Emergency Laparotomy

THE ROYAL MELBOURNE HOSPITAL

1ST JANUARY – 20TH OCTOBER 2022

PROF BENJAMIN THOMSON & DR ROSE SHAKERIAN

Emergency Laparotomy

Audit period: 1st Jan – 20th Oct 2022

↓

REDCap database – 127 cases

↓

Non-operative – 1

↓

Emergency laparotomy - 126

The Royal Melbourne Hospital

ANZELA-QI | KEY PERFORMANCE INDICATOR RESULTS FOR SEPTEMBER 2021 TO AUGUST 2022

Hospital	CT scan reported by a consultant before surgery	Lactate level available to surgeon at time of surgical referral for patients	Preoperative documentation of risk	Preoperative frailty assessment completed where age ≥ 65 years	Arrival in theatre within timescale appropriate to urgency ≤18 hrs	Consultant surgeon and anaesthetist in theatre when risk of death ≥5%	Consultant surgeon in theatre when risk of death ≥5%	Consultant anaesthetist in theatre when risk of death ≥5%	Direct critical care admission when risk of death ≥10%	Postop review by Elderly Medicine team where age ≥65 years
	38/39 (97%) incomplete= 0	31/36 (86%) incomplete= 0	2/39 (5%) incomplete= 0	0/18 (0%) incomplete= 0	19/33 (58%) incomplete=7	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	1/18 (6%) incomplete= 1
	13/15 (87%) incomplete= 2	10/12 (83%) incomplete= 0	11/15 (73%) incomplete= 0	4/8 (50%) incomplete= 0	8/13 (62%) incomplete=2	6/7 (86%) incomplete= 1	6/7 (86%) incomplete= 1	6/7 (86%) incomplete= 1	4/5 (80%) incomplete= 1	1/8 (13%) incomplete= 2
	34/55 (62%) incomplete= 13	34/50 (68%) incomplete= 0	13/58 (22%) incomplete= 1	0/36 (0%) incomplete= 1	36/56 (64%) incomplete=6	10/10 (100%) incomplete= 0	10/10 (100%) incomplete= 0	10/10 (100%) incomplete= 0	6/7 (86%) incomplete= 0	4/36 (11%) incomplete= 1
	49/58 (84%) incomplete= 7	16/56 (29%) incomplete= 38	9/63 (14%) incomplete= 4	0/22 (0%) incomplete= 2	10/27 (37%) incomplete=13	2/4 (50%) incomplete= 0	3/4 (75%) incomplete= 0	3/4 (75%) incomplete= 0	3/4 (75%) incomplete= 0	5/22 (23%) incomplete= 14
	13/15 (87%) incomplete= 0	14/15 (93%) incomplete= 0	0/15 (0%) incomplete= 0	0/5 (0%) incomplete= 0	6/12 (50%) incomplete=1	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	2/5 (40%) incomplete= 0
	27/52 (52%) incomplete= 19	36/45 (80%) incomplete= 1	26/54 (48%) incomplete= 3	0/25 (0%) incomplete= 1	33/47 (70%) incomplete=2	13/18 (72%) incomplete= 0	18/18 (100%) incomplete= 0	13/18 (72%) incomplete= 0	6/10 (60%) incomplete= 0	8/25 (32%) incomplete= 8
	108/161 (67%) incomplete= 28	84/167 (50%) incomplete= 10	157/184 (85%) incomplete= 3	3/110 (3%) incomplete= 16	80/126 (63%) incomplete=8	62/79 (78%) incomplete= 6	71/79 (90%) incomplete= 1	66/79 (84%) incomplete= 9	28/50 (56%) incomplete= 1	12/110 (11%) incomplete= 36
	80/86 (93%) incomplete= 4	42/81 (52%) incomplete= 1	53/91 (58%) incomplete= 0	7/33 (21%) incomplete= 3	70/84 (83%) incomplete=0	16/16 (100%) incomplete= 0	16/16 (100%) incomplete= 0	16/16 (100%) incomplete= 0	10/11 (91%) incomplete= 0	8/33 (24%) incomplete= 1
	7/11 (64%) incomplete= 4	11/11 (100%) incomplete= 0	6/12 (50%) incomplete= 0	0/3 (0%) incomplete= 0	10/12 (83%) incomplete=0	1/2 (50%) incomplete= 0	1/2 (50%) incomplete= 0	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	0/3 (0%) incomplete= 1
The Royal Melbourne Hospital 121 cases	98/111 (88%) incomplete= 2	75/112 (67%) incomplete= 2	48/116 (41%) incomplete= 0	17/57 (30%) incomplete= 0	53/87 (61%) incomplete=0	22/29 (76%) incomplete= 0	26/29 (90%) incomplete= 0	24/29 (83%) incomplete= 0	12/17 (71%) incomplete= 0	17/57 (30%) incomplete= 2
	1/1 (100%) incomplete= 0	1/1 (100%) incomplete= 0	0/1 (0%) incomplete= 0	0/1 (0%) incomplete= 0	1/1 (100%) incomplete=0	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	0/0 (%) incomplete= 0	0/1 (0%) incomplete= 0
	42/64 (66%) incomplete= 4	36/62 (58%) incomplete= 4	4/66 (6%) incomplete= 3	0/34 (0%) incomplete= 1	26/46 (57%) incomplete=8	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	2/2 (100%) incomplete= 0	1/2 (50%) incomplete= 0	1/34 (3%) incomplete= 2

The Royal Melbourne Hospital

Data refers to admission dates from Sept 2021 to Aug 2022 up to 15th Sept 2022

ANZELA KPIs

The Royal Melbourne Hospital

Green:

- CT scan reported by consultant pre-op (88%)
- Consultant surgeon in OT risk of death ≥ 5% (90%)
- Consultant anaesthetist in OT risk of death ≥ 5% (83%)

Orange:

- Lactate level available at time of surgical referral (67%)
- Arrival in OT within appropriate timescale (61%)
- Consultant surgeon & anaesthetist in OT risk of death ≥ 5% (76%)
- Direct CCU admission risk of death ≥ 10% (71%)

Red:

- Pre-op risk documentation (41%)
- Pre-op Frailty assessment (30%)
- Post-op Elderly Medicine review (30%)

Emergency Laparotomy

Audit period: 1st Jan – 20th Oct 2022

↓

REDCap database – 127 cases

↓

Non-operative – 1

↓

Emergency laparotomy - 126

The Royal Melbourne Hospital

Emergency Laparotomy - Outcomes V Risk

Risk Factor	Total Number (n=126)	Mortality	CCU admission rate
NELA < 5%	68 (54%)	0	8 (11.8%)
NELA 6-10%	28 (22%)	1 (3.6%)	5 (18%)
NELA 11-15%	4 (3.2%)	1 (25%)	1 (25%)
NELA 16-20%	5 (4%)	1 (20%)	1 (20%)
NELA 21-30%	7 (5.5%)	1 (*non-op management*)	4 (57.1%)
NELA 31-40%	5 (4%)	1 (20%)	5 (100%)
NELA 41-50%	4 (3.2%)	3 (75%)	4 (100%)
NELA > 50%	6 (4.8%)	2 (33.3%)	4 (66.7%)

Mortality = in hospital death
RMH mortality = 9/126 EL (7.1%)

The Royal Melbourne Hospital

Outcomes @ RMH - Internal Audit 1st Jan – 20th Oct 2022

Emergency laparotomy – 126

31 patients had at least 1 complication episode – 24.6%

9 deaths post emergency laparotomy – 7.1%

5 deaths following non-operative management (ischaemic gut)

Only 1 captured in the REDCap database

The Royal Melbourne Hospital

Current Challenges at RMH

- Pre-operative risk assessment & documentation

- Data entry > 50% retrospectively completed

- Incomplete data capture for non-operatively managed cases

- 43 general surgical trainees (SET & pre-SET) employed through RMH in 2022
  - Rotating 6 monthly & 3 monthly @ RMH and rural/regional rotations

- Elderly patients having EL would benefit from Perioperative Medicine input in the acute phase of care