HWE adult treatment pathway for Potassium binders for persistent hyperkalaemia in patients with chronic kidney disease (stages 3b-5) or heart failure based on NICE TA 599 & 623.

AMBER INITIATION – recommended for restricted use - initiation by hospital specialist, continuation in primary care

Prescribing criteria for Patiromer and Sodium zirconium cyclosilicate (potassium binders)

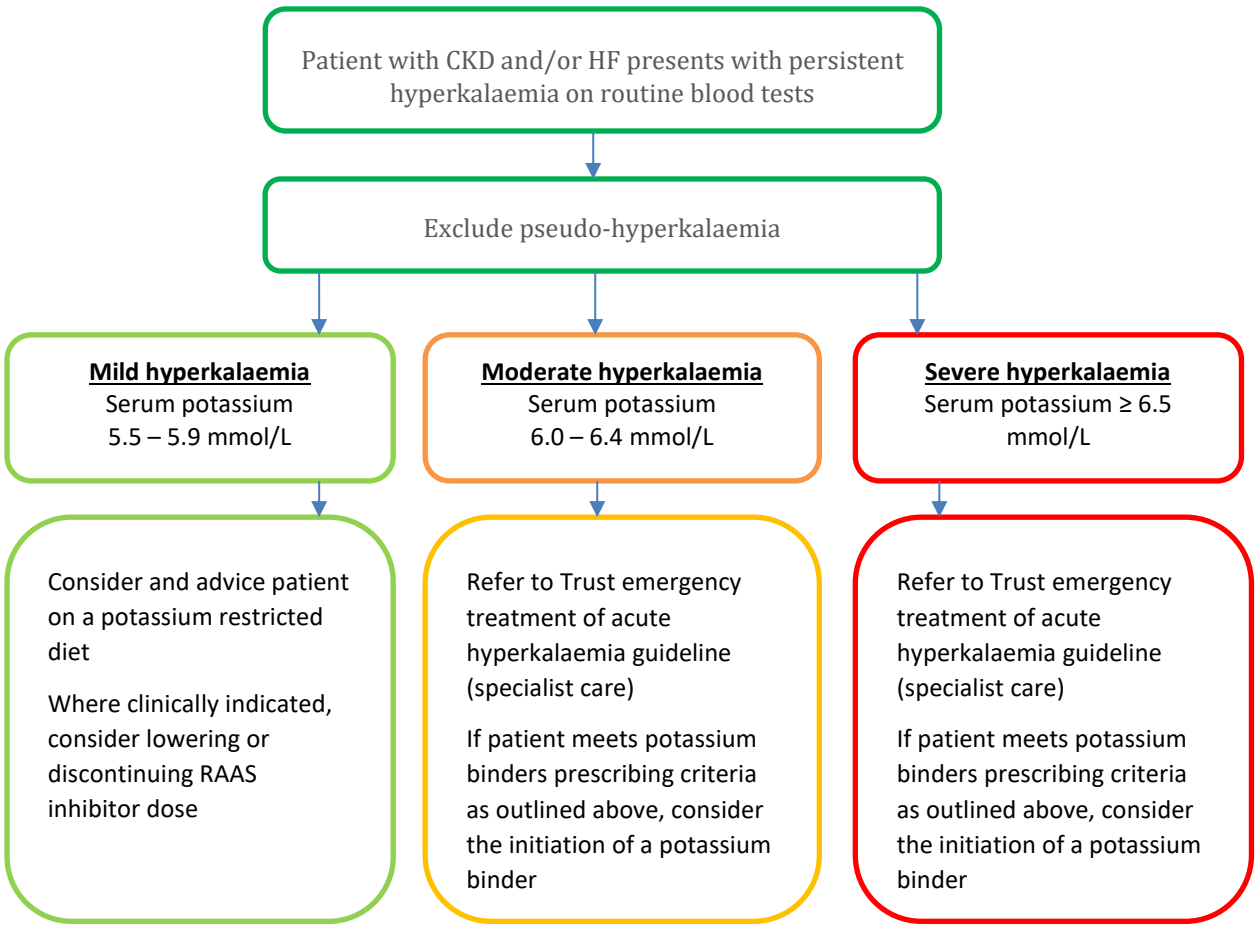
Potassium binders may be considered for initiation in hospital by a specialist in patients with persistent hyperkalaemia in adults who meet NICE criteria in line with NICE TA 599 and 623:

- ☐ have stage 3b to 5 chronic kidney disease (CKD) or heart failure (HF) AND
- ☐ have a confirmed serum potassium level of at least 6.0 mmol/L AND
- ☐ are not taking, or are taking a reduced dosage of renin-angiotensin-aldosterone antagonist (RAAS) inhibitor because of hyperkalaemia AND
- ☐ are not on dialysis

Potassium target range 3.5-5.5 mmol/L

The initiating healthcare provider is responsible for ensuring the patient is stabilised on chosen potassium binder and providing any necessary follow-up.

Stop patiromer or sodium zirconium cyclosilicate if RAAS inhibitors are no longer suitable.



Secondary care

Potassium binder initiation

Initiate patiromer at 8.4 g once daily or sodium zirconium cyclosilicate 5g once daily

- If patient on ACEi/ARB: start potassium binder and increase ACEi/ARB dose. This may be simultaneous or following initial initiation of potassium binder with adjustment of ACEi/ARB thereafter, following check of potassium levels.
- If patient not on an ACEi/ARB, start potassium binder and ACEi/ARB. This may be simultaneous or following initial initiation of potassium binder with initiation of ACEi/ARB thereafter following check of potassium levels.

Patient selection by specialist team – patient is considered suitable for initiation based on eligibility criteria and assessment of cautions and contra-indications

Contra-indications: Hypersensitivity to the active substance or to any of the excipients

Cautions: Risk factors for hypercalcaemia (calcium partially released from counterion complex) (patiromer)
Severe gastro-intestinal disorders (ischaemia, necrosis, and intestinal perforation reported with potassium binders)
Low magnesium (patiromer)
Fructose intolerance (contains sorbitol) (patiromer)

Counsel patient on how to take sachets, on storage (patiromer only), potential side effects and advise patient that long term exposure: use has not been studied for more than a year (*see below additional information*)
(Refer to respective SPC's for more detailed information on including cautions, contraindications, drug interactions and side effects)

Blood test monitoring

- Two weeks after initiation check U&Es, titrate binder dose if required (see table below) and check again in 2 weeks. (*Serum potassium should be monitored 1-2 weeks after changes are made to medicinal products that affect the serum potassium concentration (e.g. RAASi or diuretics) and after the dose of potassium binder is titrated*.)
- For patiromer, measure serum magnesium after the first month of treatment. Consider magnesium supplementation in patients presenting with hypomagnesaemia.
- For sodium zirconium cyclosilicate, monitor sodium alongside potassium
- Monitor blood pressure when titrating RAASi therapy.

Potassium binder dose titration

Serum Potassium	Action
≤ 3.8 mmol/L	Consider decreasing patiromer dose by 8.4 g / day (Minimum dose 8.4g on alternate days - unlicensed) or sodium zirconium cyclosilicate by 5g/day (minimum dose 5g on alternate days) at weekly intervals or discontinue if on lowest dose
> 3.8 mmol/L and ≤ 5.1 mmol/L	Do not change potassium binder dose
> 5.1 mmol/L and < 6.5 mmol/L	Consider increasing patiromer dose by 8.4 g / day (max dose 25.2g/day) or sodium zirconium cyclosilicate by 5g/day (maximum 10g/day) at weekly intervals
≥ 6.5 mmol/L	Refer to emergency treatment of acute hyperkalaemia guideline

Ongoing management

- Titrate ACEi/ARB dose if required and monitor U&Es and blood pressure 2-4 weeks after dose change.
- Review potassium binder dose according to results. Once patients on stable dose of potassium binder, monitor serum potassium alongside monitoring schedule for RAASi medication
- Reduce the dose of RAASi in persistent hyperkalaemia despite optimal doses of potassium binder
- After stabilisation of RAASi and potassium binder, usually at least 4-6 weeks, consider transfer of care to primary care. Prescribe further 4 weeks supply and communicate current dose and confirm initial and ongoing monitoring.

Pathway continued next page

Secondary/primary care

Primary care

Discontinuing Potassium binder

- If the patient develops a hypersensitivity reaction
- Patients should be instructed **not** to discontinue therapy without consulting their healthcare professional (increases in serum potassium may occur as early as 2 days after last dose of potassium binder).
- Stop treatment completely if RAASi therapy is no longer indicated, or if potassium binder therapy is ineffective.

Transfer of care after dose titration and stabilisation of RAASi and potassium binder by specialist

- GP to take over prescribing responsibility and monitoring.
  Specialist to confirm dose and initial monitoring requirements (*standard monitoring after RAASi started/dose changed - within 2 weeks, then monthly for 3 months, blood pressure, U&Es*)
- Monitoring of serum potassium may occur alongside other RAASi monitoring (e.g. blood pressure, U&Es) once stable, usually at 6 monthly intervals throughout therapy. Serum potassium should be monitored more frequently when patient clinical situation changes, including after changes made to medicinal products that affect potassium levels.

Dose adjustments to RAAS inhibitor or potassium binder

GP to seek advice from secondary care if concerns on dose adjustments to RAAS inhibitors or potassium binder occur or if concerns about drug interactions, contraindications, cautions or monitoring results arise

RED FLAGS

Potassium <3.8mmol/L - decrease potassium binder dose or discontinue and monitor potassium level

Potassium >6.5mmol/L - refer for emergency treatment of acute hyperkalaemia

Additional information – refer to BNF and SPC for full prescribing information

Patiromer – make up in 40ml of water or apple juice and stir well. The powder will not dissolve. Take within an hour of initial suspension. Can be taken with or without food. Separate dose by at least 3 hours from other medications. Patients may store below 25℃ for up to 6 months.

Sodium zirconium cyclosilicate – make up in 45ml of water and stir well. The powder will not dissolve. Administer azole antifungals, anti-HIV drugs and tyrosine kinase inhibitors 2 hours before or after sodium zirconium cyclosilicate.

Version	1.1 Harmonisation of Hertfordshire Medicines Management Committee (HMMC) guidance and West Essex Medicines Optimisation Programme Board (WEMOPB) guidance updates include: • Addition of HWE ICB headers • Addition of version control box
Developed by	HWE ICB PMOT
Approved by	HMMC and WEMOPB
Date approved/updated	HMMC May 2022 and WEMOPB May 2022
Review date:	The recommendation is based upon the evidence available at the time of publication. This recommendation will be reviewed upon request in the light of new evidence becoming available.
Superseded version	1.0