مؤسسة مستشفى سرطان الأطفال-مصر 57357 Children's Cancer Hospital Foundation - Egypt	**Policy Name:** **High Alert Medication and LASA Medication**

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1.0 Change of policy

1.1 No changes

2.0 Purpose

2.1 Improve patient safety and reduce the occurrence of medication errors associated with high alert medications misuse.

2.2 To identify potential high alert medications at CCHE and to outline steps to prevent errors that may result from confusion of these medications.

3.0 Policy

3.1 Policy statement:

3.1.1 High-alert medications cause harm more frequently, and the harm they produce is likely to be more serious when they are given in error. This can lead to increased patient suffering and potentially additional costs associated with caring for these patients.

3.1.2 Medications at risk for look-alike/sound-alike confusion, such as similar medication names and similar product packaging, may lead to potentially harmful medication errors.

3.2 Scope:

3.2.1 This policy and procedure applies to all healthcare providers.

3.3 Responsibilities

3.3.1 Pharmacy and Therapeutics (PNT) Committee members.

3.3.2 Patient Safety Committee members.

3.3.3 All healthcare providers.

4.0 Definitions /abbreviations:

4.1 CCHE: Children Cancer Hospital – 57357 Egypt

4.2 CPID: Continuous Performance Improvement Department

4.3 IPSGs: International Patient Safety Goals

4.4 High-Alert medications: are drugs that have a heightened risk of causing significant patient harm when they are used in error.

4.4.1 High alert Medications include:

4.4.1.1 Medications that are involved in a high percentage of errors and/or sentinel events, such as Adrenergic agonists/antagonist, Antiarrhythmics, Antithrombotics, hypoglycemic agents & insulin products, medication with narrow therapeutic index, Anesthesia medication, or chemotherapeutics... etc.

4.4.1.2 Concentrated electrolytes.

4.4.1.3 Sound alike/look alike medications.

4.4.1.4 Contrast Media

4.4.1.5 Hemodialysis solutions

4.4.1.6 Opioids

4.4.1.7 Parenteral Nutrition preparations

4.4.1.8 Sterile water for injection

4.5 Look-Alike/Sound-Alike Medications (LASA): Medications with drug names that look similar in print or sound similar to other drugs when their names are spoken. Such agents carry a significant risk of being administered improperly.

4.6 ISMP List: Institute for safe medication practice (see attachment no. 1).

4.7 An independent check: is defined as redundant and separate completion of the task by a second licensed health care professional.

4.8 Double check: is defined as verification performed by a second licensed health care professional.

4.9 MMU: Medication Management & Use

4.10 MMS: Medication Management & Safety

5.0 Procedure:

5.1 Circumstances Increasing Risk Errors in High Risk Medications

5.1.1 Poorly handwritten of medication orders

5.1.2 Verbal directions/orders

5.1.3 Similar product packaging “look alike”

5.1.4 Similar medication name “sound alike”

5.1.5 **Improper packaging leading to improper route of administration:**

5.1.5.1 Oral liquid in IV syringe

5.1.5.2 Topical products stored in syringes or bottles.

5.1.6 Storage of products with similar names in the same location

5.1.7 Similar abbreviations

5.1.8 Improper storage of concentrated electrolytes

5.1.9 Pyxis availability of concentrated Potassium Chloride and other electrolytes that may result in fatality if administered undiluted

5.2 The department of pharmaceutical services is responsible for providing the hospital with the high alert medication list through Reviewing the following:

5.2.1 The hospital formulary.
5.2.2 Updated high alert medication and look-alike/sound-alike lists published by ISMP.
5.2.3 Analysis of medication errors to determine which medications bear a significant harm.
5.2.4 Annual update of the high alert medication and look-alike/sound-alike lists
5.2.5 If there are additions or change to hospital services or new medication added to the hospital formulary that are deemed high risk then an amendment will be posted and changes will be added to list at the annual update.

5.3 The following items should be considered during selection of high alert medications:

5.3.1 Tender committees should consider the selection of premixed intravenous high alert medication solutions when available and appropriate.
5.3.2 Limit the number of available concentrations.
5.3.3 Purchase multiple strengths from alternate companies if necessary.
5.3.4 Communicate company changes to caregivers before distribution. Utilize photos to illustrate change whenever available.

5.4 Receiving of high alert medications

5.4.1 Check packaging of High Alert Medications for “look-alike” error potential.

5.5 Storage:

5.5.1 Storage area of high alert medications should be locked, separated and clearly labeled with High Alert Medication warning label which is visibly placed on the storage bin.
5.5.2 All storage locations should be clearly labeled and separated from regular stock.
5.5.3 Concentrated electrolytes are dispensed under the supervision and control of the pharmacist. (Refer to Management of Concentrated Electrolytes Policy).
5.5.4 All guidelines that are related to concentrated Electrolytes handling are included in a separate policy “Refer to Management of concentrated Electrolytes policy”.

5.6 Prescribing High Alert Medication should be according to:

5.6.1 Pre-printed orders are used whenever possible.
5.6.2 Non-standard abbreviations should be avoided.
5.6.3 Minimize using Verbal and telephone orders (only in case of emergency & inside OR)
5.6.4 The exact dose should be specified for each medication (ex. mg) not only the dosage form (ex. Tablets, ampoules, vials and bottles).
5.6.5 Order High Alert Medications intravenous infusions using standardized formulae. If standardized formulae are not available, the pharmacy accepts written physician orders that include all standard medication order elements including the dose (concentration) and the rate.
5.6.6 In case of computerized physician order entry “CPOE”, all high alert medications are appeared to physicians with alert notification (This is a High Alert Order)
5.6.7 Transcribing of order: During the electronic order entry, the pharmacist should use the electronic order IV set whenever applicable.

5.6.8 **Concentrated electrolytes are indicated in the treatment of electrolyte deficiency states when oral replacement is not feasible. The prescription must state:**

5.6.8.1 Number of electrolytes required (mmols or mEq)
5.6.8.2 The form (e.g., Potassium chloride)
5.6.8.3 The diluents to be used
5.6.8.4 The total volume to be prepared in
5.6.8.5 The period to be infused over or the infusion rate.

5.7 Preparation and Dispensing:

5.7.1 Order review: (refer to preparation policies IV & oral)
5.7.2 Picking
5.7.3 Packaging and Labeling
5.7.4 Product checking: (refer to preparation policies IV & oral)
5.7.5 Transfer: (refer to medication transfer policy)

5.8 During administration of high alert medications:

5.8.1 An independent double check is required for all drug calculations by nurses or pharmacists.
5.8.2 **Medications verification performed by two qualified nurses beside the patient. This is done through:**

5.8.2.1 Comparing the label and/or product contents in hand versus the written physician order or the pharmacy-generated Medication Administration Record (MAR).
5.8.2.2 Confirming the 5 rights (right patient, right medication, right dose, the right time, and the right route).
5.8.2.3 A double check is required when programming the pump, including starting or changing the cassette for narcotics delivered via pumps.

5.9 Labeling: (Refer to Beyond-Use Dating and Labeling of I.V admixture)

5.9.1 To draw attention about the high alert medication risk of harm from error that can occur with these medications during preparation, dispensing, and administration, labels for these medications will include the comment: “HIGH ALERT MEDIACTION”. **labels are attached to characterize specific medication categories as follows:**

5.9.1.1 Red Circular label for hazardous medications.
5.9.1.2 Yellow square label for Intrathecal Injection.
5.9.1.3 Yellow High Alert Medication Label for All High Alert Medications.
5.9.1.4 Blue Look-alike Medication Label for All Look-alike and sound-alike Medications.
5.9.1.5 Orange Concentrated Electrolytes Label for All Concentrated Electrolytes Medications. (Refer to Management of Concentrated Electrolytes Policy).

5.9.2 Inside the preparation area, when picking the High Alert Medications, great caution should be taken.
5.9.3 The prepared High Alert Medications are checked carefully by the pharmacist and then the signs on the labels.
5.9.4 For Look-alike Medication see section

5.9.5 For Concentrated Electrolytes (Refer to Management of Concentrated Electrolytes Policy).

5.10 Patient education:

5.10.1 When delivering the patient his medication, the pharmacist in charge of patient education should make sure that the patient knows all the important precautions concerning his medication.

5.11 Discarding and disposing of high alert medication:

5.11.1 High Alert Medications should be disposed safely according to each medication's way of safe disposal.

5.12 Handling of look-a like sound-alike medications:

5.12.1 Specific safety strategies are utilized for a specified list of potential look-alike sound-alike medication combinations. These strategies are selected as appropriate from the following:

5.12.1.1 Store items in segregated areas
5.12.1.2 Use both generic and trade name on shelves in dispensing areas.
5.12.1.3 Use "LASA" labels on shelves in dispensing areas.
5.12.1.4 Emphasize drug name difference using (tall man) letter in computer system and dispensing storage areas for CCHE tall man list
5.12.1.5 Order product by proprietary name.
5.12.1.6 Routine audits of Automated Dispensing Cabinets to ensure correct placement of medications Double check requirement prior to administration
5.12.1.7 Double check requirement prior to dispensing.

6.0 References:

6.1 Management of Concentrated Electrolytes
6.2 ISMP list of high alert medications.

7.0 Appendices

7.1 Related Forms

7.1.1 N/A

7.2 Related Policy(S)

7.2.1 Medication Management Program

7.3 Related Standards:

7.3.1 Joint Commission Accreditation Standards – MMU.
7.3.2 GAHAR Standards MMS. 06, 07, 11, 12, 13, 14, 15 and 16

7.4 Attachments

7.4.1 Attachment No.1 Medication Administration Guidelines for ICU and O.R.
7.4.2 Attachment No.2 CCHE List of Sound-alike/ Lookalike medication
7.4.3 Attachment No.3 ISMP list of High alert medications
7.4.4 Attachment No.4 Concentrated electrolytes List