1.0 OBJECTIVES
To provide guidelines relating to intravenous therapy in the Neonatal Nursery, relating to safety guidelines, documentation and recommendations for IV solutions and tubing changes.

2.0 POLICY STATEMENT
2.1 Safety Guidelines
2.1.1 Continuous infusion of intravenous solution is initiated only in situations where continuous therapy is necessary. IV access devices used for intermittent fluid or medication administration MUST be managed with a “lock” device. IV access devices that are not needed are removed.

2.1.2 Fluid calculations are done daily following unit guidelines. The IV rate is adjusted according to changes in amount of oral feeds unless otherwise ordered.

2.1.3 All IV solutions are administered using an infusion pump.

2.1.4 Never increase the IV infusion rate to flush the IV tubing. Instead, manually prime the line and record the amount “flushed” or use the prime function on the infusion pump.

2.1.5 Never increase the IV infusion rate for the purpose of making up for lost fluids without a written order.

2.1.6 Do not infuse packed red blood cells, frozen plasma or platelets through a peripheral inserted central catheter (PICC line) size #2 French or less.

2.1.7 Injection ports and connection sites must be cleansed with antiseptic swabs before using or before disconnecting intravenous tubing or devices. 0.5% Chlorhexidine Gluconate in 70% alcohol is the preferred antiseptic. An alternative is to wipe with povidone-iodine solution, allow this to dry, then wipe with alcohol.

2.2 Documentation
2.2.1 When an IV device is inserted the following should be documented:
- Date and time of insertion
- Who inserted the device
- Site of insertion
- Type of access device, length, gauge
- Number of attempts
- Patient response
• Complications of insertion

2.2.2 Hourly, the intravenous should be checked and recorded for the following:
• Condition of the IV site
• Patency and interventions taken if necessary
• Assessment of signs of IV device infection and interventions taken
• Rate of infusion and change in rate of infusion
• Note volume infused in the last hour
• Change in solution or addition of medications
• Change of intravenous administration sets
• Change in colour or precipitation in IV fluids

2.3 I.V. Solution Recommendations

The following are recommendations for IV solutions orders. However, it is the nurse’s responsibility to check the appropriateness of an IV solution for each individual (considering the infant’s serum glucose and sodium level and the IV solution’s glucose and sodium content), before proceeding to infuse or change it.

2.3.1 A 10% Dextrose is used except those infants less than 33 weeks gestational age.

2.3.2 Newly admitted infants less than 33 weeks gestational age will have enhanced dextrose solution (EDS) ordered if unable to start individualized parenteral nutrition immediately.

2.3.3 Arterial lines are infused with 0.45% Saline with heparin as indicated in the heparin policy unless otherwise ordered. Patients that are receiving anticoagulants at a therapeutic level should not have heparin added to the arterial line so that clotting studies may be drawn from that line. All other IV infusions for arterial lines require a written order.

2.3.4 Umbilical arterial lines may have a low dose sodium bicarbonate infusion ordered to correct metabolic acidosis. A specific order is required for mixing this infusion.

2.4 Intravenous Tubing Change

2.4.1 IV administration sets and solution bags for all regular IV solutions are changed every 96 hours. Excluding Total Parenteral Nutrition solutions, other IV’s infusing medications continuously have the infusate changed at least every 96 hours or according to stability and sterility guidelines.

2.4.2 Ensure that the solution bags and administration sets are dated when changed.

2.4.3 When orders change for solutions, it may be possible to keep “components” (e.g. tubing) of the administration that do not require changing. Continuous infusions that cannot be interrupted should be set up using a new administration set. Medication infusions that should not be interrupted include cardiovascular support drugs (e.g. Dopamine, Epinephrine) or other medications that may affect the infant’s status if disrupted temporarily.

2.4.4 Total Parenteral Nutrition Solutions are to be changed every 24 hours, and administration sets every 96 hours. Lipid emulsion and lipid emulsion administration sets are changed every 24 hours.

2.4.5 Blood Administration sets are single use and are not used for longer than four hours.
2.4.6 Medication lines are changed every 24 hours.

3.0 APPLICABILITY
All Covenant Health Neonatal Nursery staff

4.0 RELATED DOCUMENTS
Adapted with permission from Stollery Children’s Policy and Procedure Manual:
http://www.intranet2.capitalhealth.ca/nicu/pages/policiesprocedures/policiesprocedures_new.htm Intravenous Therapy, August 2014

5.0 RELATED POLICIES & PROCEDURES
Corporate Policies/Procedures Home Page – Clinical – Fluid/IV/Parenteral Therapy
Corporate Policy/Procedure Manual Peripheral IV catheter V!!-B-390
Corporate Policy/Procedure Manual V11-A-50 Medication Administration
Central Venous Catheter Insertion – Assisting
Fluid Management
Intravenous Access – Over the Needle Catheter
Intravenous Access/Bloodletting
Intravenous – Butterfly Needle
Intravenous Lock Policy and Procedure
Patient Care Manual Policy 111-73 Independent Double Checks – Medication Administration