

## Pain Management and Buprenorphine in South Australian Patients

### Abstract

*This bulletin presents the results of a partial replication of a French study (Lavie, Dubernet, Fatséas, Denis, Ali, Ling & Auriacombe 2004, unpublished) that investigated the pain management experiences of clinicians treating patients with Buprenorphine Maintenance Treatment (BMT) for opioid addiction. Differences between the two studies emerged making it difficult to make direct comparisons between the French and Australian findings. Overall it appears that for Australian patients, acute or chronic pain, is not a common occurrence. For patients who have severe acute pain that does not respond to an increase in buprenorphine dose or the addition of anti-inflammatory drugs, the preferred method of treatment is to transfer to a short-acting full agonist such as morphine until the pain has resolved.*

### Introduction

Buprenorphine is presently widely used in Australia with over 8600 patients receiving Buprenorphine Maintenance Treatment (BMT) as at June 2003 (Commonwealth Department of Health & Ageing 2003). There is an expanding body of literature discussing how chronic opioid use can result in an intolerance to pain, hyperalgesia and cross tolerance to various other opioids (Compton, Charuvastra, & Ling 2001; Kosten & Fiellin 2004; White 2004).

Compared with patients receiving Methadone Maintenance Treatment (MMT), those on buprenorphine may experience additional difficulties in the management of their pain symptoms.

Buprenorphine is a partial agonist that has a very strong affinity to the  $\mu$  receptor. The blockade effect that can develop with buprenorphine means that opioid-based analgesics should prove less effective. Consequently, BMT patients should be at increased risk of having difficult-to-manage pain episodes.

A French study (Lavie, Dubernet, Fatséas, Denis, Ali, Ling & Auriacombe 2004, unpublished) explored the pain management experiences of clinicians who were treating patients with BMT for their opioid addiction. Contrary to expectations, some doctors were effectively managing pain presentations with dextropropoxyphene. The present study seeks to examine the experience of clinicians in the Australian context.

## Aim

The aim of this review is to explore the pain experiences of BMT patients in Adelaide, South Australia, how doctors are intervening and whether there are any similar reports of opioid-based medications being effective despite their interaction with buprenorphine. Adelaide is a large metropolitan city with an estimated population of 1.1 million.

## Methodology

### Design

The project consisted of interviewing physicians who are involved in the care of patients currently receiving BMT. Semi-structured qualitative interviews were carried out either face-to-face or via phone.

### Sampling technique

Four distinct, yet related, groups of physicians were approached for interview:

- prescribing General Practitioners
- prison health medical officers
- doctors at two metropolitan hospital-based pain clinics (Royal Adelaide Hospital and Flinders Medical Centre)
- doctors working at Warinilla clinic<sup>1</sup>

All of the doctors working at Warinilla and the Flinders Medical Centre Pain Clinic were approached for interview. Four senior staff at the Royal Adelaide Hospital Pain Clinic were approached to take part (Director, Deputy Director and two staff specialists).

The selection process for GPs and prison health medical officers was somewhat more complicated. South Australia requires that doctors attend a government run training course and be subsequently registered to prescribe opioid maintenance programs. In addition, a doctor must seek an Authority<sup>2</sup> from the Department of Health to prescribe MMT/BMT to a new patient. Consequently, the Department of Health maintains a monthly updated list of South Australian

<sup>1</sup> Warinilla is a large clinic run by Drug & Alcohol Services South Australia (DASSA) that is both a community pharmacy and withdrawal management centre. Training of GPs in opioid maintenance therapies also occurs at Warinilla.

<sup>2</sup> In South Australia to enter a new patient into either a BMT or MMT program the doctor must telephone the Drugs of Dependence Unit, based within DASSA, and obtain an Authority in relation to that patient. This Authority permits the authorised prescriber and other registered prescribers in the same practice or surgery to prescribe or supply buprenorphine or methadone. Consequently, if an Authority is issued in relation to a prisoner or a Warinilla patient then any of the registered prescribers at these sites could subsequently monitor or prescribe for these patients.

prescribers and the number of patients for whom they are currently authorised to prescribe BMT or MMT. Unfortunately, unlike other states, the South Australian data does not differentiate between buprenorphine or methadone patients. At the time of reporting there was no data available to enumerate the total population of BMT recipients.

Additional sampling criteria were developed for GPs due to both the uncertainty as to whether a given doctor actually had any current buprenorphine patients and the short time frame available for completion of this project (due to time constraints it was not feasible to contact and interview every registered prescribing doctor). After consultation with local experts, the consensus was that approximately 30% of the opioid maintenance patients in Adelaide were receiving buprenorphine. It was felt that by approaching doctors with a minimum of 20 Authorities to prescribe maintenance programs we were more likely to have at least some BMT patients of whom some may subsequently have experienced a pain episode.

A total of 39 physicians were approached for inclusion in the study, including 21 GPs, four prison health workers, six pain clinic doctors and eight Warinilla doctors. The prison health workers, pain clinic doctors, Warinilla staff and the majority of GPs were based in the greater Adelaide metropolitan area. Four GPs were based in more regional areas surrounding Adelaide. Potential participants were initially sent a letter introducing the review and the researchers as well as an information sheet outlining the study aims, methodology, confidentiality agreements and what their participation would entail. A follow up call was made two to three days after the letter was sent. Data collection took place in February 2005.

## Interview Procedure

Interviews were performed either face to face or over the phone. Interviews were semi-structured and a standardised questionnaire, from the Lavie et al (2004, unpublished) study, was used as a guide. The interview was designed to gather information on the following issues:

- number of patients in BMT
- prevalence and experiences of chronic and acute pain
- common medical complaints for BMT clients
- management of pain episodes
- difficulties in managing BMT patients' pain

## Results

### Response rates

Of the 39 doctors approached to participate in the study a total of 15 were available for interview. This included: nine GPs (two from regional areas), one pain clinic physician, three prison health doctors and two Warinilla doctors.

Three doctors were away on leave during the course of this study and five were unable to be contacted. The overwhelming majority of doctors who did not agree to participate in the study did have BMT patients but stated that pain management was simply not an issue for them and none of their present BMT clients had experienced either an acute or chronic pain episode.

The 15 doctors interviewed for the study represent a total of approximately 681 BMT patients. A breakdown of BMT patients by physician group is shown in Table 1.

**Table 1.** Number of BMT patients by physician group

	N	Reported number of patients in BMT
GPs	9	313
Pain Clinic	1	2
Prison	3	241*
Warinilla	2	125 <sup>#</sup>
<b>Total</b>	<b>15</b>	<b>681</b>

<sup>#</sup> Physicians at Warinilla are not assigned a specific case-load, instead treating any patients that require assistance on that day. The 125 patients shown here is the total number of buprenorphine patients currently being seen at Warinilla.

\*Total number of Authorities issued to the doctors working in the prison health system.

### Interview format

The standardised questionnaire sought information on specific patients' presentations and doctors were informed of this in the review information sheet they were provided with. However, the majority of doctors felt unable to discuss the specifics of particular patients' presentations. Instead, a more general discussion was held regarding their experiences with BMT patients and the treatment of pain. Physicians reported that they would adopt a standard approach to the treatment of patients dependent on the presenting difficulties. Consequently, information gathered was more general in nature.

### General feedback regarding pain management

Doctors reported that BMT patients were not more likely to have pain presentations than same-aged non-opiate using patients. Indeed, as discussed previously most of the doctors who did not participate in the study felt that pain management was not an issue with their BMT patients and that they had not experienced the need to intervene. This finding was reported even after the researchers emphasised that an acute pain episode could be something as simple as a patient asking for help with a headache or a sore limb.

For those doctors who were able to discuss pain management in their clients a number of medication-based pain strategies were identified as well as complementary approaches such as physiotherapy and counselling.

### Acute pain

The number of patients who presented with acute pain issues is not available; however, doctors stated it was not a common occurrence. Some doctors discussed that all opioid users are less tolerant of pain or that they may be symptom hyper-vigilant. However, increased sensitivity to pain for the longer term opioid users did not seem to translate to increased pain presentations for buprenorphine clients.

In relation to methadone, some doctors reported no difference between BMT and MMT patients while approximately a third stated that they were more likely to receive pain complaints from MMT patients. The various reasons attributed to this were:

- Patients experiencing pain are more likely to initially have been placed on methadone.
- Due to the increased euphoric effect of methadone and subsequent poorer diligence and decreased saliva production (a consequence of opioid use) MMT patients are more likely to have dental problems resulting from poor hygiene.
- Due to the full agonist effect of methadone, individuals with high levels of opioid abuse will initially be placed on high doses of methadone. Consequently, some methadone patients form a distinct group from buprenorphine patients, are less stable and are reporting pain episodes as a form of drug seeking.

## **Acute pain management**

Responses were mixed regarding whether it was more difficult to intervene in the management of buprenorphine patients with acute pain. Some doctors stated that it was more difficult as buprenorphine limits their options in terms of using narcotic analgesics. It was also claimed that steroids are less effective. In contrast, other physicians stated they were not experiencing any difficulties in managing acute pain presentations. The general impression gained from the data, and specifically stated by some doctors, is that difficulties experienced in the intervention of pain in BMT clients is dependent upon the nature and severity of that pain. Mild to moderate pain complaints seem to be handled effectively, while for severe pain, such as fractures, BMT presents difficulties.

## **Strategies**

A common response from physicians was to prescribe analgesics that utilise different pain pathways to opioids. By far the most commonly mentioned, raised by 13 of the 15 doctors, were various non-steroidal anti-inflammatory drugs (NSAIDs), including aspirin, and/or paracetamol. This was reported as generally being an effective strategy. In addition, or as an alternative to this, some doctors would temporarily increase the patient's dose of buprenorphine. This increase was always described as moderate. When dose figures were provided it was usually increased to around 8mg, though one doctor described some patients benefiting from an increase from 8mg to 12mg.

Doctors may be less likely to increase the dose of buprenorphine than methadone in attempts to handle pain. While various doctors did discuss buprenorphine as being safer, its analgesic effects were not seen by them as being as effective as methadone. Indeed one GP stated that pain was more a problem for buprenorphine patients than methadone purely because they had never found a methadone dose that didn't address the patient's pain. Several doctors reported increasing buprenorphine but that this was not often an effective strategy. In contrast most doctors mentioned that their initial response to MMT patients in pain would be to increase their methadone dose for a period of time.

Several doctors also reported being requested to prescribe medication containing codeine phosphate 30mg/paracetamol 500mg by their patients. Due to the blockade effect of buprenorphine the physicians reported that it should not be effective and had counselled their patients regarding this issue. However, the patients who still sought this medication reported that this was effective in managing their pain and they did not seek any additional medication. The doctors discussed this as potentially being due to some form of placebo effect and/or the 500mg of paracetamol present in this medication.

Alternative medications reported by some doctors included tramadol that was described as useful as it was less likely to lead to increases in drug-seeking behaviour than benzodiazepines or opioids. Other doctors reported there being no rationale for the use of tramadol due to buprenorphine's blockade effect or that there were mixed reports as to its efficacy. Other medications mentioned as possible solutions included orphenadrine and orphenadrine/paracetamol combinations, oxycodone (low dose) and a non-prescription analgesic containing paracetamol and caffeine. One doctor also mentioned the use of a Transcutaneous Nerve Stimulation (TENS) machine and anti-convulsant drugs. For neuropathic pain, low doses of amitriptyline or anti-epileptic drugs could be prescribed.

High doses of morphine (200mg, IV) were also mentioned by two doctors but this was only in the context of hospital admissions where such medication could be monitored by hospital staff.

For those doctors who reported potential problems in the pain management of BMT patients it was commonly acknowledged that severe pain was difficult to intervene with while the patient was on buprenorphine. Consequently, if the patient was in severe pain they would change, or encourage the patient to change, to methadone. The increased analgesic effect of methadone and the ability to continually increase the dose was seen as being more effective for the management of severe pain in patients with opioid dependence. Changing to methadone also had the added advantage of increasing the range of drugs (narcotics) available to doctors that could be used to intervene in the pain episode. Other doctors mentioned that they would consider changing a patient to MMT if there were problems managing pain for BMT patients. A total of 12 doctors specifically mentioned changing clients to methadone as a pain management strategy.

## ***Chronic pain***

Precise figures as to the number of BMT patients experiencing chronic pain issues were not provided by the majority of doctors. Either no present clients were experiencing chronic pain at this time or they were unsure as to the number of patients. Hence, prevalence rates cannot be calculated. However, it was continually reported that chronic pain patients would usually not initially be placed on buprenorphine but rather methadone.

## ***Chronic pain management***

The overwhelming response from South Australian physicians from the four groups was that if a client with opioid dependence issues presented with chronic pain issues, the first instinct would be to place them on methadone. Similarly, if a BMT patient received injuries that resulted in them experiencing long-term pain then doctors usually reported that they would attempt to transfer the patient to methadone. Also, those with more significant and extensive drug using histories, and consequently potentially increased medical issues, are initially more likely to be stabilised on methadone rather than buprenorphine due to its full agonist effect. Consequently, chronic pain tended not to be an issue for BMT patients as methadone is seen as a more effective tool for the management of chronic pain in opioid-dependent people.

## ***Pregnancy***

One doctor who also fulfilled an obstetrics function discussed the approach adopted for people during pregnancy. During labour, epidurals and nitrous oxide were used rather than narcotics. Buprenorphine use may also be stopped and the patient placed on short acting opioids such as fentanyl, morphine or oxycontin for a time. Once the mother was stabilised and her pain had subsided she would be transferred back to buprenorphine.

## **General Comments**

Some doctors discussed the role of the pain clinics. While positive comments regarding the abilities of the pain clinics were received, several doctors reported that they had to address severe pain issues in their own practice due to the waiting time required for patients to access the clinics. Some mention was made of doctors referring patients to GPs who were

tending to specialise in management of pain rather than to the pain clinics. This information, when combined with feedback that chronic pain is generally treated with methadone, may explain why the pain clinic doctors were tending not to see buprenorphine patients for pain management issues. In relation to drug-dependent individuals, there is also the added pressure for doctors to quickly and effectively intervene before the patient begins to self-medicate with street opiates and potentially relapse into more severe drug abuse.

There were also a small number of reports of a lack of communication between GPs and hospitals and a potential lack of training in hospitals regarding opioid maintenance treatments. For example, one doctor had experienced severe problems with patients being admitted to hospital for surgery or pain complaints and being placed on opioid-based medications such as oxycodone. Having received a prescription for oxycodone, patients were more at risk to begin doctor shopping and subsequently relapse into more drug abuse and a more chaotic lifestyle.

Finally, one doctor discussed that pain management could be more effective with BMT patients than MMT as buprenorphine is longer acting. This doctor described pain management with MMT patients as potentially being more chaotic as they may binge at some point and then report increased pain from stronger withdrawal symptoms. This would lead to attempting to acquire greater amounts of opioids.

## **Conclusions**

- Patients receiving buprenorphine typically do not present difficult pain management issues.
- The data suggest that acute pain episodes are generally being addressed by the patient without medical assistance.
- In most acute pain episodes, when doctors intervene, it is generally managed effectively with NSAIDs including aspirin and/or paracetamol.
- Patients report positive benefits from the use of compound analgesics containing paracetamol 500mg/codeine phosphate 30mg despite the buprenorphine blocking the effect of codeine.
- Severe pain tends to be managed by transferring the patient to methadone.
- In comparison to methadone, buprenorphine tends not to be seen as effective an analgesic when used for opioid-dependent people.

## References

Compton P, Charuvastra VC & Ling W. Pain intolerance in opioid-maintained former opiate addicts: effect of long-acting maintenance agent. *Drug and Alcohol Dependence* 2001, 63 pp139–146.

Kosten TR & Fiellin DA. Buprenorphine for office-based practice: consensus conference overview. *American Journal of Addiction* 2004, 13 Suppl 1, 1–7.

White JM. Pleasure into pain: the consequences of long-term opioid use. *Addictive Behaviour* 2004, 29, pp 1311–1324.

Lavie E, Dubernet M, Fatséas M, Denis C, Ali R, Ling W & Auriacombe M. *Results of the pre-screening of a group of key physicians in Bordeaux and Bayonne (France) during Sept–Oct 2004* unpublished.

## Report prepared by:

Adam Harrison, Sophie Pointer, Ian Richards, Robyn Vial & Robert Ali

Clinical Services & Research Division