

# Perioperative mortality and morbidity review in Victoria

The benefits of multidisciplinary review

Professor David A Watters



Health  
and Human  
Services

# Better Safer Care



Victorian Clinical Council

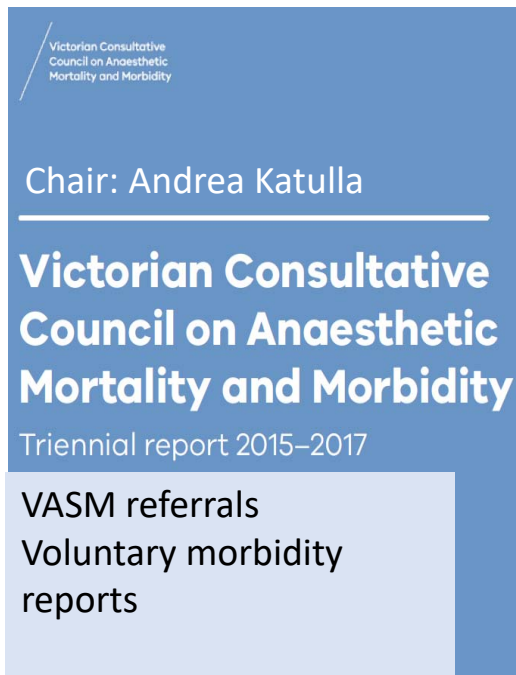
# Public Perioperative Reporting – The Past

Since 2001



Triennial report  
Published, April 2018

Since 1976



2015-17 triennial report  
Published Sept 2019

Since 2007



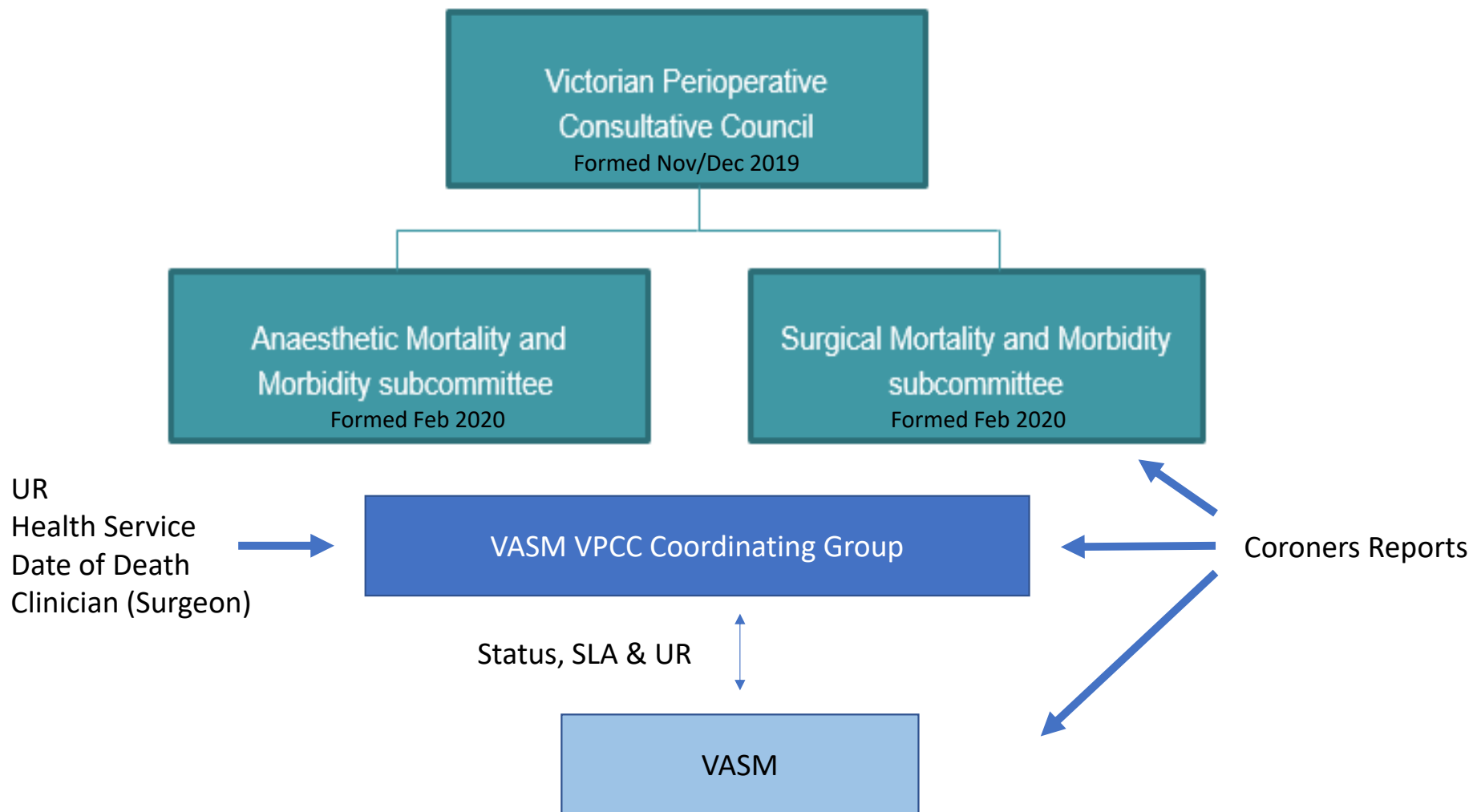
Annual reports and multiple year reports

# Surgical Sentinel Events

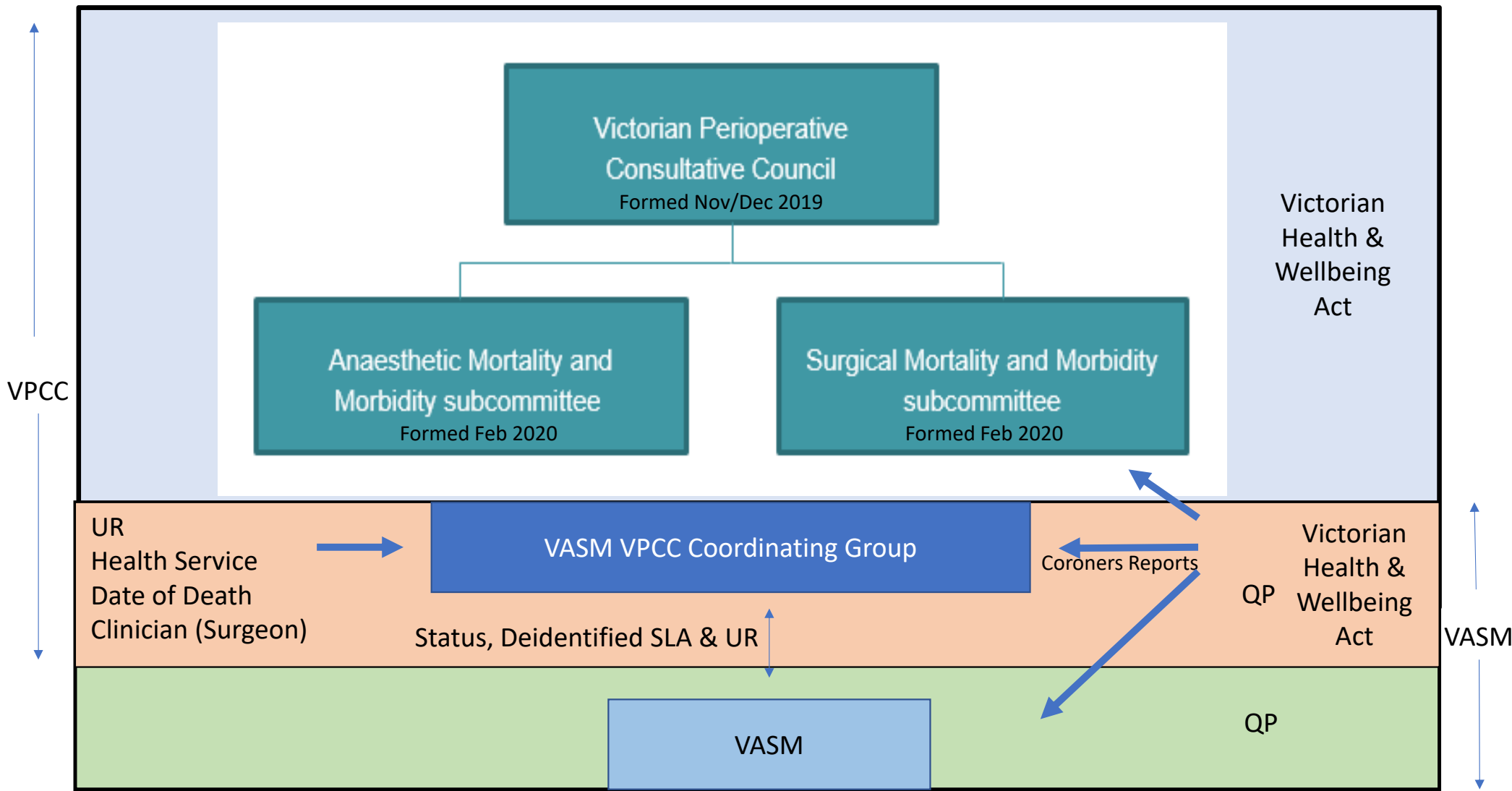
Table 2: Surgical sentinel events, Victoria, 2011–2017

Year	Category of surgical sentinel event	Number	Total
2011	Incorrect operations – patient/site/side	1	9
	Retained materials – packs/instruments/drain tubes	6	
	Other catastrophic – bleeding/fire	2	
2012	Incorrect operations – patient/site/side	0	8
	Retained materials – packs/instruments/drain tubes	6	
	Other catastrophic – laparoscopic haemorrhage	2	
2013	Incorrect operations – patient/site/side	0	6
	Retained materials – packs/instruments/drain tubes	6	
	Other catastrophic	0	
2014	Incorrect operations – patient/site/side	0	2
	Retained materials – packs/instruments/drain tubes	2	
	Other catastrophic	0	
2015	Incorrect operations – patient/site/side	0	1
	Retained materials – packs/instruments/drain tubes	1	
	Other catastrophic	0	
2016	Incorrect operations – patient/site/side	0	8
	Retained materials – packs/instruments/drain tubes	6	
	Other catastrophic – delay in transfer to theatre/delay in recognition of cause of harm	2	
2017	Incorrect operations – patient/site/side	0	11
	Retained materials – packs/instruments/drain tubes	7	
	Other catastrophic	4	

Victoria should retain its “other catastrophic” category (98 others in 2018)  
 122 sentinel events reported in 2018 including 12 retained material, 1 wrong site operation  
 2018: 76% of all sentinel events resulted in death of the patient

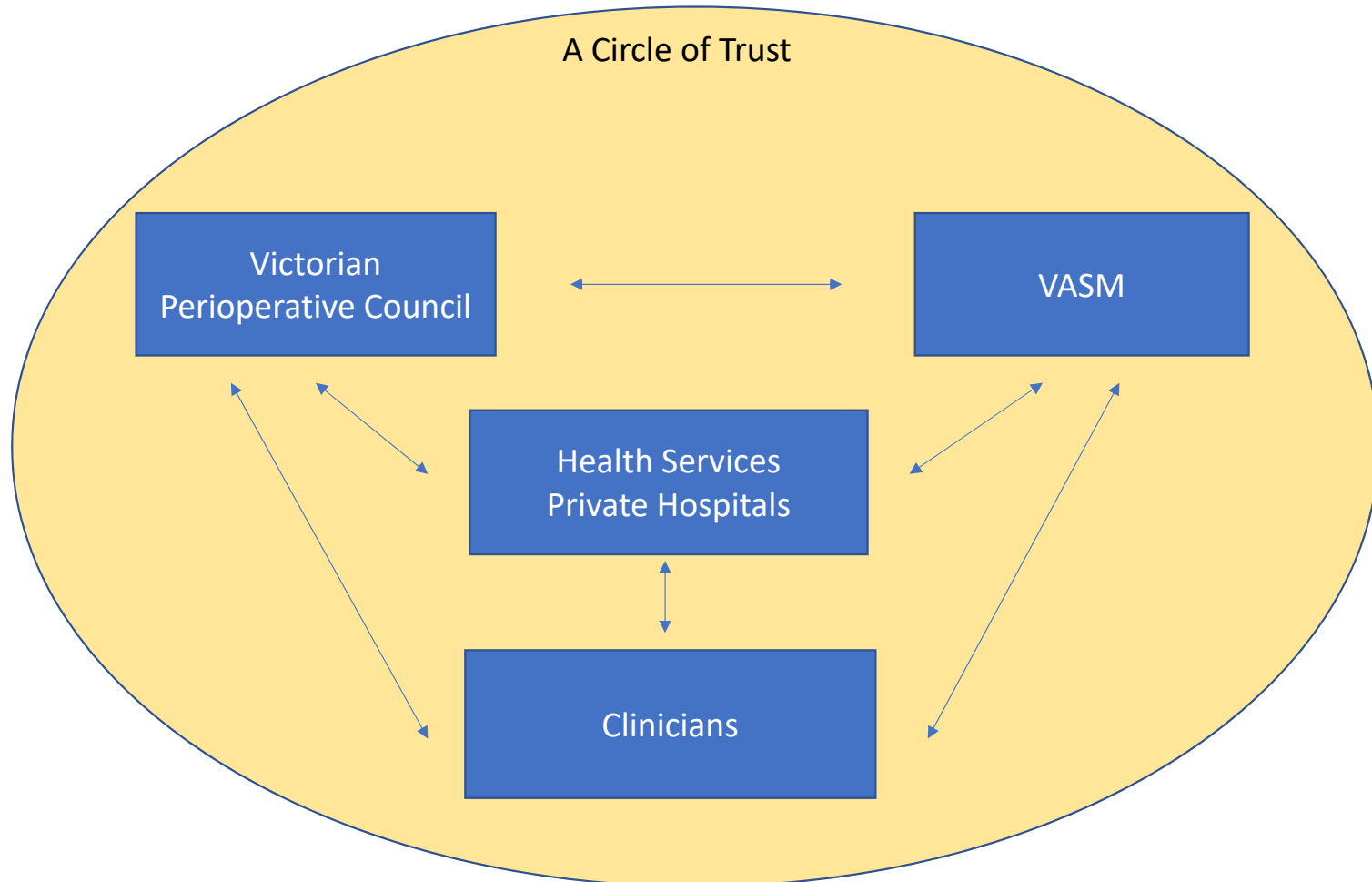


SLA = Second Line Assessments    UR = Universal record/Patient identifier



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# Information Sharing without fear



Legislative protection for information sharing and morbidity and mortality review

# Multidisciplinary Morbidity Reporting to VPCC

- Unplanned returns to theatre (now HAC 4)
- Perioperative MI
- Perioperative CVA
- Pulmonary embolism
- Transfers from Private to Public (requiring further surgery for complications)
- Long staying patients >30 days

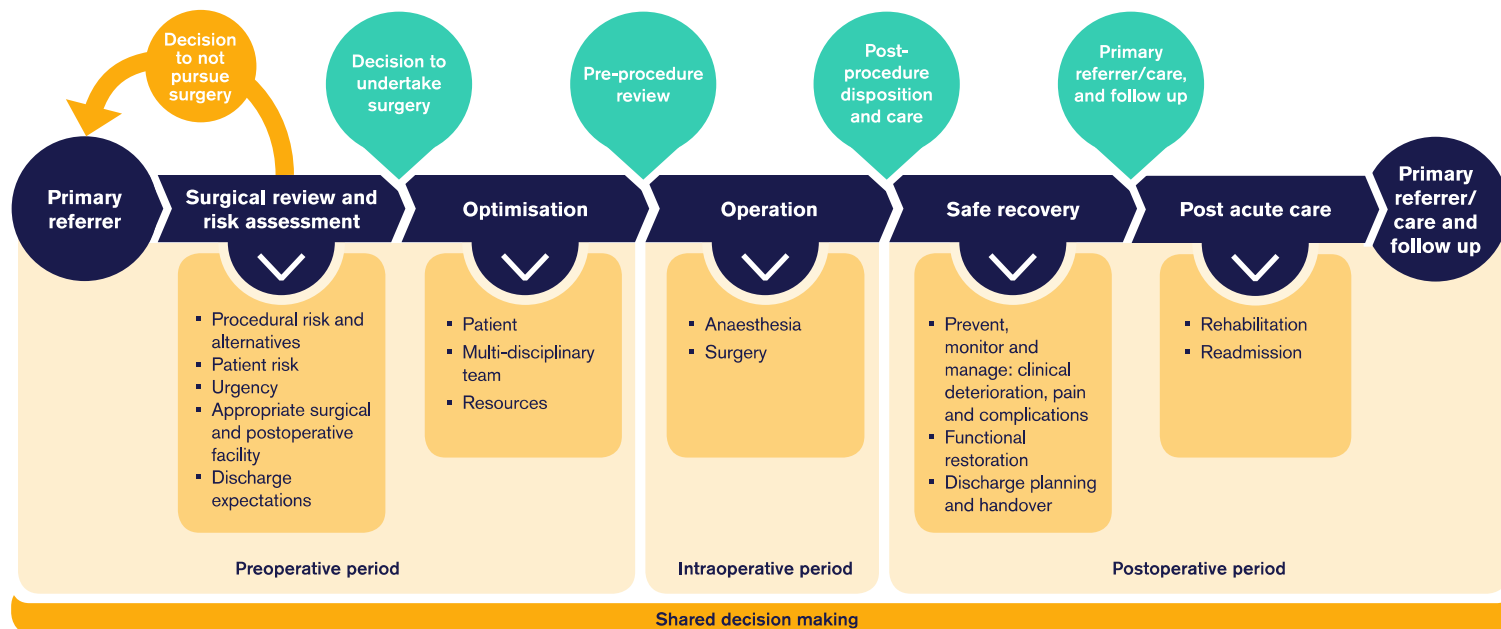


Also later: Respiratory failure, Aspiration, Unexpected Neurological damage and Anaphylaxis?



# The perioperative medicine timeline

From the contemplation of surgery to recovery



# ANNUAL REPORT 2019



## 2018 SNAPSHOT

### ANZ PATIENT LEVEL REPORT

**62%**  
of patients had a documented pain assessment within 30 min of arriving at ED



**11,995**  
RECORDS



**94%**

of patients are allowed to full weight bear after surgery

**67**  
ANZ  
HOSPITALS



**20%**  
of patients were active treatment for osteoporosis at discharge

**84%**  
of patients had a nerve block to manage pain before and/or after surgery, 69% before surgery



**77%**

of patients have surgery within 48 hours

**46%**



of patients had a preoperative assessment of cognition

# Outcomes that matter to patients

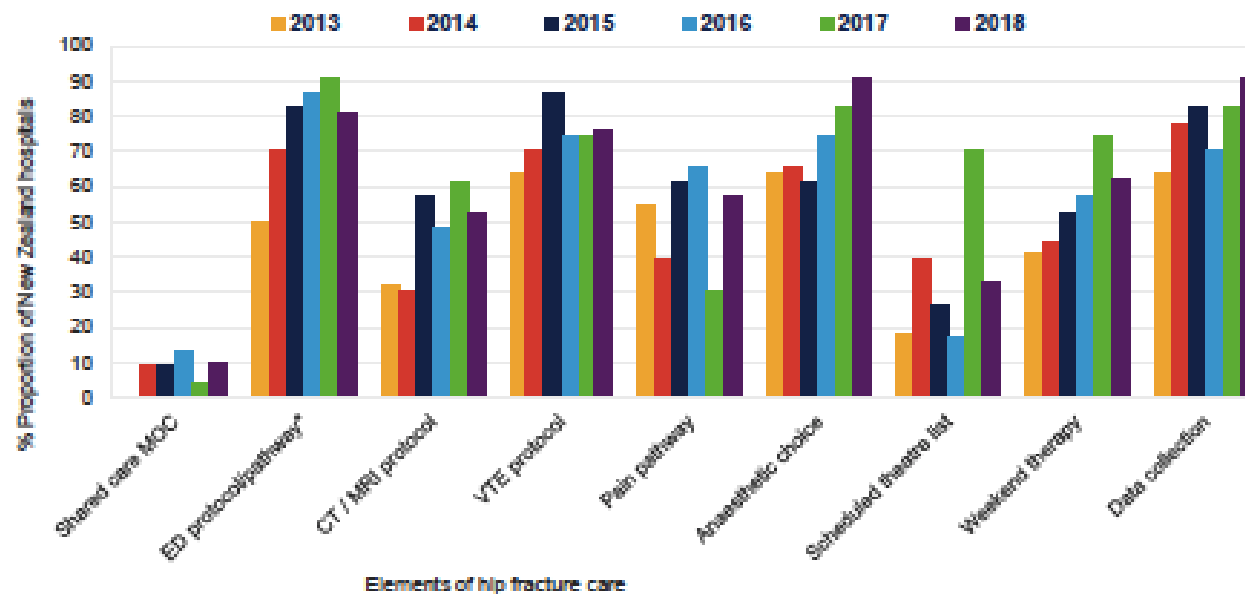
- Survival
  - 94-95% at 30 days
  - >90% at 120 days
- Return to private residence
  - 67% at 30 days
  - 71-75% at 120 days
- Return to preadmission mobility
  - 23-26% at 120 days



ANZHFR 2018

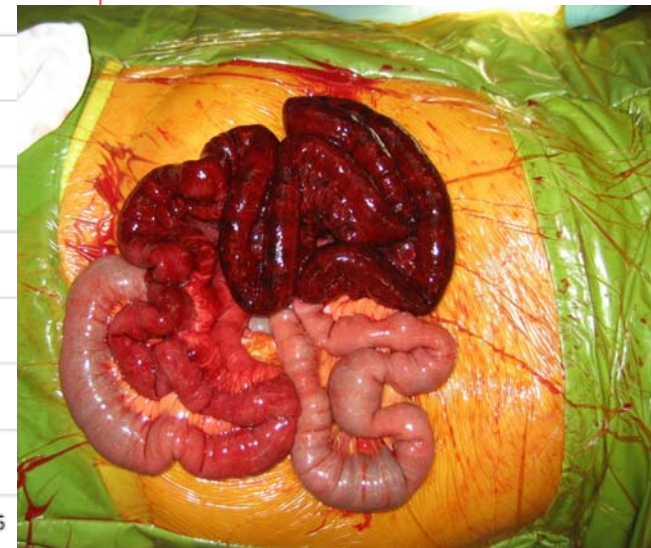
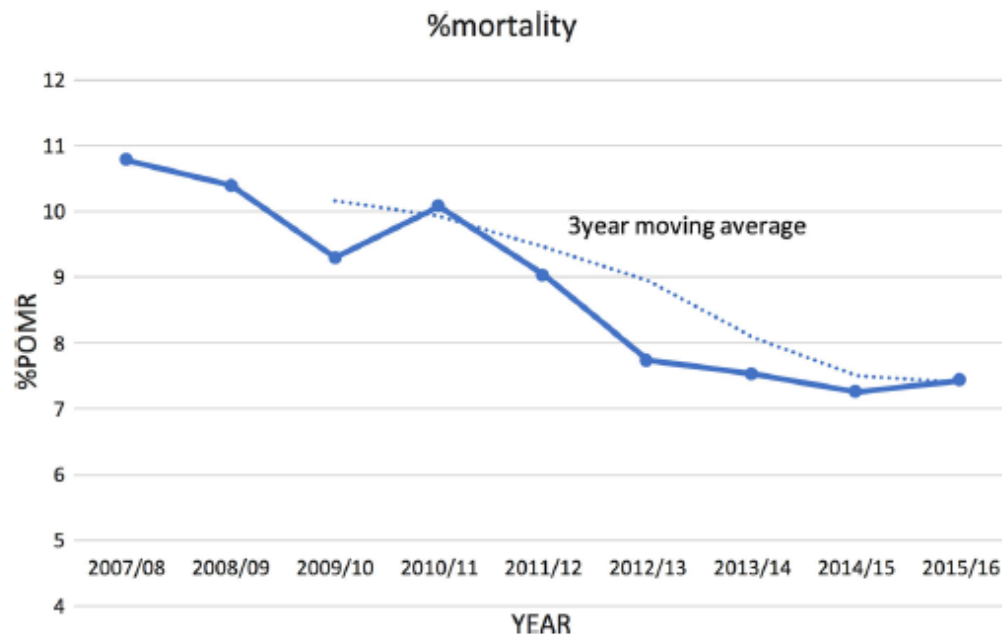
# Process: Protocols and Pathways of Care

**FIGURE 64 AUSTRALIAN HOSPITALS REPORTED ELEMENTS OF CARE 2013-2018**



# Emergency Laparotomy in Victoria

Fig. 1 Graph of statewide mortality of emergency laparotomy by year with 3 years of rolling average

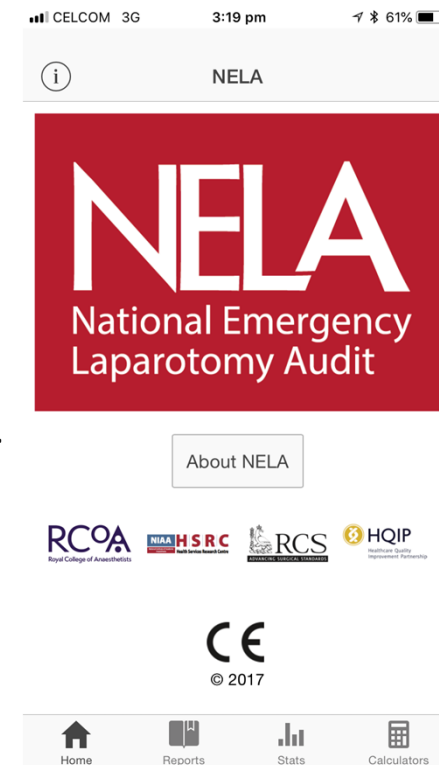


3 year rolling average smooths out the curve, especially where volume is lower

Stevens, Brown, Watters WJS 2018

## ANZELA-QI PILOT STUDY: 8 KPI's

1. CT scan reported by a Consultant pre-surgery.
2. Pre-operative documentation of risk.
3. Arrival in theatre within timescale appropriate of risk.
4. Consultant surgeon and anaesthetist when risk of death  $\geq 5\%$ .
5. Consultant surgeon in theatre when risk of death  $\geq 5\%$ .
6. Consultant anaesthetist in theatre when risk of death  $\geq 5\%$ .
7. Direct critical care admission when risk of death  $\geq 10\%$ .
8. Post-operative review by Elderly Medicine team where age  $\geq 65$ .





**ANZELA-QI PILOT**  
**KEY PERFORMANCE INDICATOR RESULT FOR JUNE 2018 TO OCTOBER 2019**

Hospital	KPI 1 CT scan reported by a Consultant pre-surgery	KPI 2 Pre-operative documentation of risk	KPI 3 Arrival in theatre within timescale appropriate to urgency <=18 hrs	KPI 4 Consultant surgeon and anaesthetist in theatre when risk of death >=5%	KPI 5 Consultant surgeon in theatre when risk of death >=5%	KPI 6 Consultant anaesthetist in theatre when risk of death >=5%	KPI 7 Direct critical care admission when risk of death >=10%	KPI 8 Post-op review by Elderly Medicine team where age >=65
Hospital A 29 cases	25/27 (93%) Incomplete = 1	13/28 (46%) Incomplete = 1	15/25 (60%) Incomplete =4	4/5 (80%) Incomplete = 0	4/5 (80%) Incomplete = 0	5/5 (100%) Incomplete = 0	4/4 (100%) Incomplete = 0	1/13 (8%) Incomplete = 2
Ballarat Health Service 56 cases	23/37 (62%) Incomplete = 11	6/44 (14%) Incomplete = 2	18/35 (51%) Incomplete =10	2/3 (67%) Incomplete = 0	2/3 (67%) Incomplete = 0	3/3 (100%) Incomplete = 0	3/3 (100%) Incomplete = 0	1/28 (4%) Incomplete = 3
Canberra Hospital 222 cases	171/192 (89%) Incomplete = 17	28/217 (13%) Incomplete = 7	113/176 (64%) Incomplete =13	9/23 (39%) Incomplete = 1	9/23 (39%) Incomplete = 1	17/23 (74%) Incomplete = 1	10/16 (63%) Incomplete = 1	5/119 (4%) Incomplete = 17
Fiona Stanley Hospital 187 cases	81/139 (58%) Incomplete = 44	119/156 (76%) Incomplete = 0	84/116 (72%) Incomplete =7	35/58 (60%) Incomplete = 4	37/58 (64%) Incomplete = 4	50/58 (86%) Incomplete = 6	22/36 (61%) Incomplete = 5	7/93 (8%) Incomplete = 33
Gold Coast University Hospital 92 cases	40/78 (51%) Incomplete = 18	50/88 (57%) Incomplete = 0	61/87 (70%) Incomplete =0	19/30 (63%) Incomplete = 0	21/30 (70%) Incomplete = 0	27/30 (90%) Incomplete = 0	10/17 (59%) Incomplete = 0	3/44 (7%) Incomplete = 4
Hospital B 1 case	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete =0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0
Logan Hospital 93 cases	70/76 (92%) Incomplete = 4	23/78 (29%) Incomplete = 0	41/60 (68%) Incomplete =4	11/12 (92%) Incomplete = 0	12/12 (100%) Incomplete = 0	11/12 (92%) Incomplete = 0	3/6 (50%) Incomplete = 0	29/36 (81%) Incomplete = 0
Hospital C 26 cases	13/15 (87%) Incomplete = 1	10/18 (56%) Incomplete = 0	7/16 (44%) Incomplete =7	8/8 (100%) Incomplete = 0	8/8 (100%) Incomplete = 0	8/8 (100%) Incomplete = 0	5/5 (100%) Incomplete = 0	0/12 (0%) Incomplete = 0
Nepean Hospital 71 cases	28/54 (52%) Incomplete = 12	45/55 (84%) Incomplete = 2	29/38 (76%) Incomplete =1	16/23 (70%) Incomplete = 0	17/23 (74%) Incomplete = 0	21/23 (91%) Incomplete = 0	9/12 (75%) Incomplete = 1	10/32 (31%) Incomplete = 10
Hospital D 7 cases	1/6 (17%) Incomplete = 4	0/7 (0%) Incomplete = 0	5/7 (71%) Incomplete =0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/3 (0%) Incomplete = 0
Rodhampton Base Hospital 68 cases	28/40 (70%) Incomplete = 11	13/42 (31%) Incomplete = 2	17/24 (71%) Incomplete =0	5/5 (100%) Incomplete = 0	5/5 (100%) Incomplete = 0	5/5 (100%) Incomplete = 0	4/4 (100%) Incomplete = 0	5/20 (25%) Incomplete = 5
Royal Adelaide Hospital 239 cases	144/198 (73%) Incomplete = 27	74/218 (34%) Incomplete = 16	87/185 (47%) Incomplete =28	39/50 (78%) Incomplete = 1	45/50 (90%) Incomplete = 0	42/50 (84%) Incomplete = 1	22/33 (67%) Incomplete = 0	10/112 (9%) Incomplete = 14
Hospital E 46 cases	25/35 (71%) Incomplete = 1	2/42 (5%) Incomplete = 1	17/30 (57%) Incomplete =4	1/1 (100%) Incomplete = 0	1/1 (100%) Incomplete = 0	1/1 (100%) Incomplete = 0	1/1 (100%) Incomplete = 0	7/16 (44%) Incomplete = 0
Royal Hobart Hospital 172 cases	125/141 (89%) Incomplete = 6	21/138 (13%) Incomplete = 15	61/116 (53%) Incomplete =19	12/14 (86%) Incomplete = 0	12/14 (86%) Incomplete = 0	14/14 (100%) Incomplete = 0	7/9 (78%) Incomplete = 0	23/93 (25%) Incomplete = 8
Sir Charles Gairdner Hospital 342 cases	178/257 (69%) Incomplete = 16	260/298 (87%) Incomplete = 2	151/223 (68%) Incomplete =6	102/118 (86%) Incomplete = 1	105/118 (89%) Incomplete = 1	112/118 (95%) Incomplete = 1	60/82 (73%) Incomplete = 1	34/165 (21%) Incomplete = 11
Hospital F 3 cases	1/1 (100%) Incomplete = 0	0/2 (0%) Incomplete = 2	1/2 (50%) Incomplete =0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0	0/0 (%) Incomplete = 0
St Vincents Hospital Sydney 84 cases	39/69 (57%) Incomplete = 6	20/79 (25%) Incomplete = 0	41/64 (64%) Incomplete =4	7/10 (70%) Incomplete = 0	10/10 (100%) Incomplete = 0	7/10 (70%) Incomplete = 0	8/9 (89%) Incomplete = 0	11/36 (31%) Incomplete = 6
Western Health 180 cases	79/127 (62%) Incomplete = 16	11/147 (7%) Incomplete = 3	65/130 (50%) Incomplete =14	3/6 (50%) Incomplete = 0	3/6 (50%) Incomplete = 0	6/6 (100%) Incomplete = 0	2/5 (40%) Incomplete = 0	25/75 (33%) Incomplete = 6



**ANZ Emergency Laparotomy Audit –  
Quality Improvement (Pilot)**



AUSTRALASIAN COLLEGE FOR EMERGENCY MEDICINE



Australian Society of Anaesthetists



Notes: Data refers to Admission Dates from June 2018 to October 2019, for cases entered up to 12 November 2019. Data extracted 12/11/19 2:41 PM ACST

# Unplanned return to theatre

## AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for  
improvement for clinicians and health system managers

Hospital-Acquired Complication **4**

## SURGICAL COMPLICATIONS REQUIRING RETURN TO THEATRE

HOSPITAL-ACQUIRED COMPLICATION	RATE <sup>a</sup>
1 Pressure injury	10
2 Falls resulting in fracture or intracranial injury	4
3 Healthcare-associated infections	135
4 Surgical complications requiring unplanned return to theatre	20
5 Unplanned intensive care unit admission	na <sup>b</sup>
6 Respiratory complications	24
7 Venous thromboembolism	8
8 Renal Failure	2
9 Gastrointestinal bleeding	14
10 Medication complications	30
11 Delirium	51
12 Persistent incontinence	8
13 Malnutrition	12
14 Cardiac complications	69
15 Third and fourth degree perineal laceration during delivery (per 10,000 vaginal births)	358
16 Neonatal birth trauma (per 10,000 births)	49

a per 10,000 hospitalisations except where indicated  
b na = national data not available

This hospital-acquired complication includes the diagnoses of:

- Post-operative haemorrhage/haematoma requiring transfusion and/or return to theatre
- Surgical wound dehiscence
- Anastomotic leak
- Vascular graft failure
- Other surgical complications requiring unplanned return to theatre.



## Why focus on surgical complications?

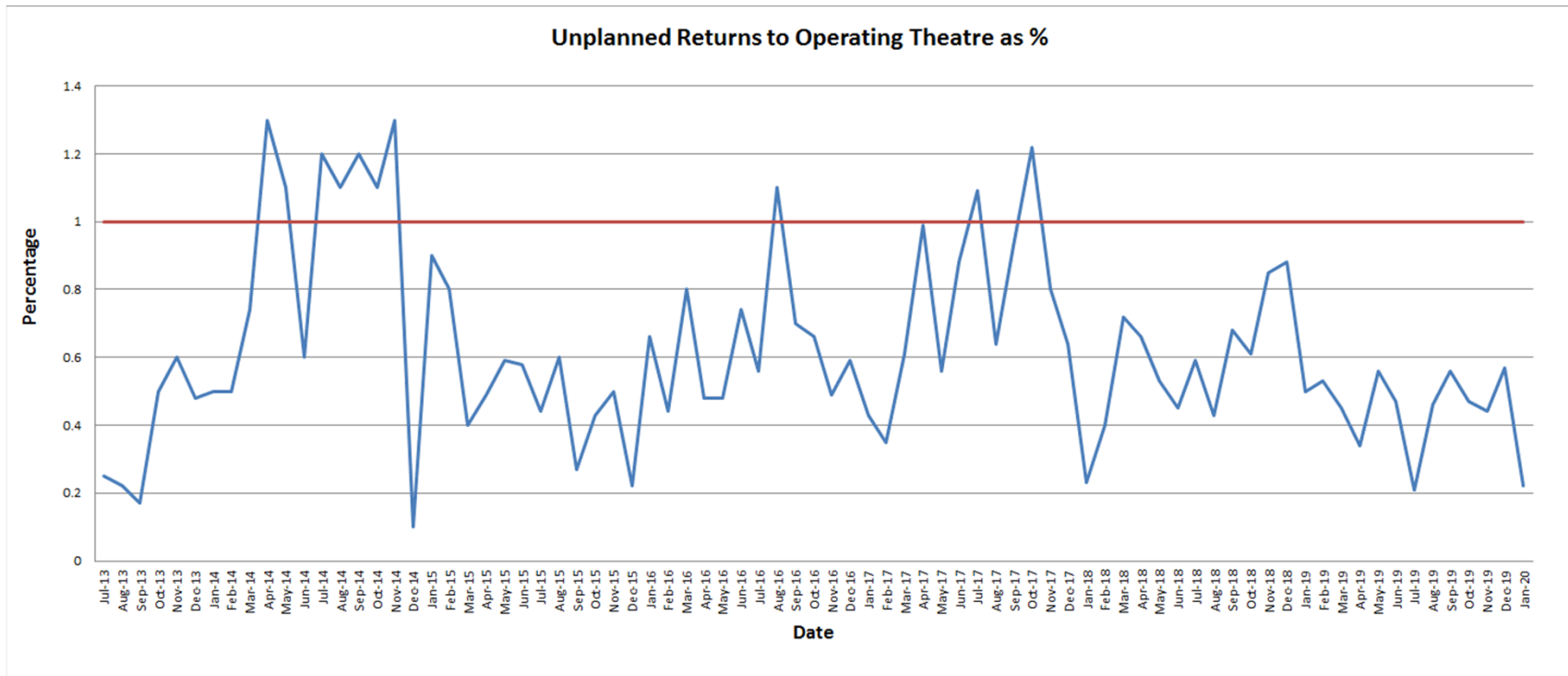
Each year, nearly 9,000 operating theatre visits involve patients who return to

Need to be well defined, may represent safer, better care



# Unplanned Returns – Trend graph

Barwon Health University Hospital Geelong

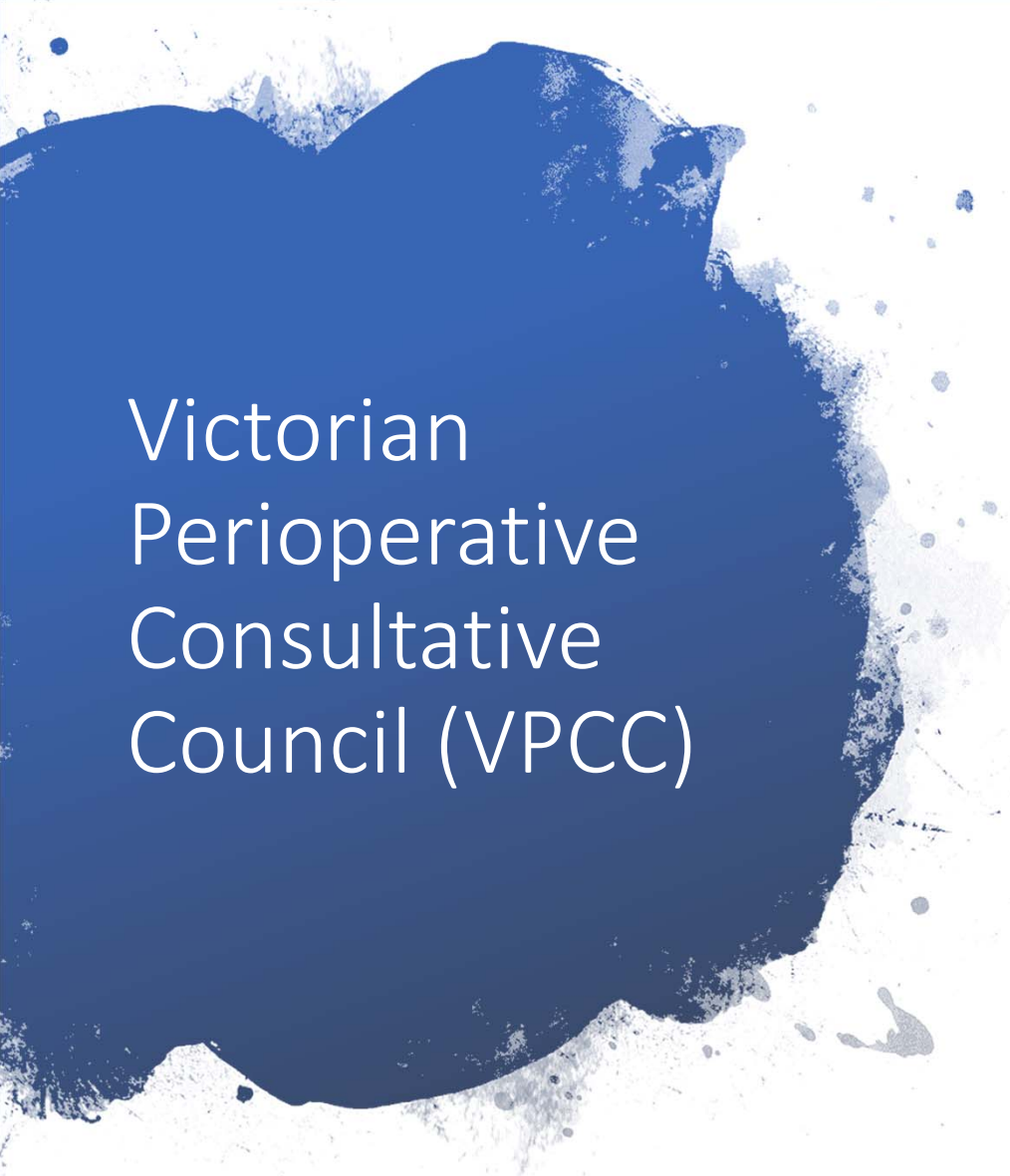


July 2013 – January 2020

Unplanned return to theatre for a complication of surgery

# Opportunities for improvement

- Agreed protocol for stopping oral anticoagulants preoperatively
- Cardiological input to when they stop and when they restart
- Not forgetting to restart oral anticoagulants and who is responsible?
- Identifying patients who are at risk
- Identifying patients who should have preoperative optimization
- Promoting medical, cardiological and orthogeriatric review
- Agreed system of health service review when these events occur
- Raising awareness of risk and best practice where this can be defined



# Victorian Perioperative Consultative Council (VPCC)

- Multidisciplinary Review
- Better, Safer Perioperative Care
- Connecting silos to share information to improve care (including registries)
- Identify morbidity events missed by the health services and the system
- Support Health Services to improve their M&M review
- Review major morbidity
- Make VASM even more effective
- Minimise duplication of effort through appropriate information sharing
- Learning, Quality improvement and avoiding blame game