Recommendations for symptom control in patients with Stage 5 Chronic Kidney Disease (CKD) in the community

Authors: Jaryn Go (Lead Nurse, Renal Supportive Care), Prof Magdi Yaqoob (Consultant), Helen Rainey (Lead CNS, CKD), Dr Will White (Consultant), Niamh Kelly and Louise Condon (Pharmacists), Renal Department Barts Health.

Version Number: 1.1

Review date: January 2025

The purpose of this document is to provide specialist recommendations for symptom control for use by GPs and other health care professionals caring for patients with Stage 5 CKD in a community setting. It includes general advice and recommendations as well as medicine specific dosing. This document should support clinical judgement but not replace it. Please see page 6 for contact details for further advice.

Note: This guide serves as specialist recommendation for those medicines which are Amber in the primary care formulary.
Most of the doses cited herein are based on the Renal Drug Handbook.

Symptom	Common Causes / Comments	Management
Dyspnoea	General	Electric Fan (or breeze) on patient's face can help alleviate dyspnoea.
	Anxiety	*Oral/enteral route preferred* 1st line: If the anxiety is ongoing, Lorazepam sublingually (use oral tablets administered under the tongue): Starting dose: Lorazepam 0.5mg PRN up to twice daily or three times daily. Note patients with CKD stage 5 are more prone to the CNS side effects and should be monitored closely when initiated and after a dose titration. Max dose 4mg/day, but a lower dose (i.e. 2 to 3mg/day) would usually be sufficient. 2nd line: low dose opioid e.g. Oxycodone 1.25-2.5mg orally to help with anxiety related symptoms, should be tried before considering subcutaneous Midazolam for episodes of acute anxiety (see advice box on page 6 for end of life care). Note: risk of accumulation of opioids in renal impairment, use with caution.

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	Fluid overload (pulmonary oedema)	1st line: Furosemide - dose required may be high: max 240mg orally/24hrs To monitor response can check daily weights, if possible, aim for no greater than 1kg loss/day. Doses of diuretics to be titrated according to patient symptoms. If poor response after 1 week, Furosemide can be given subcutaneously by syringe driver over 24hrs to aid absorption*. 2nd line: consider adding oral Metolazone 2.5 mg 2x/week (1st line) or oral Bendroflumethiazide 2.5mg 3x/week (2nd line if Metolazone not available).
	Metabolic acidosis	Sodium bicarbonate 500mg orally twice daily (Note that no blood monitoring is recommended at this dose, which should be sufficient for this patient cohort).
	Anaemia (haemoglobin level can sometimes decrease rapidly causing dyspnoea)	IV iron therapy or subcutaneous erythropoietin may be appropriate via Renal Team*.
Pain	Consider underlying cause of pain (e.g. peripheral vascular disease etc.) If prescribing opioids advise: • Start with a low dose of opioid • Avoid slow release preparations of opioid • Increase usual dose interval as the half-life maybe prolonged (e.g. give PRN) • Inform patient and relatives of signs of opioid toxicity (drowsiness, confusion, myoclonus etc.) and advise safety netting to call doctor should these occur - will need early clinical review. **Oral opioids**: risk of accumulation and toxicity as all undergo a degree of renal excretion. **Topical opioids**: Fentanyl patches – inactive metabolites, minimal renal excretion but potent so avoid in opiate naïve patients. Buprenorphine patches may also be safe but evidence is limited. NSAIDs can be used if patient prefers to do so after a thorough discussion	<u>1st line: non-opioid analgesia</u> Paracetamol 1g oral four times daily. Consider 500mg four times daily in the very elderly/frail weight <50kg and/or concurrent liver impairment <u>2nd line: weak opioid plus paracetamol</u> Codeine 15mg oral up to four times daily OR Tramadol 50mg oral up to twice daily If pain is chronic and is responding to weak opioid consider a Buprenorphine patch 5micrograms/hr every 7 days (equivalent to approximately120mg oral Codeine per day) <u>3rd line: strong opioid plus paracetamol</u>

	of the risks and benefits with the patient and/or their families. Ensure to prescribe laxatives when using opiates.	Oxycodone oral 1.25-2.5mg up to four times daily If pain is chronic and is responding to a strong opioid consider Fentanyl patch 12micrograms/hr (equivalent to approximately 20mg oral Oxycodone per day) 4th line / alternative: neuropathic agents Gabapentin oral 100mg at night Gabapentin can be titrated up to 300mg at night (increased in increments max every 7-14 days) Pregabalin oral 25mg alternate nights Pregabalin can be titrated up to 50mg twice daily (increased in increments max every 7-14 days) *Note:* Only uptitrate neuropathic agents further if symptoms are not adequately controlled, but patient is tolerating well. 5th line / alternative: tricyclic antidepressant Amitriptyline oral 10mg at night Amitriptyline can be titrated up to 25mg to 50mg at night. Higher doses are not recommended.
Nausea/ Vomiting	Uraemia (Nausea is prevalent, constant queasiness) Gastric stasis (post prandial intermittent nausea, early satiety, vomiting relieves nausea)	Haloperidol 0.5mg oral once daily titrated up in 0.5mg increments to a maximum of 1.5mg three times daily. Can also be given subcutaneously at the same dose if oral route not tolerated.. Metoclopramide 10mg oral three times daily (max 30mg/24hrs). Can also be given subcutaneously at the same dose if oral route not tolerated. For symptoms related to GORD, consider low dose PPI, such as Omeprazole 20mg oral once daily. If patient already prescribed a PPI consider dose titration.
Agitation / Delirium	Consider may be a sign patient is beginning to enter terminal phase. Exclude other causes: e.g. sepsis, urinary retention, side effects of	If no reversible cause(s) found:

	medicines, consider opioid toxicity. Can also be associated with dementia.	Haloperidol 0.5mg-1mg oral up to twice daily And/Or Lorazepam 0.5mg oral or sublingually up to twice daily
Itch / Pruritus	Common in CKD stage 5 and difficult to treat Could be due to dry skin, medications	1. Regular emollients as per local formulary (e.g. Diprobase topically twice daily). Consider trial of Aqueous Cream with menthol for cooling sensation. 2. Encourage patients who are still eating, to take their phosphate binders***** as prescribed 3. Consider neuropathic agents: Gabapentin or Pregabalin titrated as per pain section above. 4. Sertraline 25mg to 50mg oral once daily or Mirtazapine 7.5mg to 15mg oral at night (caution with sedation). 5. Chlorphenamine 4 mg can also be trialed (max: three times daily).
Restless legs	Common in CKD Stage 5. Can be exacerbated by anaemia. Encourage mobility.	1st line: Neuropathic agents: Gabapentin or Pregabalin titrated as per pain section above. 2nd line: Clonazepam 0.5mg oral at night (caution if prescribing in conjunction with opioids).
Constipation	Decreased mobility. Altered dietary intake. Medications (opioids, phosphate binders, iron tablets) Decreased fluid intake	1. Senna 15mg oral at night, titrated up to twice daily. 2. Docusate sodium 100mg to 200mg oral up to twice daily. 3. Macrogols (e.g. Movicol) 1 sachet once daily, titrated up as needed but use with caution with volumes of fluid required to reconstitute. 4. Bisacodyl 5mg to 10mg oral at night.(suggest for patient/carer to purchase OTC in boroughs where this is non-formulary) 5. Glycerol suppositories PRN

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Depression	Burden of Illness Loss of independence Reliance on family members &/or carers Guilt / anxiety Functional impairment & physical symptoms Awareness of mortality	Sertraline 25mg to 50mg oral once daily or Mirtazapine 7.5mg to 15mg oral at night if sedating agent preferred. Depression Support Groups can also be accessed through: - Visiting the Mind website - Local psychological therapies team - Depression UK (for those who don't have internet access)
Sleep Disturbances	Multiple causes	Review any reversible causes e.g. restless legs, pruritus, pain, anxiety, depression. If a short course of benzodiazepines required, avoid courses longer than 7 days and use lowest dose possible. The following can be used: 1. Melatonin modified release (MR) tablets 2mg oral 1-2 hours before bed 2. Zopiclone 3.75mg oral at night
Cramps	Common in CKD, specific cause: unknown.	Tonic water (suggest to patient/carer to buy) Quinine sulphate 200mg to 300mg at night
Dry Mouth	Medications (e.g. opioids, anticholinergics) Exclude oral thrush	Saliva replacement spray/tablets PRN Ice chips Treat thrush if present (Nystatin orally 100,000units/ml 1 ml four times a day - continue for 48 hours after thrush is resolved)

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Taste Changes	Common in CKD	Try mouthwashes (suggest to patient/carer to buy) Sips of soda water (suggest to patient/carer to buy)
Gout	Common in CKD Can also be associated with high doses of diuretics	For acute attacks, the following can be used: 1st line: Prednisolone 30mg oral for 5 days 2nd line: Colchicine max 500micrograms oral twice daily for 3 days For pain relief: NSAIDS can be considered after discussing risks and benefits with patient and/or their families. For prophylaxis of chronic symptoms: Allopurinol 100mg daily or alternate days

*** Where asterisked please contact renal team for advice (contact details below)**

For further advice:

Barts Health Renal Supportive Care Team

Mon-Fri 9-5pm	Tel no: 020 359 41732 Email address: bartshealth.renalsupportivecareteam@nhs.net
Urgent out of hours	Contact on call renal registrar via Barts Health switch (020 7377 7000)

End of life care:

For anticipatory prescribing:	Renal Supportive Care Team (details above)
Other issues on terminal care:	Contact your local hospice team