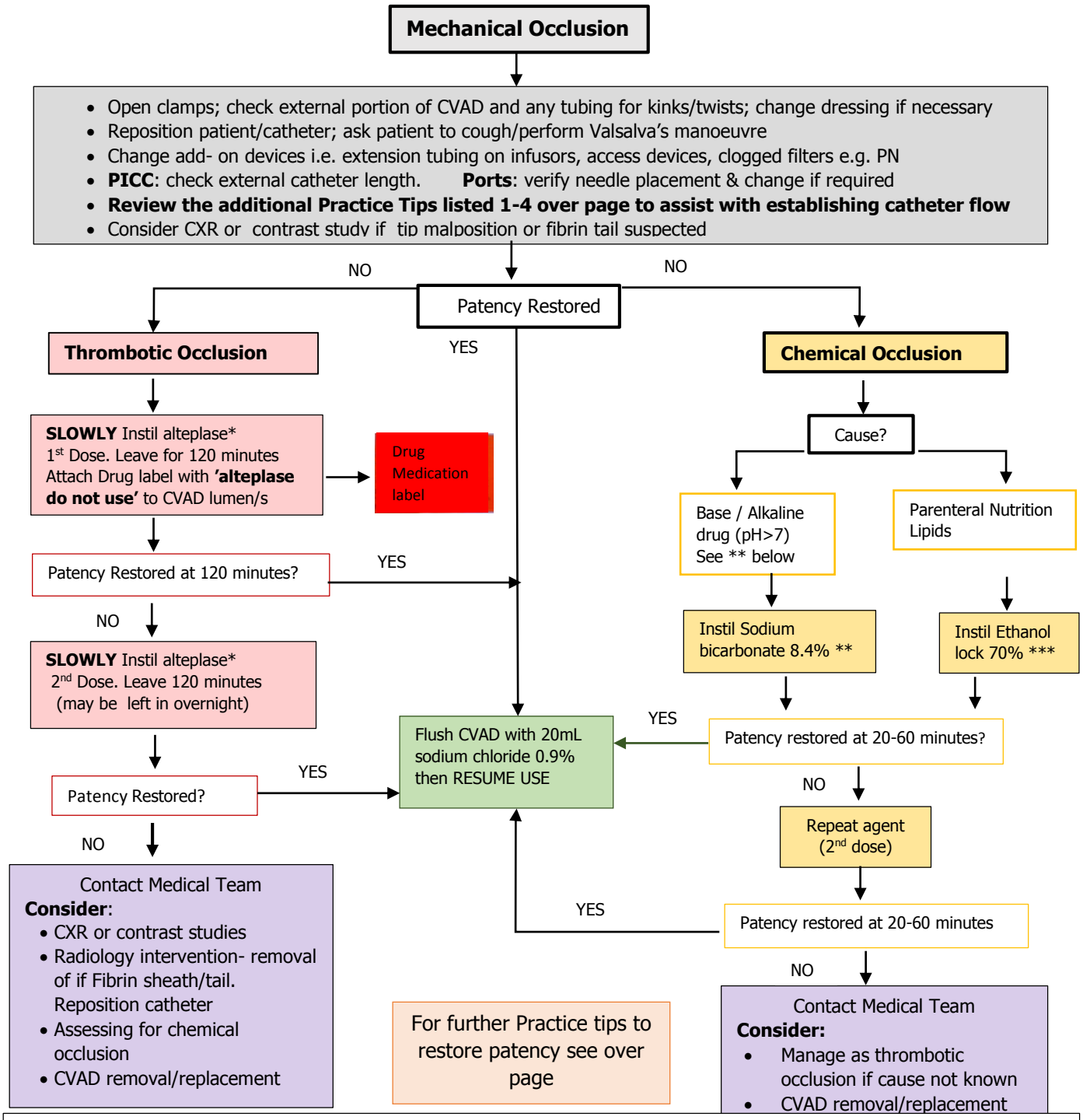
ALGORITHM for MANAGEMENT OF PARTIAL, PERSISTENT WITHDRAWAL or COMPLETE OCCLUSION



*METHOD OF ADMINISTRATION

[1] **Partial/withdrawal occlusion**: Instil clearance agent using direct installation method.

[2] **Complete Occlusion:** one of the following three methods may be used to instil clearance agent. **Source: CVAD Resource Book. 1**. Negative aspirate technique (page 51) **2**. Single syringe technique (page 52) **3**.3 way tap technique (page 53)

DOSAGE – Always confirm you have correct product before use. Must be prescribed by Dr and obtained from pharmacy

* [1, 2] **Alteplase. (Store in refrigerator prior to reconstitution) for single use only.** Reconstitute 2 mg vial with 2.2 mL sterile water. Swirl gently until all contents are dissolved. Draw up **2 mg/2 mL** using 10mL syringe**.** Don't shake the vial, slight foaming may occur. Let vial stand undisturbed *to allow large bubbles to dissipate before administering.*

Chemical clearance agents

** **Sodium Bicarbonate 8.4%,1mmol/mL** fill volume of catheter lumen, refer to *catheter section CVAD Resource* Book (Reference NOIDs for pH high drugs e.g. phenytoin, dilantin)

*** **Ethanol lock 70%-** fill volume of catheter lumen see *catheter section CVAD Resource Book*

Authorised by the CDHB CVAD Governance Group November 2014. Adapted from the 2014 CVAA Occlusion Guidelines in collaboration with Pharmacy Department Christchurch Hospital CDHB 2015

Type of Occlusion	Symptoms/Signs	Cause
Partial	Decreased ability to infuse or flush into the CVAD	Mechanical, Thrombotic or Chemical occlusion
Withdrawal	Inability to aspirate blood but able to flush without resistance Lack of free flowing blood return	Mechanical or Thrombotic Occlusion, fibrin tail
Complete	Inability to infuse or withdraw blood or fluid into the CVAD	Mechanical, Thrombotic or Chemical occlusion

BEFORE CONTINUING, HAVE YOU COMPLETED THE BASIC PATIENT & CATHETER ASSESSMENT?

PICC- CHECK EXTERNAL MEASUREMENT **PORT** - CHECK NEEDLE PLACEMNENT

Practice tips to be considered along with medical team assistance

PRACTICE TIPS

Prevention of occlusions should be the goal when managing CVADs. Catheter salvage is the preferred approach when managing partial or complete occlusions

Do not leave a partial occlusion untreated. Prompt action should be taken as soon as a partial occlusion is suspected to restore full catheter patency and avoid a complete occlusion and possible removal

Do not leave an occluded catheter lumen untreated because another lumen is functional. This is a source for infection

Checking for blood return:

1. You can flush but there is no blood return observed when using a 10mL syringe? Try using a 5mL syringe to aspirate and check for blood return
2. Try the negative aspirate technique by using a STANDARD sterile 10mL syringe containing 5mL sodium chloride 0.9%. Draw back to the 8mL mark to apply negative pressure repeating several times. If successful blood will be drawn into the syringe
3. Use a gravity technique (i.e. with primed IV giving set and 100mL bag of sodium chloride 0.9% open clamps on catheter and giving set , briefly hold the attached bag below the level of the patient's heart until you see flashback of blood in IV tubing)
4. Proceed with administration of medication if no problems have been identified during any of the steps above. **STOP** and seek medical advice if the patient experiences **ANY** discomfort or there are any unexplained problems

Using Alteplase

VERY SLOWLY INSTIL alteplase to ensure it comes in contact with the thrombus or clot burden and is 'soaked up' by the thrombus for maximum effect.

Stop all infusions where possible when treating a suspected FIBRIN TAIL/SHEATH to ensure optimum thrombolysis during dwell time to facilitate maximum contact with fibrin. For information on management refer to the occlusion section pages 50-55 in CVAD Resource Book

For further clinical guidance

Interventional Radiology. 81410 Monday – Friday 0800-1700. Ask for nursing coordinator.
After hours Monday-Friday contact on call nurse via the operator and ask for the IR on call nurse 1800-2200, Sat –Sun 0830-2200.

NE CVADs PDU 81529
CNS/NE Haematology /Oncology

Burwood Hospital - NE
TPMH - NE
Ashburton - NE

Authorised by CDHB Governance Group November 2014. **Source Data**: INS Standards of Infusion Therapy 2011, The Royal College of Nursing-Standards for Infusion Therapy, Canadian Vascular Access Association 2014, Clinical Journal of Oncology 2014, Mason et al