

TRENT MEDICINES INFORMATION SERVICE

# QIPP Detail Aid Support Document

Providing support for quality in prescribing

## BUPRENORPHINE PATCHES- a high price for convenience?

### KEY MESSAGES

- Buprenorphine patches at lower doses are broadly as effective as codeine or tramadol but much more expensive. Oral analgesics should generally be preferred as first line therapy in chronic non-cancer pain.
- The patches are unsuitable in acute or unstable pain due to the need for slow titration of doses; it may take up to 72 hours to achieve a stable blood level after a change in dose.
- Exposure of patches to heat while being worn may lead to increased absorption of the drug from the patch and consequent adverse effects. Patients should be warned of the symptoms of excessive absorption

### WHAT IS THE PROBLEM?

*Buprenorphine patches cost several times more than oral morphine in equivalent doses. In the last year (to Sept 2021), Barnsley spent approximately £416,000 on buprenorphine patches. 60% of this cost was as a result of prescribing the weaker strength of patches (Sevodyne®), which has a similar analgesic effect as co-codamol or tramadol.*

*Local guidance advises the use of oral morphine where a strong opioid is considered necessary.<sup>1</sup>*

### MAJOR CONSIDERATIONS

*Patches containing buprenorphine (e.g. Sevodyne®, Bupeaze®\*) are an alternative to oral opioid analgesics. The two brands are not interchangeable as they deliver different amounts of buprenorphine (Sevodyne® is the weaker) and the time each patch is applied is different – weekly for Sevodyne® and twice weekly for Bupeaze®.*

For amounts of buprenorphine delivered by the two brands of patch see table in detail aid, giving approximately equivalent doses of morphine. There is a lack of comparative studies with other opioid drugs such as codeine or tramadol investigating dose equivalence, though one study<sup>2</sup> did compare buprenorphine patches with modified release tramadol and found them broadly equivalent in effect.

*\*There are many brands of buprenorphine patches available (both lower and higher strength). Sevodyne® is the preferred brand of 7 day buprenorphine patch in Barnsley and Bupeaze® is the preferred 4 day (twice weekly) buprenorphine patch.*

*The patches are not suitable for titrating the dose upwards in acute or unstable pain due to a delay in achieving higher blood levels. It may take up to 72 hours after a dose change for blood levels to reach a new stable level.*

The SPC for Sevodyne® recommends not increasing the dose for 3 days when starting on a patch, during this time supplemental analgesia will be needed to maintain analgesic effect for a patient switching from other analgesics.

*After removal of a patch a reservoir of active drug may remain in the skin and continue to be absorbed for over 24 hours.). This can cause difficulties in switching to alternative analgesics.*

This information is in the SPC, which advises that during discontinuation additional opioids should not be given for the first 24 hours after removal of a patch.

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Problems associated with the use of opioid patches have been reported locally. There have been incidents where patients have forgotten to remove a patch before applying the next one leading to an increased risk of side effects. Many patients report skin irritation with buprenorphine patches.

*A review of trials involving buprenorphine patches for chronic non cancer pain found that efficacy was similar to tramadol or co-codamol and that the patches have a considerable placebo effect. Data on equivalent doses for these agents are lacking.*

See MTRAC review.<sup>3</sup> Trials in non cancer pain (often back pain) found the patches to be superior to placebo and in a trial comparing low dose buprenorphine patches (Butrans®) with tramadol MR, non-inferiority of the patches was found.<sup>2</sup> In a further trial<sup>4</sup> involving osteoarthritis patients, where buprenorphine patches were used together with paracetamol, the patches were found to be non-inferior to co-codamol (using doses of codeine in the co-codamol group up to 60mg).

### Dose equivalents of oral morphine and buprenorphine patches

NB These doses are a guide only. They are based on a ratio of 100:1 potency, though this may not be applicable to all patients. This data should not be used to switch treatments.

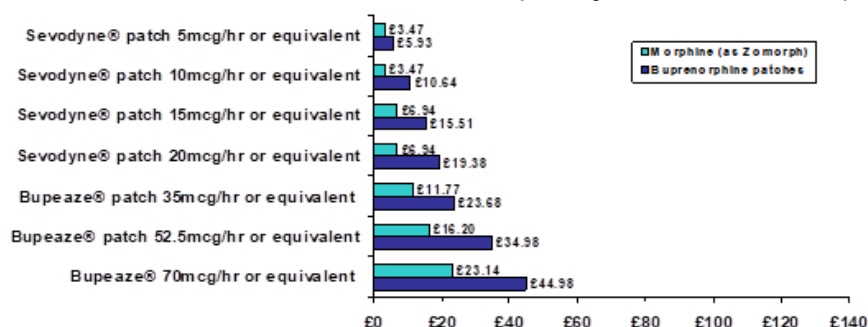
Buprenorphine 5 micrograms/hr	12mg morphine in 24 hours
Buprenorphine 10 micrograms/hr	24 mg morphine in 24 hours
Buprenorphine 20 micrograms/hr	48 mg morphine in 24 hours
Buprenorphine 35 micrograms/hr	84 mg morphine in 24 hours
Buprenorphine 52.5 micrograms/hr	125 mg morphine in 24 hours
Buprenorphine 70 micrograms/hr	168 mg morphine in 24 hours

Note that formulations of buprenorphine transdermal patches are available as 72-hourly, 96-hourly and 7-day patches. Consult the BNF or SPC for further information.

This data is based on PO morphine: TD buprenorphine conversion ratio of 100:1, a ratio suggested by the Palliative care Formulary<sup>5</sup>. Clearly these should be treated with caution, particularly at higher doses. Dose equivalents for buprenorphine patches with other opioid analgesics such as tramadol or codeine are not available.

Note: the SPC warns of the possibility of increased absorption of buprenorphine from the patches when exposed to external heat sources. Patients or carer should be warned of symptoms of excessive opioid absorption including respiratory depression, sedation, drowsiness, and nausea and vomiting (see SPC). See also the 'Fentanyl and buprenorphine skin patches: How to use and dispose of them safely' PIL.<sup>6</sup>

### WHAT ARE THE COSTS? (30 days, MIMS June 2021)



Comparison of cost of buprenorphine patches at each dose with approximate equivalent dose of Zomorph®, the costs of the Zomorph® have been calculated from the nearest practicable dose e.g. the 12mg dose cost calculated on 20mg daily. Costs of Bupeaze® calculated using 2 patches per week as suggested in SPC.

NB Patients should be monitored closely if any changes in dose or formulation are made. Morphine has been used as comparator drug for these costings because of the lack of availability of dose equivalents for weaker opioids.

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## References

1. Guidance on the use of strong opioids in Barnsley. NHS Barnsley. April 2022. Available at: <https://best.barnsleyccg.nhs.uk/clinical-support/medicines/prescribing-guidelines/Opioid%20Comparison.pdf>
2. Karlsson M & Berggren AC. Efficacy and safety of low-dose transdermal buprenorphine patches (5, 10, and 20 microg/h) versus prolonged-release tramadol tablets (75, 100, 150, and 200 mg) in patients with chronic osteoarthritis pain: a 12-week, randomized, open-label, controlled, parallel-group noninferiority study. *Clin ther* 2009; 31:503-13.
3. MTRAC review of buprenorphine patches for chronic non-cancer pain at: <https://ccg.centreformedicinesoptimisation.co.uk/download/62aeef5064af7cff23f231651cf1e1c6/Buprenorphine-Patch-Summary-Jan-12.pdf>
4. Conaghan PG *et al*. Transdermal buprenorphine plus oral paracetamol vs an oral codeine-paracetamol combination for osteoarthritis of hip and/or knee: A randomised trial. *Osteoarthritis and Cartilage* 2011;19:930-8.
5. Buprenorphine monograph *in* Palliative Care Formulary (PCF-7) 2020.
6. Fentanyl and buprenorphine skin patches: How to use and dispose of them safely PIL. Available at: <http://barnsleybest.nhs.sitekit.net/clinical-support/patient-information-sheets/Fentanyl%20and%20Buprenorphine%20Transdermal%20Patch%20safety%20leaflet.pdf?UNLID=7321004362022412135546>

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