

TRENT MEDICINES INFORMATION SERVICE

QIPP Detail Aid Support Document

Providing support for quality in prescribing

FENTANYL PATCHES- any better than morphine?

KEY MESSAGES

- Fentanyl patches are a relatively potent formulation of opioid that are unsuitable in acute or unstable pain due to the need for slow titration of doses.
- Absorption from patches may change. Adverse events have occurred where the patches have been subjected to external heat, some of these have been fatal.
- Adverse events such as respiratory depression are a risk, particularly in those with pre-existing respiratory disease or who are opioid-naive. The MHRA advice is not to use these unless other opioids have previously been tolerated.

WHAT IS THE PROBLEM?

Fentanyl is a strong opioid similar to morphine, though it is much more potent. See dose comparison in detail aid (copied below). Patches containing fentanyl cost much more than oral morphine. See Costs table in detail aid (copied below).

In the last year (to Sept 2021), Barnsley spent just under £253,000 on fentanyl patches. If half of this had been prescribed as morphine slow release (e.g. Zomorph®), approximately £60,000 would have been available for other treatments. Local guidance advises the use of oral morphine where a strong opioid is considered necessary.¹

MAJOR CONSIDERATIONS

Patches containing fentanyl (e.g. Fencino® (contraindicated in patients who are allergic to peanuts or soya) and Matrifen®) are a useful way of delivering the drug that avoids the need for tablets. They are appropriate for use in stable pain for patients who are intolerant of morphine or who have renal failure.

For some patients the convenience of not having to take tablets for pain regularly is a clear advantage. Others are unable to tolerate morphine without significant side effects, and for those with renal failure fentanyl is preferable because it does not have active metabolites that accumulate in renal failure (unlike morphine).

The patches are not suitable for titrating the dose upwards in acute or unstable pain due to the delay in achieving higher blood levels: it may take up to 36-48 hours after a dose change for blood levels to reach a new stable level.

The Palliative Care Formulary² (PCF-7) warns that transdermal fentanyl should not be used for acute (transient intermittent or short-term) pain, e.g. postoperative pain or where there is a need for rapid dose titration for severe uncontrolled pain.

The onset of effect after placing a patch is slow and blood levels do not reach steady-state for 36-48 hours after starting a new dose. As blood levels increase over several days, adverse effects may occur gradually and not be recognised as being due to the opioid.

After removal of a patch a reservoir of active drug may remain in the skin and continue to be absorbed for as long as 22 hours (average 17). This can cause difficulties in switching to alternative analgesics.

This information is in the SPC. The BNF advises that patients should be monitored for 24 hours following removal of a patch if they have experienced severe side effects.

If a patient is being switched from fentanyl patches to another opioid this residual amount of fentanyl must be taken into account when calculating doses of opioid during the first day after removal of the patch.

Increased absorption from patches may occur with raised temperatures such as occur in pyrexia or during a hot bath. Fatalities have occurred as a result.

The MHRA have warned of errors in use of fentanyl patches in the Drug Safety Updates at <https://www.gov.uk/drug-safety-update/serious-and-fatal-overdose-of-fentanyl-patches>³ and <https://www.gov.uk/drug-safety-update/transdermal-fentanyl-patches-life-threatening-and-fatal-opioid-toxicity-from-accidental-exposure-particularly-in-children>⁴, these include accidental exposure and inappropriate use as well as increased absorption caused by raised temperature. See also the 'Fentanyl and buprenorphine skin patches: How to use and dispose of them safely' PIL⁵: <http://barnsleybest.nhs.sitekit.net/clinical-support/patient-information-sheets/Fentanyl%20and%20Buprenorphine%20Transdermal%20Patch%20safety%20leaflet.pdf?UNLID=7321004362022412135546>

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Prescribers may be unaware of the large amounts of opioid these patches can deliver (see morphine equivalent doses below).

The MHRA have warned that fentanyl patches should not be used in opioid-naïve patients.⁶

A number of problems with the use of opioid patches have been raised locally. There have been a number of incidents where patients have forgotten to remove one patch before applying the next one increasing the risk of adverse events.

Dose equivalents

Approximate dose equivalents of oral morphine and fentanyl patches taken from the Barnsley Palliative Care Formulary:⁷

Note: These doses should not be used to switch treatments. These doses are a guide only. Sources vary in the ratio of potency of these two drugs.

30-60mg morphine in 24 hours	Fentanyl 12 micrograms/hr
60 -90mg morphine in 24 hours	Fentanyl 25 micrograms/hr
135-180 mg morphine in 24 hours	Fentanyl 50 micrograms/hr
225-315mg morphine in 24 hours	Fentanyl 75 micrograms/hr

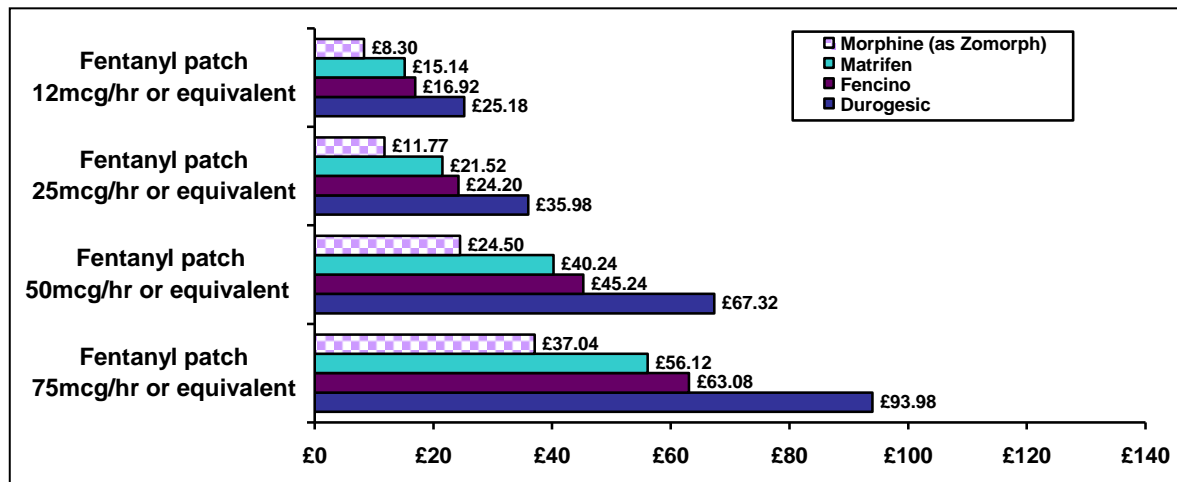
These dose equivalents have also been used for the cost data table below. Prescribers are advised to seek specialist advice when transferring from one opioid to another. The Barnsley Palliative Care Formulary says to seek specialist advice if the Fentanyl dose exceeds 75microgram/hr.⁷

Important note: using the above table to convert from fentanyl patch back to oral morphine is inappropriate and may result in an excessive dose of morphine being given.

Patients should be monitored closely if there are any changes in dose or type of opioid they are using.

WHAT ARE THE COSTS?*(30 days, MIMS Sept 2022)

(* Zomorph costs calculated as the nearest twice daily dose available to the upper dose limit equivalent of oral morphine)



Comparison of cost of fentanyl patches at each dose with approximate equivalent dose of Zomorph®. Note that Durogesic® is much more expensive than Fencino® and Matrifen® NB Patients should be monitored closely if any changes in dose or formulation are made.

There are significant cost differences between the different brands of fentanyl patches. Where a prescription is written generically the charge will be for the Durogesic® brand. Fencino® and Matrifen® are cost effective brands – prescribe by brand name and not generically.

References

- Guidance on the use of strong opioids in Barnsley. NHS Barnsley. October 2021 Available at: <https://best.barnsleyccg.nhs.uk/clinical-support/medicines/prescribing-guidelines/Opioid%20Comparison.pdf>
- Palliative care formulary PCF-7 2020 (Fentanyl monograph)
- MHRA December 2014. Serious and fatal overdose of fentanyl patches: Available at: <https://www.gov.uk/drug-safety-update/serious-and-fatal-overdose-of-fentanyl-patches>
- MHRA October 2018. Transdermal fentanyl patches: life-threatening and fatal opioid toxicity from accidental exposure particularly in children. Available at: <https://www.gov.uk/drug-safety-update/transdermal-fentanyl-patches-life-threatening-and-fatal-opioid-toxicity-from-accidental-exposure-particularly-in-children>

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5. 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>
6. MHRA September 2020. Transdermal fentanyl patches for non-cancer pain: do not use in opioid- naïve patients. Available at: <https://www.gov.uk/drug-safety-update/transdermal-fentanyl-patches-for-non-cancer-pain-do-not-use-in-opioid-naive-patients>
7. Barnsley Palliative Care Formulary 2020-2023. Available at : <http://barnsleybest.nhs.sitekit.net/clinical-support/medicines/prescribing-guidelines/Palliative%20Care%20Formulary.pdf?UNLID=7321004362022412141354>

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