Use of Alfentanil in Renal Failure in Palliative Care in Lincolnshire.

Introduction
This information sheet is intended as a resource for staff in Lincolnshire looking after palliative care patients who have been prescribed alfentanil for pain relief. It is not a clinical guideline.

Most opioids are renally excreted and can accumulate in renal failure. Some patients with poor renal function can tolerate commonly used opioids such as morphine or oxycodone. Others develop significant side effects such as confusion, drowsiness, hallucinations and myoclonus (twitching).

Alfentanil is an alternative opioid that can be used for pain relief in a syringe driver for patients with poor renal function in the last few days of life.

This guidance should make prescribing this more straightforward. If in doubt seek specialist advice by ringing St Barnabas In-Patient Unit on 01522 511566 or Thorpe Hall on 01733 225900 at any time.

What is alfentanil?
Alfentanil is a synthetic strong opioid. Compared to parenteral morphine it is more potent, works more quickly but has a shorter duration of action. Alfentanil is licensed for IV use as an analgesic during surgery or in ITU. It is metabolised by the liver to inactive metabolites that are excreted in the urine.

When is it used in palliative care?
Sub-cutaneous (SC) alfentanil is used by palliative care clinicians in situations where patients are struggling with side effects from opioids due to significant renal failure. It is usually given via continuous SC infusion with a syringe driver to provide background analgesia.

SC Alfentanil can be used as a breakthrough (PRN) analgesic but its short duration of action may mean that it does not provide an adequate length of pain relief. It can be used for short lived incident related pain e.g. dressing changes. Transmucosal fentanyl products (licensed for breakthrough pain) are now more commonly used for this indication.

How do I use it?
It can be appropriate for patients to try or continue alternative opioids, especially if they are still taking oral medications. The doses and frequency of administration of alternative opioids may need to be reduced to account for the reduced renal excretion. Monitoring for adverse effects is required.

Consider alfentanil for opioid analgesia in patients with an eGFR <30 or when the patient is known/likely to have significantly deteriorating renal function. If considering use before a patient is thought to be in the last days of life, the pros and cons of syringe driver use should be discussed. E.g. impact on mobility, showering. Continuous SC infusions are normally used in palliative patients who are unable to manage oral medication due to nausea and vomiting or swallowing problems.

For opioid naïve patients the usual starting doses are:

- Continuous SC infusion via syringe driver - 500micrograms/24 hours.
- PRN – 125 micrograms SC. Can be repeated hourly.

For patients who are already on opioids, the alfentanil dose will be based on their previous opioid requirements (table 1).

<table>
<thead>
<tr>
<th>Oral morphine</th>
<th>SC morphine</th>
<th>SC diamorphine</th>
<th>SC alfentanil</th>
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</thead>
<tbody>
<tr>
<td>30mg</td>
<td>15mg</td>
<td>10mg</td>
<td>1mg</td>
</tr>
<tr>
<td></td>
<td>Divide oral morphine dose by 2</td>
<td>Divide oral morphine dose by 3</td>
<td>Divide oral morphine dose by 30</td>
</tr>
</tbody>
</table>

Appendix G from:
Lincolnshire Guidelines: Symptom Management in Adult Palliative and End of Life Care.
For the breakthrough/PRN dose divide the 24 hour dose by 6. This can be repeated up to hourly.

Ranges can be used in the same way as other opioids. Administer lower doses first and titrate up if required.

How do I prescribe it?
Alfentanil is a controlled drug that comes in several strengths. The most appropriate for use in palliative care is 2ml ampoules of alfentanil 500microgram/ml.

In a syringe driver, alfentanil is compatible with other commonly prescribed symptom control medications of midazolam, levomepromazine and hyoscine butylbromide. It can be diluted with water for injection or normal saline.

What is needed?
Whenever a patient is transferred from one strong opioid to another they should be monitored for signs of being:
- under-opiated – i.e. increased pain
- over-opiated e.g. drowsiness, confusion, respiratory depression

For patients with ongoing pain, titrate alfentanil in the same way as other opioids. An increase of 25-50% at a time is commonly recommended.

For patients that appear over-opiated, consider reducing the opioid dose. Be aware that these signs may be irreversible signs of a patient who is close to death.

Cautions to note:
Contra-indications: Do not administer concurrently with MAOIs or within two weeks of their discontinuation. Generally no absolute contra-indication if titrated carefully against a patient's pain.

Alfentanil can accumulate where hepatic clearance is reduced e.g. the elderly or a patient with hepatic impairment. Consider using smaller doses overall and use conservative dose estimates when converting from other opioids.

Opioid withdrawal symptoms can occur when switching from morphine or oxycodone to a continuous SC infusion of alfentanil. These manifest with symptoms like gastric flu and last for a few days; PRN doses of the original opioid will relieve troublesome symptoms.

Alfentanil is metabolised in the liver by CYP3A4. Caution is required with concurrent use of drugs which inhibit or induce these enzymes. This is not usually an issue for patients who are only on medications for symptomatic control.

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References (last accessed 6.11.17):
Alfentanil. PCF6 accessed via www.palliativedrugs.com
Alfentanil, St Elizabeth Hospice, Ipswich.

Appendix G from:
Lincolnshire Guidelines: Symptom Management in Adult Palliative and End of Life Care.