To cease or not to cease that is the question? Developing perioperative medication management guidelines.

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Introduction

The high rates of clinical variance in medication management in the peri-operative setting has previously led to patient confusion and potentially poor outcomes both pre- and post-surgery. Ensuring that patients received a uniform and evidenced based medication management plan prior to surgery became the focus of this project. Working with a variety of disciplines including Haematology and Anesthetics in the Pre-Admissions Clinic we formulated a consensus guideline, focusing on ease of access and comprehension as well as evidence based practice.

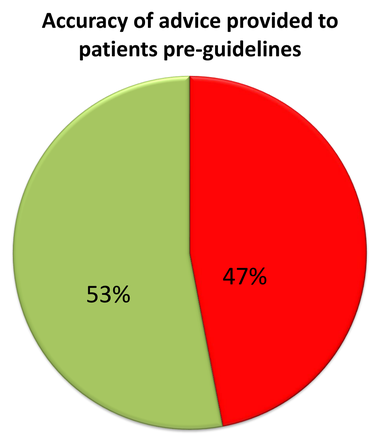
Aim

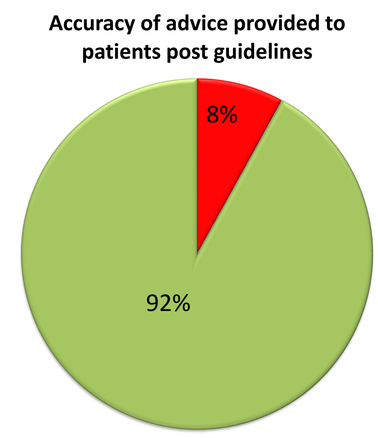
To eliminate clinical variation in perioperative medication management by developing an evidence based guideline and ensuring 90% compliance within 8 months to July 2018.

Method

- Literature search conducted on perioperative medication management
- Developed guidelines in conjunction with evidence and endorsed by Pharmacy, Haematology and Anaesthetics
- Provide guidelines to all members of the PAC team and educating all involved how to use the guidelines
- Assess impact of intervention by conducting a retrospective audit of 30 cases pre and post.

Results





Conclusions

This is an excellent example of how a pharmacy led multidisciplinary project can drive a significant change in practice to improve the care delivered to patients. By having uniformity in medication management mirroring current evidence in the perioperative setting we can reduce undue harm and adverse outcomes. This also enables consistent advice to be provided to patients in the Pre-Admission Clinic

Perioperative Medication Management Summary		
Medication	**When to cease**	**Comments**
Anticoagulants		
Apixaban & Rivaroxaban	**High bleeding risk surgery** *CrCl >50mL/min*: Last dose 48-72 hours before surgery *CrCl 30-50mL/min*: Last dose 72 hours before surgery **Low bleeding risk surgery** *CrCl >50mL/min*: Last dose 24 hours before surgery *CrCl 30-50mL/min*: Last dose 48 hours before surgery	**Recommencing NOACs postoperatively:** *Low bleeding risk surgery:* Start or resume 24 hours after surgery *High bleeding risk surgery:* Do not resume until 48-72hours after surgery. Consider alternative VTE prophylaxis in the interim.
Dabigatran	**High bleeding risk surgery** *CrCl ≥ 80mL/min*: Last dose 48 hours before surgery *CrCl 50-80mL/min:* Last dose 48-72 hours before surgery *CrCl 30-49mL/min*: Last dose 96 hours before surgery **Low bleeding risk surgery** *CrCl ≥ 80mL/min*: Last dose 24 hours before surgery *CrCl 50-80mL/min*: Last dose 24-48 hours before surgery *CrCl 30-49mL/min*: Last dose 48-72 hours before surgery	
Warfarin	5 days prior	Clexane bridging not required for patients with AF with CHADS2 score 1-4. Consider bridging for pts with AF with a CHADS2 score of 5-6. Bridging required for mechanical heart valves, recent VTE within last 3 months. **Recommencing warfarin postoperatively:** Resume 24-48 hours after surgery. Do not reload/give dose higher than usual maintenance. Monitor INR every 2 days.
Antiplatelets		
Aspirin alone	Can usually continue; Consider cessation 7 days prior for prostatectomy.	Consultation with surgeon/anaesthetist
Dual Antiplatelets (Percutaneous Coronary Intervention)	**Low bleeding risk surgery and high risk of ACS** Consider continuing dual antiplatelets **Moderate to High bleeding risk surgery** Cease clopidogrel 5 days prior, consider continuing aspirin Cease ticagrelor 3 days prior, consider continuing aspirin Cease prasugrel 7 days prior, consider continuing aspirin	Consult with Cardiology if recent stenting and on DAPT. Absolute minimum cover with DAPT after stenting (BMS or new gen DES) is 1 month. Need to weigh up bleeding risk vs ischaemic risk and priority for surgery. For non-urgent elective surgery and high risk of ACS consider waiting until 6 month DAPT course complete. **Recommencing DAPT** Resume within 48 hours after surgery
Dipyridamole/aspirin (Assasantin SR)	5-7 days prior	
Dipyridamole	2 days prior	
Ticlodipine	10-14 days prior	
Disclaimer: For perioperative management of anticoagulants and antiplatelets in neuraxial surgery, refer to *ASRA Antiplatelet and Anticoagulant Guidelines for Interventional Pain Procedures: https://journals.lww.com/rapm/Fulltext/2015/05000/Interventional_Spine_and_Pain_Procedures_in.2.aspx*		
Antihypertensives		
ACE-I, ARBs etc	Withhold Morning of Surgery.	**Recommencing:** Recommence on day 2 post surgery.
Diuretics	Continue; may omit dose on morning of surgery as specified by anaesthetist	
NSAIDs (non-selective)	3-4 days prior	Platelet function normalises after 3 days from stopping NSAID.

Acknowledgements

OHS Haematology Department

OHS Anaesthetics Department

NSW GOVERNMENT Health Western NSW Local Health District