WOMEN'S COLLEGE HOSPITAL
Health care for women | REVOLUTIONIZED

Clinical Policy Manual

Title: Control, Distribution and Administration of Concentrated Electrolytes

Women's College Hospital		**Policy No:**	2.30.016
Title	Control, Distribution and Administration of Concentrated Electrolytes	**Original:** (mm/dd/yyyy)	07/31/2017
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Issued by:	WCH Pharmacy Services		
Approved by:	Pharmacy and Therapeutics Committee Medical Advisory Committee		

Women's College Hospital Intranet document is considered the most current.

Policy Statement:

Women's College Hospital (WCH) ensures the safety of patients through best practices and limitation of the distribution of high concentration electrolytes solutions. These are considered high alert medications that are tightly regulated as they may cause significant harm if administered in error. WCH limits the procurement and stocking of concentrated electrolytes. Currently concentrated electrolytes that are stocked in the WCH Pharmacy Department include calcium chloride prefilled syringes 100mg/mL, calcium gluconate 100mg/mL, and magnesium sulfate 500mg/mL. These are commercially available formulations. Concentrated electrolytes are appropriately found in the emergency defibrillator cart in the Acute Ambulatory Care Unit (AACU) and the Post-Anesthesia Unit (PAU) in anticipation of sudden and unanticipated life-threatening emergencies that may occur in the hospital or in the surgical areas. Certain concentrated electrolytes are also stocked in limited numbers in the AACU night cart for urgent situations overnight or when Pharmacy Services is closed.

Specific patient care areas that contain concentrated electrolytes include:

- Acute Ambulatory Care Unit (AACU) – the AACU night cart contains a limited supply of necessary concentrated electrolytes such as calcium gluconate or magnesium sulphate. Each vial is labelled with the "Concentrated Electrolyte" warning sticker that alerts the clinician that further dilution is required. These concentrated electrolytes will be placed in a separate locked compartment within the medication room to further safeguard their storage and access.
- Emergency defibrillator carts found in the AACU and in the Peri-Anesthesia Unit (PAU) - Calcium chloride prefilled syringes and magnesium sulfate 500mg/mL vials are stored and secured inside emergency defibrillator carts in very limited amounts.
- No concentrated electrolytes are kept as floor stock, or in any other patient care areas at WCH.

Definitions:

Concentrated Electrolytes – refers to the following: all calcium salts with concentrations greater than or equal to 10%, magnesium sulfate concentrations greater than 20%, any potassium salts with concentrations greater than or equal to 2mmol/mL (or 2mEq/mL), sodium acetate and sodium phosphate concentrations greater than or equal to 4mmol/mL, and sodium chloride concentrations greater than 0.9%.

Procedure:

Controlled use of concentrated electrolytes – WCH limits the use of concentrated electrolytes to the specific areas stated above. In all other patient care areas and clinic settings, there are no concentrated electrolytes stored.

Distribution of concentrated electrolytes – all concentrated electrolytes vials or prefilled syringes are labelled with a "Concentrated Electrolyte" warning sticker to increase visual awareness.

Administration of concentrated electrolytes – in a non-emergency situation, concentrated electrolytes will only be administered pursuant to a medication order complete with medication name, route, and dose in EPIC. During Pharmacy hours, these orders will be verified by a Pharmacist and dispensed as a patient-specific dose. Paper orders may sometimes be used in a hospital downtime situation. Clinicians will consult the IV Drug Monographs available on the WCH Intranet for instructions on diluting concentrated electrolytes, maximum concentrations, rates of infusion, and monitoring (i.e. cardiac monitoring, vitals, etc.) prior to administering the electrolyte. All concentrated electrolytes require an independent double check prior to administration (please see procedure under WCH Policy 2.30.007 - Independent Double Check of High Risk/High Alert Medication).

References:

1. Accreditation Canada. Required Organizational Practices Handbook 2019.
2. WCH Clinical Policy. Independent Double-Check of High Risk/High Alert Medication. http://www.mywch.ca/data/1/rec_docs/12306_2.30.007-_Independent_Double-Check_of_High_Risk_Alert_Medication.pdf. (Accessed 1 Feb 2021)
3. ISMP List of High-Alert Medications in Acute Care Settings (2017). https://www.ismp.org/tools/institutionalhighAlert.asp (Accessed 1 Feb 2021)
4. ISMP Medication Safety Self Assessment for High-Alert Medications (2018). https://www.ismp.org/sites/default/files/attachments/2018-01/EntireAssessmentWorkbook.pdf (Accessed 1 Feb 2021)
5. Sunnybrook Health Sciences Centre. Pharmacy Department. IV Drug Monographs. (Accessed 28 January 2021).