

## **Potassium Chloride Safety Recommendations Summary\***

### **HOSPITAL ADMINISTRATION**

#### **1. Create a high-level multidisciplinary team with a mandate to:**

- Reduce the error potential of potassium chloride (KCl).
- Define an implementation strategy (including timelines).
- Provide regular updates to the hospital board's Quality & Risk Management Committee.
- Include discussion of KCl injury and preventive system safeguards during orientation programs for nurses, physicians, and pharmacists and locum staff.

### **PHYSICIANS and PHARMACY AND THERAPEUTICS COMMITTEE**

1. Pharmacy and Therapeutics Committee to develop clear guidelines for the use of KCl, including:
  - Use of oral, instead of IV, KCl whenever clinically feasible.
  - Standardization of prescribing practices to match available premixed KCl solutions.
  - Maximum concentration of KCl allowable in an IV solution.
  - Proper mixing to avoid pooling.
  - Maximum hourly and daily limits of KCl that a patient may receive.
  - Maximum infusion rate.
  - Requirements for infusion rate and patient monitoring.
  - Evaluation of need and/or feasibility of automatic substitution policy.
2. Identify that orders such as "KCl 40 mEq IV now" or "give KCl 20 mEq IV bolus" should be considered incomplete and unacceptable. Orders require instructions for dilution and infusion rate.
3. If it is deemed necessary that concentrated KCl products be available in a critical care area, create policies to restrict and safeguard their use. Consider a locked cupboard and/or a double sign-out procedure for obtaining the concentrated product.

### **NURSING UNIT**

1. Have each patient care unit, program, department, and clinic undertake a review by physicians, nurses and pharmacists with the following aims:
  - Identify if concentrated KCl products are in patient care areas.
  - Plan and organize actions to remove concentrated KCl products from patient care areas.
  - Have standardized premixed KCl IV solutions available in adequate quantities.
  - Store premixed KCl solutions separately from plain IV solutions.
  - If concentrated KCl products must be available in a critical care area, follow P&T policies regarding access, e.g., locked cupboard and/or a double sign-out procedure for obtaining the product.

### **PHARMACY**

1. Work with the appropriate department(s), e.g., Stores and Nursing, to arrange for storage and distribution of premixed KCl IV solutions.
2. Consider purchasing only the 40 mEq /20 mL size concentrate (not 20 mEq/10 mL size) to minimize the chance of mix-up with other commonly used products such as 10 mL sterile water and 10 mL normal saline.
3. Pharmacy should prepare any nonstandard solutions that are deemed absolutely necessary but are unavailable commercially in a premixed format.
4. Minibag products containing KCl should be dispensed and controlled by the pharmacy only.
5. Add an auxiliary fluorescent warning label to the KCl concentrate product at the time of receipt of the drug into inventory in the pharmacy. See Section 10.
6. Add auxiliary warning label to premixed minibags containing KCl, providing the recommended route of administration (e.g., "central line only") and the recommended duration of infusion (e.g., "infuse over at least 1 hour"). See Section 10.
7. Have pharmacists intervene when nonstandard orders for IV solutions with KCl are prescribed. Prescribing practices must take into consideration the premixed KCl IV solutions that are available.
8. Choose a designated area for storing concentrated KCl products in the pharmacy to reduce the likelihood of substitution errors.