MEDICATION SAFETY

INTRAVENOUS INFUSION ADDITIVES

AIM

- To ensure the appropriate management of intravenous infusion additives.

KEY POINTS

- This guideline shall be read in conjunction with KEMH Clinical Guidelines:
  - Section P 2.3.4 Checking and the Administration of Intravenous Drugs by Medical and Nursing/Midwifery Staff
  - Section P 2.3.3 Standard Procedures for Reconstitution and Administration of Intravenous Drugs

- This guideline applies to all additions of drugs or electrolytes to intravenous fluids contained in large volume bottles, bags, minibags, or burettes.

- All additives to large volumes (500mL, 1000mL) IV fluids will be prescribed on the hospital IV therapy chart (MR740).

- All additives to large volume IV fluids will be administered via a volumetric pump.

- Drugs added to minibags or burettes shall be prescribed on the medication chart (MR810). The diluent shall be prescribed.

- The addition of drugs to standard IV fluids is associated with several significant risks
  - Contamination with microorganisms
  - Contamination with foreign particles
  - Incompatibility resulting from precipitation and/or inactivation of the drug or production of a toxic substance.
  - Bolus dosing of the additive due to inadequate mixing.

RISK MINIMISATION STRATEGIES

- Medications shall be added to an IV fluid only when positively indicated and not as a matter of convenience. Approved IV fluids include
  - Glucose 5%
  - Glucose 4% + Sodium Chloride 0.18%
  - Glucose 10% 500mL.
  - Sodium Chloride 0.9%.
  - Compound Sodium Lactate (Hartmann’s).

- The compatibility of the solution with the additive shall be determined prior to preparing the flask.

- Where doubt exists concerning the compatibility of various medications or solutions, the medication shall not be prepared or administered until authorisation has been obtained from the pharmacist.
When solutions contain Heparin, or if more than one medication is to be added to an IV container, both compatibility and safety must be determined prior to preparation.

Medications shall not be added to the following infusates:
- Blood or blood products
- Lipid emulsions
- Mannitol
- Glycerol
- Bicarbonate solutions
- Amino acid solutions

All containers (including minibags, burettes and syringes) to which additives have been placed shall be labelled with an appropriately completed IV additive label.

All additives shall be checked by a second person who shall sign the label.

Following addition of the medication and immediately prior to use the solution must be thoroughly mixed and inspected for particulate matter or change of colour.

All IV solutions containing additives shall be administered within 24 hours of preparation or discarded.

All solutions containing additives made in the ward areas shall be used immediately after preparation.

Infusions containing narcotics shall be managed in accordance with Clinical Guidelines Section P 2.2.3 Schedule 8 Controlled medications Administration

TPN solutions and other multiple mixtures shall be prepared in the pharmacy under sterile conditions.

REFERENCES (STANDARDS)

| National Standards – 4- Medication Safety
| Legislation - Nil
| Related Policies - Nil
| Other related documents – Nil

RESPONSIBILITY

| Policy Sponsor | HoD Pharmacy |
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