QRG for the use of sodium zironconium cyclosilicate or patiromer calcium in the management of acute hyperkalaemia during the COVID-19 pandemic
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Who should read this document?
This document is to be referred to for the prescribing, clinical check and administration of sodium zirconium cyclosilicate (Lokelma®) or patiromer calcium (Veltassa®) where required for the management of acute hyperkalaemia during the COVID-19 pandemic.

Background
Both sodium zirconium cyclosilicate (Lokelma®) and patiromer calcium (Veltassa®) are licensed and NICE approved options for the management of acute life-threatening hyperkalaemia alongside standard care.

Due to altered availability of renal replacement therapy and other existing treatments for acute hyperkalaemia, Lokelma® or Veltassa® may be recommended by the renal registrar or above alongside existing local policy measures for management of acute hyperkalaemia.

As other treatments, such as insulin in glucose, for managing hyperkalaemia drive potassium into cells and do not remove extracellular potassium, Lokelma® or Veltassa® may be required for patients where dialysis or haemofiltration is not immediately available.

Process overview
When to prescribe:
Sodium zirconium cyclosilicate (Lokelma®) and patiromer calcium (Veltassa®) may be prescribed across all levels of care following the recommendation of the renal registrar or above for the management of acute hyperkalaemia.

How to prescribe:
Dosing:
- Sodium zirconium cyclosilicate (Lokelma®)
  - Initial treatment:
    - 10g TDS for up to 72 hours (until normokalaemic)
    - Enteral feeding tube administration has been tested via 8 French NG tube. See administration for further details
  - Maintenance treatment if required - on renal advice only
    - 5-10g daily titrated to response
- Patiromer calcium (Veltassa®)
  - Initial treatment:
    - 8.4g PO daily
    - Doses MUST be given at least 3 hours before and 3 hours after other medication
    - No information is available on enteral feeding tube administration
  - Maintenance treatment if required - on renal advice only
    - Increased at weekly intervals by increments of 8.4g titrated to response. Maximum dose 25.2g daily.
Monitoring:
Monitoring of serum potassium should be continued as per local guidelines for the management of hyperkalaemia. If other treatments have stopped, serum potassium should be checked daily as a minimum whilst continuing Lokelma® or Veltassa® for acute hyperkalaemia.

Full side effect information can be found in the individual SPCs. Lokelma® may cause oedema related events, and with longer term use may cause GI disturbance such as constipation, diarrhoea, abdominal pain or nausea and vomiting. Veltassa® may cause constipation, diarrhoea, abdominal pain, flatulence and hypomagnesaemia and less commonly nausea and vomiting.

Onset of action and course length (in the management of acute hyperkalaemia):
These treatments have a slow onset of action and should be used in addition to existing local policy measures for the treatment of acute hyperkalaemia

- Sodium zirconium cyclosilicate (Lokelma®)
  - Onset of action of 1 hour
  - Normokalaemia is achieved typically in 24-48 hours
  - Once normokalaemia achieved advice of the renal team should be sought and maintenance treatment only prescribed if recommended
  - If normal serum potassium levels are not reached after 72 hours of treatment, sodium zirconium cyclosilicate should be stopped

- Patiromer calcium (Veltassa®)
  - Onset of action between 4 and 7 hours
  - Once normal serum potassium levels achieved treatment should be discontinued

Administration:
Sodium zirconium cyclosilicate (Lokelma®)

- For oral administration:
  - The entire contents of the sachet should be emptied in a drinking glass containing approximately 45 ml of water and stirred well. The powder will not dissolve. The tasteless liquid should be drunk while still cloudy. If the powder settles, the water should be stirred again. It should be ensured that all of the contents are taken
  - The suspension can be taken with or without food
  - Lokelma® should be administered at least 2 hours before or 2 hours after oral medications with clinically meaningful gastric pH dependent bioavailability (see SPC for further details)

- For nasogastric tube administration (this has only been tested via 8 French NG tube)
  - Suspend dose in a beaker with approximately 25 mL of water
  - Draw up into the enteral syringe and keep the syringe constantly moving and back-leaning to prevent the powder from settling into the syringe tip
  - Rinse the beaker with an additional 15 mL of water and administer via the syringe using the same technique as noted above
  - Flush tube well with at least of 10 mL of water after administration
Patiromer calcium (Veltassa®)

- For oral administration:
  - The complete dose should be poured into a glass containing approximately 40 mL of water, then stirred. Another approximately 40 mL of water should be added, and the suspension stirred again thoroughly. The powder will not dissolve. More water may be added to the mixture as needed for desired consistency.
  - The mixture should be taken within 1 hour of initial suspension. If powder remains in the glass after drinking, more water should be added and the suspension stirred and taken immediately. This may be repeated as needed to ensure the entire dose is administered.
  - Veltassa® can be taken with or without food. It should not be heated (e.g. microwaved) or added to heated foods or liquids. It should not be taken in its dry form.
  - Veltassa® MUST be administered 3 hours before AND after other medicines.

- For enteral feeding tube administration no information exists. Use this product orally only.

Supporting documents

Local policy for the management of hyperkalaemia should be referred to.

The following documents have been used in the development of this QRG:
https://www.medicines.org.uk/emc/product/10074/smpc

https://www.medicines.org.uk/emc/product/779/smpc

https://www.nice.org.uk/guidance/ta599

https://www.nice.org.uk/guidance/ta623
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**Parent Document:** none  
**Scope:** Trust-wide  
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**Author’s Division:**  
**Approval:** CAG 5/5/20  
**Keywords:** sodium zirconium, zirconium, patiromer, lokelma, veltassa, hyperkalaemia, covid  
**Review date:** November 2020