Policy Category	BC - Best Care		
Best Care Goals	☒ Safe ☐ Personal ☐ Connected ☐ Effective		
Applies To	National		
Version	**Approval Authority**	**Effective from**	**Review by date**
1	National Medical Director, WA	7/09/2021	23/09/2024

Contents

1. Rationale

The purpose of this Clinical Protocol is to provide a guiding framework for Hospital at the Home service Medical Practitioners.

Pre-Procedure/Surgical Intervention Bridging typically involves cessation of Warfarin or NOAC and commencement of Low Molecular Weight Heparin (LMWH).

2. Scope

The Clinical Protocol applies Nationally for HATH clients treated with anticoagulants prior to scheduled procedures or surgery.

3. Acceptance to HATH Criteria and Pathway

RED Unacceptable for community admission to HATH Refer to ED/ Inpatient management. (May become suitable for HATH after ED or inpatient stabilisation)	• Co-existing medical conditions requiring hospital admission • Known or suspected hypersensitivity to warfarin or LMWH/other (eg. clexane, fondaparinux) (unless under the governance of Haematology Consultant or thrombosis clinic) • Pregnancy < 22 wks (warfarin is teratogenic. Pregnancy category D) (unless under the governance of Haematology Consultant for high risk conditions e.g mechanical valve)

ORANGE
Requires discussion with Medical Governance prior to acceptance.
	• Over 13 years, suitable for adult dosing and under the care of a specialist team
	• Increased risk factors for bleeding- e.g recent surgery, falls, familial bleeding disorder, GI bleeds, epistaxis
	• Increased risk factors for clotting- mechanical valves (especially mitral), mitral valve disease, recent VTE, carotid artery disease, arterio-embolic disease whilst on anticoagulation.
	• Conditions which may increase the risk of bleeding:
	  • History of familial bleeding disorder
	  • Thrombocytopenia.
	  • Uncontrolled hypertension.
	  • Increased risk of falls

GREEN Accepted for HATH	• Client referred for cessation of oral anticoagulation (warfarin or NOAC/DOAC) or antiplatelet medication and pre-procedure/surgical intervention. • Client's medical condition has been assessed as stable, has a clear diagnosis, management plan, prognosis and is at low risk of deterioration.

4. Pathology Work Up

Verify if any recent pathology has been ordered prior to requesting the below:

- Baseline blood tests:
  - Full blood picture (FBP) for baseline platelet counts
  - Urea & electrolytes to assess renal function
  - Coagulation profile (INR, APTT, fibrinogen)
  - Liver function tests
- **Day 5: Repeat FBP to assess platelet count for heparin induced thrombocytopenia.**
  - Refer to eTG anticoagulation guidelines for further guidance on heparin induced thrombocytopaenia

5. General Management

- Daily nursing assessment as per Presurgical Bridging Care Pathway. Collaborate with medical governance doctor if any deterioration in client's condition.
- Access blood results from referral source
  - If on Warfarin: Obtain last INR, therapeutic range and regular Warfarin dose from referral source.
  - Collaborate with medical governance doctor regarding any abnormal test results.
- Check renal function, calculate CG and check LMWH orders with Medical Governance
- Administer LMWH as per medical authority.
- Ensure the last dose of enoxaparin is administered 24 hours prior to procedure.

6. General Guidelines

6.1. Commencement of enoxaparin post warfarin cessation

- Enoxaparin sodium should be commenced once INR is below the target INR range, unless stated otherwise by referrer.

6.2. Commencement of enoxaparin post NOAC/DOAC cessation

- Enoxaparin sodium is typically commenced no earlier than 24 hours post NOAC/DOAC cessation. Range 1-3 days

6.3. Commencement of enoxaparin post anti platelet cessation

- Enoxaparin sodium is typically commenced no earlier than 24 hours post anti platelet cessation.

Recommended enoxaparin dose

Renal function	Treatment dose
Normal renal function CrCl > 30mL/min	• 1.5 mg/kg SC daily* or • 1 mg/kg SC BD**
Severe renal impairment CrCl < 30mL/min	• 1 mg/kg SC daily
* If dose required is greater than 150mg, dose must be given as twice daily dose. **Twice-daily dosing of enoxaparin is preferred for patients at high risk of bleeding, or of thrombosis, such as patients who are older, obese or have a malignancy.	

7. Monitoring

- **Day 5: Repeat FBP to assess platelet count for heparin induced thrombocytopenia.**
- Anticoagulation dosing as per pathway. Daily liaison with Medical Governance for dosing on POC

8. Medical Governance

- The client has access to medical governance support for 24 hours per day, 7 days per week.
- Primary medical governance can be by referring medical specialists, credentialed referring GPs or by Silver Chain medical staff.
- When governance is retained by a Silver Chain medical officer the client will have a medical review within 48 hours of admission and the medical officer will determine when the scheduled follow up and discharge will occur.
- Where the primary medical governor is unavailable the Silver Chain medical officer can provide the medical governance.
- Care delivery is planned and provided in consultation with the client, medical officer/specialist holding medical governance and nursing staff.
- In the instance when a client's condition deteriorates the Silver Chain medical officer or nursing staff will confer with an emergency department medical officer.
- A summary of the episode of care is sent to the referrer or the client's GP at discharge.

9. Discharge Planning

- Ensure the client has an appointment arranged with own General Practitioner (GP) prior to discharge to ensure continuity of care.
- Fax client discharge summary to GP.

10. Supporting Documents

Silver Chain Group documents that directly relate to and inform this Clinical Protocol are available with this document in the Policy Document Management System (PDMS).

Other documents that directly relate to and inform this Clinical Protocol are as follows:

- Australian Commission on Safety and Quality in Health Care 2017 National Safety and Quality Health Service Standards (2nd), Sydney. Australia
- eTG complete. 2020. Cardiovascular: Periprocedural management of patients with cardiovascular disease. Therapeutic Guidelines. https://tgldcdp-tg-org-au.silverchain.idm.oclc.org/viewTopic?topicfile=periprocedural-management-cardiovascular-disease
- Government of Western Australia Department of Health. 2020. Guidelines for Anticoagulation using Warfarin. https://ww2.health.wa.gov.au/-/media/Files/Corporate/general-documents/WATAG/Warfarin-guidelines-for-anticoagulation.pdf
- Clinical Excellence Commission. Guidelines on Perioperative Management of Anticoagulant and Antiplatelet Agents. 2018; http://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0006/458988/Guidelines-on-perioperative-management-of-anticoagulant-and-antiplatelet-agents.pdf

11. Document Details

Document Owner	Executive Medical Director, East Coast
Document Type	CP - Clinical Protocol
Consumer Participation	☐ Yes ☒ Not Applicable
Functional Area	Acute
Risk Rating	Moderate
Periodic Review	36 months

Silver Chain Group's policies align with relevant legislation and standards and are based on providing a fair, inclusive and safe working environment free from bullying and discrimination and one that enables equal opportunity for all Silver Chain staff. Our policies embody our values of Care, Community, Integrity and Excellence.

Appendix A: Management of Bleeding and/or High INR (Over-anticoagulation)

Principles

- INR > 3.5 on Point of Care (POC) machine e.g. Coagulochek mandates laboratory specimen to be taken.
- Laboratory specimen is considered as 'gold standard' and should be utilised in preference to POC machine.

High Bleeding Risk

- Recent major bleed (within 4 weeks)
- Major surgery (within 2 weeks)
- Thrombocytopaenia (platelet count < 50 x 10^9/L)
- Known liver disease
- Concurrent antiplatelet therapy

Management of patients on warfarin therapy with bleeding*

Clinical setting	Recommendation
INR ≥ 1.5 with life threatening bleeding	Cease warfarin and transfer immediately to hospital
INR ≥ 2.0 with clinically significant bleeding	Cease warfarin and transfer immediately to hospital
Any INR with minor bleeding	Omit warfarin, repeat INR following day and adjust warfarin dose to maintain INR in the target therapeutic range **If bleeding risk is high or INR > 4.5 refer to hospital for administration of vitamin K**

*indication for warfarin therapy should be reviewed; if clinically appropriate, consider permanent cessation.