

Good Spin on a Bad Event

REDUCE THE INCIDENT OF MEDICATION ERRORS RELATED TO

POTASSIUM CHLORIDE (KCl) INFUSION

By Aster RV Hospital, Bangalore



- ✓ Prospective study conducted in a tertiary care hospital based on the **incidents reported on potassium chloride infusion related medication errors.**
- ✓ Improper dilution & administration, inadequate monitoring, lack of understanding, technical proficiency, busy schedule, infrequent cross verification, random approach towards medication administration and inopportune training contributed to such events.
- ✓ Potassium chloride is considered as **high-risk medication**, as incorrect administration can cause **potential harm** to the patient which may **increase the criticality** or may **result in sentinel events.**
- ✓ Administering it too rapidly/high doses/incorrect concentration & infusion rates might cause cardiac arrest/arrhythmia within minutes.

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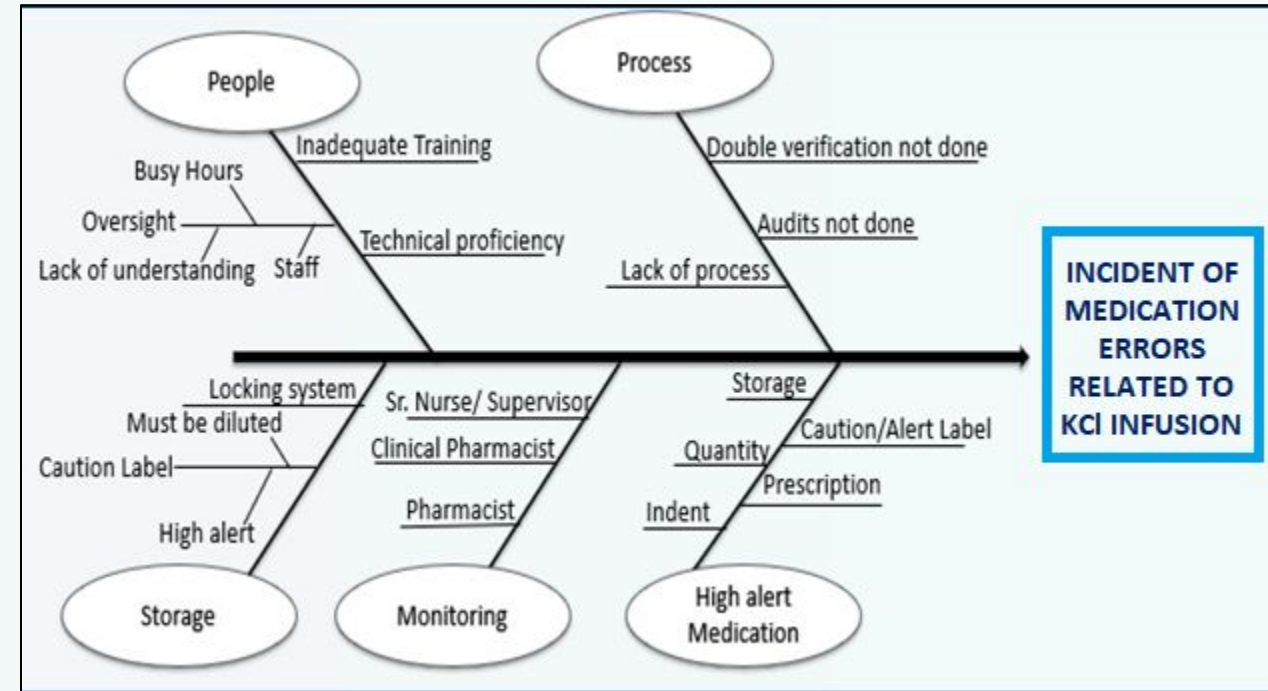
PROJECT AIM & OBJECTIVE:

- To reduce the medication error (improper dilution, rate of infusion, drug concentration, route of administration) for potassium chloride infusion.
- Reduction of thrombophlebitis caused due to faster infusion/ high concentration.

Project Champion: Dr Nisha R – Clinical Pharmacist

Project Members:

- Dr Chinnadurai : Lead Critical care consultant
- Dr Aravinda : Deputy Chief Medical Services
- Dr Chaitra A : Quality & Medical Services
- Mr Shiran : Patient safety Officer
- Mrs Shanthy Rani : Chief Nursing officer
- Dr Devika : Clinical Pharmacist



Cause and effect analysis

Before Administration:

- To practice affixing high alert and must be diluted red caution labels
- Mandatory double checking before initiating the infusion
- Selection of the right diluent
- Administration via volumetric infusion pump only with drug label.
- Vigilant on the rate for
 Central line : >10mmol/hour
 Peripheral lines : ≤10mmol/hour
 Concentration : > 40mmol/L limitations.
- Cardiac Monitor to be connected before administration of drug.

S No	Audit Parameters										
	Date										
	Patient Details										
	UHID										
	Location										
1	Medication rights										
2	Dilution of Potassium chloride										
3	Administration of Potassium chloride										
4	Double check										
5	Volumetric infusion pump with labeling										
6	Rate of infusion as per dilution										
7	IV access (central/peripheral line)										
8	Vital monitoring										
9	Monitoring of electrolytes (Lab reports)										
10	Signs of phlebitis based on rate of transfusion										
11	Clinical Pharmacist Name & Sign										

During Administration:

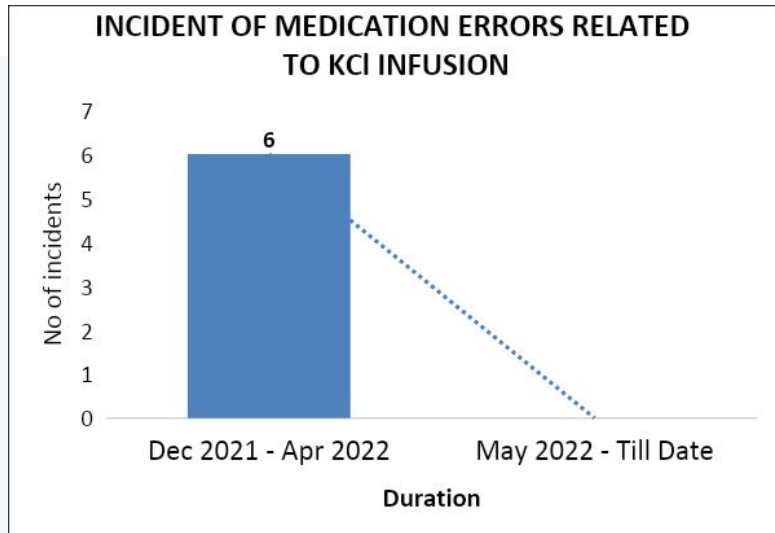
- Checking the infusion site periodically (30mins) for redness and inflammation
- The vital parameters (Heart rate, Blood Pressure, Heart Rhythms & Saturation)

After Administration:

- Precautionary measures to be taken to prevent hyperkalemia by monitoring of serum electrolytes after administration

DISCUSSION & CONCLUSION:

- ✓ As the incidence of medication errors pertaining to incorrect administration of potassium chloride was in increasing trend as per prospective study is being conducted biannually.
- ✓ The incidence of administration error during **Dec 2021 to April 2022** were **6 incidents** numbers.
- ✓ On re-assessment with **cause and effect analysis** new process defined and implemented.
- ✓ The number of incidents of **KCl medication error** is **Nil** from **May 2022- till date** as depicted in the bar diagram below.



KCL INCIDENTS Dec 21 - April 22	
MONTH	COUNT
Dec-21	2
Jan-22	1
Feb-22	1
Mar-22	1
Apr-22	1

KCL INCIDENTS Dec 21 - Nov 22	
May -22	0
Jun – 22	0
Jul – 22	0
Aug-22	0
Sep-22	0
Oct-22	0
Nov-22	0

Thank you