potassium

100mg(1.33mmol)/mL 10% oral mixture, 75mg(1mmol)/mL 7.5% injection

Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

This is a high risk medication ⚠

An overdose can be rapidly fatal.

Premixed bags with added potassium and sodium are commercially available and generally avoid the need to prepare solutions at the bed-side using concentrated potassium chloride ampoules.

Do not administer concentrated intravenous potassium chloride (1mmol/mL) solution directly unless administered into a central line and under consultant direction.

Intravenous potassium chloride ampoules should be restricted to the pharmacy department or intensive care areas and should only be considered where the standard premixed potassium containing solutions are unable to meet the clinical need of the patient

Synonyms

KCl (this is not an acceptable abbreviation in South Australian Hospitals)

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Government of South Australia
SA Health

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Dose and Indications

Hypokalaemia

Always prescribe as millimol (mmol) of elemental potassium

Intravenous infusion

1 to 3mmol/kg/day

Correct deficits slowly and reassess plasma potassium levels at regular intervals

Higher doses up to 6mmol/kg/day may be needed for severe depletion

Correct any true deficit slowly over 1 to 2 days and adjust dose according to clinical requirements for potassium.

Oral

1 to 2mmol/kg/dose daily

Daily dose can be given in divided doses or mixed with the daily feed volume, depending on the unit specific procedures

Preparation and Administration

Oral

The 10% oral solution contains 100mg (1.33mmol)/mL potassium

Oral Dose	1mmol	2mmol	4mmol	6mmol	8mmol	10mmol
Volume	0.75mL	1.5mL	3mL	4.5mL	6mL	7.5mL

Give oral doses with feeds to minimise gastric irritation.

Intravenous infusion

Use standard strength potassium solutions where possible. Commercial solutions include:

- 10% glucose with 0.225% (or 0.038 mmol/mL) sodium and 0.02mmol/mL potassium (500mL bags)

Administer potassium solutions at 0.2mmol/kg/hour or slower.

- **Always** dilute potassium ampoules prior to intravenous administration
- **Always** control infusion with a syringe/IV pump
- **Never flush**

Concentrated potassium chloride ampoules (1mmol/mL) should only be used to produce intravenous solutions at the bed-side in intensive care situations and with consultant advice.

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Compatible Fluids

Glucose 5%, glucose 10%, glucose/sodium chloride solutions and sodium chloride 0.9%

Adverse Effects

Common

Oral: Vomiting, diarrhoea, abdominal pain

Intravenous: Thrombophlebitis, pain, necrosis at injection site

Symptoms of hyperkalaemia (large doses or rapid IV administration) include hypotonia, flaccid paralysis, cold skin, grey pallor, hypotension, cardiac arrhythmias (heart block, peaked T waves) and asystole

Monitoring

- Observe intravenous site closely for signs of extravasation when using concentrated solutions.
- Continuous ECG monitoring is mandatory when administering potassium by the intravenous route in neonates.
- Plasma potassium levels should be measured regularly with frequency determined by the clinical situation.

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	November 2012	current	Original version

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