Subcutaneous (SC) Fentanyl and Alfentanil in Palliative Care
St Peter's Hospice: Information for Primary Care

- **Specialist advice is strongly recommended if considering use of SC fentanyl or alfentanil. This information is to supplement specialist advice not to replace it**
- Fentanyl and alfentanil are strong opioids which can be given as subcutaneous (SC) injections or in a syringe pump mixed with other commonly used SC drugs (some reports of incompatibility in syringe pump with cyclizine for both fentanyl and alfentanil)
- They may be authorised for pain or breathlessness in certain specific circumstances for patients who are in last weeks or days of life in line with anticipatory prescribing guidelines or when injections or syringe pump are needed for symptom control
- Unlike morphine or diamorphine there is no accumulation of fentanyl, alfentanil or their metabolites in renal failure, so their use may reduce risk of opioid toxicity and side effects

Indication and uses of SC fentanyl or alfentanil

1. eGFR <30 ml/minute

- Consider their use if SC opioid is needed and clinically relevant risk of side effects if another opioid is used (e.g. longer prognosis, higher analgesic requirements, lower eGFR)
- However there are risks in using an opioid which is less familiar to health professionals and not widely available so a pragmatic decision should be made weighing up risks and benefits
- Always use SC fentanyl or alfentanil for patients stopping dialysis
- For a patient in last days of life with an EGFR in the 20s requiring only low doses of opioid consider risk/benefit of alternatives to fentanyl or alfentanil (see 'a' or 'b') but monitor for side effects or toxicity and change to SC alfentanil or fentanyl if these develop. E.g:
  a. If opioid naïve use SC oxycodone as potentially lower risk of side effects than morphine
     -**Last weeks of life:** Oxycodone 1-2mg SC PRN 1 hourly for pain/breathlessness
     -**Approaching last days**: syringe pump: Oxycodone 2.5-7.5mg/24 start when needed
  b. If patient is tolerating their current opioid e.g. low dose oral morphine, a pragmatic decision may be made to use SC morphine PRN and if needed low doses in a pump

2. Opioid toxicity

- Use with specialist advice in a patient with eGFR>30ml/minute who needs a SC opioid but can not tolerate other opioids

Approximate dose conversions-always seek specialist advice

Patient on drug A	To convert to the 24 hour dose in mg of drug B	Divide the 24 hour dose in mg of A (oral morphine) by:	Example	
			A	B
Oral morphine	SC fentanyl	150	15mg	0.1mg= 100 micrograms
Oral morphine	SC alfentanil	30	15mg	0.5mg= 500 micrograms

Practicalities of using SC fentanyl/alfentanil

- Fentanyl: For an opioid naïve patient stopping dialysis or where fentanyl is indicated prescribe and authorise the following on the community palliative care drug chart
  Last weeks of life. 12.5-25 micrograms SC PRN 1 hourly for pain/breathlessness
  Approaching last days. Syringe pump: 50-150micrograms/24 hrs: start when needed
- Fentanyl: (available in contracted pharmacies) vials are 50 micrograms per ml so maximum SC injection is 100 micrograms and maximum dose in pump is ~600-900 micrograms depending on other drugs in the pump. If volume prohibits use, change to alfentanil (seek specialist advice)
- Alfentanil: There are 2 different concentrations, caution is required: 500micrograms/ml (available in contracted pharmacies) and 5mg/ml (must be ordered by pharmacy)
- Alfentanil: injection is short acting lasting only ~ 1hr so is not ideal for prn use. An alternative PRN SC opioid e.g oxycodone may be required. (Seek specialist advice)

Dr Dida Cornish March 23 for St Peter's Hospice: review 2025