

# 2022 Best Research Poster Award



## Australian and New Zealand Laparotomy Audit- Quality Improvement (ANZELA-QI) – A Regional Perspective

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### INTRODUCTION

Emergency laparotomy (EL) is a significant healthcare burden with higher rates of morbidity and mortality. (1) However, perioperative pathways have fallen short of clinical care standards. There is wide variation of outcomes and evidenced- based care standards. This prompted the National Emergency Laparotomy Audit (NELA), established in 2013 in England and Wales which has shown progressive improvement in outcomes and care. (2)

There is dearth of local and national data in Australia on processes, outcomes or delivery of emergency laparotomies (EL). Hence, the Australian and New Zealand Laparotomy Audit-Quality Improvement (ANZELA-QI) was established to improve care by providing high-quality, real-time data relating to management of acute abdomen. (3) Barwon Health, a regional hospital in Geelong, Victoria, Australia is one of the pioneer hospitals involved in ANZELA-QI.

### OBJECTIVES

In this study, the aim is to determine the outcomes in emergency laparotomies at Barwon Health, and whether preoperative mortality risk assessment improves these outcomes.

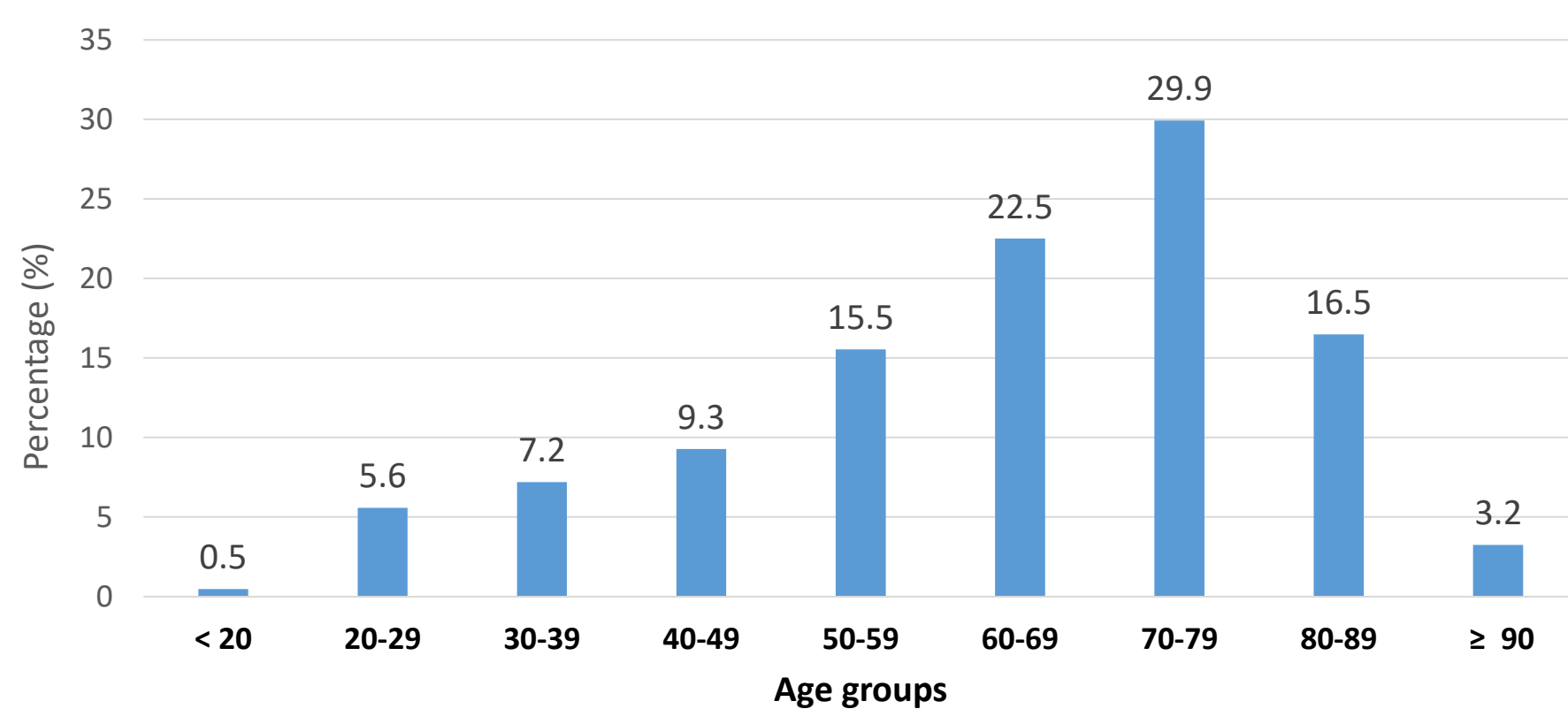
### METHOD

A prospective audit was completed for all emergency laparotomies performed at Barwon Health from February 2018 to June 2022. Data were recorded for 475 patients using an online database, Research Electronic Data Capture (REDCap) programme. Data were entered directly onto REDCap and obtained for key performance indicators (KPIs) including preoperative mortality risk using the NELA score, critical care and geriatric involvement and other outcomes including mortality rate, length of stay and postoperative complications by Clavien-Dindo classification.

### RESULTS

Emergency laparotomies for 475 patients were identified. The median age of patients who had an EL was 67, with 72.1% of patients greater than 60 years of age.

Age Distribution



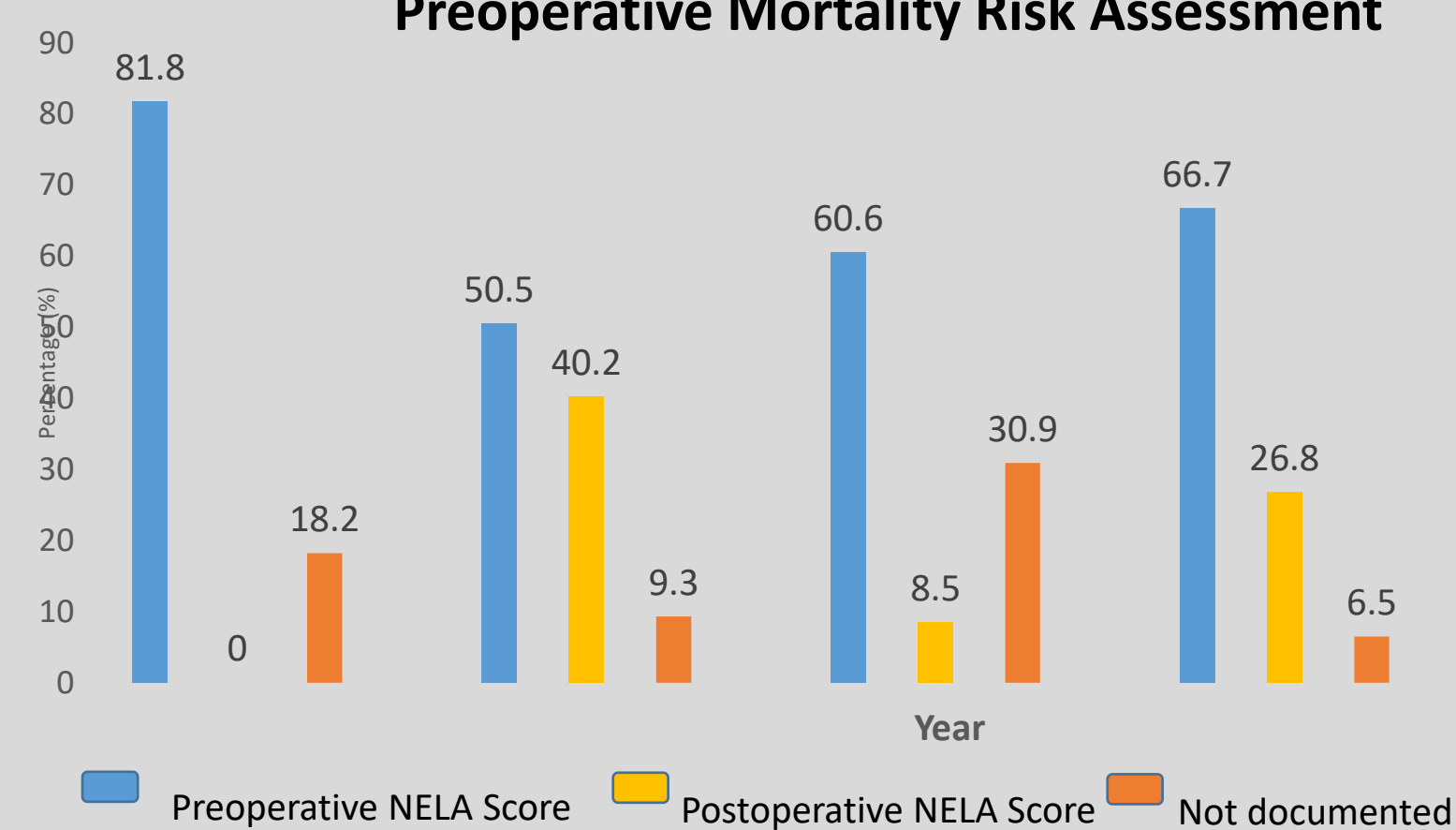
### REFERENCES & ACKNOWLEDGEMENTS

- (1) The Royal College of Surgeons of England and Department of Health. The higher risk general surgical patient: towards improved care for a forgotten group. 2011.
- (2) The NELA Project Team. The Sixth Patient Report of National Emergency Laparotomy Audit (NELA), London 2020. <https://www.nela.org.uk/reports>.
- (3) ANZELA-QI Working Party, Aitken RJ *et al*. Two-year outcomes from the Australian and New Zealand Emergency Laparotomy Audit-Quality Improvement pilot study. ANZ J Surg. 2021 Jun 28.
- (4) McClintock, S *et al*, Geelong Audit of Surgical Mortality: Are we making a difference? [PowerPoint Slides], RACS 88<sup>th</sup> Annual Scientific Congress 2019

### RESULTS

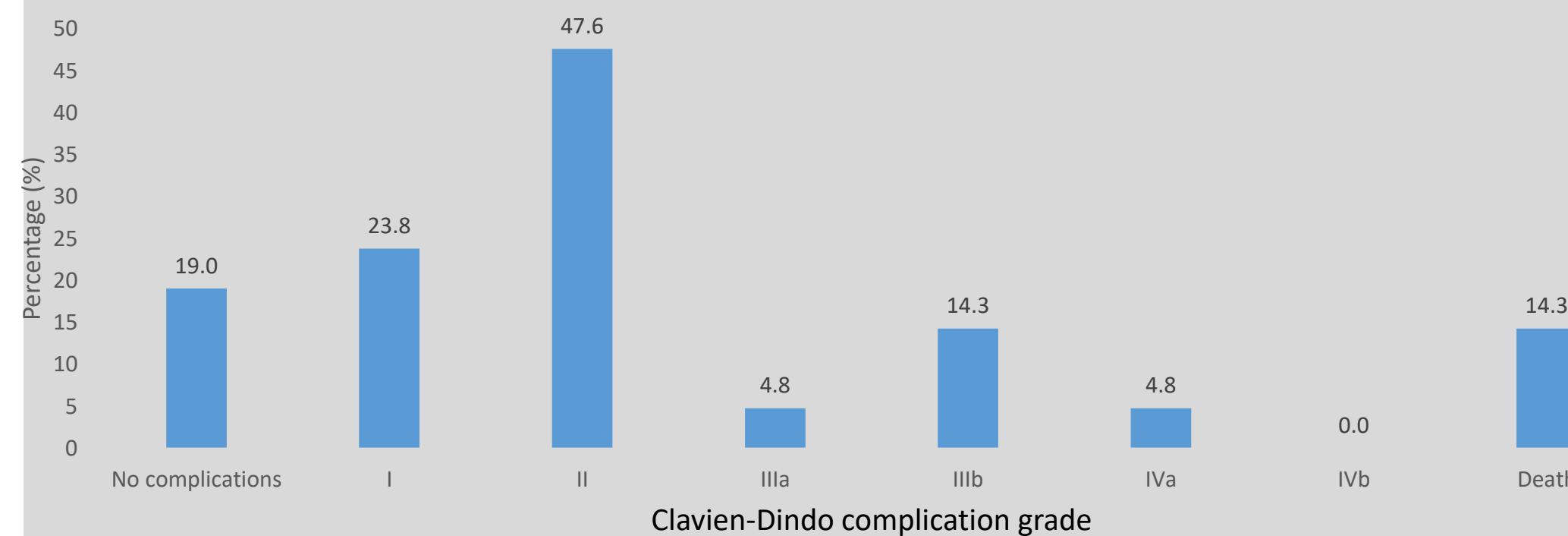
The overall in-hospital mortality for Barwon Health was 8.4%, which has reduced from 9.8% prior to the ANZELA-QI study. (4) The average length of stay was 12.9 days, which has not statistically changed before commencement of ANZELA-QI at Barwon Health.

Preoperative Mortality Risk Assessment

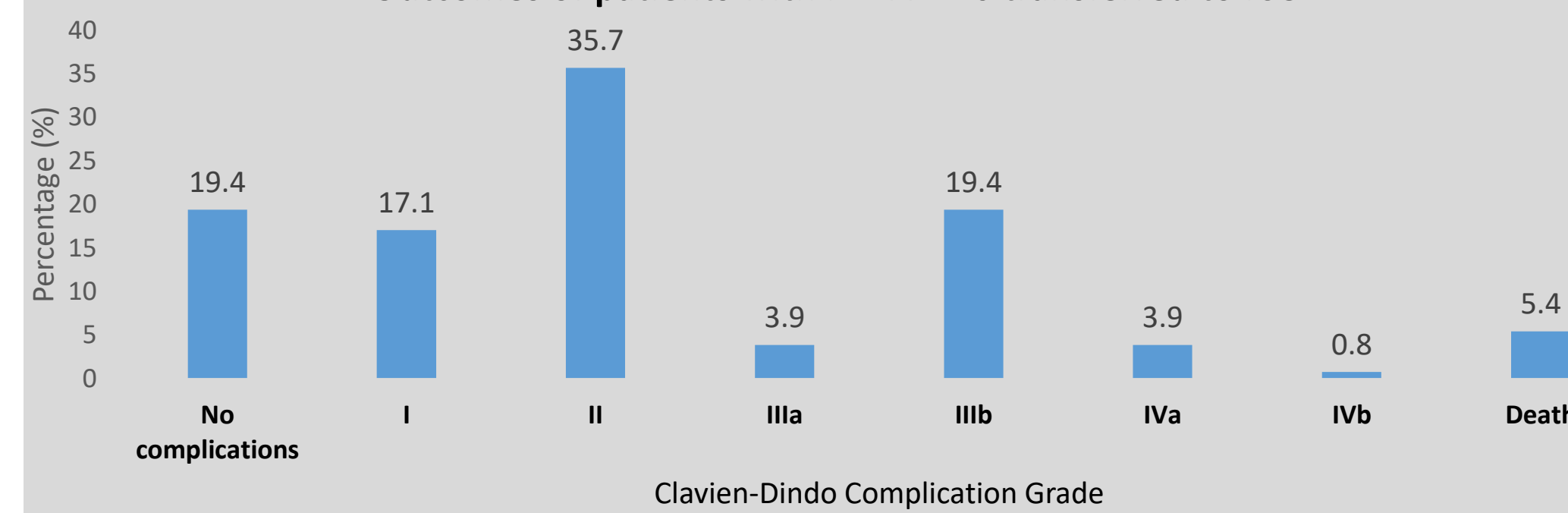


### Outcomes by Clavien-Dindo complications:

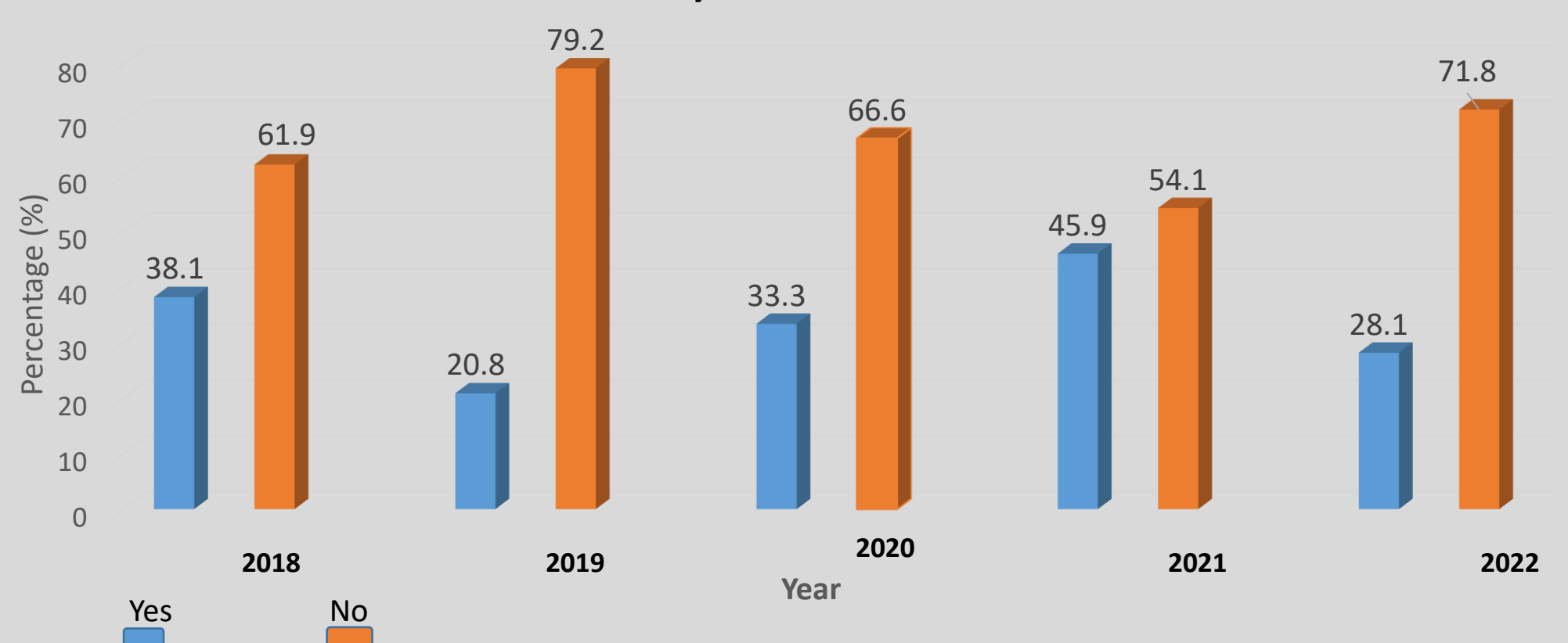
Outcomes of patients with NELA ≥ 10 transferred to ward



Outcomes of patients with NELA < 10 transferred to ICU



Elderly Team Assessment



### CONCLUSION

There is considerable improvement in preoperative mortality risk assessment (NELA score) from 50% in 2019 to 83% in 2022. The overall reduction in the in-hospital mortality rate and short duration of length of stay for patients who underwent emergency laparotomies at University Hospital Geelong since ANZELA-QI is a reflection of a good outcome for this typically unwell patient group. It is also evident that patients with NELA score ≥ 10 transferred directly to the ward have a higher rate of complications and mortality rate. Given the majority of patients being more than 60 years of age in the Barwon Health cohort, there needs to be improvement in geriatric involvement with this high risk population group.