



## Nursing Guidelines on the Administration of Coagulation Factor Concentrate

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# Nurse Practice Committee

## Guidelines on The Administration of Coagulation Factor Concentrates by Nursing Staff by Bolus and Continuous Infusion

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### **Introduction**

All coagulation factor concentrates (CFCs) may be administered intravenously as a slow bolus injection. Certain Factor VIII and IX concentrates ie Advate, Benefix & Kogenate, may be administered by continuous infusion. Long acting Biogen® FVIII & FIX concentrates are not suitable for continuous infusions.

### **Indications for the administration of CFCs**

<b>Bolus Injection</b>	<b>Continuous Infusion</b>
Treatment of bleeding episodes	Treatment of severe bleeding episodes (Mulcahy et al 2005)
Prophylaxis of bleeding episodes	Prevention of bleeding in surgery (Birlingmaier et al 2006)

### **Definition of CFCs**

Coagulation factor concentrates are fractionated preparations of individual clotting factors or groups of clotting factors which are freeze dried. They provide convenient high doses of clotting factor. (World Federation of Haemophilia 1997).

### **Complications associated with CFCs**

- Nausea & vomiting
- Phlebitis
- Inhibitor formation
- Coagulopathy
- Anaphylaxis
- Viral / vCJD infection (plasma derived products only)

### **Guidelines for the authorisation for nursing staff to administer CFCs**

The nurse must be registered by An Bord Altranais

The nurse must have successfully completed all parts of OLCHC Intravenous Medication training

The nurse must meet the criteria for the administration of intravenous medications as set out in The Medication Policy (OLCHC 2001).

### **Equipment Required**

<b>For bolus</b>	<b>For infusion</b>
CFC prescription sheet & Blood Transfusion compatibility form CFC & reconstitution kit I.V. tray 2.5ml NaCl flush	CFC prescription sheet & Blood Transfusion compatibility form CFC & reconstitution kit B Braun Perfusor® Space syringe driver pump Syringe (20ml or 50ml B/Braun Omnifix) Vygon extension line with side port, anti-syphon valve and anti-reflux valve Drug additive label 500mls Sodium Chloride B/Braun Infusomat® pump B/Braun Infusomat® Intravenous Infusion line For Advate infusion only –sterile water to make up an infusion with a final volume of 50mls.

ACTION	RATIONALE & REFERENCE
<p>Explain the procedure to the child and family</p> <p>Confirm the patient's diagnosis, inhibitor status and treatment of choice either in the Health Care Record or Clintech (Electronic Healthcare Record – relevant to hereditary coagulation disorder patients only)</p> <p>Collect CFC from Blood Transfusion Laboratory as per the guidelines for the Administration of Coagulation Factor Concentrates</p> <p>Gather CFC prescription chart, CFC and equipment required for procedure</p> <p>Check all details and calculations of the CFC prescription with a second nurse/doctor as per blood product checking guidelines</p> <p>Ensure full vials of CFC are prescribed in accordance with the 'no-wastage' policy (Exception Prothromplex and children &lt;10kg)</p> <p>Decontaminate hands</p> <p>Implement /Ensure universal precautions for plasma derived products</p> <p>Reconstitute CFC as per manufacturer's guidelines as set out on the product insert</p> <p>Mix reconstituted CFCs by gently rotating or swirling the vial. Do not shake vigorously</p> <p><b><u>TO ADMINISTER CFC BOLUS</u></b></p> <p>Draw CFC into the syringe using the vial filter supplied (more than one vial may be drawn into one syringe using a different filter needle for each vial)</p> <p>Check reconstituted CFC for evidence of precipitation, discoloration or particles</p> <p>Check the CFC prescription sheet with the patient's identity bracelet with a second nurse/doctor at the bedside as per the hospital medication policy</p> <p>Confirm the factor deficiency, reason for infusion, inhibitor status and history of adverse reactions with the patient/family member if present</p> <p>Decontaminate hands</p> <p>Administer the CFC as per the hospital guidelines for administration of CFCs in consultation with the individual CFC manufacturer's instructions as per product insert</p> <p>Record the administration of the CFC on the CFC prescription sheet as per hospital policy, ensuring all information is clearly documented and signed. Complete traceability tag and return to the Blood Transfusion Department.</p>	<p>To inform the child and family, to gain co-operation, ensure consent for procedure. To promote patient's understanding and trust. (Trigg &amp; Mohammed 2010).</p> <p>To confirm the patient's factor deficiency and the CFC to be administered. (OLCHC 2013a)</p> <p>(OLCHC 2013b)</p> <p>To ensure the safe preparation and administration of the CFC</p> <p>To ensure the correct product is administered to the correct patient at the correct time in the correct dose. (OLCHC 2001, An Bord Altranais 2007)</p> <p>To avoid the unnecessary wastage of CFC (OLCHC 2013a)</p> <p>To reduce transfer of micro-organisms (Haas &amp; Larson 2008, OLCHC 2011a)</p> <p>(OLCHC 2013a, OLCHC 2013b)</p> <p>To ensure that individual CFCs are reconstituted as per manufacturer's guidelines</p> <p>To avoid reducing the potency of the CFC</p> <p>To filter any particles. To reduce the risk of side effects .As recommended by manufacturer</p> <p>To avoid administration of substandard CFC to the patient</p> <p>To ensure the correct CFC is administered to the correct patient (OLCHC 2001, An Bord Altranais 2007)</p> <p>To reduce transfer of micro-organisms (Haas &amp; Larson 2008, OLCHC 2011a)</p> <p>To ensure the safe administration of the CFC. ( An Bord Altranais 2007, OLCHC 2013b)</p> <p>To reduce the risk of medication errors</p>

<p>Dispose of equipment as per hospital policy</p> <p><b><u>FOR CFC CONTINUOUS INFUSION</u></b>  Draw fully dissolved CFC into the syringe using the filter supplied.  For Advate infusion draw CFC into 50 ml syringe and make up final volume to 50mls using sterile water</p> <p>Check reconstituted CFC for evidence of precipitation and discoloration.</p> <p>Attach and prime the extension line with the CFC.</p> <p>Complete drug additive label and fix it to the syringe</p> <p>Prepare continuous infusion of sodium chloride 0.9%</p> <p>Attach sodium chloride 0.9% line to extension line, primed with CFC.  At the bedside, check the patient's details on the CFC prescription sheet against the patient's identity bracelet with a second nurse/doctor as per the hospital medication policy.  Confirm the factor deficiency and inhibitor status with the patient/family member if present</p> <p>Ensure the patient does not have a history of adverse reaction to the CFC.</p> <p>Decontaminate hands as per hospital policy</p> <p>Check CFC infusion rate with a second nurse/doctor as per hospital Medication Policy.  <b><u>dose required/hr x volume</u></b>  <b><u>dose available</u></b></p> <p>Infuse CFC infusion using B/Braun Perfusor® Space syringe driver pump.</p> <p>Infuse sodium chloride 0.9% using a B/Braun Infusomat® pump @ 5-20mls/hr as prescribed</p> <p>Set pumps to calculated rate as per manufacturer's instructions</p> <p>Dispose of equipment as per hospital policy</p> <p>Record the administration of the CFC on the CFC prescription sheet as per hospital policy ensuring all information is clearly documented and signed.</p>	<p>(OLCHC 2011b)</p> <p>To filter any particles  To reduce the risk of side effects  To avoid wastage of the CFC through IV giving set.</p> <p>To avoid administration of substandard CFC to the patient.  As recommended by manufacturers</p> <p>To facilitate administration of the CFC infusion  (OLCHC 2013a)</p> <p>To maintain accurate records  To prevent duplication of treatment  To provide a point of reference in the event of queries  (OLCHC 2001)</p> <p>To run in tandem with CFC infusion and to reduce the risk of thrombophlebitis (Martinowitz and Batorova 2005, OLCHC 2013a)</p> <p>To facilitate administration of the CFC infusion</p> <p>To ensure the correct product is administered to the correct patient  (OLCHC 2001, An Board Altranais 2007)</p> <p>To reduce the risk of side effects (OLCHC 2011a)</p> <p>To reduce transfer of micro-organisms  (Haas &amp; Larson 2008, OLCHC 2010)  To ensure the correct dose of CFC is administered.  (OLCHC 2001, An Board Altranais 2007)  OLCHC (2013a) OLCHC (2013b)</p> <p>To ensure correct infusion rate is maintained</p> <p>To reduce the risk of thrombophlebitis</p> <p>To ensure correct infusion rate is maintained</p> <p>To ensure the safety of all staff and patients  (OLCHC 2013c)</p> <p>To reduce the risk of medication errors (OLCHC Medication Policy 2001, An Board Altranais 2007)</p>
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