



Peri-operative Management

of patients with diabetes

Dr Chee Khoo

Which one are you?



Easy

Omit some orals
Half some insulin
Omit some insulin
Restart when eating



Not my problem

Pre-admission
Anaesthetists
Surgeon
Hospital staff
Or whoever

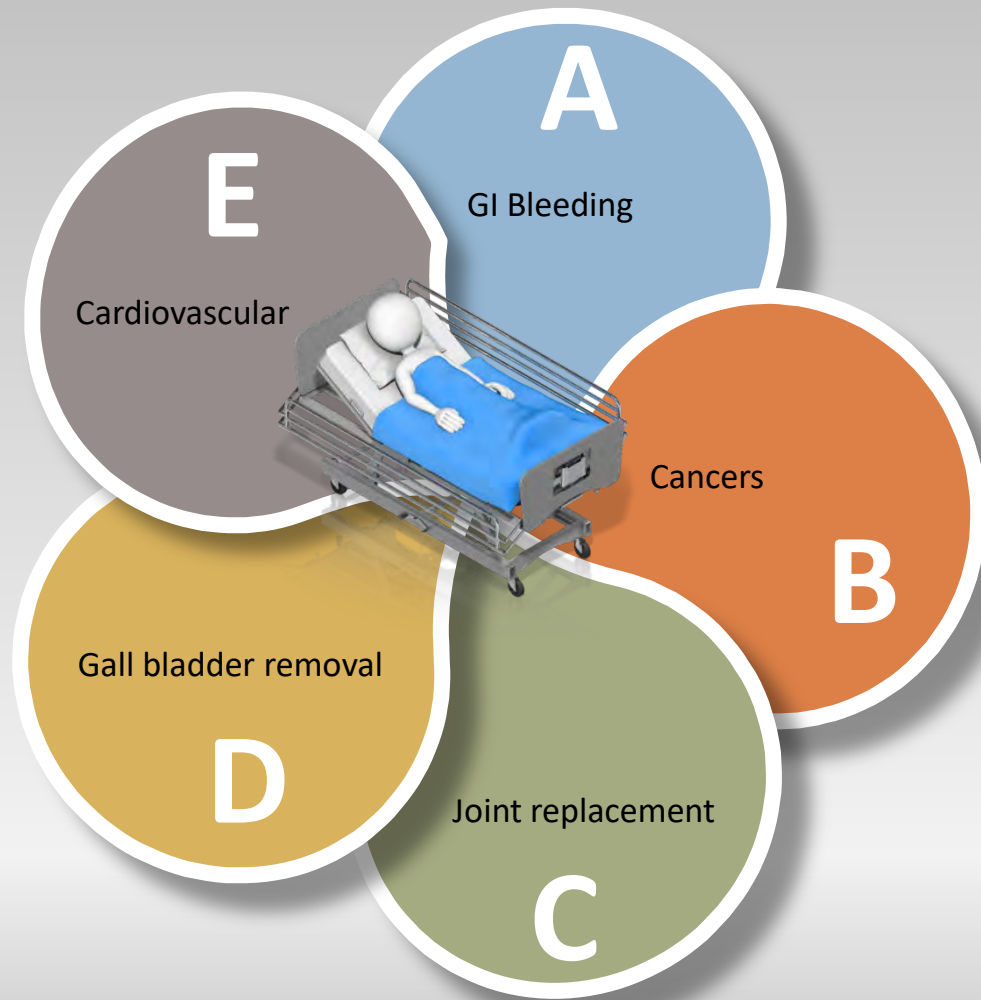


Peri-op instructions

Admission

...changing trends





Hospitalisations

...likelihood

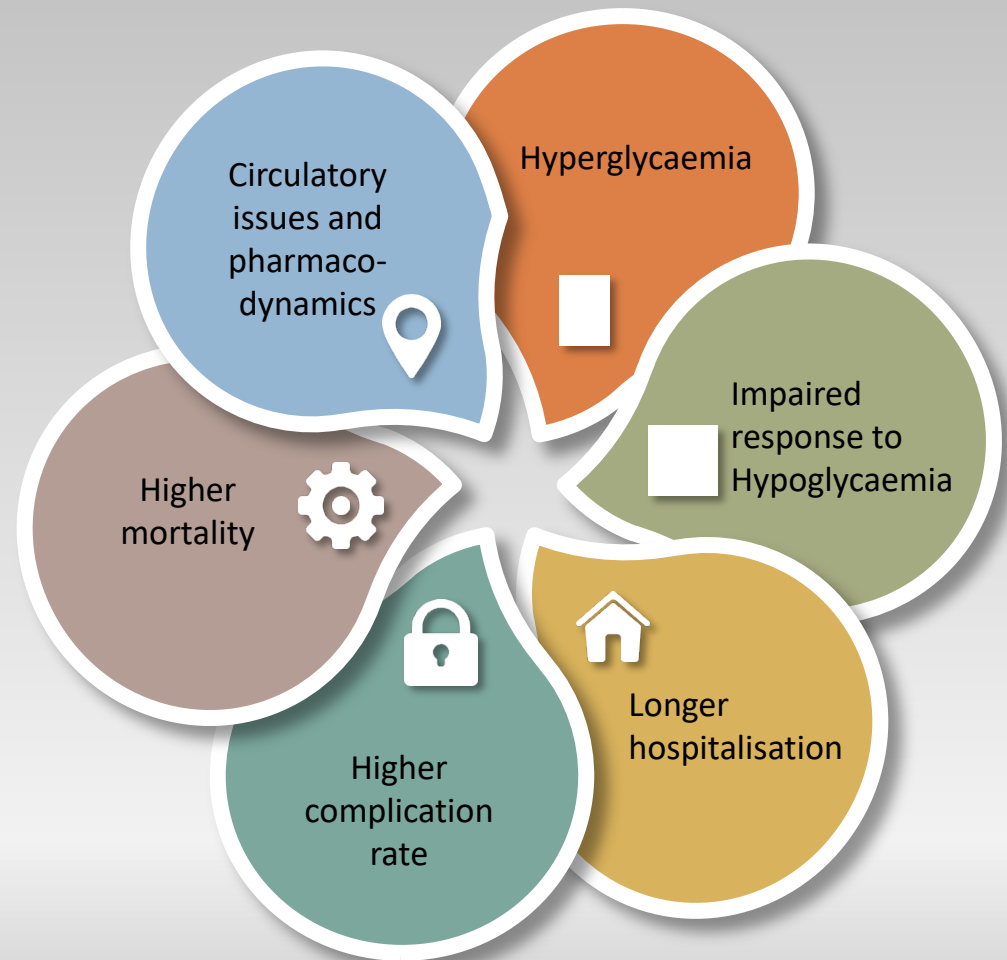
Diabetes & Surgery

More than just medication adjustment

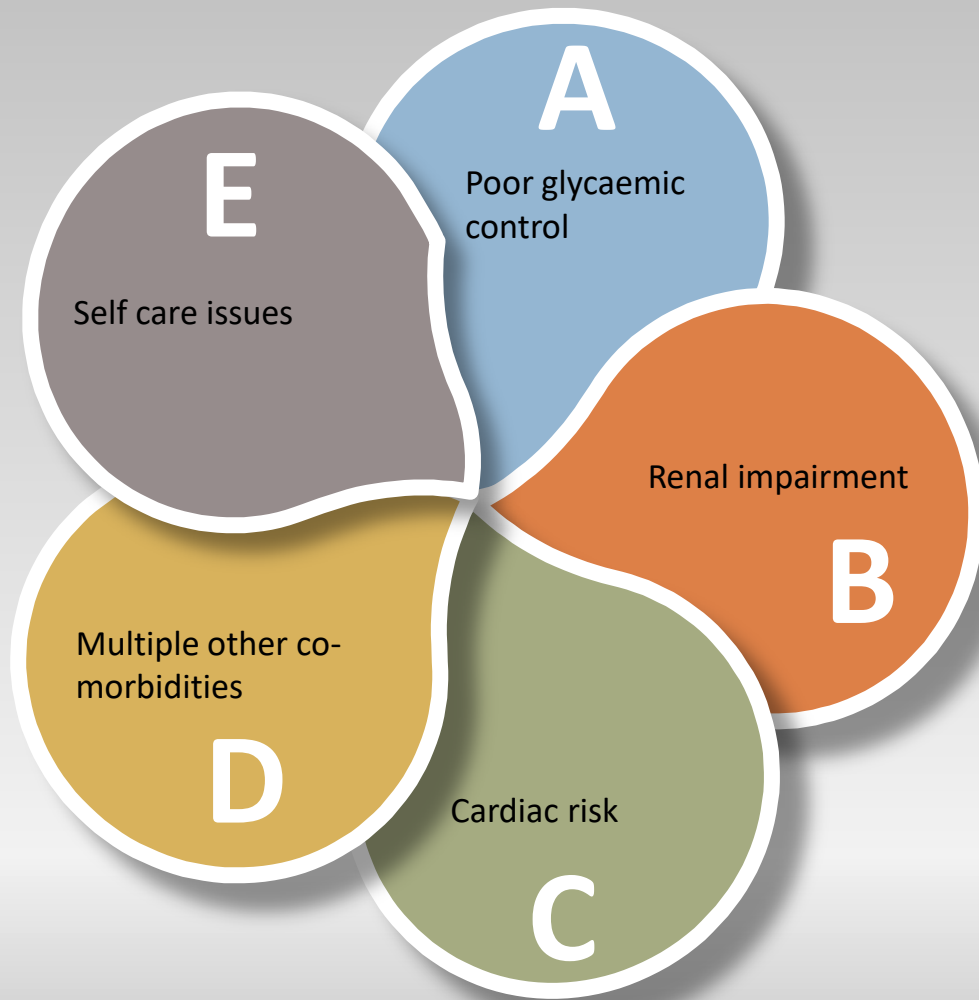


Diabetes & Surgery

Special category



**Worse outcomes
if...**



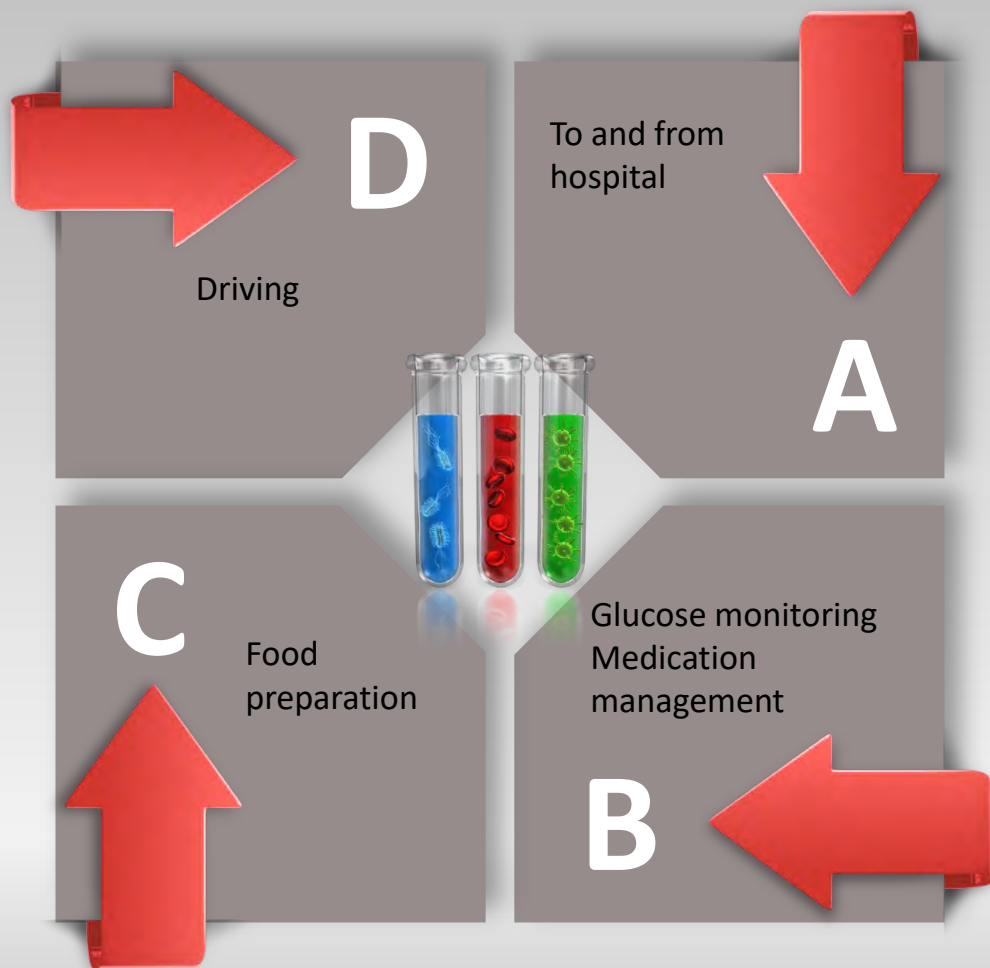
Vascular events in non-Cardiac surgery patients cohort evaluation (VISION) Trial

21,000 patients 13 countries, myocardial injury in noncardiac surgery, 30-day mortality

The 30-day mortality for the entire patient population was 1.2% (95% CI 1.1%–1.4%)

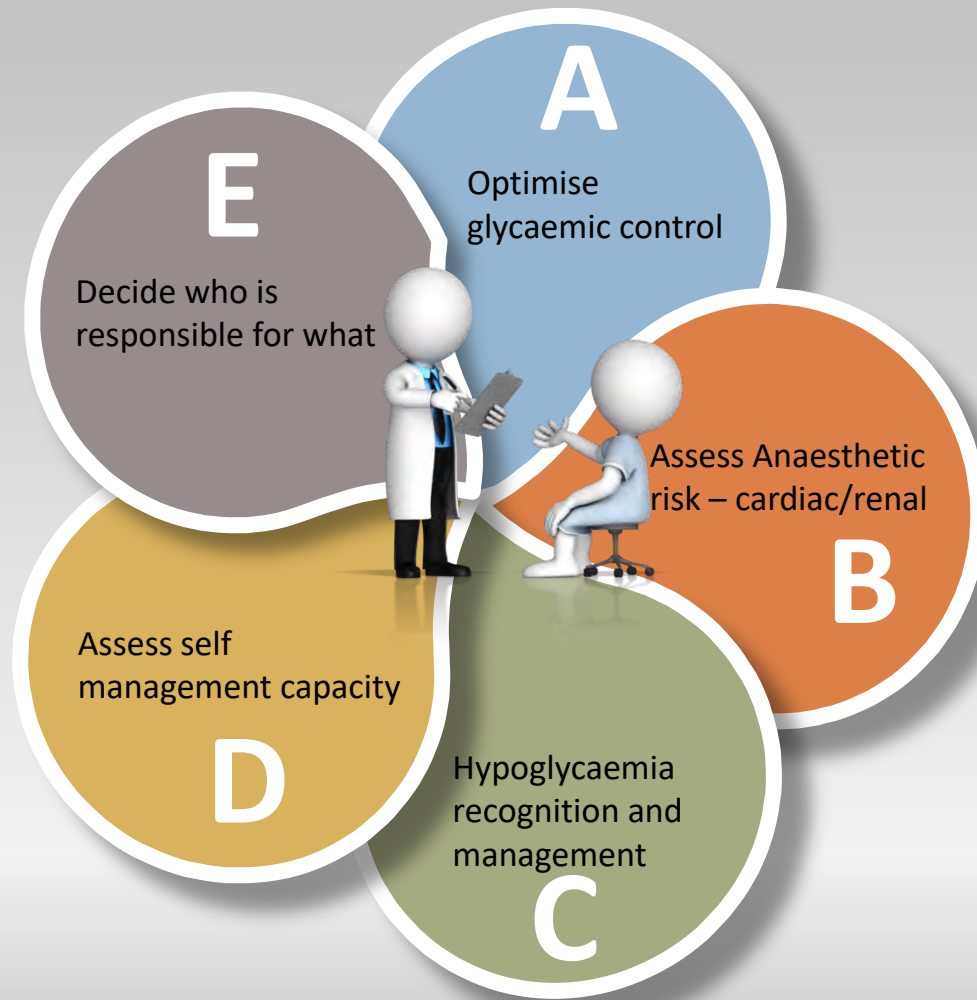
Troponin Threshold(ng/L)	Patients (%)	Mortality Rate (%)	HR (95% CI)	<i>P</i>
≥20 to <65	18.6	3.0	23.6 (10.3-54.1)	<0.001
≥65 to <1000	5.1	9.1	70.3 (30.6-161.7)	<0.001
≥1000	0.2	29.6	227.0 (87.4-589.9)	<0.001

Devereaux PJ. Relationship between high sensitive troponin T measurements and 30-day mortality after noncardiac surgery. American College of Cardiology 2017 Scientific Sessions: March 19, 2017; Washington, DC. Abstract 17-LB-16217-ACC.



Patient Self Management





**Use time between
decision for
surgery and actual
date to:**



Postpone surgery?

Consider postponing surgery
if HbA1c > 9.0%
Consider referral to if unable
to improve glycaemic control

Written Instructions

Clear instructions for patient
and carer
Clear information for
anaesthetist and surgeon
Ask to review patient earlier



Pre-operatively...

If BSL unstable with hypos +/- BSL > 15 mmol/L, seek advice from

**Patient's usual
endocrinologist**

**Endocrinology
Registrar at local
hospital**



Consider postponing surgery

Type 2 Patients on basal insulin +/- oral medications +/-GLP RA Injections

Colonoscopy

Bow

2 da

	Oral Rx	GLP RA Injections	Basal Insulin	Diet	Testing	Aim*
2 day prior to procedure	Usual meds	Usual dose	Continue usual dose	Encourage similar carb intake	Monitor BSL pre and 2 hours after each meal and before bed Titrate insulin or increase carbs if necessary	6-10 mmol/L 6-14 mmol/L if elderly or patients with advanced diabetes
1 day before procedure	Usual meds No SGLT2 inhibitors Watch for hypos if on SU	Usual dose	Basal only regimen: Usual morning dose (if any) Half evening dose Basal + Bolus regimen: Usual morning dose (if any) Half evening dose No rapid acting insulin	carbohydrate containing fluids every 2-3 hours reduce if BSL trending high	Every 2 hours whole day plus 2 am if possible *4	6-10 mmol/L 6-14 mmol/L if elderly or patients with advanced diabetes
Day of procedure	No oral medications	Omit	Basal only regimen: Usual morning dose (if any) Basal + Bolus regimen: Usual morning dose of basal (if any) No rapid acting insulin	Fasting	Every 2 hours until meals resume then every 4 hours for rest of the day	6-10 mmol/L 6-14 mmol/L if elderly or patients with advanced diabetes
Post op	Usual meds from lunch time except SGLT2 inhibitors - restart 24 hours post op	Usual dose at next full meal	Basal only regimen: Usual evening dose Basal + Bolus regimen: Restart full rapid acting dose at next full meal	Usual diet	Every 2 hours until meals resume then every 4 hours for rest of the day	6-10 mmol/L 6-14 mmol/L if elderly or patients with advanced diabetes

See

Give 10% total insulin dose as rapid insulin every 3-4 hours if BSL >10-12 mmol/L

Dear Colleague

This patient suffers from diabetes and is likely to undergo a procedure. As you know, in general, patients with diabetes are at higher risk of peri-operative complications. We should use the time between decision for surgery and surgery date to:

- **Optimise glycaemic control**
- **Screen for complications**
- **Make adjustments to the medication regimen if necessary**
- **Assess patient's self-management capacity**

Once the decision is made for surgery, please ask the patient to return to the practice for me to develop a **comprehensive peri-operative plan**.

Further information on the peri-operative care for patients with diabetes can be found at:

sws.healthpathways.org.au

<i>The Planned Procedure</i> You have a Colonoscopy planned for the	<i>Date of procedure:</i> Day: _____ Date: _____
<i>Your personal details:</i> Name DOB Address	<i>Your contact details</i> Your home number: Your mobile number: Your next of kin: Next of kin contact number:
<i>Your Diabetes</i> Type 1 or Type 2 diabetes (circle one) Duration of diabetes <5y 5-10y >10y (circle one) Doctor managing your diabetes	<i>Medications you usually take for your diabetes:</i> Tablets/injections Insulin dose
<i>Your results</i> Date of last blood test Usual fasting glucose Last HbA1c	<i>Your kidney function</i> Date of last eGFR Last eGFR
<i>Adjustment to your medications</i> 2 days before procedure (Day: _____) Dietary intake Tablets/Injections Insulin dose 1 day before procedure (Day: _____) Dietary intake Tablets/Injections Insulin dose On the day of procedure (Day: _____) Dietary intake Tablets/injections Insulin dose	<i>Checking your blood glucose</i>
<i>Check list</i> Who will drive you to hospital? Who will drive you home from hospital? Are you able to cook for yourself afterwards? Are you able to check your blood sugar afterwards? Is anyone able to stay the night with you?	----- ----- Yes / No Yes / No Yes / No

Which one are you?



Easy

Omit some orals
Half some insulin
Omit some insulin
Restart when eating



Not my problem

Pre-admission
Anaesthetists
Surgeon
Hospital staff
Or whoever



Peri-op instructions



Thank you

