

Specialist Palliative Care  
Audit and Guidelines Group

# **Specialist Palliative Care Audit and Guidelines Group (SPAGG)**

**Prescribing algorithm for patients with pain  
and renal impairment using FENTANYL by  
subcutaneous injection**

**Version 2**

## Coversheet for Specialist Palliative Audit and Guideline Group Agreed Documentation

This sheet is to accompany all documentation agreed by SPAGG. This will assist maintenance of the guidelines as well as demonstrating the governance process undertaken prior to members seeking local approval in their areas of work.

<b>Document Title</b>	<b>Prescribing algorithm for treating pain in patients with renal impairment using FENTANYL injection subcutaneously</b>  <b>Please note there is also an ALFENTANIL version of this algorithm</b>
<b>Document Date</b>	August 2021
<b>Document Purpose and Intended Audience</b>	Algorithm designed to be used by professionals in all healthcare settings caring for palliative patients who have renal impairment (defined as eGFR <30ml/min) and are experiencing pain.
<b>Authors</b>	Dr Elizabeth Freshwater, Locum Palliative Consultant at John Taylor Hospice, Dr Anna Lock, Consultant Palliative Medicine SWBH NHS Trust
<b>References</b>	See end of guidance
<b>Consultation Process</b>	This algorithm will be audited and reviewed in 3 years
<b>Monitoring</b>	
<b>Review Date</b> (must be within three years)	August 2024
<b>Approval Signatures:</b> SPAGG chair SPAGG deputy chair SPAGG secretary	Chair: Dr J Tomas  Secretary: Dr A Gray
<b>Date Approved by SPAGG:</b> August 2021	
<b>Date submitted to Area Prescribing Committee:</b>	

**Prescribing Algorithm for Pain for patients with renal impairment using FENTANYL injection subcutaneously**

**Please note there is also an ALFENTANIL version of this algorithm**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Summary of Change/Process</b>
1.0	Nov 2019	Adapted from the Sandwell and West Birmingham NHS Trust "Guideline for managing pain in the last days of life for patients with chronic renal impairment"
2.0	Aug 2021	Review alongside Birmingham Administration Form

**Scope of guidance**

1. This is for use by professionals in all healthcare settings caring for patients with palliative diagnosis and renal impairment in pain who require fentanyl by SC injection or infusion.
2. For the purposes of this document renal impairment may be chronic or acute, and is defined as eGFR <30 ml/min.
3. For the purposes of this document the dying phase is considered to be a prognosis of less than six weeks, or if 'phase of illness' ranking is used then when patient is ranked as 'deteriorating' or 'dying'.
4. This algorithm should be used in conjunction with other [SPAGG guidance](#) relating to the care of patients in the dying phase.

**OPIOID CONVERSION TABLE**  
**For use in patient with renal impairment (eGFR<30ml/min)**

There is no exact equivalence between opioids therefore starting low and titrating upwards is recommended safe practice.

Approximately equivalent opioid doses for PRN use:

Oral morphine	Morphine injection	Fentanyl injection
5 mg	2.5 mg	25 micrograms
10 mg	5 mg	50 micrograms

DO NOT use these equivalent doses for larger doses without specialist palliative advice, as the small numbers entailed have been rounded up.

Approximately equivalent opioid doses for starting doses in subcutaneous infusions (CSCI):

Oral morphine in 24 hours	Morphine injection via CSCI	Fentanyl injection via CSCI
30 mg	15 mg	150 micrograms
60 mg	30 mg	300 micrograms

**Opioid choice in pre-existing renal impairment:** Consider not using morphine in continuous infusion for patients with known renal impairment because of the high risk of accumulation and adverse effects.

However it is **not** necessary to routinely check the renal function of all patients thought to be entering the dying phase who are comfortable on their regular opioid- even if they develop undetected renal impairment, it may not be necessary to convert them to alternative unless they develop side effects or signs of opioid toxicity.

Fentanyl's excretion is not affected by renal impairment, which means it is less likely to cause side effects and opioid toxicity due to accumulation in this situation, and is the drug of choice for continuous subcutaneous infusion.

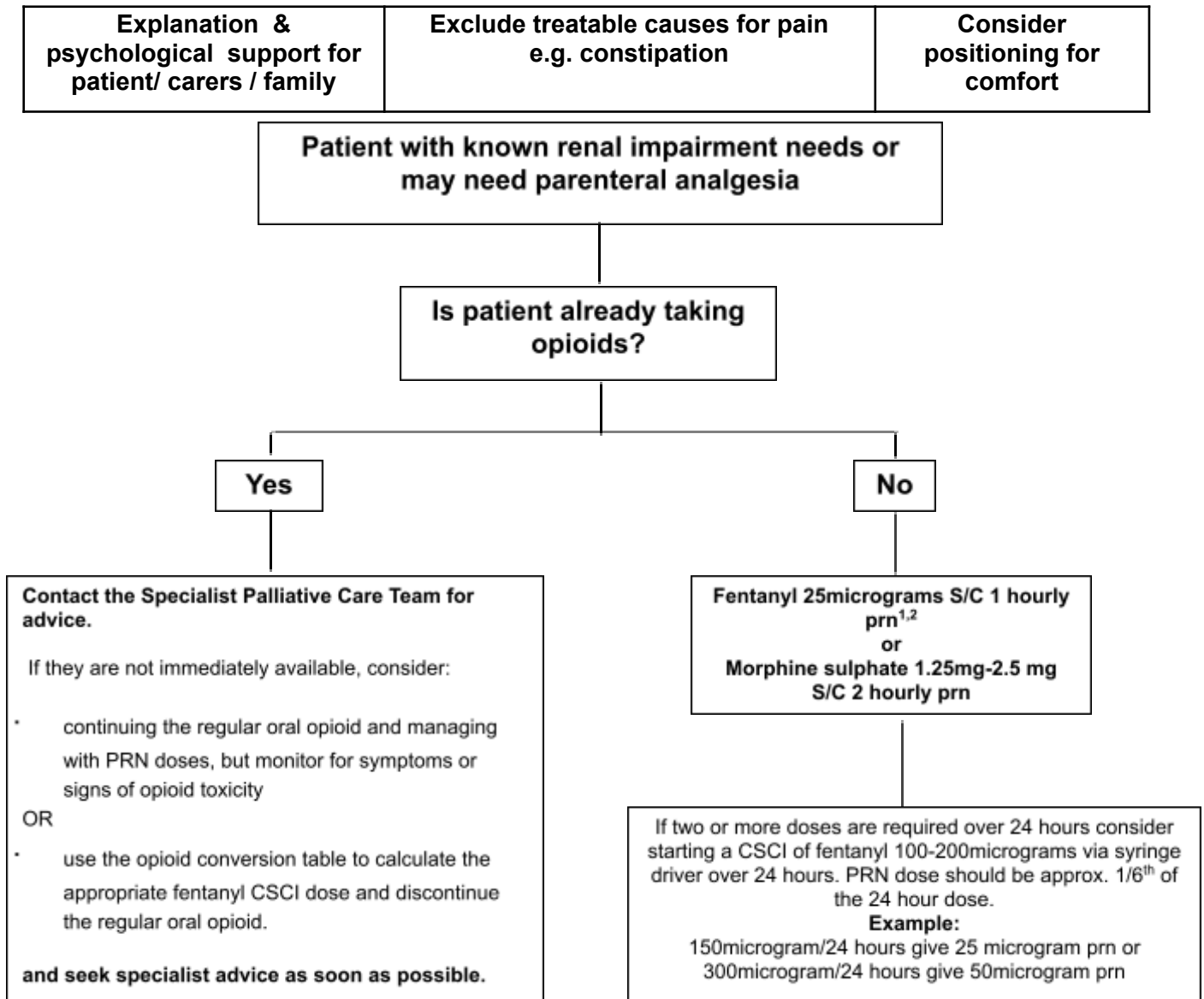
**Starting dose of fentanyl CSCI:** this should be based on prior opioid requirements and titrated upwards according to the amount of subsequent PRN doses required *in addition* to the continuous infusion – there is no upper limit provided the pain is responding well to the opioid and there are no symptoms or signs of adverse effects or toxicity.

**Breakthrough analgesia accompanying fentanyl CSCI:** use of fentanyl for 'as required' doses is limited by the volume of solution required at higher doses – do not give more than 100 micrograms at once. An alternative is to use low dose alternative subcutaneous opioid e.g. morphine.

**Seek specialist palliative care advice:** If converting from alternative strong opioids, if analgesia requirements are escalating, distressing opioid side effects, if clinician is unclear about appropriate choice of opioid or an alternative opioid is prescribed.

**Further information:** is available from the WMPCP Guidelines on opioids and dose conversion [here](#).

**Prescribing Algorithm for Pain in patients with renal impairment (eGFR <30mls/min) using FENTANYL SUBCUTANEOUSLY**



**References:**

1. Brown *et al.* (2012) Kidney disease from advanced disease to bereavement. *Oxford Specialist Handbook* (2e). Oxford University Press.
2. Douglas C *et al.* (2009) Symptom management for the adult patient dying with advanced chronic kidney disease: a review of the literature and development of evidence-based guidelines by a United Kingdom Expert Consensus Group. *Palliative Medicine*. **23**: 103–110.
3. Twycross *et al.* (2017) Palliative Care Formulary
4. [West Midlands Palliative Care Physicians Guidelines 2019](#)