

An equity review of emergency laparotomy at Wellington Hospital

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Declaration

No conflict of interest

Introduction

- Emergency laparotomy is a common operation
- International, regional and national audits conducted to improve the quality of care for patients
- High mortality rate associated with emergency laparotomy
- In New Zealand, Māori have a higher mortality rate compared to non Māori

This project

Primary outcome: To compare the mortality rate of Māori and non Māori post emergency laparotomy at Wellington Regional Hospital .

Secondary outcomes: LOS, post operative complications, ED presentations prior, pre-operative mortality risk score and post operative ICU admission.

This project also aligns with the *Eighth Report of the POMRC* recommendations and the strategic vision of Capital & Coast District Health Board.

Method

Emergency laparotomy - non-elective, non-trauma-related, open (+/- laparoscopic) surgical procedures on the gastrointestinal tract, excluding appendicectomy, cholecystectomy and trauma

- Patients over the age of 18
- Between 1/1/2020 and 31/12/2020 at Wellington Regional Hospital
- Eligible ICD codes (defined by ANZELA-QI /POMRC)

The data

- Epidemiological factors – ethnicity, age, ASA score
- Any ED presentation 90 days prior
- Length of stay
- Post operative complications (sepsis, acute renal failure, pneumonia, cardiac arrest, myocardial infarction, heart failure, pulmonary embolism, stroke, urosepsis)
- Intensive Care Unit (ICU) post operatively
- 30 day Mortality
- NZrisk pre-op risk assessment

Results

	Māori (n=34)	Non-Māori (n=273)	P value
Age	51.9 (13.2)	61.2 (18.7)	0.005
ASA 1	2 (6%)	30 (11%)	0.13
ASA 2	9 (26%)	111 (41%)	
ASA 3	17 (50%)	100 (37%)	
ASA 4	5 (15%)	31 (11%)	
ASA 5	1 (3%)	1 (0.3%)	
ED presentation prior	21(62%)	218 (81%)	0.01
LOS	6 (4-12)	7 (4-13)	0.34
Complications	2 (6%)	27 (10%)	0.45

NZRisk Score

NZRisk Score	Māori (n=34)	Non-Māori (n=273)
Low (<5%)	16 (41%)	128 (47%)
High (5-9.9%)	9 (26%)	52 (19%)
Highest (>10.1%)	9 (26%)	93 (34%)

Mortality

Māori (n=34)	Non-Māori (n=273)	P value
4 (12%)	43 (16%)	0.54

Conclusion

- No difference in mortality rate, complication rate, or length of stay associated with ethnicity
- Māori patients are younger
- Māori patients have higher ASA score
- No difference in NZRisk score

Next steps

- Similar study over a longer time period, the aim would be to do a study covering at least five years of data (2015-2020) to produce statistically significant results.
- Sub analyse a larger study to review the effect of Covid on emergency laparotomies at Wellington regional Hospital.
- Collaboration with other researchers to further validate NZRisk score as an excellent model risk score of mortality for our New Zealand population .
- Collaboration with ICU researchers to further investigate appropriate ICU admission post operatively for highest risk patients undergoing emergency laparotomies.

Thank you

References

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