

# Pharmacist-led multidisciplinary compilation of perioperative medication management guideline in response to local hospital needs

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## BACKGROUND

When the Pre-admission Clinic (PAC) pharmacists were implemented in September 2016 at Redcliffe Hospital (a 250-bed outer metropolitan hospital), there was no local perioperative medication guideline in place and advice to patients (with respect to which medicines e.g. anticoagulants, antiplatelets and diabetic medicines to continue or withhold; and for how long) varied from doctor to doctor.

Guidelines from major tertiary hospitals were initially utilised, however inconsistent advice from medical staff continued due to varied specialist opinions and types of surgery performed in different sites. This made it difficult for PAC pharmacists and nurses to identify errors and on occasion resulted in cancellation of a procedure. *It's time* for local guidelines.

## AIM

1. To develop an evidence-based, site-specific perioperative medication management guideline informed by local experts' opinion and types of surgery performed within the facility
2. To improve the efficiency and consistency of decision-making regarding perioperative medicines in PAC and improve patient safety, especially those taking high risk PINCHA medicines

## METHODS



Collaboration is key!

An initial draft was compiled by consulting perioperative medicines guidelines from multiple hospital sites, researching current literature and reviewing safety notices.

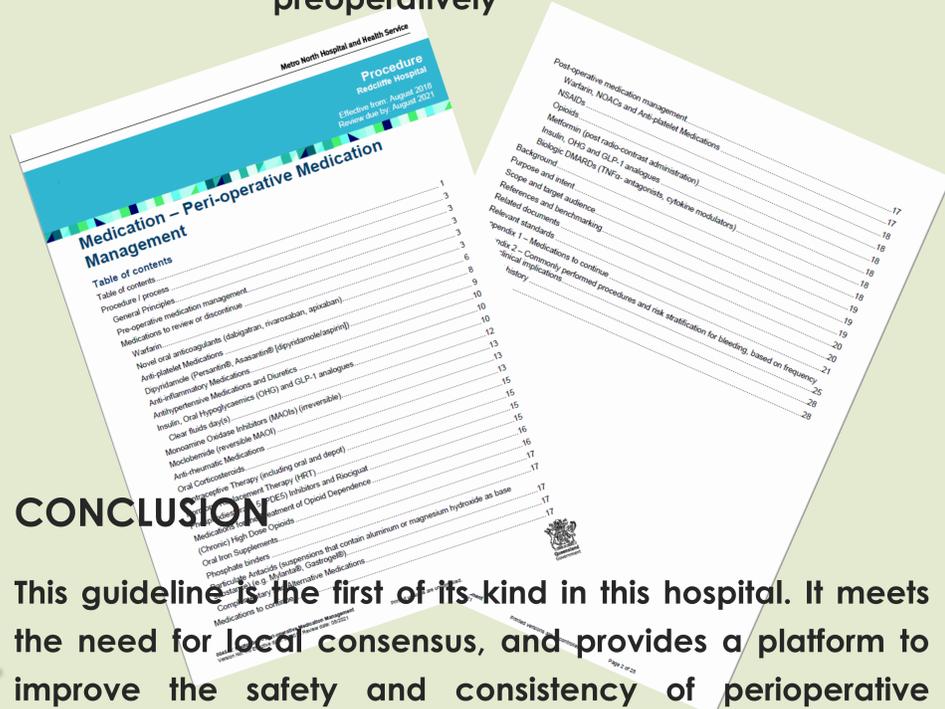
The draft was then distributed to anaesthetists and surgeons of multiple specialities for consultation and approval.

## RESULTS

The guideline was endorsed by the local Medicines Advisory Committee and published in August 2018. Some of the general recommendations below may vary from practices at major hospitals:

| Drug                   | General management | Recommendations prior to surgery | Comment  |
|------------------------|--------------------|----------------------------------|--|
| Metformin              | Weekly             | Continue                         | Caution and avoid if patient has renal impairment. If possible, use metformin ER (1000mg) to reduce GI side effects. |
| Levodopa               | Daily              | Continue                         | Caution and avoid if patient has renal impairment. If possible, use levodopa ER (250mg) to reduce GI side effects.   |
| Hydrochlorothiazide    | Daily              | Continue                         |  |
| Sildenafil             | Daily              | Continue                         |  |
| Acetaminophen          | Daily              | Continue                         |  |
| Myofascial pain relief | Daily              | Continue                         |  |
| Tramadol               | Daily              | Continue                         |  |

- Continue non-steroidal anti-inflammatory drugs perioperatively for most surgeries
- Continue metformin and short-acting glucagon-like peptide-1 analogues on clear fluid day prior to colonoscopy
- Avoid particulate antacids on the day of procedure in view of risk of pulmonary damage if aspirated
- Include local referral pathway to Acute Pain Service for patients on greater than 50mg oral morphine equivalent daily preoperatively



## CONCLUSION

This guideline is the first of its kind in this hospital. It meets the need for local consensus, and provides a platform to improve the safety and consistency of perioperative medication management by clinicians, nurses and fellow pharmacists. It also serves to empower junior doctors working in surgical rotations.

Future directions: to maintain and update the guideline every 1 to 2 years; and potentially expand the scope of PAC pharmacists to complete "Medication Advice Form" which is then co-signed by medical staff.

## Some key resources used:

- Princess Alexandra Hospital Prescribing Guidelines 2017. Ch 17. Drug use in surgery
- Queensland Health guidelines for warfarin, dabigatran, factor Xa inhibitors and low molecular weight heparin.
- The Prince Charles Hospital Procedure. Peri-procedural management of anticoagulants. Preoperative medication management.
- Australian Diabetes Society. Perioperative diabetes management guidelines 2012.
- American College of Rheumatology/ American Association of Hip and Knee Surgeons Guideline for the perioperative management of antirheumatic medication in patients with rheumatic diseases undergoing elective total hip or total knee arthroplasty 2017.
- Australian and New Zealand College of Anaesthetists Safety Alert April 2018. Severe euglycaemic ketoacidosis with SGLTs inhibitors use in the perioperative period.