

# 8. CESSATION OF MEDICATIONS AFFECTING COAGULATION

Numerous medications and complementary therapies affect haemostasis. Cessation or bridging therapy may be required in order to minimise blood loss (PBM Pillar 2).

## Key messages

- Numerous medications and complementary therapies may affect haemostasis.

## Clinical implications

- The management of antiplatelet agents and anticoagulant therapy needs to be tailored for each patient to balance the risk of bleeding and thrombotic events, taking into consideration the indications for the medications, and the nature of the procedure and its risk of bleeding.
- The PBM guidelines: Module 2 – Perioperative provide some evidence and consensus based guidance.<sup>1</sup>

Specialist guidelines or advice may be required.

## Background

Numerous medications and complementary therapies may affect haemostasis so a comprehensive list of what the patient is taking is required. The management of antiplatelet agents including non-steroidal anti-inflammatory agents, aspirin and clopidogrel and anticoagulant therapy including warfarin, heparin and the new oral anticoagulants (NOAC) will need to be tailored for each patient to balance the risk of bleeding and thrombotic events, taking into consideration the indications for the medications, and the nature of the procedure and its risk of bleeding. A multidisciplinary team approach, involving surgeon, anaesthetist, cardiologist and haematologist, may be necessary to develop a management plan appropriate for the patient.

Some guidance regarding management of patients on anticoagulant and antiplatelet agents is provided in the PBM guidelines: Module 2 – Perioperative as outlined below.<sup>1</sup>

In patients undergoing coronary artery bypass graft (CABG) surgery either (with or without cardiopulmonary bypass off-pump coronary artery bypass), clopidogrel therapy should be stopped, where possible, at least 5 days before surgery (PO-R7).<sup>1</sup> In patients receiving clopidogrel who are scheduled for elective noncardiac surgery or other invasive procedures, a multidisciplinary approach should be used to decide whether to cease therapy or defer surgery, balancing the risk of bleeding and thrombotic events.

Specific evaluation is required for patients who have had a recent stroke, or received a drug-eluting stent within the last 12 months or a bare metal stent within the last 6 weeks. If a decision is made to cease therapy preoperatively, this should occur 7–10 days before surgery (PO-PP9).<sup>1</sup>

In patients undergoing noncardiac surgery, it is reasonable to continue low dose aspirin therapy. This may require specific evaluation in neurosurgery and intraocular surgery. (PO-R8) For those undergoing cardiac surgery, aspirin may be continued until the time of surgery (PO-PP8).<sup>1</sup>

In patients undergoing elective orthopaedic surgery, NSAID therapy should be ceased preoperatively to reduce blood loss and transfusion. The timing of the cessation should reflect the agent's pharmacology (PO-R9).<sup>1</sup>

In patients undergoing minor dental procedures, arthrocentesis, cataract surgery, upper gastrointestinal endoscopy without biopsy or colonoscopy without biopsy, warfarin may be continued (PO-R10).<sup>1</sup> In patients receiving warfarin who are scheduled for elective noncardiac surgery or other invasive procedures (excluding minor procedures - see PO-R10); specific management according to current guidelines is required (e.g. guidelines from the American College of Chest Physicians and the Australasian Society of Thrombosis and Haemostasis) (PO-PP10).<sup>1</sup>

Additional sources to assist management include: [New oral anticoagulants - a practical guide](#),<sup>2</sup> [Consensus guidelines for warfarin reversal](#): Australasian Society of Thrombosis and Haemostasis;<sup>2</sup> [The perioperative management of antithrombotic therapy](#): American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8<sup>th</sup> Edition);<sup>3</sup> [Management of severe perioperative bleeding: guidelines from the European Society of Anaesthesiology](#);<sup>4</sup> and [Guideline on the management of bleeding in patients on antithrombotic agents](#): British Committee for Standards in Haematology.<sup>5</sup>

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## References

1. National Blood Authority. [Patient Blood Management Guidelines: Module 2 – Perioperative](#). Australia, 2012.
2. Tran H, Joseph J, Young L, McRae S, Curnow J, et al. [New oral anticoagulants – a practical guide on prescription, laboratory testing and peri-procedural/bleeding management](#). Internal Medicine Journal, 2014;44:525-536
3. Douketis JD, Berger PB, Dunn AS, et al. [The perioperative management of antithrombotic therapy\\*: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines](#) (8th edition). Chest, 2008;133(6\_suppl):299S-339S.
4. Kozek-Langenecker SA, Afshari A, Albaladejo P, Santullano CA, De Robertis E, et al. [Management of severe perioperative bleeding: guidelines from the European Society of Anaesthesiology](#). Eur J Anaesthesiol. 2013;30:270-382.
5. Chee YL, Crawford JC, Watson HG, Greaves M. [Guideline on the management of bleeding in patients on antithrombotic agents](#): British Committee for Standards in Haematology. British Journal of Haematology, 2008;140:496-504.

## Additional Resources

- Case study Point of Care Coagulation Testing National Blood Authority <http://blood.gov.au/point-care-coagulation-testing-case-study-prince-charles-hospital-brisbane>