)	Injection 15 mg in 1 ml			Below

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Morphine sulfate (Doctor's bag)	Injection 30 mg in 1 ml			Below
Morphine sulfate	Injection 10 mg in 1 ml			Below
Morphine sulfate	Tablet 200 mg (controlled release)			Above
Morphine sulfate	Sachet containing controlled release granules for oral suspension, 200 mg per sachet			Above
Morphine tartrate	Injection 120 mg in 1.5 ml			Below
Oxycodone	Suppository 30 mg			Below up to November 2004. Above from December 2004
Oxycodone hydrochloride	Tablet 5 mg (controlled release)	November 2003		Below
Oxycodone hydrochloride	Capsule 20 mg			Below
Oxycodone hydrochloride	Tablet 40 mg (controlled release)			Above
Oxycodone hydrochloride	Tablet 20 mg (controlled release)			Above up to December 2004. Below from January 2005
Oxycodone hydrochloride	Tablet 10 mg (controlled release)			Below
Oxycodone hydrochloride	Oral solution 5 mg per 5 ml, 250 ml	August 2003		Below
Oxycodone hydrochloride	Capsule 10 mg			Below
Oxycodone hydrochloride	Tablet 80 mg (controlled release)			Above
Oxycodone hydrochloride	Tablet 5 mg			Below
Oxycodone hydrochloride	Capsule 5 mg			Below
Pethidine hydrochloride	Injection 100 mg in 2 ml			Below
Pethidine hydrochloride	Injection 50 mg in 1 ml			Below
Pethidine hydrochloride (Doctor's bag)	Injection 100 mg in 2 ml			Below
Tramadol hydrochloride	Tablet 100 mg (sustained release)			Below
Tramadol hydrochloride	Tablet 200 mg (sustained release)			Below
Tramadol hydrochloride	Tablet 150 mg (sustained release)			Below

Generic name	Form and strength	Drug availability on PBS		Co-payment status
		Start date	End date	
Tramadol hydrochloride (Doctor's bag)	Injection 100 mg in 2 ml	May 2002		Below
Tramadol hydrochloride	Oral drops 100 mg per ml, 10 ml	August 2005		Below
Tramadol hydrochloride	Capsule 50 mg	November 2002		Below
Tramadol hydrochloride	Capsule 50 mg			Below
Tramadol hydrochloride	Injection 100 mg in 2 ml	May 2002		Below