

# Evaluation of the utilisation and clinical outcomes of an Afterhours Emergency Telehealth Service to Residential Aged Care Facilities

Dr Tia Smith and Dr Rosie Crone  
Barwon Health

## Introduction

There are over 232,000 people living in residential aged care facilities (RACF) in Australia. It is estimated the cohort of older Australians will increase from 3.7 million to 8.6 million by 2056<sup>1</sup>.

Typically, RACF residents are vulnerable and frail population<sup>2</sup>, and frequently present to the emergency department (ED) where they are at increased risk of infections, falls, medication errors, delirium and pressure injuries<sup>3</sup>.

There is increasing evidence to suggest that many can be appropriately managed within their aged care facility<sup>4</sup>. This could reduce hospital admissions, emergency visits, and the nosocomial harm to frail, elderly patients presenting to hospital.<sup>5</sup>

There is paucity of data for Telehealth emergency consultation for residential aged care facility residents, especially in the after-hours period, when there is reduced availability of primary care physicians.

## Aims

This study aims to examine service utilisation and clinical outcomes in RACF patients accessing After-Hours Telehealth (AHT) consultations with an emergency clinician or nurse practitioner (NP).

## Acknowledgements

We pay our respects to the Elders past, present and emerging. We thank the Traditional Owners for custodianship of the land, and celebrate the continuing culture of the Wadawurrung people.

A special thank you to Kristin O'Brien, the coordinator of the afterhours telehealth project.

## Methodology

The study was conducted as a single-centre retrospective audit of the After-Hours Telehealth Project, a pilot program implemented across a regional Victorian health service from May 2021 to March 2022. The AHT Project involved the RACF initiating a telehealth consultation with an emergency clinician from the local tertiary referral hospital between 6-10pm on weekdays (Monday-Friday) and 12-6pm on Saturday's, or with a NP between 12pm-6pm on Saturday's, for acutely unwell residents requiring medical assessment.

There were 30 participating RACF's, and a tertiary referral hospital which is the primary ED providing acute care for residents in the region.

Falls risk factors and outcomes for patients from RACF presenting to emergency departments

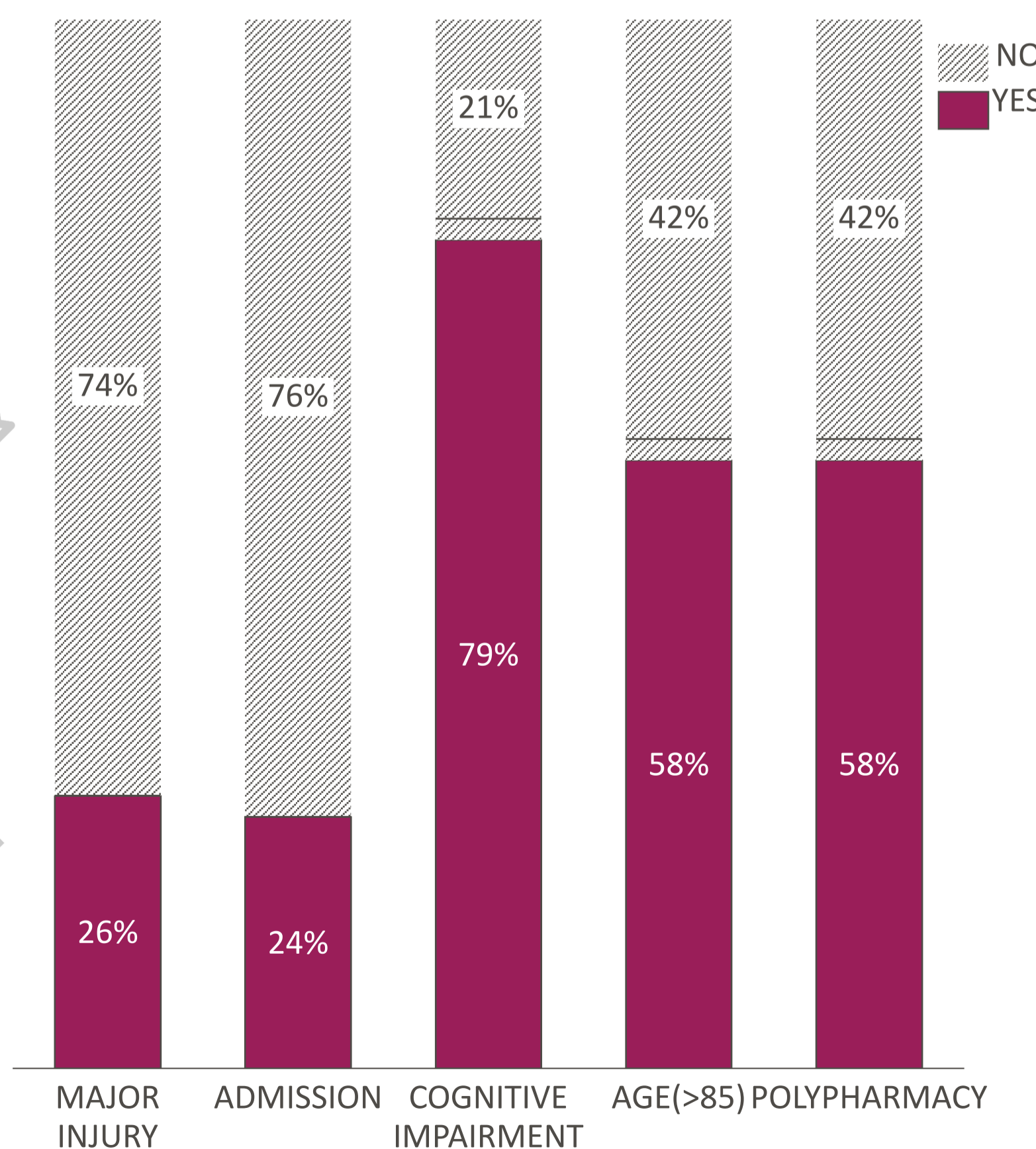


Image 1 . A sub analysis of all patients who presented with a fall (n = 126) with associated outcomes (major injury, admission to hospital) and risk factors (cognitive impairment, age, polypharmacy >5 medications).

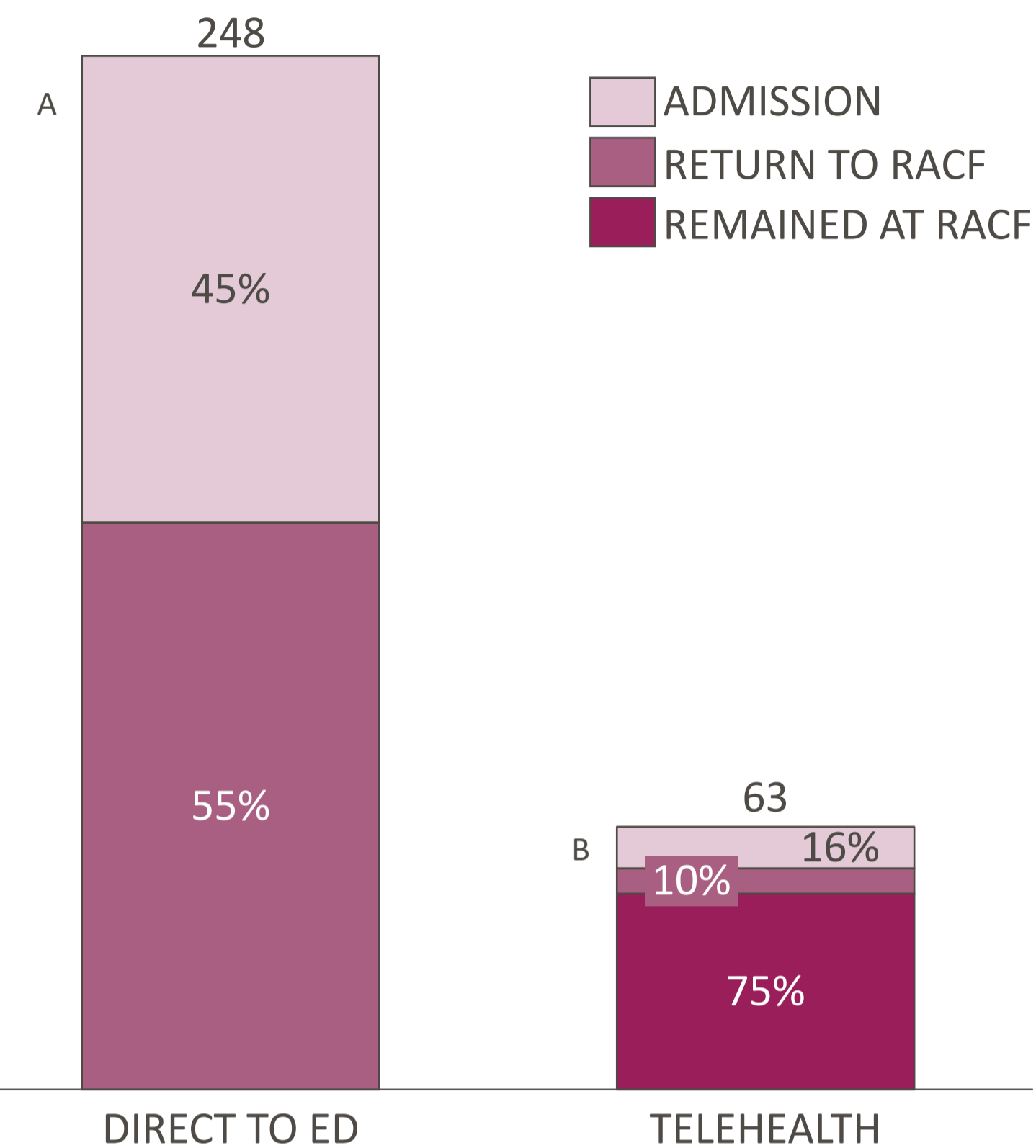


Image 2. Disposition of patients who (A) present directly to the emergency department or (B) were assessed by the After-Hours Telehealth service. Patients were either admitted to hospital, returned to their RACF after ED presentation, or remained at their RACF (AHT group only)

## Results

There were 312 residents who accessed emergency care during the after-hours period. 249 (80%) were transported directly to the ED, and 63 (20%) utilised the AHT services. Patients who accessed the AHT service were more likely to have dementia or cognitive impairment ( $p=0.017$ ), and more likely to have presented with a fall ( $p=0.032$ ). Of the patients presenting with a fall to either ED or for Telehealth, only 24% of patients required a hospital admission (Image.1). 50% of all patients referred directly to the ED were admitted to hospital, whilst 75% of those using the AHT service remained at the RACF (Image 2). Mortality and representation rates were similar across the two groups. Patients across both groups were on an average 8 medications, with high rates of antidepressants (37%), antipsychotics (20%), benzodiazepines (16%) and opiates (27%). The most utilised Telehealth service was the nurse practitioner (NP) in-person review (48%) (Table 1).

## Conclusion

With an estimated up to 53% of all Australians entering RACF during their lifetime, it is vital we provide accessible, economical healthcare that respects residents' wishes. We can then reduce the strain on an already stretched healthcare system.

This study has shown there is potential for RACF residents to access emergency care within their facility, potentially reducing negative patient and hospital outcomes, and improving resource availability. Although the numbers limited the validity of the study, there was no increase in mortality and representation rates for After-Hours Telehealth Service group.

This highlights the feasibility of an After Hours Telehealth service to aged care residents and emphasises the importance of nurse practitioners in service delivery, which can improve early assessment and communication between aged care facilities and emergency services.

Table 1. Telehealth Service utilisation

Variable	Transferred to ED (n=16)	Remained at RACF (n=47)	Total (n=63)	p-value
ED Registrar Telehealth or Phone Review, n (%)	10	7	17 (27%)	0.106
Nurse practitioner Telehealth or Phone Review, n (%)	5	11	16 (25%)	0.525
Nurse Practitioner in-person review, n (%)	4	26	30 (48%)	0.036*

## References

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