ANNUAL REPORT 2021

ANZHFR

Australian & New Zealand Hip Fracture Registry

ENHANCING OUTCOMES FOR OLDER PEOPLE

The Australian and New Zealand Hip Fracture Registry (ANZHFR) sincerely thanks the multidisciplinary teams of the 86 hospitals who contributed to the patient level report (64 in Australia and 22 in New Zealand) and the 117 hospitals who contributed to the facility level results. This report would not be possible without your ongoing support, commitment and energy.

The ANZHFR receives funding from the Australian Government Department of Health, New Zealand Accident Compensation Corporation, NSW Health Agency for Clinical Innovation, Victorian Agency for Health Information, SA Health, WA Health and Queensland Health, and receives in-kind support from Neuroscience Research Australia, UNSW Sydney and the New Zealand Orthopaedic Association.

ABBREVIATIONS

ACEM	Australasian College of Emergency Medicine
ACT	Australian Capital Territory
AFRM	Australasian Faculty of Rehabilitation Medicine
AIHW	Australian Institute of Health and Welfare
ANZ	Australia and New Zealand
ANZBMS	Australian and New Zealand Bone and Mineral Society
ANZCA	Australian and New Zealand College of Anaesthetists
ANZHFR	Australian and New Zealand Hip Fracture Registry
ANZONA	Australian and New Zealand Orthopaedic Nurses Alliance
ANZSGM	Australian and New Zealand Society for Geriatric Medicine
AOA	Australian Orthopaedic Association
APA	Australian Physiotherapy Association
ASA	American Society of Anaesthesiologists
AUS	Australia
CT	Computed Tomography
ED	Emergency Department
FLS	Fracture Liaison Service
GP	General Practitioner
HDU	High Dependency Unit
HFCCCS	Hip Fracture Care Clinical Care Standard
ICU	Intensive Care Unit
MRI	Magnetic Resonance Imaging
NDI	National Death Index
NHFD	National Hip Fracture Database
NHMRC	National Health and Medical Research Council
NT	Northern Territory
NZ	New Zealand
NZOA	New Zealand Orthopaedic Association
OT	Operating Theatre
QLD	Queensland
RACP	Royal Australasian College of Physicians
RACS	Royal Australasian College of Surgeons
SA	South Australia
VIC	Victoria
VTE	Venous Thromboembolism
WA	Western Australia

NOTE: Rehabilitation – when used in the Figures, rehabilitation refers to inpatient rehabilitation at a public or private hospital. It does not include rehabilitation provided in the community or private residence.

NeuRA
Discover. Conquer. Cure.

NZOA
New Zealand Orthopaedic Association

UNSW SYDNEY

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Additional copies of this report may be accessed at www.anzhfr.org or can be requested from the ANZHFR. Extracts from this report may be reproduced provided the source of the extract is acknowledged.

Report prepared on behalf of the ANZHFR Steering Group by: Ms Jamie Hallen, AHFR Manager; Mr Stewart Fleming, Webmaster; Professor Jacqueline Close, ANZHFR Co-Chair Geriatric Medicine; Professor Ian Harris AM, ANZHFR Co-Chair Orthopaedic Surgery.

The ANZHFR would like to thank Dr Reidar Lystad, Australian Institute of Health Innovation, Macquarie University NSW, for the outlier reports and Ms Barbara Toson, Biostatistician, Flinders University SA, for the risk-adjusted mortality analysis.

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CO-CHAIRS' FOREWORD

Welcome to the 2021 Annual Report, which includes the sixth patient level report and the ninth facility level report. This year, 86 hospitals have contributed patient level data and all 117 hospitals who were asked, provided facility level data to the report. Apart from having complete coverage of hospitals in New Zealand, we also have complete or near-complete coverage in Queensland, Western Australia, South Australia and Tasmania. We are grateful to the teams working in our hospitals across Australia and New Zealand who give their time to participate in Registry activities.

We continue to report against the binational Hip Fracture Care Clinical Care Standard and all quality indicators are included in the printed report, as for previous years. For the first time, the report also includes an outlier report, which monitors hospital performance against the quality indicators and enables sites to easily see areas of high quality care or those that require review. This year, however, not all variables included in previous reports are included in the printed report. A complete report is available online through the Registry website at www.anzhfr.org. This change has allowed room for more detailed mortality and outlier reporting, and we hope that by focussing on the most important outcomes, the written report is easier to read.

After introducing mortality data in the 2020 report, this section has been formalised in this report. The 2021 report provides 30-day mortality data from 2016 to 2020 included, and 365-day mortality for years prior to 2020. Consenting hospitals are identified for the first time and the mortality graphs allow comparison between regions and between hospitals.

The Registry has also expanded other activities. The Research Committee is now producing publications based on Registry data and several Sprint Audits involving brief periods of focussed, additional data collection, have been planned for 2021. Custom fields are now available for all sites to collect institution-specific data of their choosing.

Despite continuing restrictions due to the COVID-19 pandemic, the Registry has developed alternative education methods. Our 2020 lecture series includes interviews with experts on specific topics and these have been made available on YouTube via the Registry website. The registry has also recently launched Hipcast, a podcast series to help improve hip fracture care, and is increasing the ways for teams to connect with registry news through Twitter and LinkedIn. HipFests were held virtually in both Australia and New Zealand in the first part of 2021, and New Zealand was able to return to a face-to-face format for its second HipFest of the year.

This year marks the last year of involvement for our long-term Australian registry manager, Elizabeth Armstrong, who will leave the Registry in 2021 to pursue a PhD looking at hip fracture care in low and middle-income countries. We would like to thank Elizabeth for her tireless effort in establishing and promoting the registry over many years and to welcome Jamie Hallen, who joined as the new Australian registry manager in 2021 after a transition period with Elizabeth.

The 2021 report provides the largest and most detailed report on hip fracture care in Australia and New Zealand. The steering group, representing the multidisciplinary stakeholders involved in hip fracture care, will continue to expand and refine outcome reporting and education to fulfil their mission to improve hip fracture care for all. We consider this report to be an important step on that path.

Professor
Jacqueline Close
Geriatrician

Co-Chair
Australian and New Zealand
Hip Fracture Registry

Professor
Ian Harris AM
Orthopaedic Surgeon

Co-Chair
Australian and New Zealand
Hip Fracture Registry

EXECUTIVE SUMMARY

The Australian and New Zealand Hip Fracture Registry (ANZHFR) is one of an increasing number of hip fracture registries globally, set up with the intention of using data to drive a quality improvement agenda. With data on over 65,000 hip fractures collected over the past 6 years, it continues to be a key source of information on how care is provided and the outcomes of care following a hip fracture.

The 2021 report includes 14,816 records from 86 hospitals and we continue to see a year-on-year increase in hospitals contributing data to the Registry including some private hospitals in Australia.

With an increasing number of annual reports, it is becoming easier to see where practice is improving and where the gaps are in care. Variability in practice is also evident and some of this variability is likely to be to the detriment of the patient.

This year the printed report focuses on performance against the Hip Fracture Care Clinical Care Standard whilst the digital report covers additional domains relevant to clinicians, managers and funders of health systems.

Progress is evident in a number of domains including:

- assessment of cognition
- assessment of pain
- management of pain
- availability of a hip fracture pathway
- availability of a pain pathway
- provision of written information for patients as they transition from the acute hospital setting.

It is pleasing to see an increase in the number of hospitals that have developed a hip fracture pathway (91%). The development of pathways necessitates members of the multidisciplinary team to come together and map out the patient journey. It is highly likely that this process ensures that there is attention to all aspects of the hip fracture journey and can move sites from being exemplars in one or two aspects of care to high performing organisations in all aspects of care.

Time to surgery has remained fairly static with 81% of patients receiving surgery within 48 hours of presenting to hospital. However, there is the variability in time to surgery across sites with access to theatre continuing to be the main factor delaying surgery. There is also significant variability in the average time to surgery for patients who present to a non-operating hospital and need to be transferred (25 – 80 hours). Some of this will reflect the geographical challenges of transferring people long distances but it is also likely that a lack of transfer protocols and prioritisation mean that people spend longer in a transferring hospital than is optimal.

The data presented on fracture type and surgical procedure suggests that some sites may not be accurately recording this information. Involving a member of the surgical team is encouraged to ensure that both classification of the fracture type and surgical procedure are accurate.

The COVID-19 pandemic has disrupted care in many hospitals with some orthopaedic wards being repurposed to COVID-19 wards and staff being deployed to areas of increased need during the pandemic. The decrease in the number of patients seen by a geriatrician in 2020 in Australia (87%) is likely a reflection of the temporary deployment of geriatricians to other roles in the hospital and community setting. This is exemplified by the story from Frankston Hospital contained within this report.

Frustratingly, the number of people leaving hospital on treatment for osteoporosis is low (27%) and we have seen little improvement over time. Understanding why we aren't making progress is a priority for ANZHFR and a Sprint audit is planned for late 2021 to try and gain a better understanding of the barriers and enablers to adopting evidence-based care in this area.

We have taken on board feedback from the sites contributing data to the Registry and this year we move from reporting on whether a patient was "offered" the opportunity to mobilise the day after surgery to whether the patient "actually" mobilised.

Whilst 90% of patients were reported to have been given the opportunity to mobilise the day after surgery, only 47% actually mobilised. This stark difference generates more questions than it answers and further work is needed to understand the barriers to actually mobilising a patient the day after surgery.

Whilst the Registry is reaching a mature phase, we are aware that sites across the countries are at different stages along their journey to improving hip fracture care. Many sites have moved from a project-based approach where one area of care is in focus to teams that have streamlined the whole hip fracture care pathway. This years' introduction of an outlier report will allow sites to see how they are performing against the Hip Fracture Care Clinical Care Standard and hopefully encourage teams to focus on areas where improvement is still needed. Using the custom fields option of the Registry can help teams collect additional fields of their choice for a time-limited period to gain a better understanding where the gaps are in care.

We strongly support sites learning from each other and we will continue to highlight exemplar care though a variety of channels including this report.

ANZHFR continues its journey to improve the care provided to and outcomes for people who fracture their hip. Much has been achieved and the data is there to support this. Much is still to be done and the Registry will continue to work with clinicians and managers across our two countries to ensure that the provision of timely and relevant data continues to have a key role in improving care.

KEY RECOMMENDATIONS

- **For teams early in the journey, map out the hip fracture journey in your hospital and engage the key stakeholders from the outset**
- **Teams review the outlier report to identify areas where they may need to undertake quality improvement work**
- **Use the custom fields function of the Registry to add variables of interest to support any local quality improvement activity**
- **Access real time data and share with all members of the hip fracture team**
- **In the absence of a local booklet, use the ANZHFR booklet (available in 15 languages) which provides an individualised care plan for patients as they transition from hospital to home**
- **Participate in ANZHFR Sprint Audits**

2020 CALENDAR YEAR SNAPSHOT

PATIENT LEVEL REPORT

65%
of patients had a documented assessment of pain within 30 minutes of arrival at the ED

67%
of patients had a preoperative assessment of cognition

79%
of patients had a nerve block to manage pain before surgery

86
ANZ Hospitals

14,816
Records

87%
Australian patients and

82%
NZ patients were seen by a geriatrician during their acute hospital stay

90%
of patients were given the opportunity to mobilise on the day of or day after surgery

81%
of patients had surgery within 48 hours

47%
of patients achieved first day walking

27%
of patients were on active treatment for osteoporosis at discharge from hospital

LEGEND: Improvement · No change · Decline in performance

91%
of hospitals reported having a hip fracture pathway

31%
of hospitals utilise an orthopaedic/ geriatric medicine shared care service model

117
ANZ Hospitals

86%
of hospitals reported having a pain pathway

82%
of hospitals have a weekend therapy service

43%
of hospitals had planned operating lists for hip fracture patients

62%
routinely provide written information on treatment and care after hip fracture

LEGEND: Improvement No change

HIP FRACTURE CARE CLINICAL CARE STANDARD

The Hip Fracture Care Clinical Care Standard was released in 2016 by the Australian Commission on Safety and Quality in Health Care, in collaboration with the Health Quality and Safety Commission New Zealand. The Clinical Care Standard plays a role in ensuring the delivery of high-quality hip fracture care by describing the components of care that should be provided to older people admitted with a hip fracture.

The Hip Fracture Care Clinical Care Standard contains seven quality statements and 16 indicators. The next sections of this report detail results from both the patient and facility level audits against the Hip Fracture Care Clinical Care Standard quality indicators. The quality statements and indicators enable the calculation of a quantitative measure of care processes, structures, or outcomes. For the first time, the ANZHFR also reports on outliers against 14 indicators, which can be used by clinicians or health providers to identify areas of high quality care, or areas that may require review.

QUALITY STATEMENT 1:
Care at presentation

A patient presenting to hospital with a suspected hip fracture receives care guided by timely assessment and management of medical conditions, including diagnostic imaging, pain assessment and cognitive assessment.

QUALITY STATEMENT 2:
Pain management

A patient with a hip fracture is assessed for pain at the time of presentation and regularly throughout their hospital stay, and receives pain management including the use of multimodal analgesia, if clinically appropriate.

QUALITY STATEMENT 3:
Orthogeriatric model of care

A patient with a hip fracture is offered treatment based on an orthogeriatric model of care as defined in the Australian and New Zealand Guideline for Hip Fracture Care.

QUALITY STATEMENT 4:
Timing of surgery

A patient presenting to hospital with a hip fracture, or sustaining a hip fracture while in hospital, receives surgery within 48 hours, if no clinical contraindication exists and the patient prefers surgery.

QUALITY STATEMENT 5:
Mobilisation and weight bearing

A patient with a hip fracture is offered mobilisation without restrictions on weight bearing the day after surgery and at least once a day thereafter, depending on the patient's clinical condition and agreed goals of care.

QUALITY STATEMENT 6:
Minimising risk of another fracture

Before a patient with a hip fracture leaves hospital, they are offered a falls and bone health assessment, and a management plan based on this assessment, to reduce the risk of another fracture.

QUALITY STATEMENT 7:
Transition from hospital care

Before a patient leaves hospital, the patient and their carer are involved in the development of an individualised care plan that describes the patient's ongoing care and goals of care after they leave hospital. The plan is developed collaboratively with the patient's general practitioner. The plan identifies any changes in medicines, any new medicines, and equipment and contact details for rehabilitation services they may require. It also describes mobilisation activities, wound care and function post-injury. This plan is provided to the patient before discharge and to their general practitioner and other ongoing clinical providers within 48 hours of discharge.

INTRODUCTION

The Australian and New Zealand Hip Fracture Registry (ANZHFR) is managed by the Falls, Balance and Injury Research Centre at Neuroscience Research Australia, a medical research institute affiliated with the UNSW Sydney Faculty of Medicine. In New Zealand, the Registry is supported by the New Zealand Orthopaedic Association. The Registry is guided by a multidisciplinary advisory group, consisting of representatives from key clinical stakeholder and consumer organisations. Since inception, this advisory group has been chaired by both a geriatrician and an orthopaedic surgeon, reflecting the ideal, shared approach to high-quality hip fracture care.

The ANZHFR is a clinical quality registry that collects data on the care provided, and the outcomes of care, to older people in Australia and New Zealand, admitted to hospital with a fracture of the proximal femur. Its minimum dataset is intentionally aligned with the ANZ Guideline for Hip Fracture Care in Adults (2014), developed by the ANZHFR Steering Group, and the binational Hip Fracture Care Clinical Care Standard, an initiative of the Australian Commission for Safety and Quality in Health Care, in partnership with the Quality and Safety Commission New Zealand.

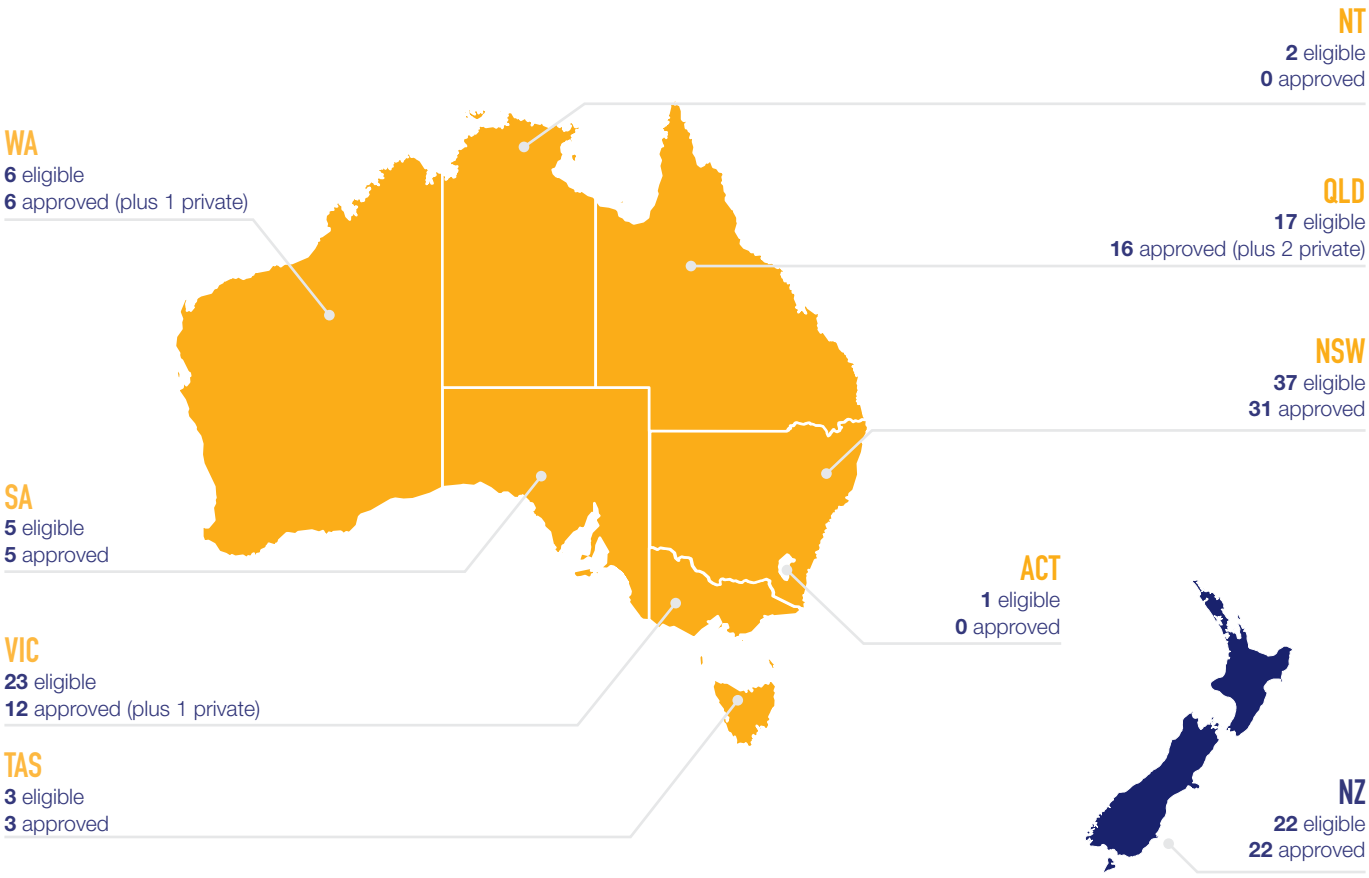
The ANZHFR is pleased to present the 2021 Annual Report, which includes the sixth patient level report and the ninth facility level report.

ANZHFR PARTICIPATION

Hospitals in Australia and New Zealand that provide surgical treatment to patients admitted with a fracture of the proximal femur are eligible to contribute data to the ANZHFR. The proportion of eligible public hospitals approved to participate in the ANZHFR and to be included in the annual report has increased from 21% of ANZ hospitals in 2016 to 87% in 2021. The total number of hospitals eligible for both patient and facility audits may vary each year as public health system services are reconfigured, or private hospitals increase their participation in the ANZHFR.

Not all approved hospitals have been able to contribute data to the ANZHFR and clinicians, health services, and our two health systems faced additional challenges due to the ongoing global COVID-19 pandemic. The ANZHFR will continue to work with approved sites who have been unable to contribute data to identify sustainable processes for participation. Image 1 shows eligible public hospital participation for Australia (by state and territory) and New Zealand. Four private hospitals contribute data to the ANZHFR; one in Western Australia, two in Queensland and one in Victoria.

Image 1: Public sector participation for Australia (by state and territory) and New Zealand



PARTICIPATION 2021

PATIENT LEVEL AUDIT

NEW ZEALAND HOSPITALS

	REPORT ID	2020
Auckland City Hospital	ACH	229
Christchurch Hospital	CHC	457
Dunedin Hospital	DUN	183
Gisborne Hospital	GIS	34
Hawkes Bay Hospital	HKB	153
Hutt Valley Hospital	HUT	122
Middlemore Hospital	MMH	258
Nelson Hospital	NSN	124
North Shore Hospital	NSH	399
Palmerston North Hospital	PMR	136
Rotorua Hospital	ROT	84
Southland Hospital	INV	76
Taranaki Base Hospital	TAR	65
Tauranga Hospital	TGA	214
Timaru Hospital	TIU	74
Waikato Hospital	WKO	297
Wairarapa Hospital	MRO	15
Wairau Hospital	BHE	47
Wellington Hospital	WLG	142
Whakatane Hospital	WHK	28
Whanganui Hospital	WAG	55
Whangarei Hospital	WRE	142

AUSTRALIAN HOSPITALS

	REPORT ID	2020
Albany Hospital	ABA	53
Armidale Hospital	ARM	49
Austin Hospital	###	222
Bankstown / Lidcombe Hospital	BKL	142
Blacktown Hospital	###	166
Box Hill Hospital	BOX	224
Cairns Hospital	CNS	211
Campbelltown Hospital	CAM	89
Coffs Harbour Base Hospital	CFS	78
Concord Hospital	CRG	122
Dandenong Hospital	DDH	344
Dubbo Base Hospital	DBO	90
Fiona Stanley Hospital	FSH	541
Flinders Medical Centre	FMC	253
Footscray Hospital	FOO	336
Frankston Hospital	FRA	243
Geelong Hospital	GUH	-
Gold Coast University Hospital	GCH	29
Gosford Hospital	GOS	377
Grafton Hospital	###	48
Hornsby Ku-ring-gai Hospital	HKH	136
Ipswich Hospital	IPS	123
John Hunter Hospital	JHH	401
Joondalup Hospital	JHC	174
Launceston Hospital	LGH	121
Lismore Base Hospital	LBH	151
Liverpool Hospital	LIV	262
Logan Hospital	LOG	92
Lyell McEwin Hospital	LMH	276
Maitland Hospital	TMH	54
Maroondah Hospital	MAR	211
Mater Hospital	MSB	90
Nambour Hospital	NBR	-
Nepean Hospital	NEP	221
North West Regional Hospital	###	63
Orange Health Service Hospital	OHS	147
Port Macquarie Base Hospital	PMB	148
Prince Charles Hospital	PCH	358
Prince of Wales Hospital	POW	170
Princess Alexandra Hospital	PAH	217
QEII Hospital	QII	85
Queen Elizabeth Hospital	QEH	153
Redcliffe Hospital	RED	130
Robina Hospital	ROB	280
Rockhampton Hospital	ROK	98
Royal Adelaide Hospital	RAH	278
Royal Hobart Hospital	RHH	128
Royal North Shore Hospital	RNS	187
Royal Perth Hospital	RPH	343
Royal Prince Alfred Hospital	RPA	161
Ryde Hospital	RYD	-
Sir Charles Gairdner Hospital	SCG	260
St George Hospital	STG	203
St Vincent's Hospital Darlinghurst	SVD	142
St Vincent's Hospital Melbourne^	HO2	110
Sunshine Coast University Hospital	SCU	284
Tamworth Hospital	TAM	101
The Alfred	TAH	166
The Northern Hospital	TNH	187
The Sutherland Hospital	TSH	172
The Wesley Hospital	###	17
Toowoomba Hospital	TWB	147
Townsville Hospital	TSV	182
Tweed Hospital	###	106
Wagga Wagga Base Hospital	WGG	70
Westmead Hospital	WMD	195
Wollongong Hospital	TWH	265

^ Approval to identify site was granted just prior to publication.

The patient level report includes data from 86 hospitals. In 2020, 14,816 records were contributed for the calendar year 1 January 2020 to 31 December 2020: 11,482 records from 64 Australian hospitals and 3,334 records from 22 New Zealand hospitals. Hospitals must have contributed at least 10 patient records during the relevant calendar year to be included in the patient level report. Contributing hospitals are listed on page 14 with their three-letter report identifier and the number of records contributed for the 2020 calendar year. All New Zealand hospitals and 58 Australian hospitals have elected to be identified.

117 hospitals completed the facility level audit for 2020.

FACILITY LEVEL AUDIT

New Zealand Hospitals

Auckland City Hospital
Christchurch Hospital
Dunedin Hospital
Gisborne Hospital
Hawkes Bay Hospital
Hutt Valley Hospital
Rotorua Hospital
Middlemore Hospital
Nelson Hospital
North Shore Hospital
Palmerston North Hospital
Southland Hospital
Taranaki Base Hospital
Tauranga Hospital
Timaru Hospital
Waikato Hospital
Wairarapa Hospital
Wairau Hospital
Wellington Regional Hospital
Whakatane Hospital
Whanganui Hospital
Whangarei Base Hospital

Australian Hospitals

NEW SOUTH WALES

Armidale Hospital
Bankstown-Lidcombe Hospital
Bathurst Base Hospital
Bega – South East Regional Hospital
Blacktown Hospital
Bowral and District Hospital
Campbelltown Hospital
Canterbury Hospital
Coffs Harbour Base Hospital
Concord Hospital
Dubbo Base Hospital
Gosford Hospital
Goulburn Base Hospital
Grafton Hospital
Hornsby Ku-ring-gai Hospital
John Hunter Hospital
Lismore Base Hospital
Liverpool Hospital
Maitland Hospital
Manning Base Hospital
Nepean Hospital
Northern Beaches Hospital
Orange Health Service
Port Macquarie Base Hospital
Prince of Wales Hospital
Royal North Shore Hospital
Royal Prince Alfred Hospital
Ryde Hospital
Shoalhaven and District Hospital
St George Hospital
St Vincent's Hospital Darlinghurst
Tamworth Base Hospital
The Sutherland Hospital
The Tweed Hospital
The Wollongong Hospital
Wagga Wagga Base Hospital
Westmead Hospital

VICTORIA

Albury Wodonga Health
Ballarat Health Service
Bendigo Hospital
Box Hill Hospital
Dandenong Hospital
Frankston Hospital
Geelong Hospital
Goulburn Valley Health Shepparton
Latrobe Regional Hospital
Maroondah Hospital
Mildura Base Hospital
Northeast Health Wangaratta
Royal Melbourne Hospital
Sandringham Hospital
South West Healthcare Warrnambool
St Vincent's Hospital Melbourne
The Alfred
The Austin Hospital
The Northern Hospital
West Gippsland Healthcare Group (Warragul)
Western District Health Service Hamilton
Western Health (Footscray)
Wimmera Health Care Group Horsham

QUEENSLAND

Bundaberg Hospital
Cairns Base Hospital
Gold Coast University Hospital
Hervey Bay Hospital
Ipswich Hospital
Logan Hospital
Mackay Base Hospital
Mater South Brisbane
Princess Alexandra Hospital
QEII Jubilee Hospital
Redcliffe Hospital
Robina Hospital
Rockhampton Base Hospital
Sunshine Coast University Hospital
The Prince Charles Hospital
Toowoomba Hospital
Townsville Hospital

WESTERN AUSTRALIA

Albany Hospital
Bunbury Hospital
Fiona Stanley Hospital
Geraldton Hospital
Joondalup Health Campus
Royal Perth Hospital
Sir Charles Gairdner Hospital

SOUTH AUSTRALIA

Flinders Medical Centre
Lyell McEwin Health Service
Mount Gambier
Royal Adelaide Hospital
The Queen Elizabeth Hospital

TASMANIA

Launceston General Hospital
North West Regional Hospital (Burnie)
Royal Hobart Hospital

NORTHERN TERRITORY

Alice Springs Hospital
Royal Darwin Hospital

AUSTRALIAN CAPITAL TERRITORY

Canberra Hospital

DATA QUALITY, CAVEATS AND LIMITATIONS

The patient level report includes data from 86 hospitals. In 2020, 14,816 records were contributed for the calendar year: 11,482 records from 64 Australian hospitals and 3,334 records from 22 New Zealand hospitals.

CAVEATS

- The figures in this report include data from Australia and New Zealand for all records with an Emergency Department Arrival, In Hospital Fracture, or Transfer date, from midnight 1 January 2020 to midnight on 31 December 2020.
- Figures in the patient level report only include records where data is available.
- Hospitals must have contributed at least 10 patient records during the relevant calendar year to be included in the patient level report.
- All figures adhere strictly to a minimum 10 records required rule other than follow-up where at least 10 records and a follow-up rate of more than 80% are required for inclusion in the figure.
- Where the figure has featured in previous years, average bars from the previous four reports are included for comparison.
- New Zealand has elected to identify all hospitals with a hospital specific code. In Australia, a hospital specific code is used where the local principal investigator and their hospital executive have elected to opt-in to identified reporting. Six Australian hospitals have not opted-in and have been randomly assigned a number that has been used consistently throughout this report. The number has been provided to the principal investigator for each hospital.
- The facility level report includes aggregated data only. Responses were received from all 117 hospitals invited to participate.

COMPLETENESS

Completeness refers to the number of variables completed per record over the number of variables eligible to be completed for that patient. The Registry utilises automated and manual data completeness checks for each record. When logged into the Registry users can view the percentage of variables complete per record and details of missing variables. 100% completeness is not always possible as some data may not be available for some patients or from some sites. In 2020, the average level of completeness from all 86 hospitals was 99% (Figure 1).

CORRECTNESS

Correctness refers to the accuracy of the data entered into each data field. The ANZHFR utilises data validation rules and inbuilt date/time sequence checks to reduce the possibility of incorrect data being entered. Pop-up warnings alert users if the data falls outside any of the specified limits, which assists users to identify potentially incorrect data.

In 2021, the ANZHFR released a Quality Audit tool for the first time. The tool enabled participating sites to check the quality of a random selection of 10% of records entered into the registry (up to a maximum of 25 records for high volume sites). Undertaking the audit was voluntary. 42% of hospitals in Australia and 45% in New Zealand commenced the audit. The ANZHFR received valuable feedback around the benefits and challenges associated with completing the audit and will continue to work with sites to enhance the value of the quality audit tool, which will be made available each year.

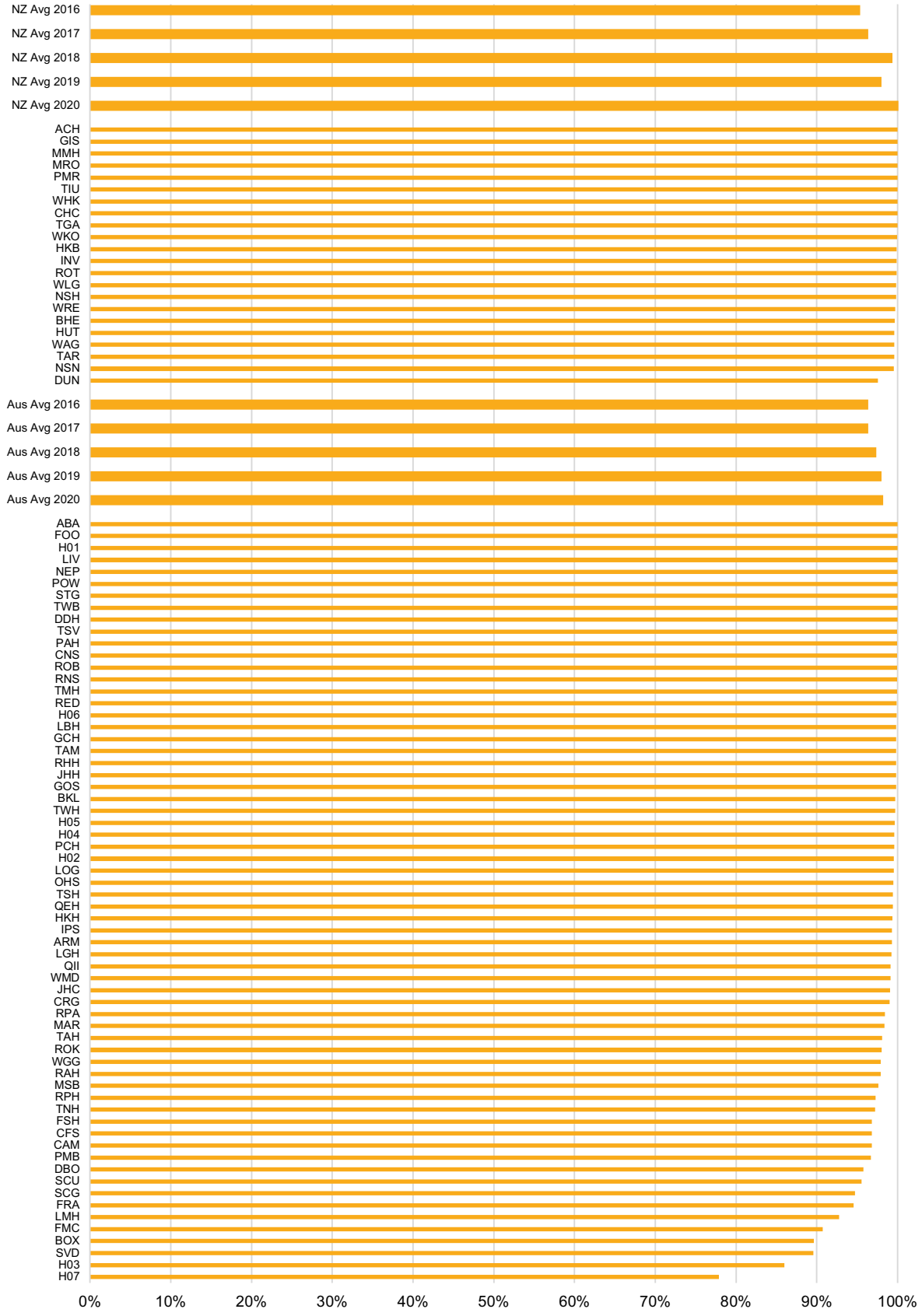
CAPTURE/ASCERTAINMENT

Capture/Ascertainment refers to the proportion of eligible patients that are captured by the Registry. High levels of capture allow the findings to be generalised to the whole population. If the capture rate is low, selection bias may be introduced where patients included or excluded are systematically different from each other. This may affect the generalisability of the findings.

In New Zealand, the number of hip fracture cases in the registry can be compared with the discharge coding from the National Minimum Data Set (NMDS). The numbers are extracted in March for the previous calendar year during which the data collection took place. There is minimal change in the numbers after this date and this provides a good comparator with which to judge ascertainment. Ascertainment was 20% in 2017, 60% in 2018, 70% in 2019, 88% in 2020 and 86% in 2021, reflecting the increase in eligible hospital participation and the refinement of data collection systems over time.

In Australia, ascertainment is difficult to source due to jurisdictional differences in the collection and reporting of data. The ANZHFR hopes to be able to report this information for Australia in the future.

FIGURE 1 Data completeness



Doing the quality audit prompted discussion within the team about where information is sourced, such as which 'time stamps' to use, and identified areas where data variables were being interpreted differently. This has led to more consistent and improved quality of data collection. We look forward to seeing our improvements when we repeat the audit next year.

Dr Sarah Hurring, Principal Investigator

PATIENT LEVEL AUDIT

SECTION 1: DEMOGRAPHIC INFORMATION

FIGURE 2 Sex

Females comprised 69% of New Zealand and 66% of Australian hip fracture patients, respectively.

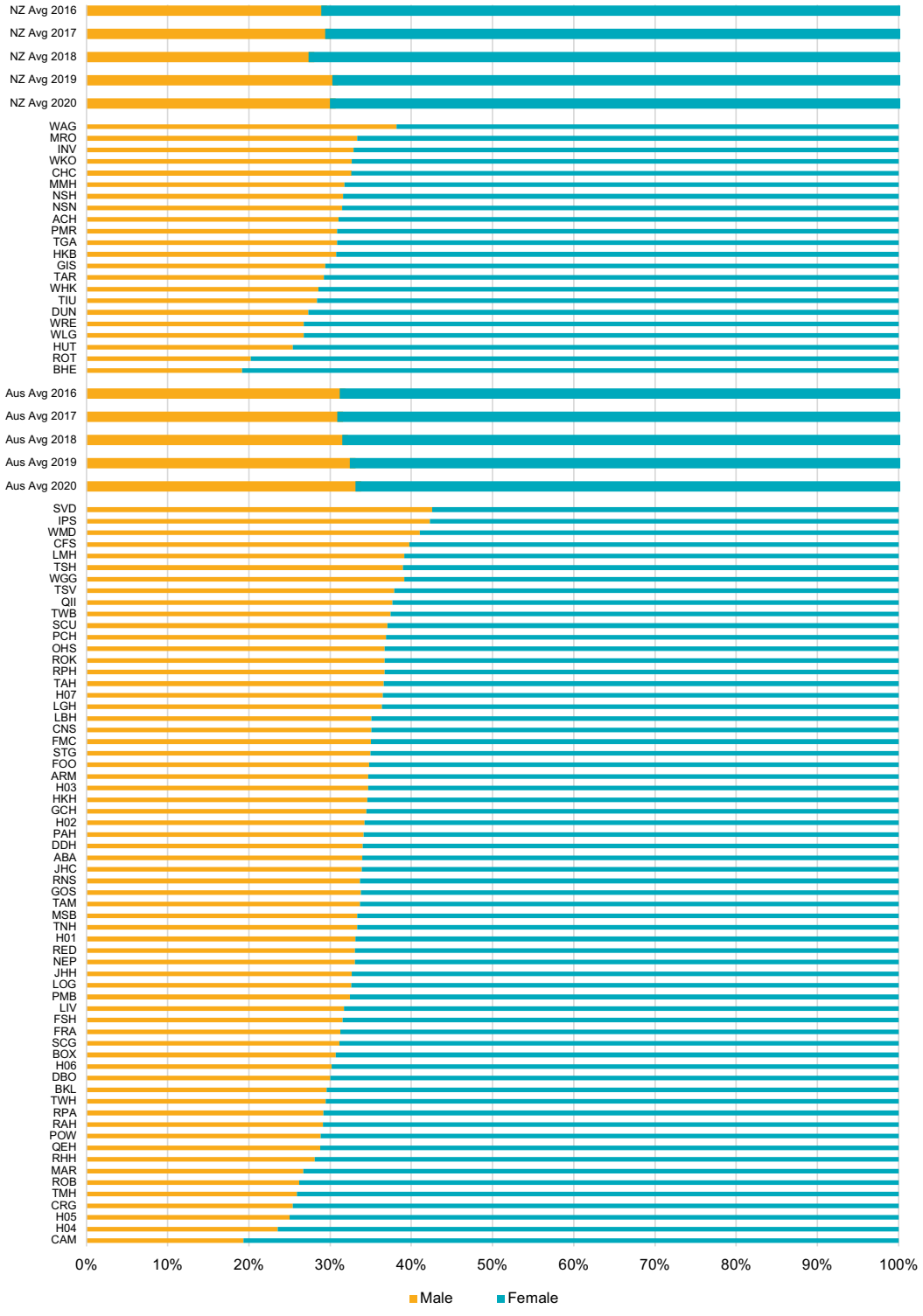


FIGURE 3 Age at admission

The average age of hip fracture patients was 82 years in New Zealand and 81 years in Australia. In both countries, the median age was 84 years. People aged 90 years and older made up 27% of hip fracture patients in New Zealand and 25% in Australia. Figure 3 shows the distribution of hip fracture patients by 10-year age bands.

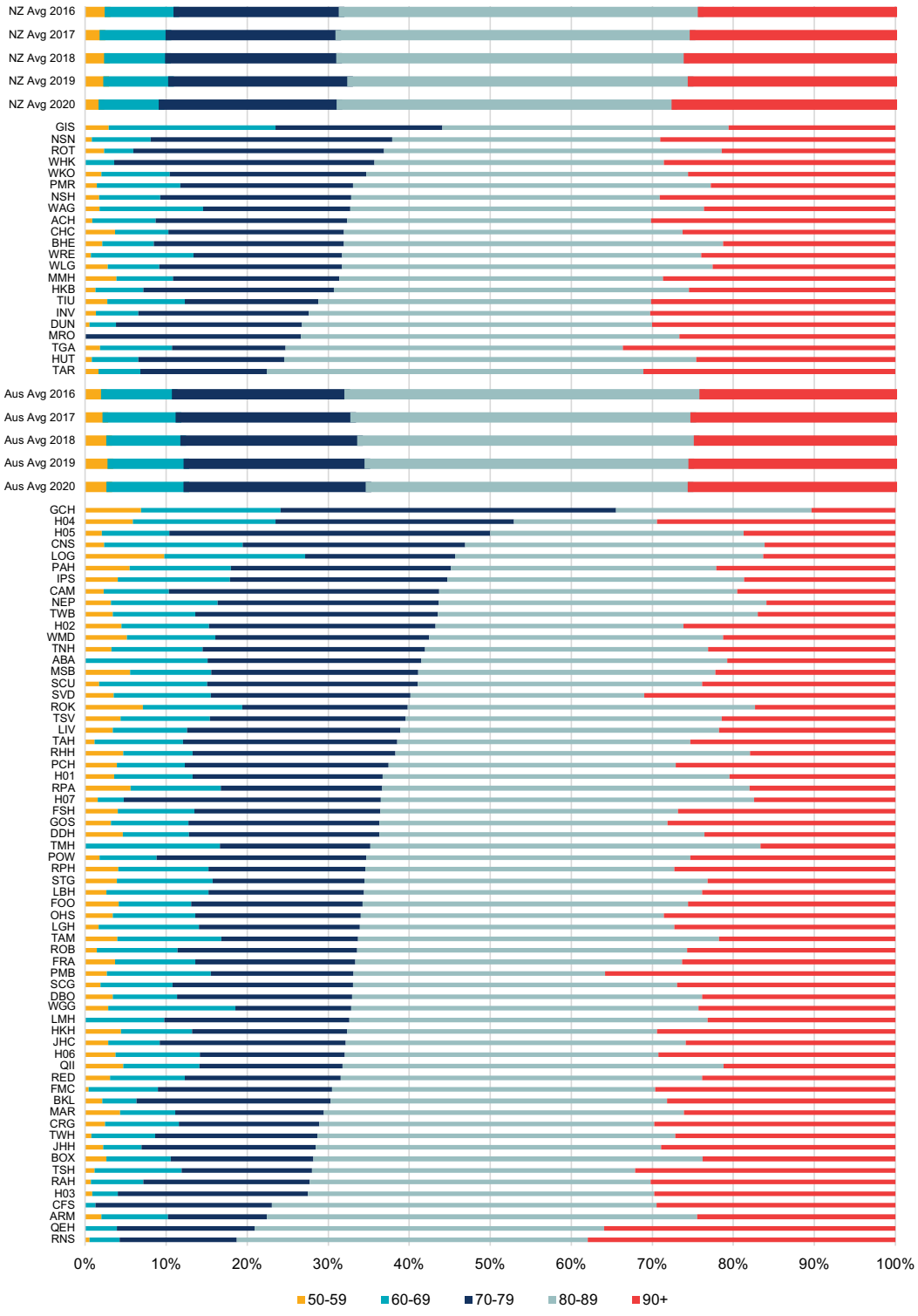


FIGURE 4 New Zealand ethnicity

Maori and Pacific Peoples made up 4% of the New Zealand reported data. The majority of New Zealand hip fracture patients report being of European origin. Equivalent data are not collected in Australia. Accuracy in reporting of Indigenous status is known to be variable.

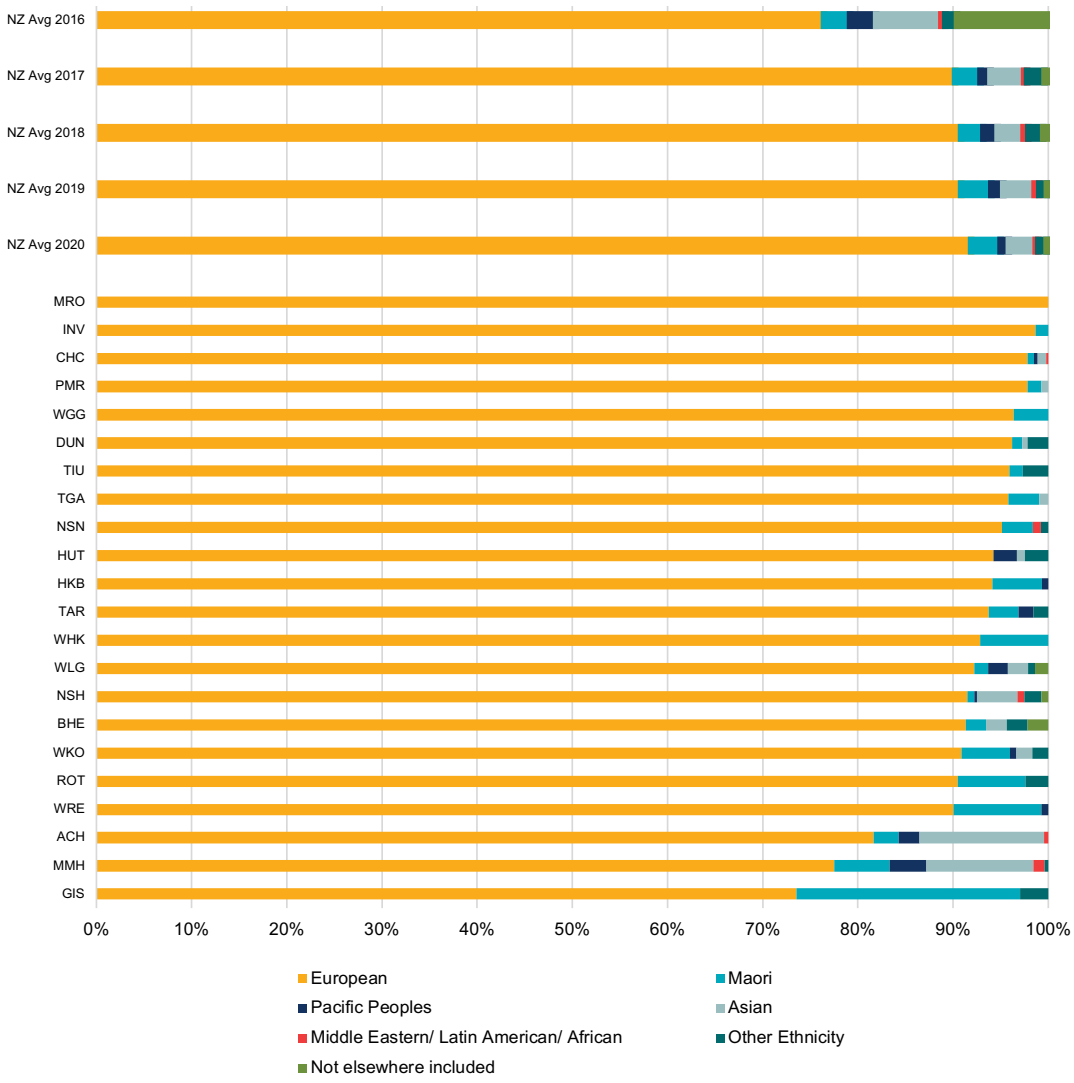


FIGURE 5 Usual place of residence

Seventy-one percent of people in New Zealand and 72% of people in Australia admitted with a hip fracture lived at home prior to their injury. Twenty-eight percent of people were admitted from residential care in both countries. The variation seen between hospitals reflects differences in the local population and number of residential aged care beds.

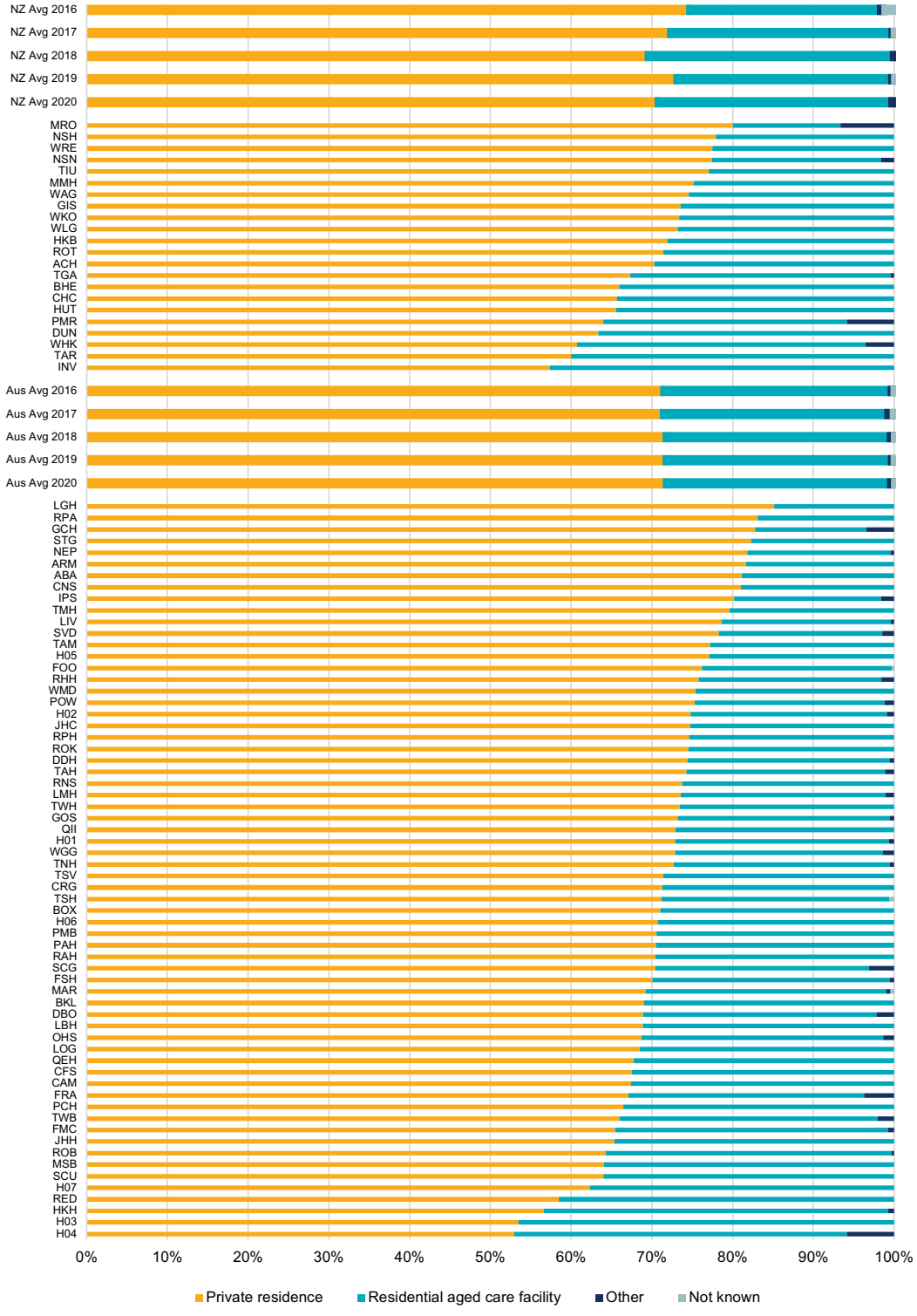


FIGURE 6 Preadmission cognitive status

Thirty-six percent of patients in New Zealand and 37% of patients in Australia had pre-existing impaired cognition or known dementia. Cognitive status prior to admission was not known for 3% of patients in New Zealand and 4% of patients in Australia.

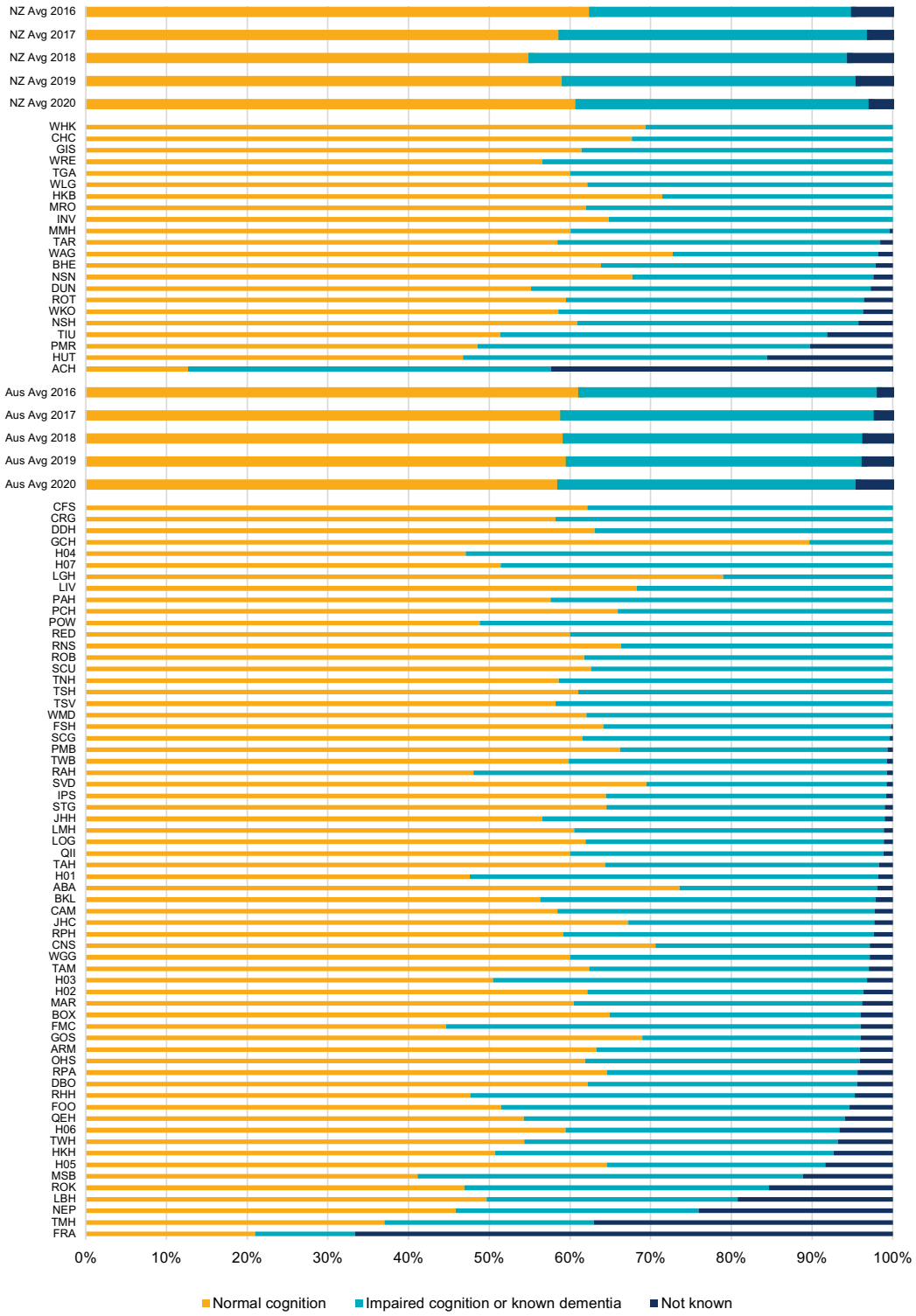


FIGURE 7 Preadmission walking ability

Prior to admission, 41% of hip fracture patients in New Zealand and 44% in Australia walked without a walking aid. Obtaining baseline mobility is important to inform discussions between patients, families and clinicians around post-injury treatment goals.

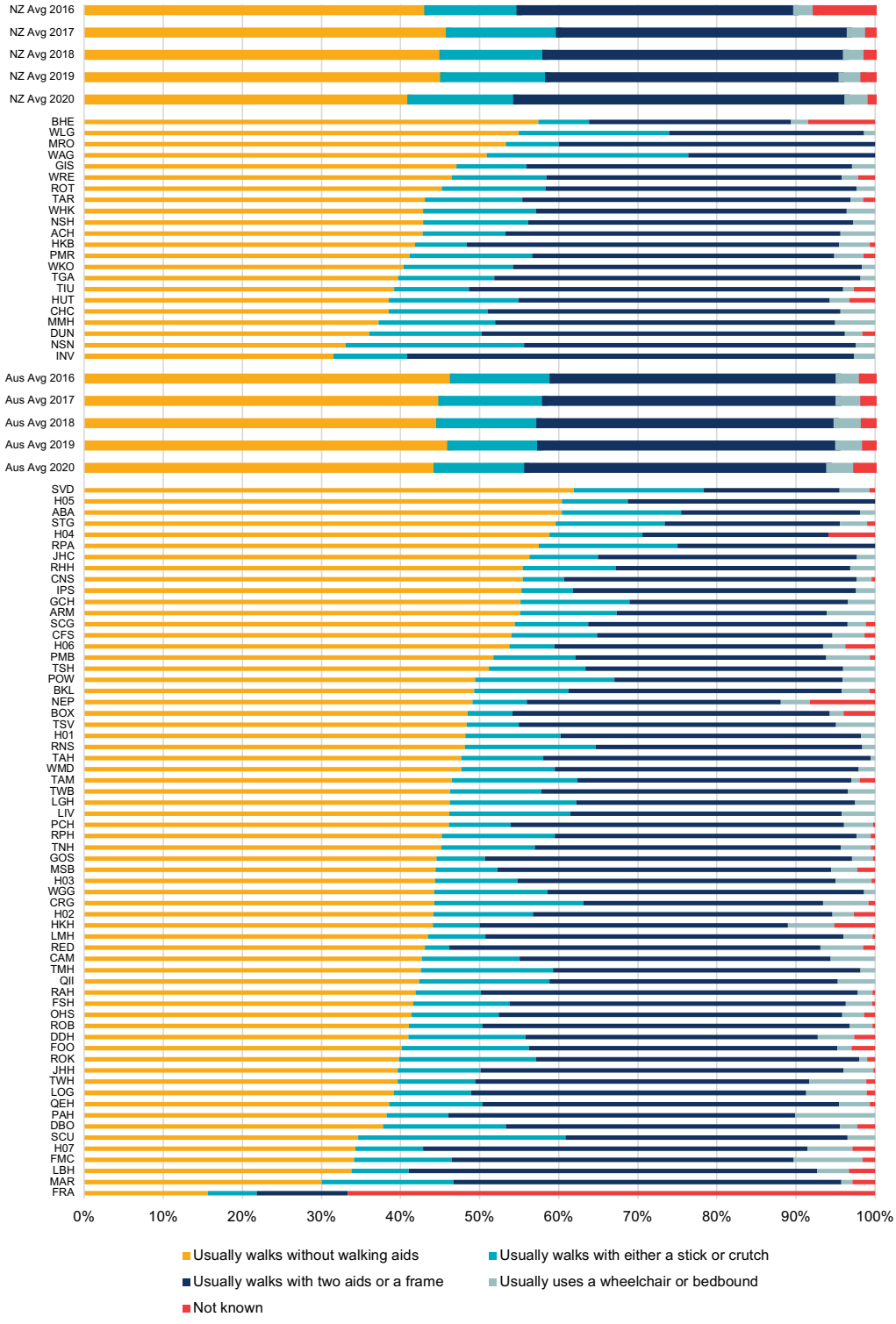


FIGURE 8 ASA grade known

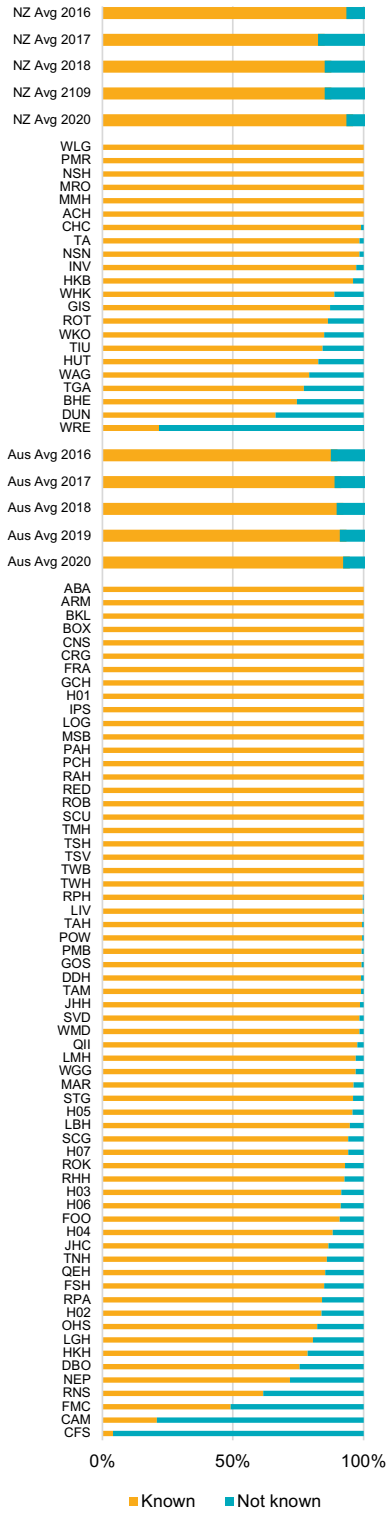
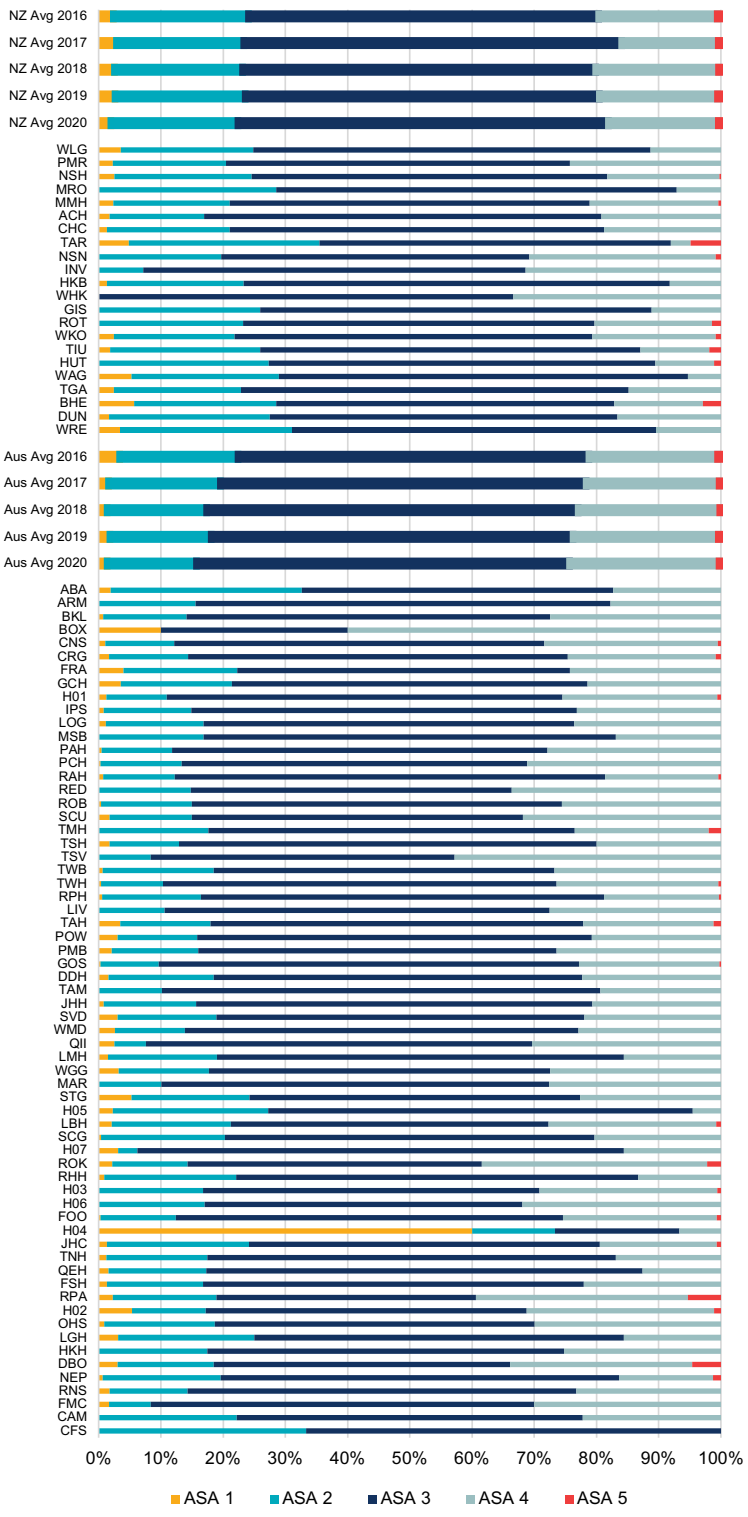


FIGURE 9 ASA grade



ASA grading is a measure of anaesthetic risk. It is often used as a general measure of physical health or comorbidity. Increasing ASA grade is associated with a person's morbidity and mortality risk.

Figure 8 shows the proportion of hip fracture patients with ASA grade known is increasing over time in both countries. Hospital level data can be used to inform specific improvement initiatives for sites with lower rates of collection for this variable. Figure 9 shows the grading of anaesthetic risk for patients at each hospital where the ASA grade is known.

SECTION 2: CARE AT PRESENTATION

FIGURE 10 Transferred from another hospital

Seven percent of hip fracture patients in New Zealand and 14% in Australia were transferred from another hospital for definitive management of their fracture. The variation between countries and hospitals reflects differences in geography, service delivery, and the role delineation of the hospital.

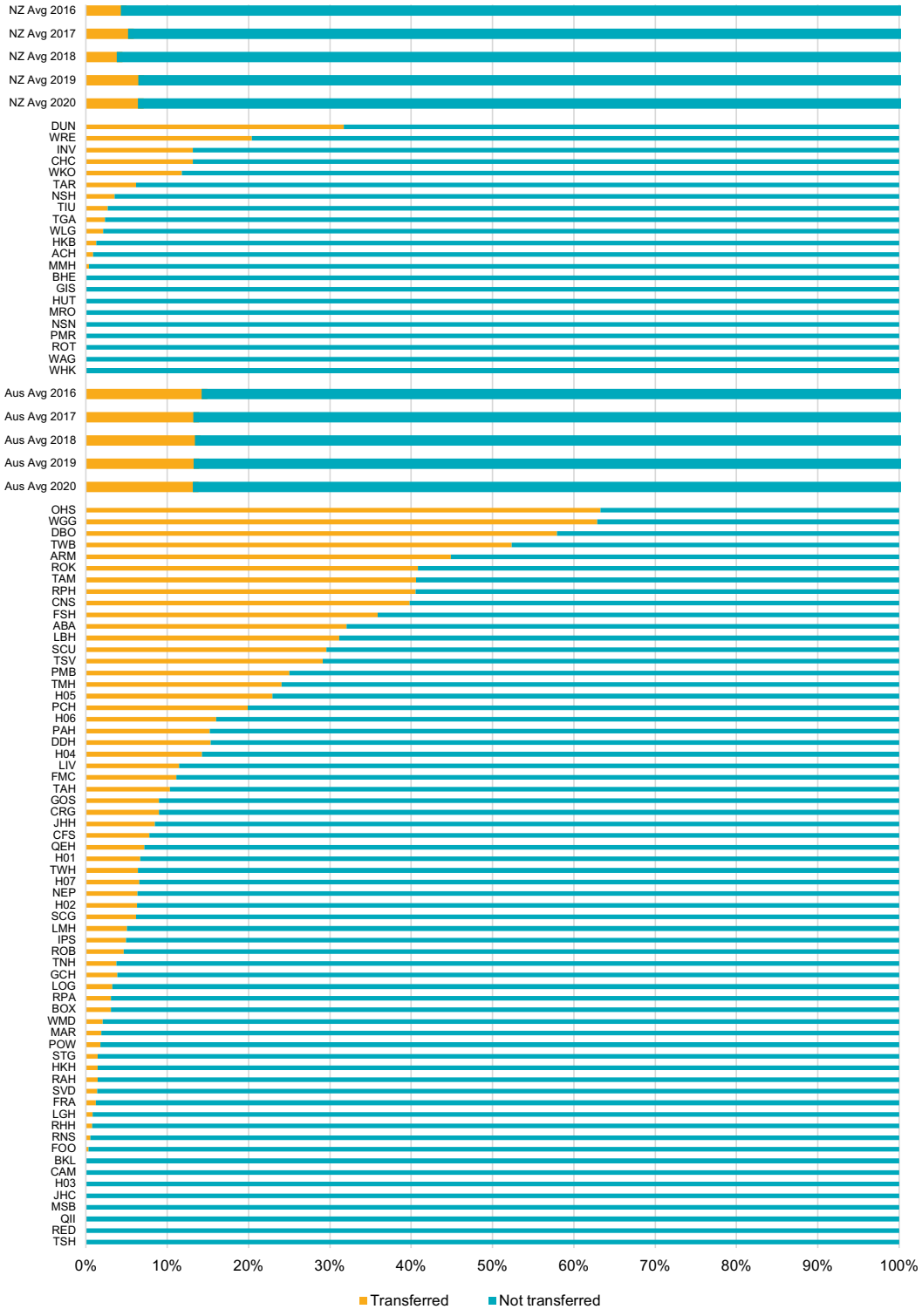
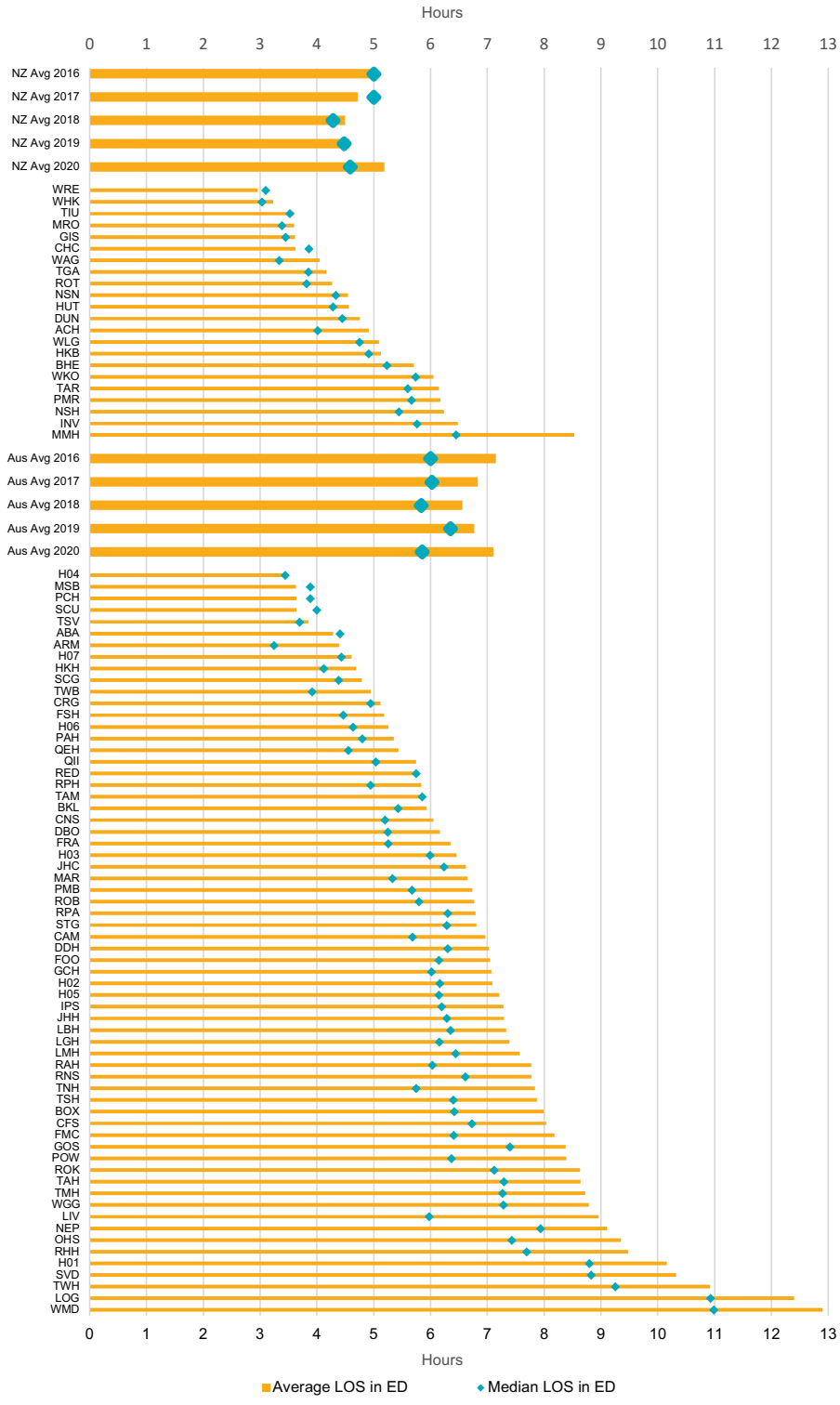


FIGURE 11 Average length of stay (LOS) in the Emergency Department (ED)

Average length of stay (LOS) in the Emergency Department (ED) was 5.1 hours in New Zealand and 7.1 hours in Australia, representing an increase in both countries compared with the previous four years. The median LOS in the ED was 4.6 hours in New Zealand and 5.9 hours in Australia.



TOWNSVILLE HOSPITAL

Townsville University Hospital Emergency Department (ED) provides service to many patients with neck of femur (NOF) fractures and we pride ourselves on their treatment. From arrival to ED, their diagnostics are expedited – leading to early treatment and transfer to specialty care. These patients have increased pain, especially on movement, so pain management is paramount.

Nerve blocks are administered in almost 100% of patients either in our department or at the referring centre prior to arrival. This is to ensure patient comfort and is guided by regular pain assessments. We understand that specialty care on our orthopaedic ward is desirable so once nerve blocks are administered and the NOF pathway has been actioned, it is important that the patient is transferred in a timely matter. In most cases, these patients will go directly to the orthopaedic ward to reduce movement and disorientation. Patients with NOF fractures have a high risk of deterioration - early diagnosis, early treatment and timely transfer to specialty care is imperative to positive patient outcomes.

Niki Taylor, A/Nurse Educator, Emergency Department

FIGURE 12 Ward type

The type of ward used for hip fracture patients varies between sites due to factors such as the size and the role of the hospital. The proportion of patients admitted to a specific hip fracture or orthopaedic ward in 2020 was 94% in New Zealand and 89% in Australia. In 2020, re-configuration of wards in response to the COVID-19 pandemic may have contributed to the proportion of hip fracture patients admitted to outlying wards at some hospitals.

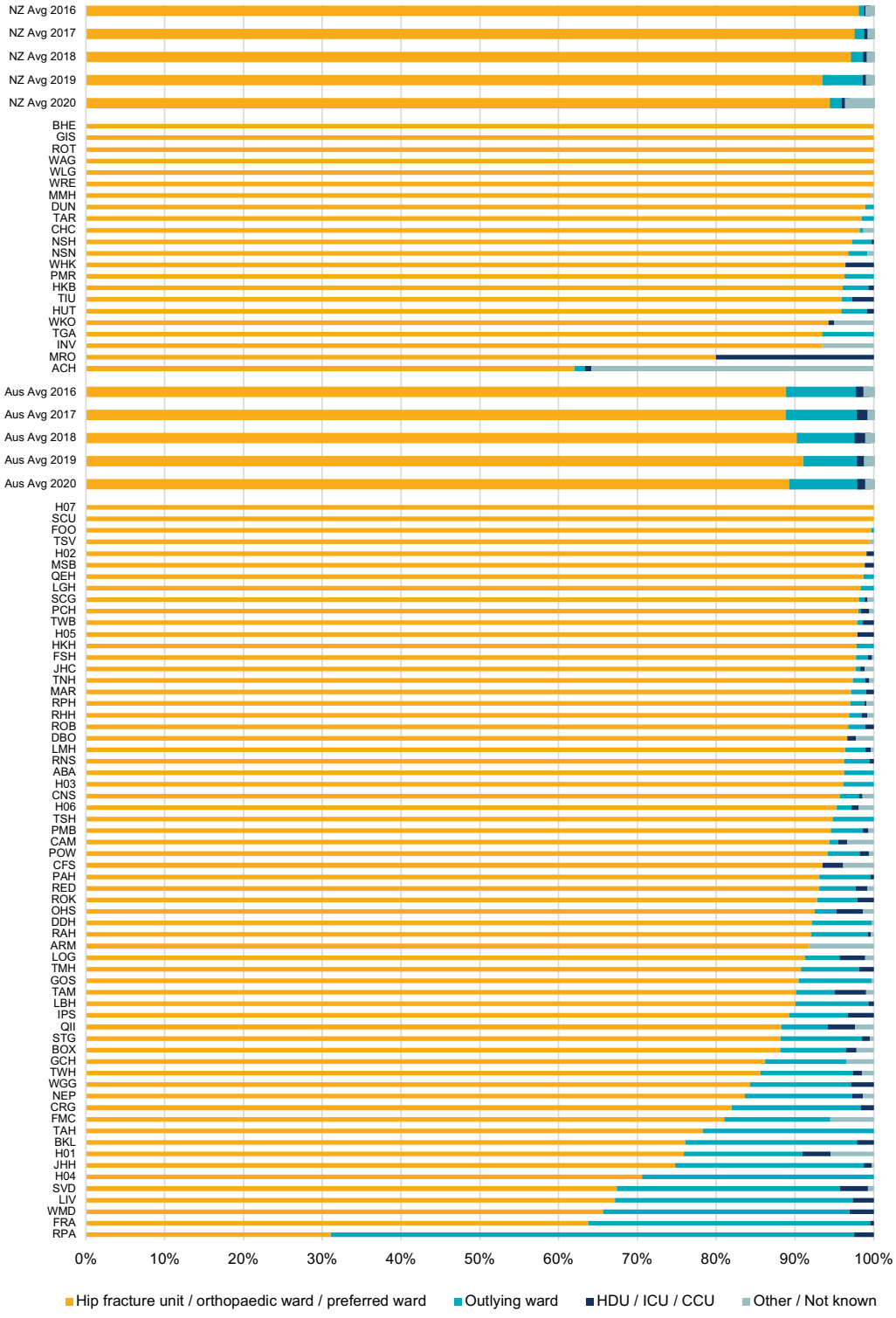
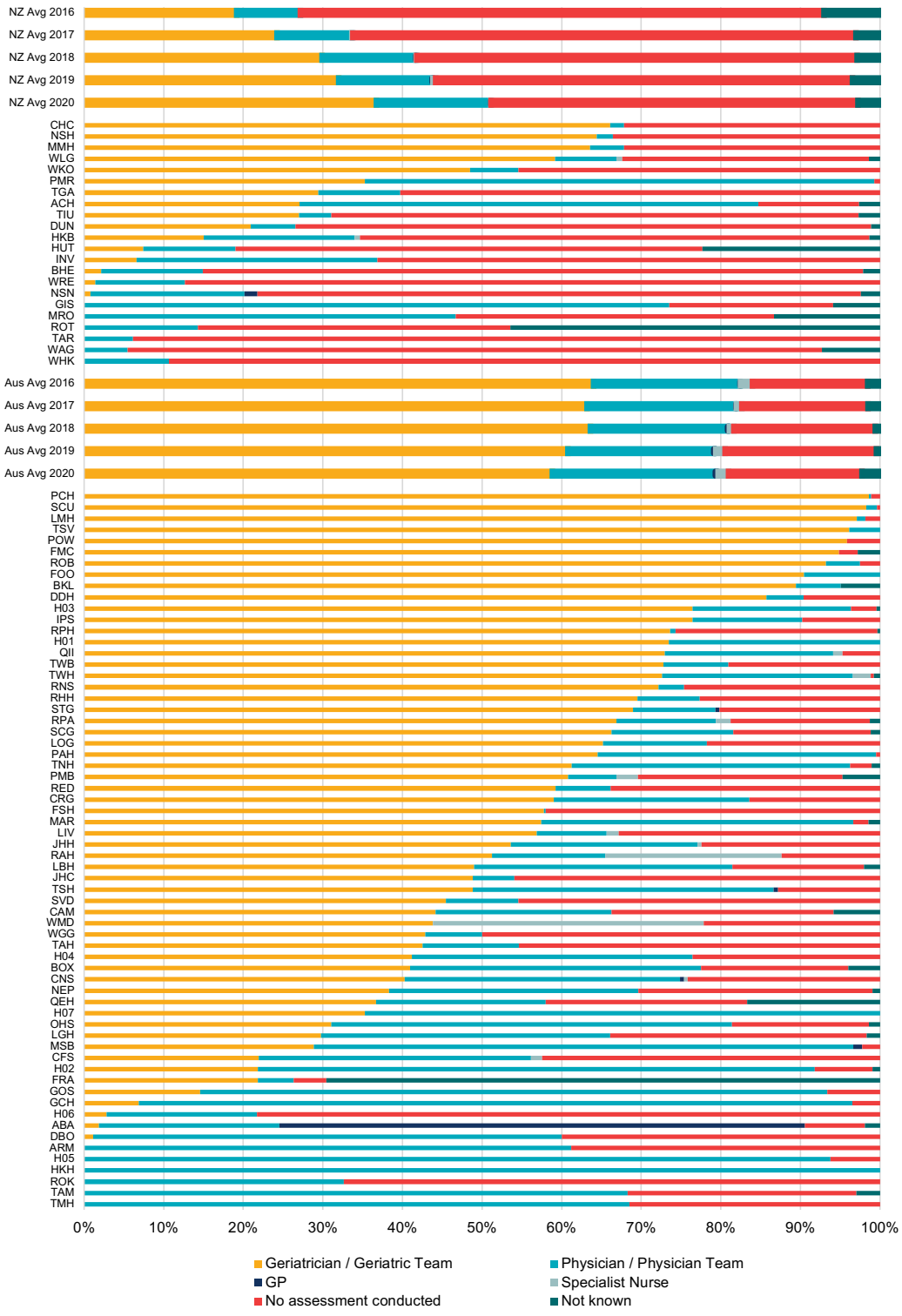


FIGURE 13 Preoperative medical assessment

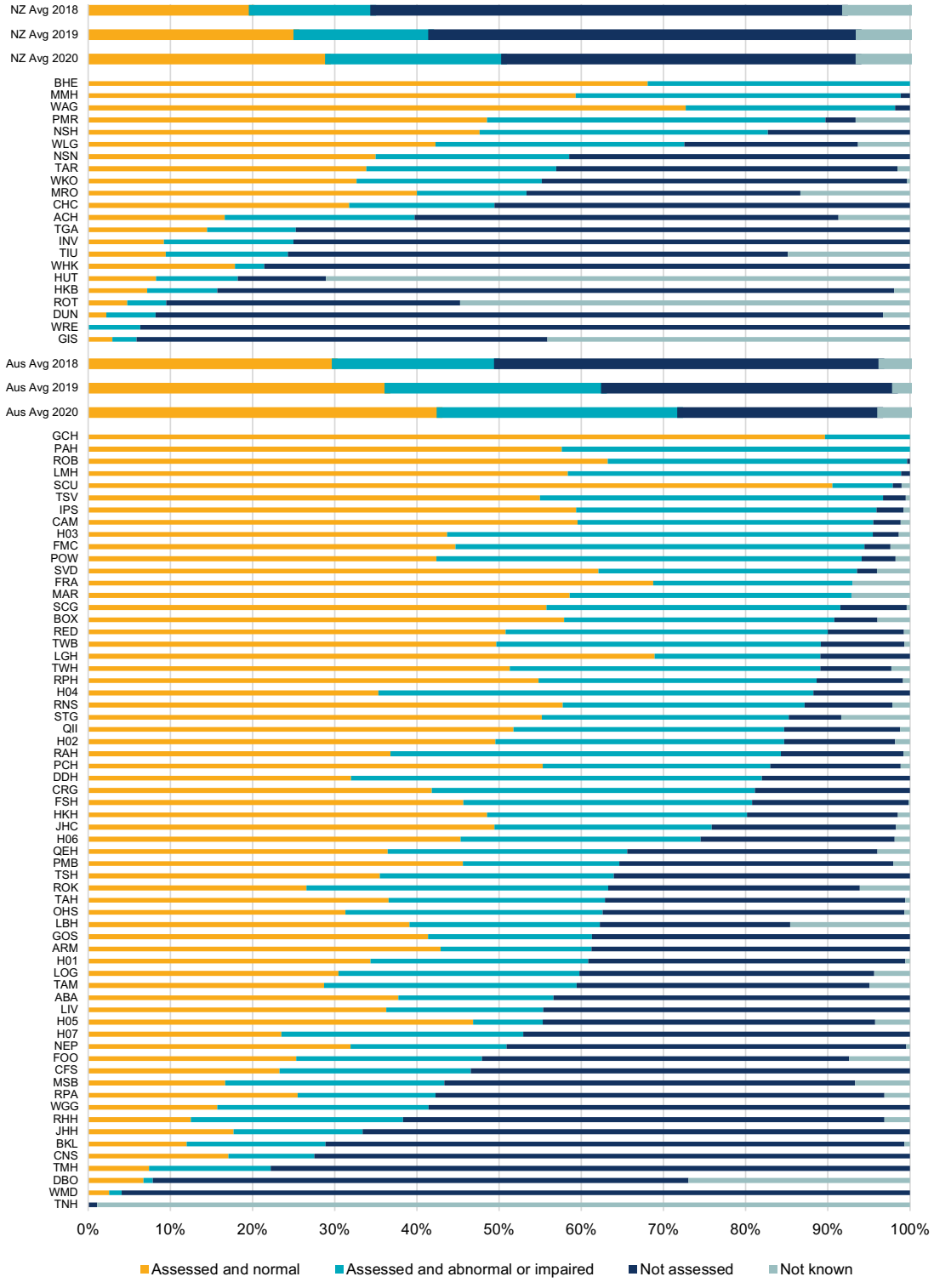
Thirty-seven percent of patients in New Zealand and 59% of patients in Australia were seen by a geriatrician prior to surgery. Some hospitals do not have access to geriatric medicine services and general physicians, general practitioners or specialist nurses may undertake the preoperative medical assessment.



51% of hip fracture patients in New Zealand and 72% in Australia had their cognition assessed prior to surgery using a validated tool

FIGURE 14 Preoperative cognitive assessment

Figure 14 shows the proportion of patients who had their preoperative cognition status assessed. In New Zealand, 51% of patients had their cognition assessed using a validated tool prior to surgery. Twenty one percent were recorded as having a cognitive impairment. In Australia, 72% of patients had their preoperative cognition assessed. Twenty nine percent were recorded as having a cognitive impairment. Both countries have shown an increase each year in preoperative assessment of cognition in hip fracture patients.



PALMERSTON NORTH

MAKING GAINS IN PREOPERATIVE COGNITIVE ASSESSMENT

Originally the junior doctors were solely responsible for completing the preoperative cognitive assessment, but for a variety of reasons, this was not always done. The nursing team have now picked this up and support completion, with significant improvement. Hip fracture care is a team effort so when some members of the team aren't able to complete aspects of the assessment, there are systems and checks in place so the other members of the team will.

Erica Calvert, Charge Nurse, NZ

Overall, we feel at MidCentral we have made significant gains in improving the care, treatment and outcomes for hip fracture patients.

FIGURE 15 Pain assessment in the Emergency Department (ED)

On average, 62% of New Zealand hip fracture patients and 66% of Australian hip fracture patients had a documented assessment of pain within 30 minutes of presentation. Pain assessment in the ED has increased each year in New Zealand, and overall, in Australia.

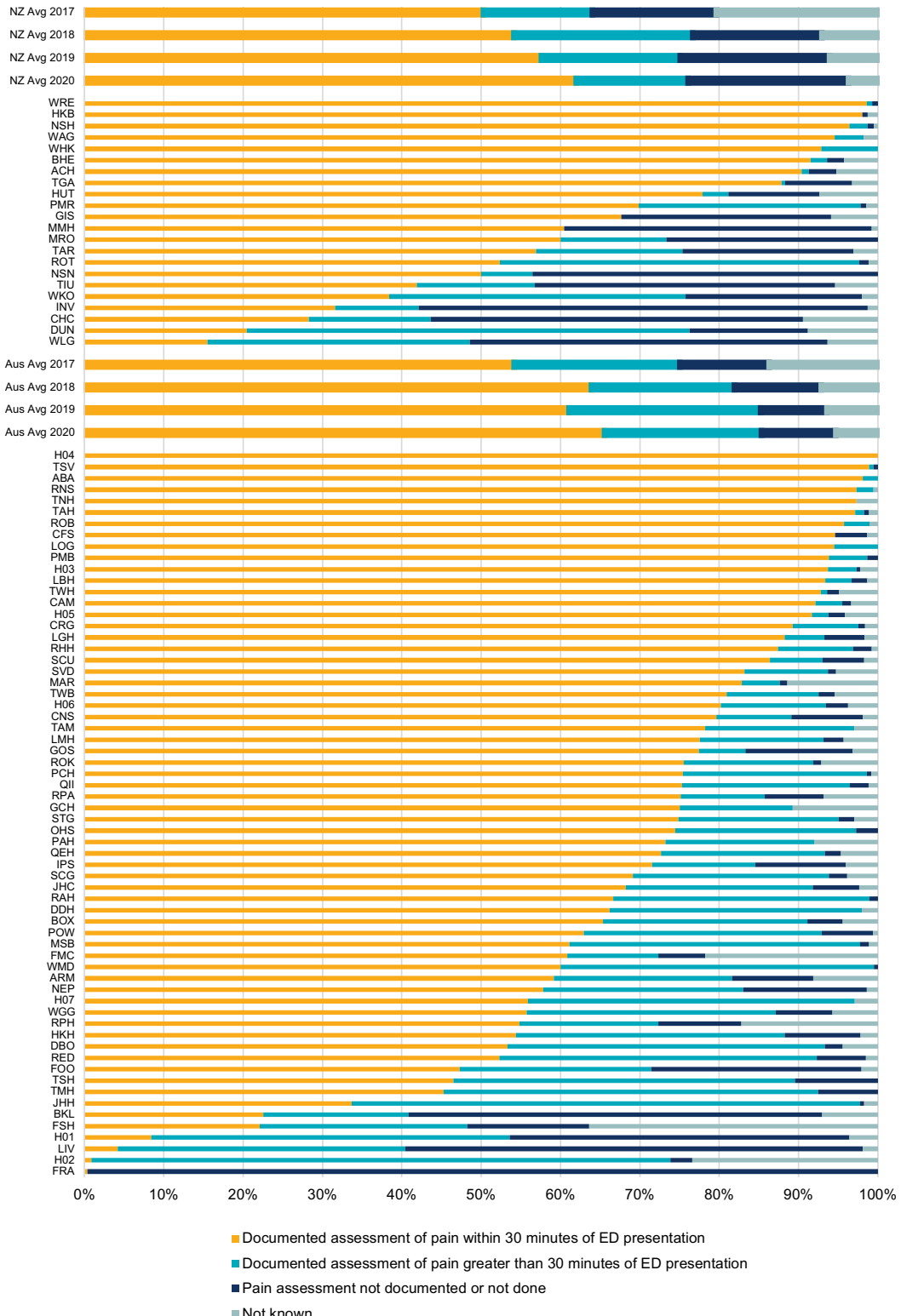


FIGURE 16 Pain management in the Emergency Department (ED)

Sixty-one percent of New Zealand and 70% of Australian hip fracture patients received analgesia either in transit (by paramedics) or within 30 minutes of arrival at the ED.

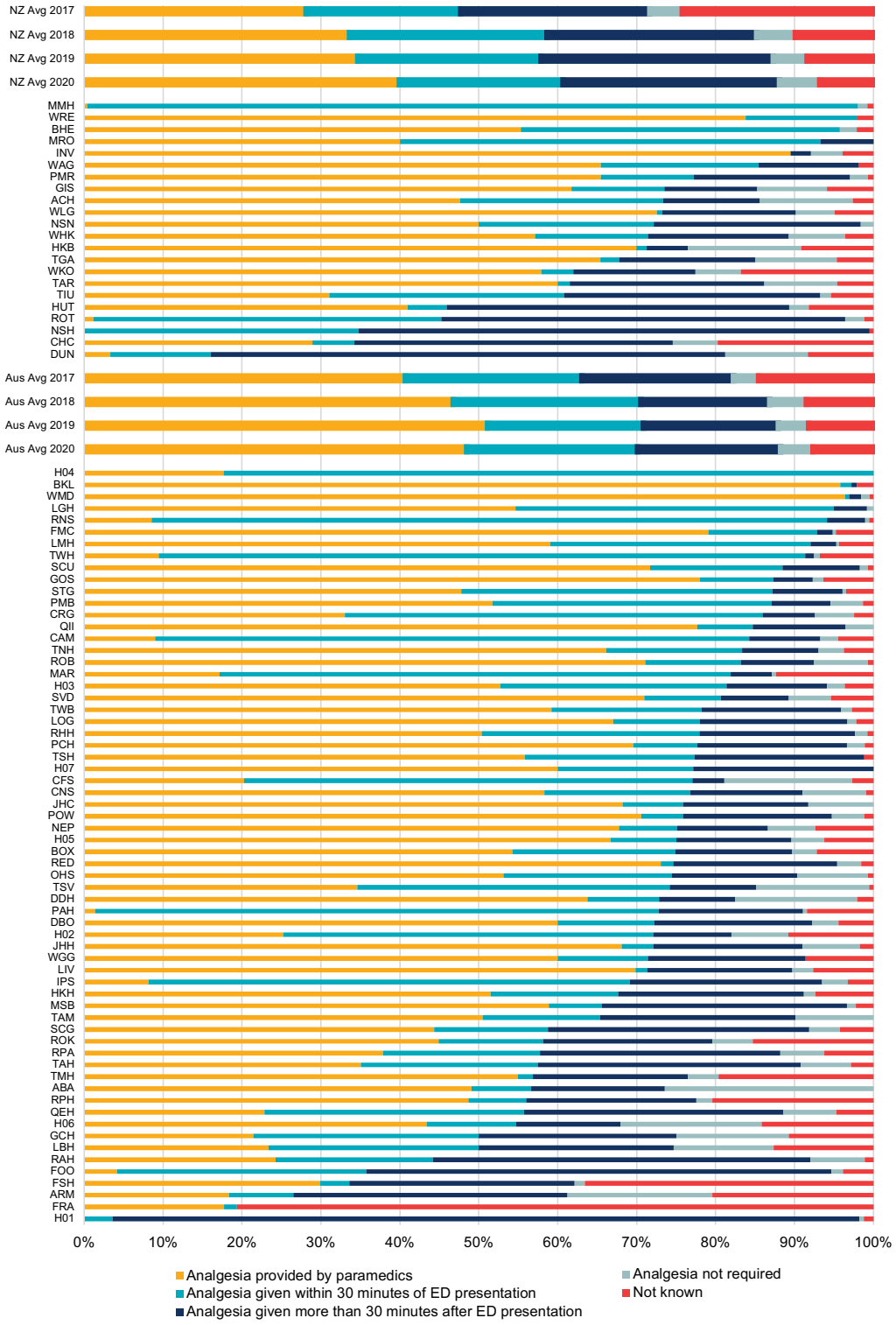
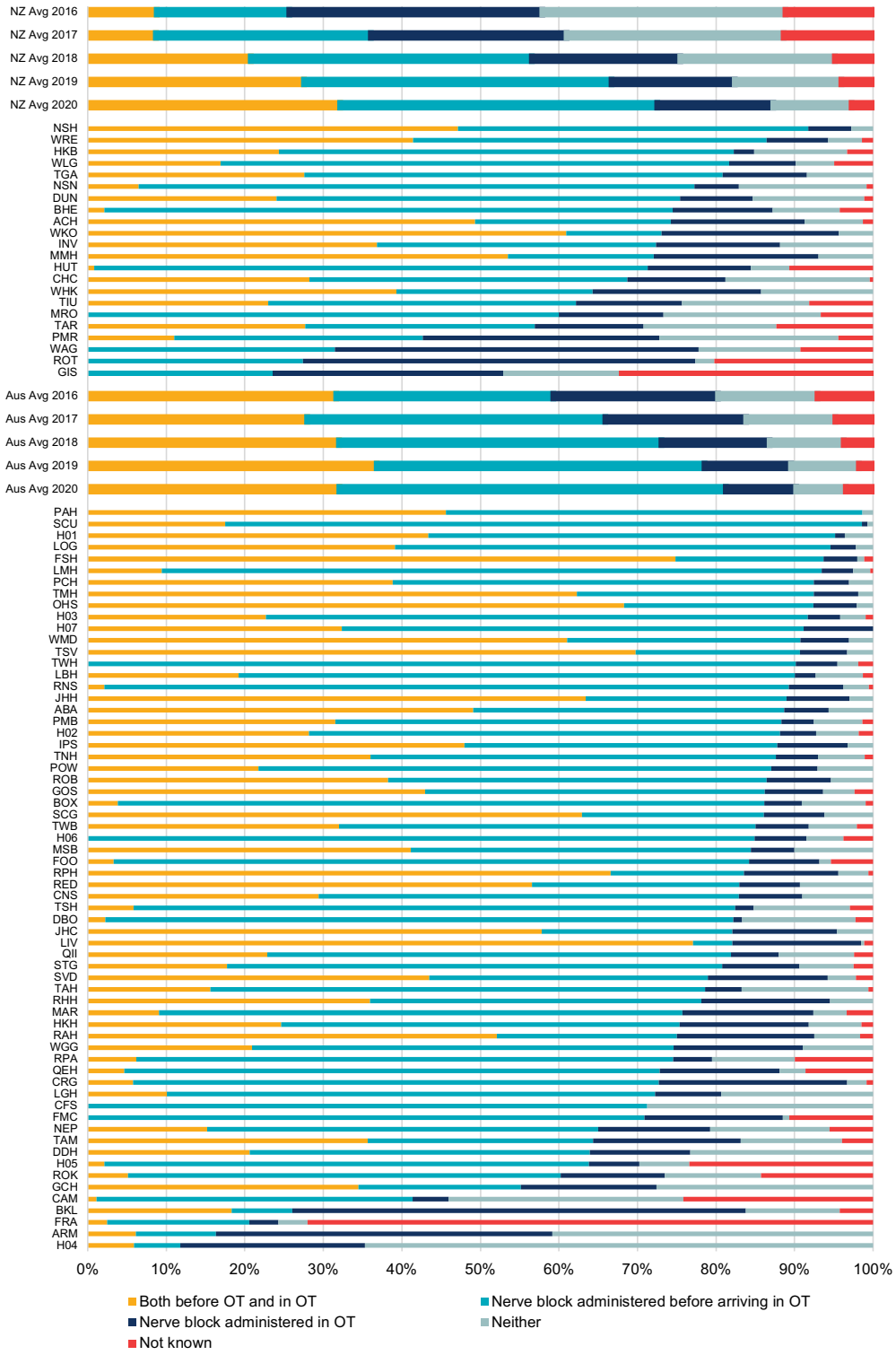


FIGURE 17 Use of nerve blocks

The increased use of nerve blocks to manage preoperative pain seen in previous years continued in 2020. In New Zealand, 72% of patients received a nerve block before surgery and in Australia, 81% of patients had a nerve block administered before surgery.



COLLABORATING TO ENHANCE HIP FRACTURE CARE

The Agency for Clinical Innovation (ACI) from New South Wales (NSW) Health is continuing to collaborate with clinicians involved in the provision of hip fracture care. Recently, in partnership with Southern NSW and Hunter New England Local Health Districts, two pain management workshops were successfully delivered.

The ACI Pain Management Clinical Leads, Dr Jenny Stevens and Julie Gawthorne, discussed practical strategies on how to effectively translate knowledge into practice to meet the Australian Commission on Safety and Quality in Health Care Hip Fracture Care Clinical Care Standard. Local multidisciplinary teams met to reflect on current practice and network with others to share ideas on improving hip fracture care. Clinicians were given the opportunity to gain knowledge and skills in pain assessment and management of patients with a hip fracture, including the appropriate use of Fascia Iliaca Blocks (FIB).

Future plans include having FIB training resources and an accreditation pathway accessible to clinicians across NSW through the My Health Learning portal.

For more information on NSW Leading Better Value Care Hip Fracture Care initiative, please visit https://aci.health.nsw.gov.au/statewide-programs/lbvc/hip-fracture-care

> This is part of our core business as an acute pain service. It's exciting that we can now administer these blocks to support our patients, anaesthetic registrars and junior doctors in the Emergency Department.
>
> **Clinical Nurse Consultant, NSW**

SECTION 3: SURGERY AND OPERATIVE CARE

FIGURE 18 Treated with surgery

98% of hip fracture patients in New Zealand and 97% in Australia are treated surgically. It is expected that nearly all patients will benefit from surgery to alleviate pain and optimise function. Non-operative treatment may be a reasonable option in cases where surgery will not change the patient's outcome or for those with stable undisplaced fractures who are able to mobilise. A shared decision-making approach should be taken, considering the patient's preferences and goals of care.

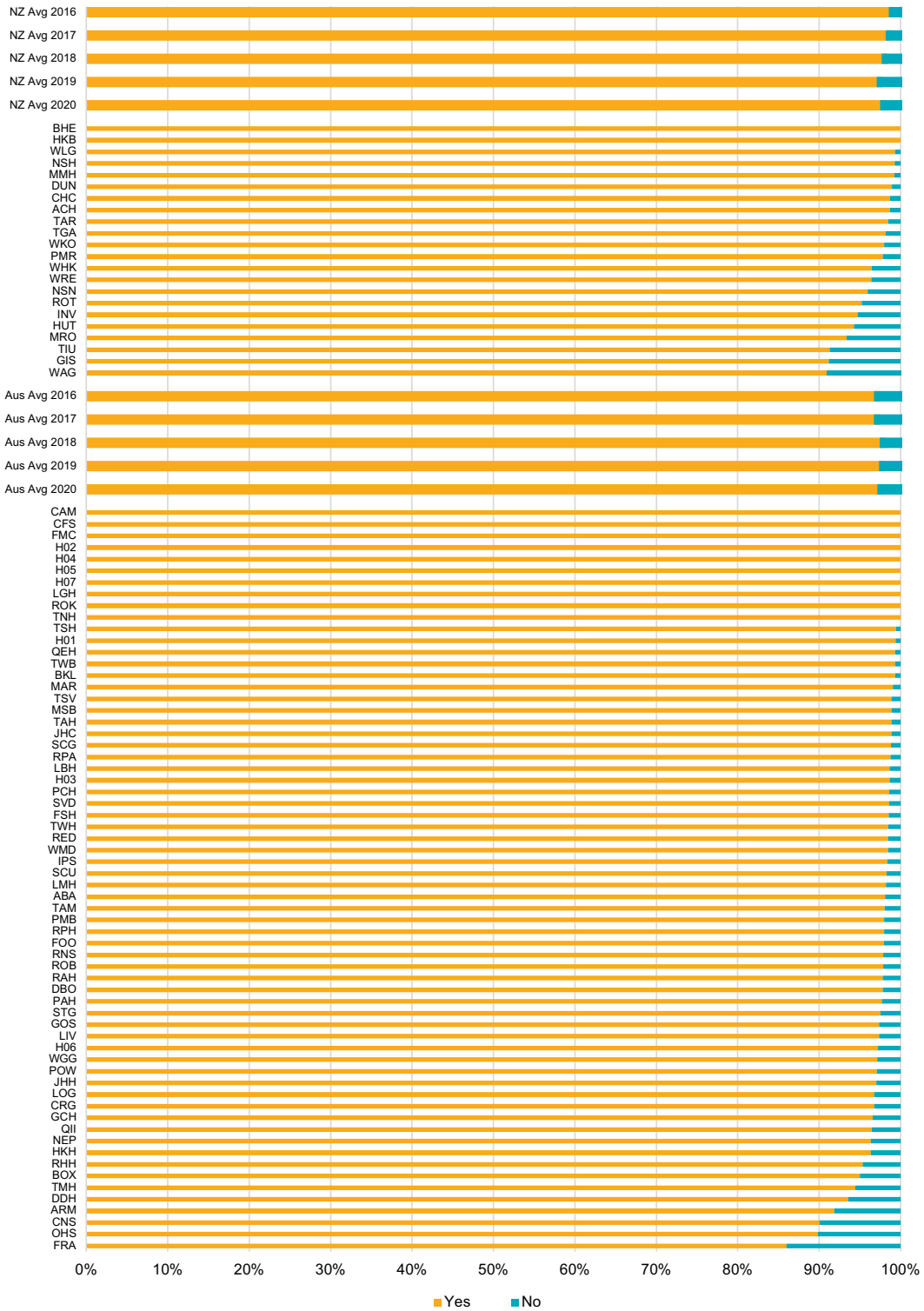
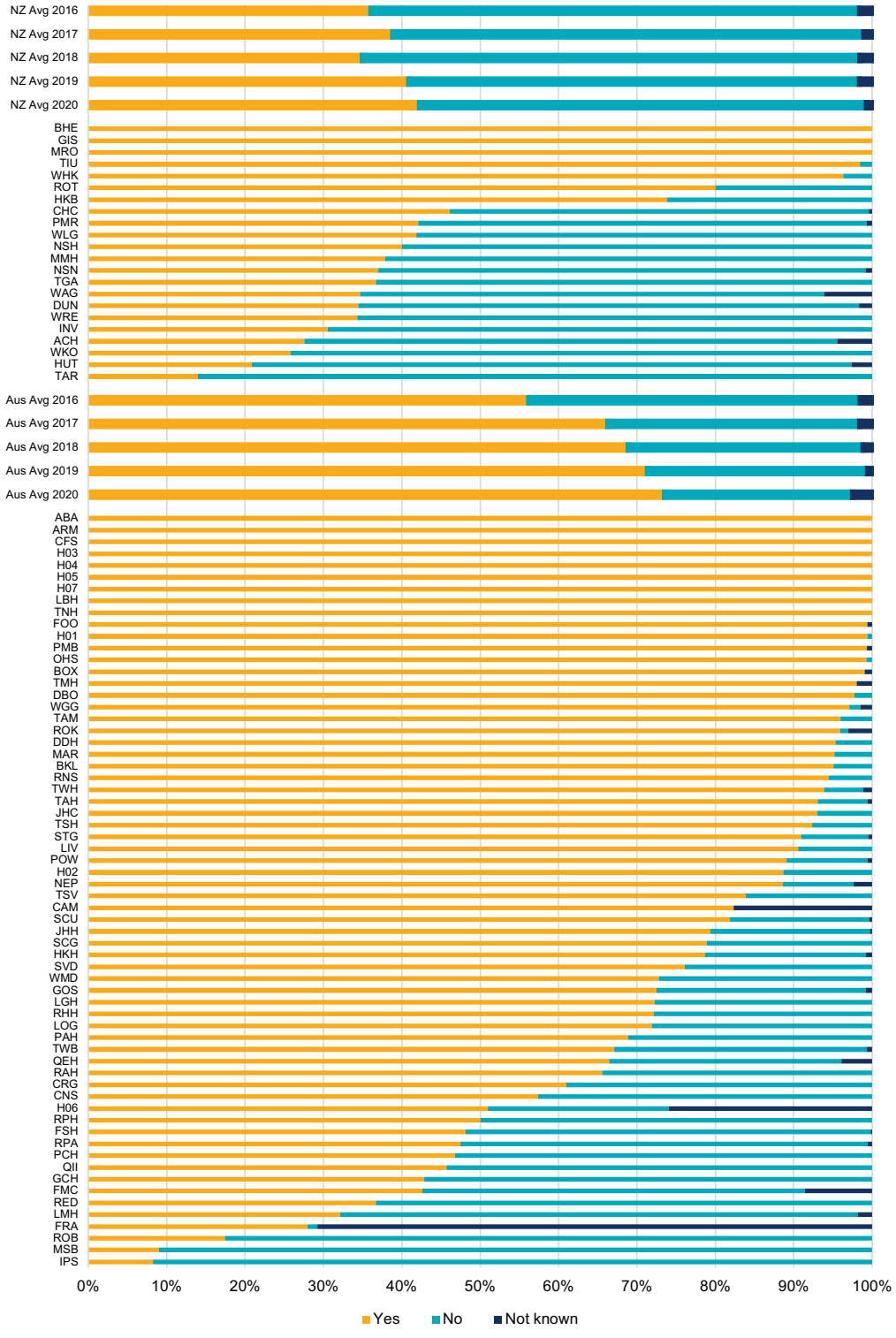


FIGURE 19 Consultant surgeon present and scrubbed during surgery

A consultant surgeon was present and scrubbed during surgery for 42% of cases in New Zealand and 74% of cases in Australia. On average, consultant surgeon presence has increased over time for the last five years in both countries. There is variation in the presence of consultant surgeons within Australia and New Zealand during hip fracture surgery, potentially associated with the complexity of surgery and hospital factors. Further research is needed to determine the optimum level of supervision required based on patient factors and surgical complexity[1].



[1] Fajardo Pulido D, Ryder T, Harris IA, Close JCT, Chehade MJ, Seymour H, Harris R, Armstrong E, Mitchell R. Patient, surgical and hospital factors associated with the presence of a consultant surgeon during hip fracture surgery. Do we know the answer? ANZ J Surg. 2021 Apr 20. doi: 10.1111/ans.16867. Epub ahead of print. PMID: 33876535.

CUTTING TIME TO SURGERY IN NELSON MARLBOROUGH DHB

We wanted to improve the way we delivered hip fracture care to older adults admitted to hospital - to get patients back on their feet by aiming for surgery the same or next day. Using the Hip Fracture Care Clinical Care Standard and ANZ Guideline for Hip Fracture Care, the teams at Wairau and Nelson hospitals have implemented a hip fracture pathway and pre-surgery optimisation guidelines. We involved the whole multidisciplinary team in both hospitals developing a hip fracture care pathway from the Emergency Department to rehabilitation, prioritising hip fracture surgery on the theatre lists and early frequent mobilisation. Median time to surgery is presently 19.4 hrs in Nelson and 20.7 hrs in Wairau.

Sharing the hip fracture data regularly with the wider team has helped to maintain momentum gradually increasing compliance with more of the Hip Fracture Clinical Care standards. The present focus is improving bone protection for all patients experiencing fragility fractures, having just received ACC funding for this service.

Margie Burt, (NMDHB Surgical Nurse Educator and Hip fracture Co-ordinator)

Sharing the hip fracture data regularly with the wider team has helped to maintain momentum gradually increasing compliance with more of the Hip Fracture Clinical Care standards.

FIGURE 20 Average time to surgery excluding transferred patients

Calculation of time to surgery is the difference between the date and time of initial presentation and anaesthetic start time. This figure excludes patients transferred from another hospital to the operating hospital. This year, the median time between presentation and surgery in New Zealand was 24 hours (average time to surgery 33 hours). In Australia, the median time to surgery was 28 hours (average time to surgery 35 hours).

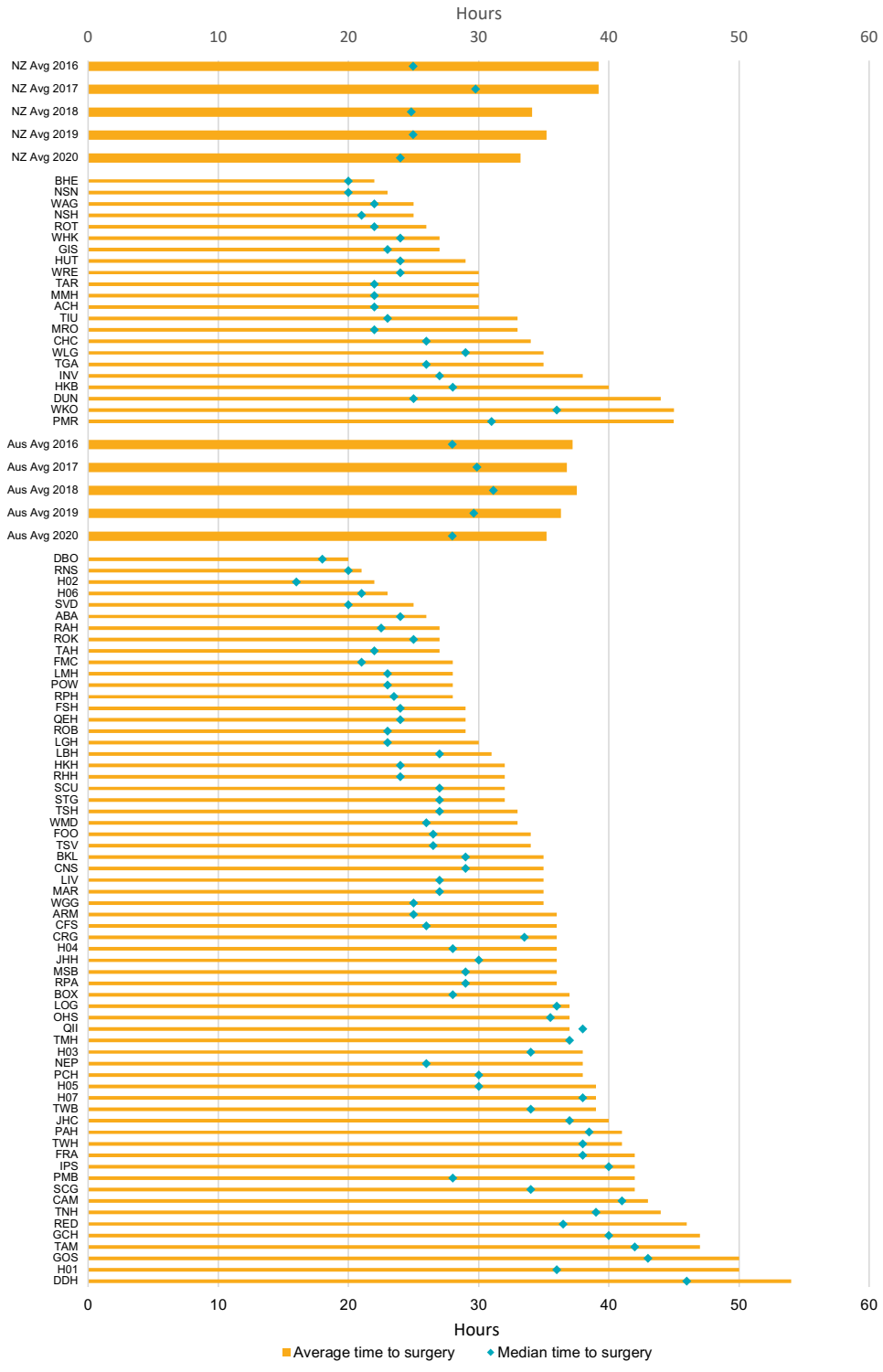


FIGURE 21 Average time to surgery – transferred patients only

Reporting time to surgery for transferred patients includes the time spent at the presenting hospital and reflects the treatment delays that result from not having expedited pathways for the transfer of hip fracture patients, or not transferring patients directly to operating hospitals. The average time to surgery increases to 47 hours for transferred patients in both countries. This is reported for six New Zealand hospitals and 34 Australia hospitals with ten records or more.

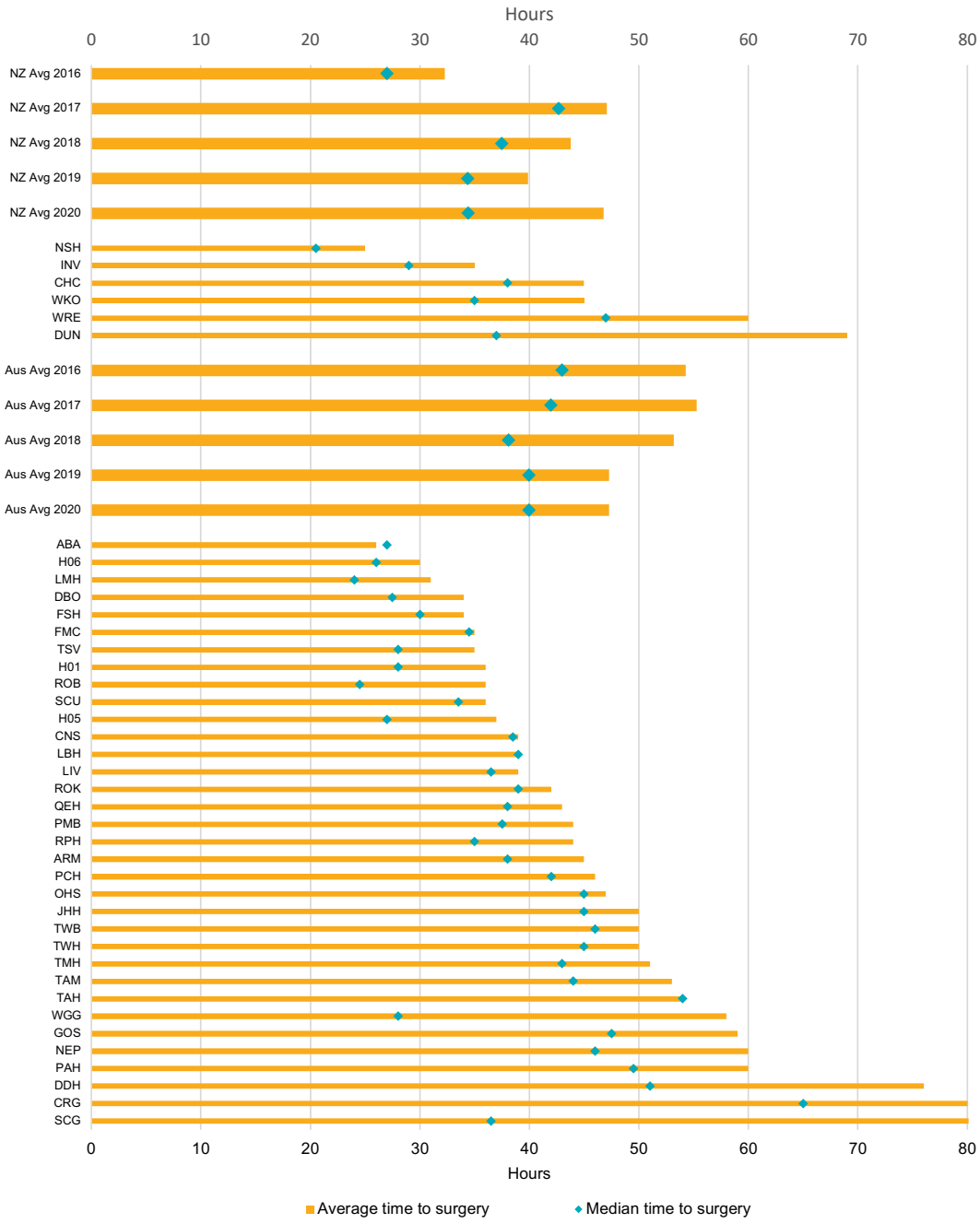


FIGURE 22
Surgery within 48 hours

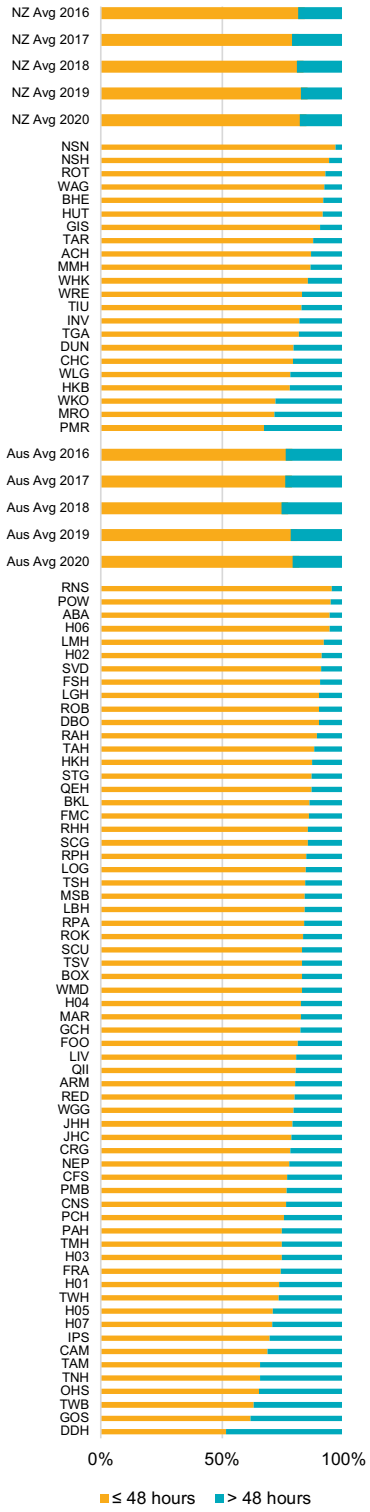
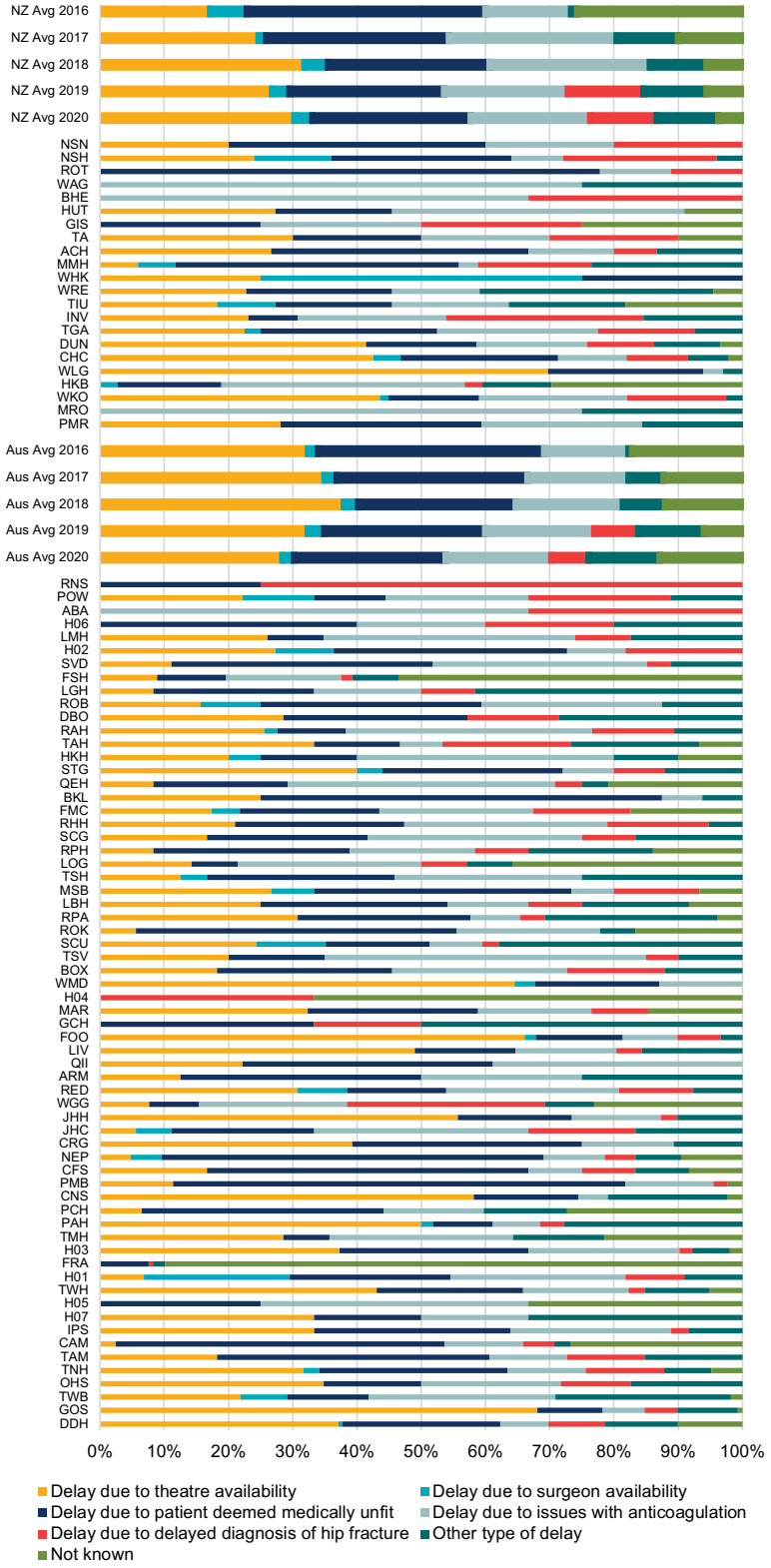


FIGURE 23
Reason for delay longer than 48hrs



Figures 22 and 23 include both transferred patients and patients admitted directly to the operating hospitals. Prompt hip fracture surgery has been demonstrated to reduce morbidity, hasten functional recovery and reduce length of stay. Figure 22 shows that 83% of patients in New Zealand and 80% of patients in Australia who underwent surgery were operated on within 48 hours of presentation to the first hospital. This is unchanged from 2019. Figures 23-25 highlight reasons for delay and provide areas of focus for improvement

Theatre availability remains the most common reason for delay to surgery beyond 48 hours

FIGURE 24 Reason for delay > 48 hrs for New Zealand

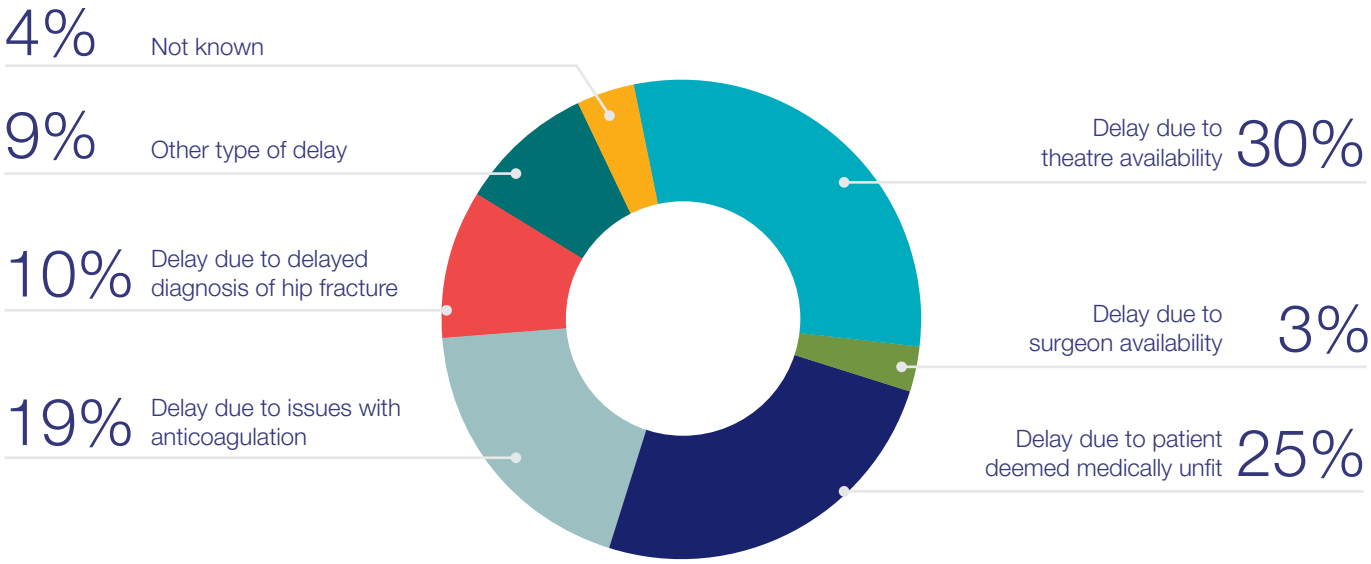
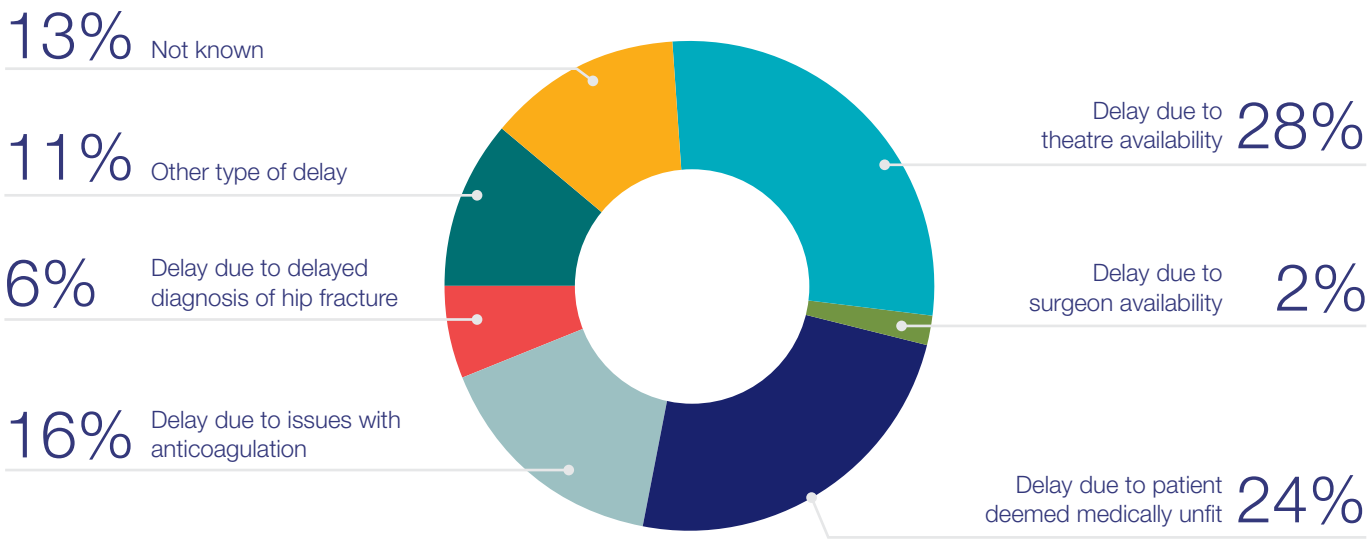


FIGURE 25 Reason for delay > 48 hrs for Australia



GOSFORD – TIME TO SURGERY AND THEATRE ACCESS

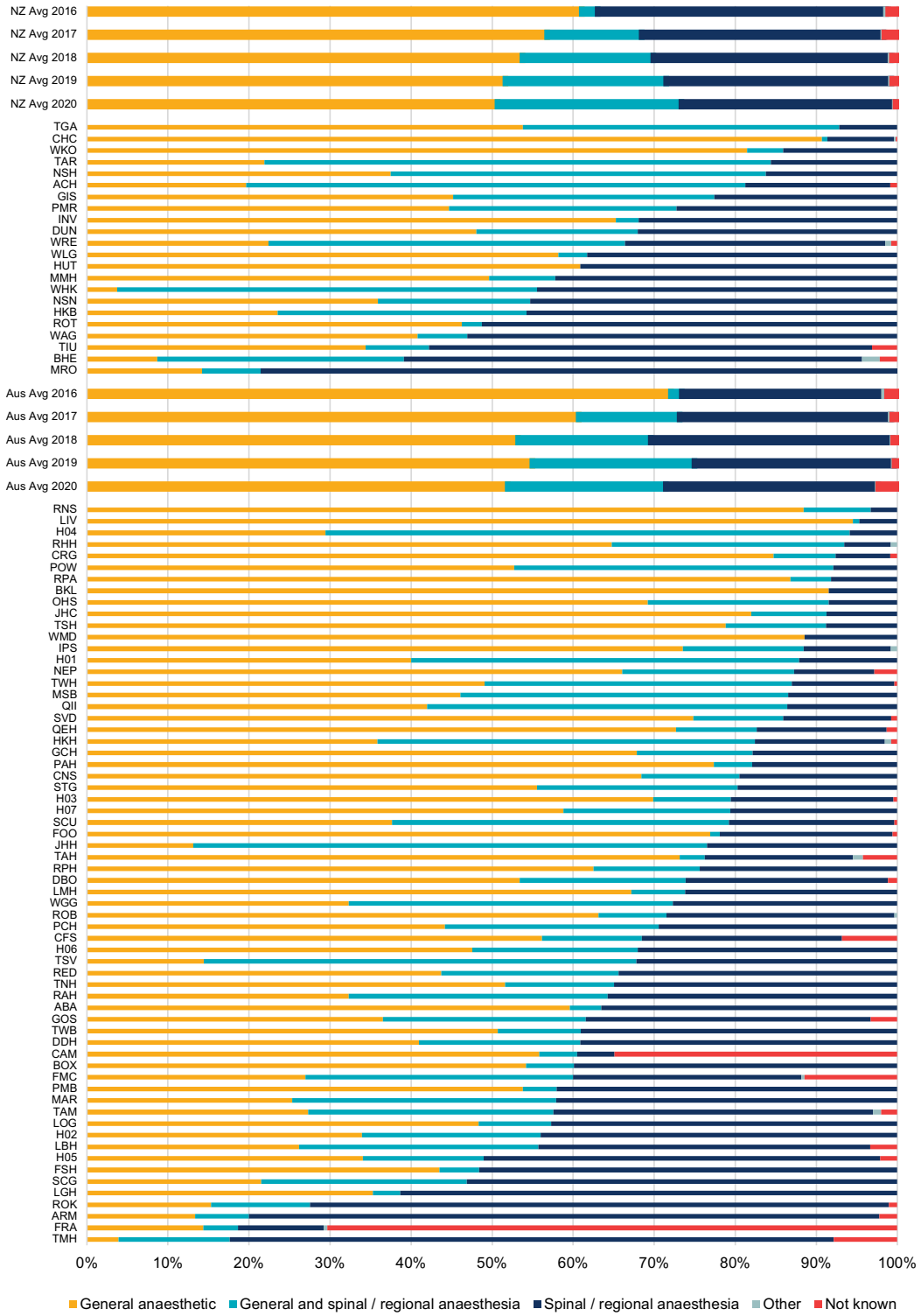
For the year 2020/21, Central Coast Health has shown a significant improvement in acute length of stay, which is now down to 6.5 days, and pain management, with up to 88% of patients having early pain assessments and the administration of regional blocks. Although the Local Health District is made up of several hospitals, all of our fractured NOF patients are transferred and receive their procedure at Gosford Hospital.

Our Hip Fracture Steering Committee consists of orthopaedic surgeons and trainees, operating theatre staff, medical and nursing staff, senior clinical directors, allied health and our ortho-geriatricians, data managers and hospital improvement specialists, following the engagement of the Leading Better Value Care initiative (NSW Agency for Clinical Innovation). We have focused on areas such as: inter-hospital patient transfers to improve our time to surgery and consultant surgeon presence during surgery.

We found that our most useful change was to ensure patients with a fractured NOF are scheduled as either first or second case on our daily trauma list. This strategy was implemented over a 6-month period and has improved our time to surgery and significantly impacted the overall acute length of stay and outcome of our patient's rehabilitation.

FIGURE 26 Type of anaesthesia

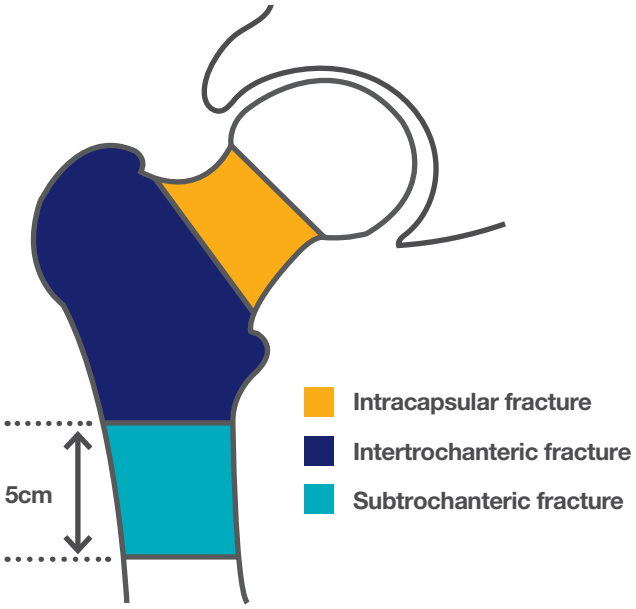
Seventy-three percent of people in New Zealand and 71% in Australia had a general anaesthetic with or without regional anaesthesia. Marked variation remains between hospitals and likely reflects the preference of the anaesthetist or the department.



HIP FRACTURE TYPES AND SURGERY

The term "hip fracture" is used to describe different types of fracture of the proximal (upper) femur. The types of hip fracture are classified by the location of the fracture. Classification of the type of hip fracture is important, as it will determine the most appropriate management of the fracture. See Image 2 for the terms used to identify the zones of hip fracture.

Image 2: Zones of hip fracture



The types of fracture seen at each site (Figure 27) are consistent with expectations in that between 5% and 10% are subtrochanteric, and the remainder are divided fairly evenly between intertrochanteric and intracapsular (subcapital) fractures. Sites with wide variation from the average may reflect low numbers of hip fracture cases or issues with the classification of the type of fracture.

Different fracture types are generally treated by different surgical techniques. There is variation in the use of the two most common types of implant, a sliding hip screw and an intramedullary nail. Fractures occurring in the intracapsular area (femoral neck) usually undergo an arthroplasty (replacement). Hemiarthroplasty involves removing the head of the femur (ball of the hip joint) that has broken away from the shaft of the bone and replacing it with an artificial (metal) ball that is held in place by a connected stem that sits inside the upper end of the femur (thigh bone). A total hip arthroplasty involves the same procedure, but also involves replacing the socket of the hip joint with a metal and plastic cup. Undisplaced fractures (Figure 29) may be treated by inserting screws across the fracture rather than replacing the broken part of the bone (arthroplasty).

Fractures that occur in the extracapsular region (trochanteric) generally undergo internal fixation with an intramedullary nail or a sliding hip screw and plate. Figures 28 and 29 (pages 49 and 50) show the proportions of intracapsular fractures (femoral neck or subcapital fractures) treated with various techniques, reported separately for undisplaced and displaced fractures.

Although the proportion of displaced femoral neck fractures treated with total hip arthroplasty is increasing, hemiarthroplasty remains the most common treatment for this fracture type. Intertrochanteric fractures are usually treated by internally securing the fractures using metallic devices, rather than replacing the broken part (arthroplasty). There is variation in the use of the two most common types of implant a sliding hip screw and an intramedullary nail (Figure 30 on page 51). Change in practice over time can be seen with more intramedullary nails used over sliding hip screws. The ANZHFR does not distinguish between simple and comminuted or unstable fracture types and this may influence the choice of implant. For subtrochanteric fractures, intramedullary fixation is recommended (Figure 31 on page 52). The ANZ Guideline for Hip Fracture Care recommends the use of cemented stems for hip arthroplasty. Figures 32 and 33 show the rates of cement use reported by sites for both hemiarthroplasty and total hip arthroplasty.

NOTE: hospitals with fewer than ten (10) cases for any type of surgery have not been reported in Figures 28 to 33.

FIGURE 27 Fracture type

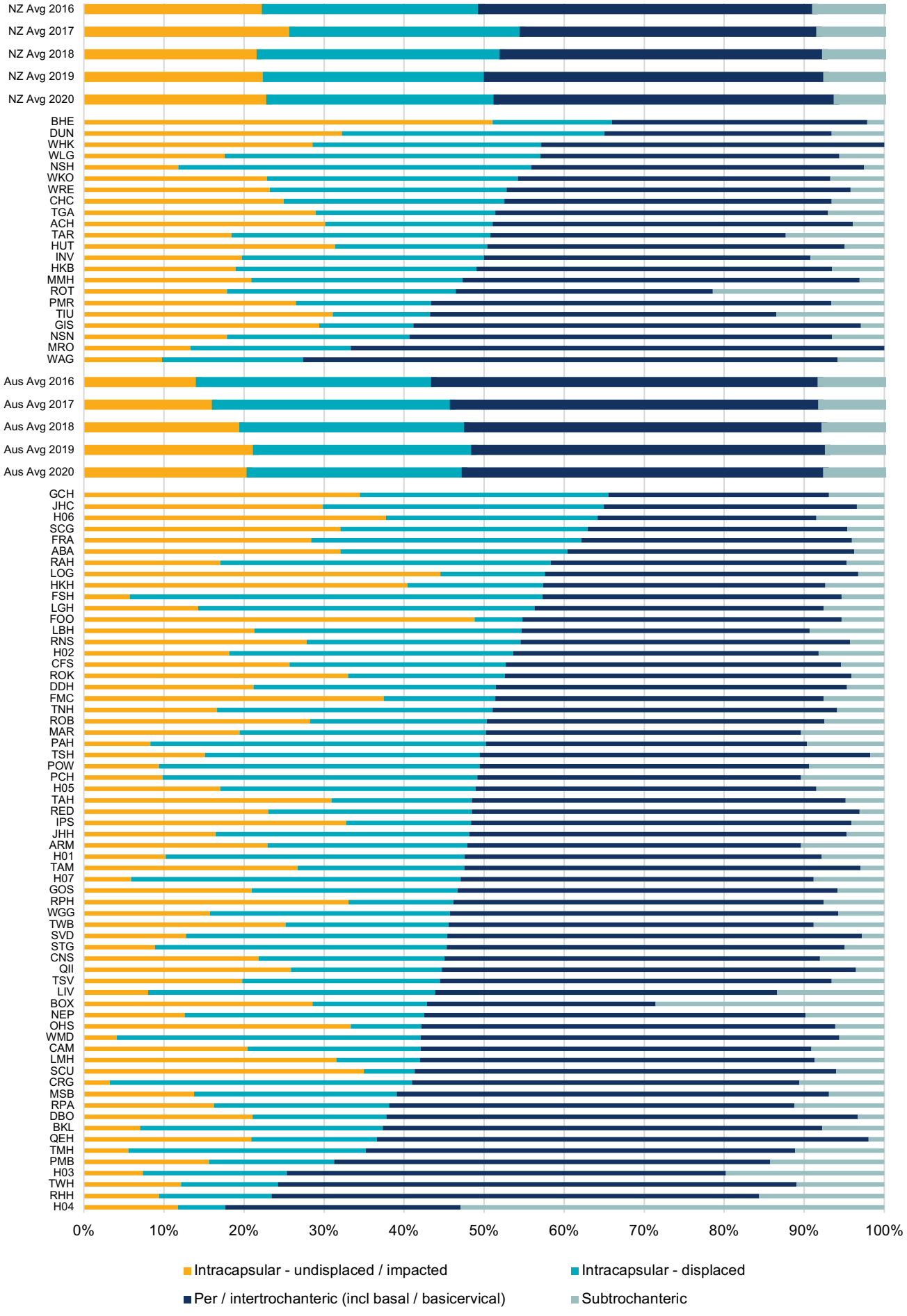


FIGURE 28 Procedure type for intracapsular undisplaced/impacted femoral neck fractures

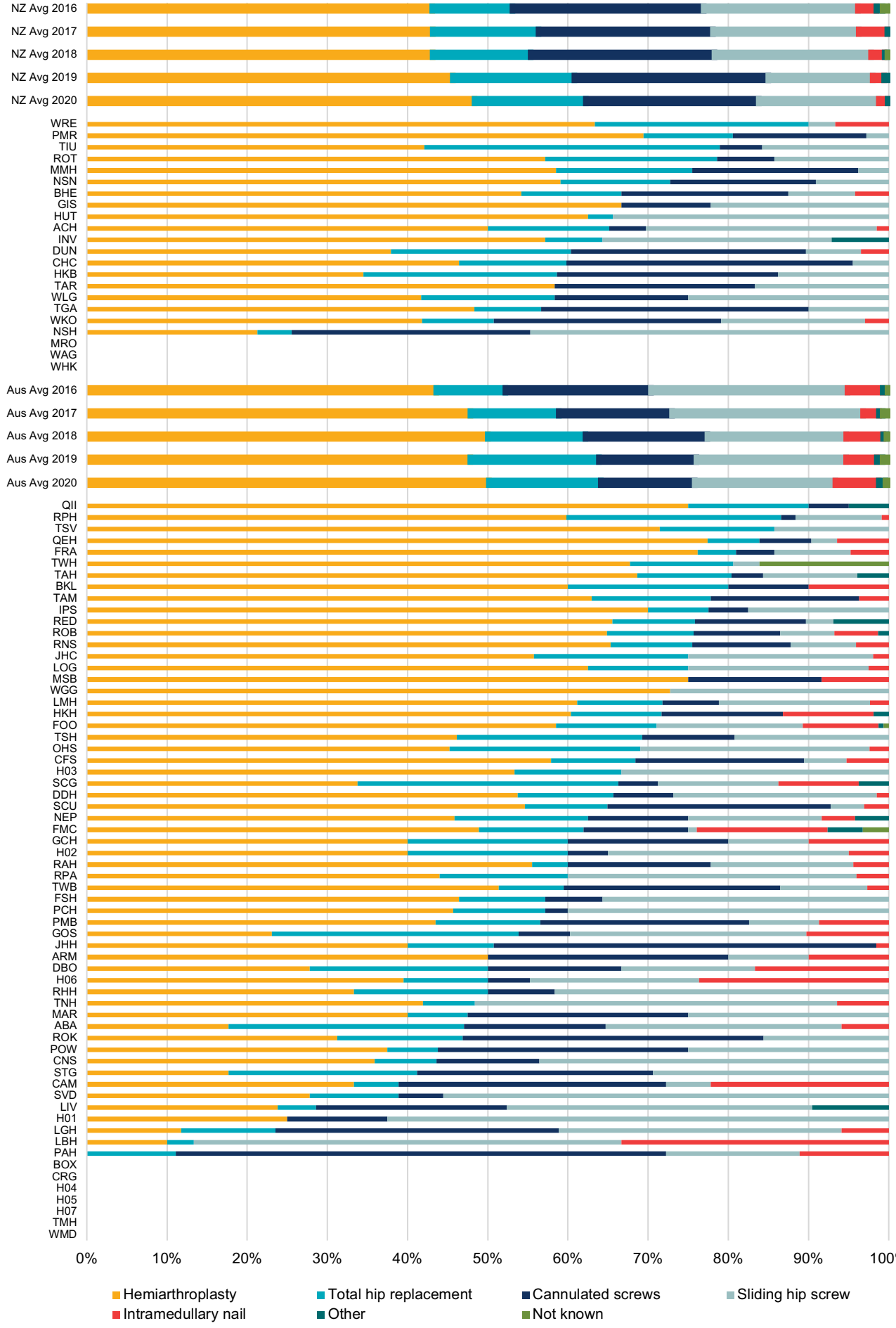


FIGURE 29 Procedure type for intracapsular displaced femoral neck fractures

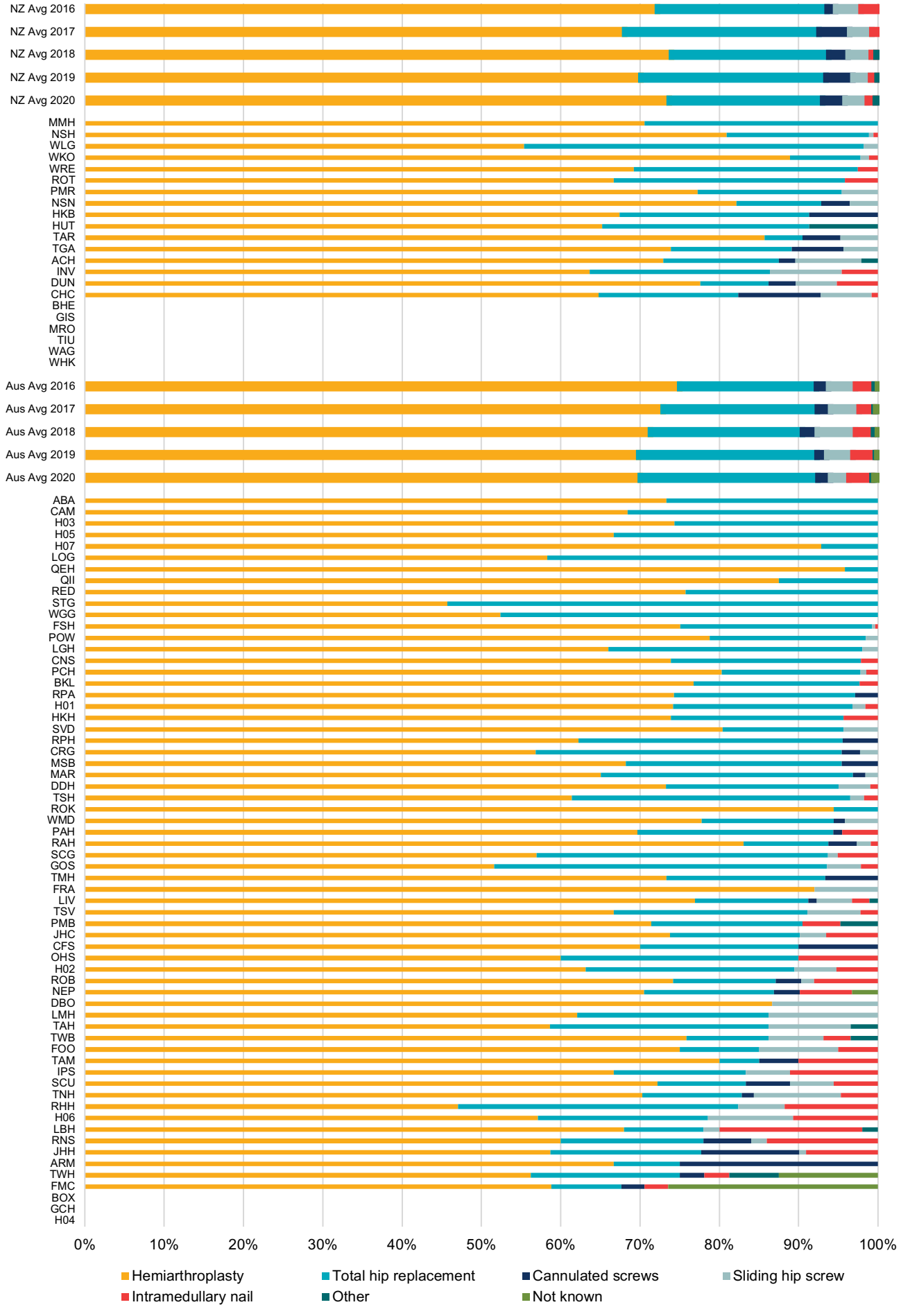


FIGURE 30 Procedure type for intertrochanteric fracture (incl basal / basicervical)

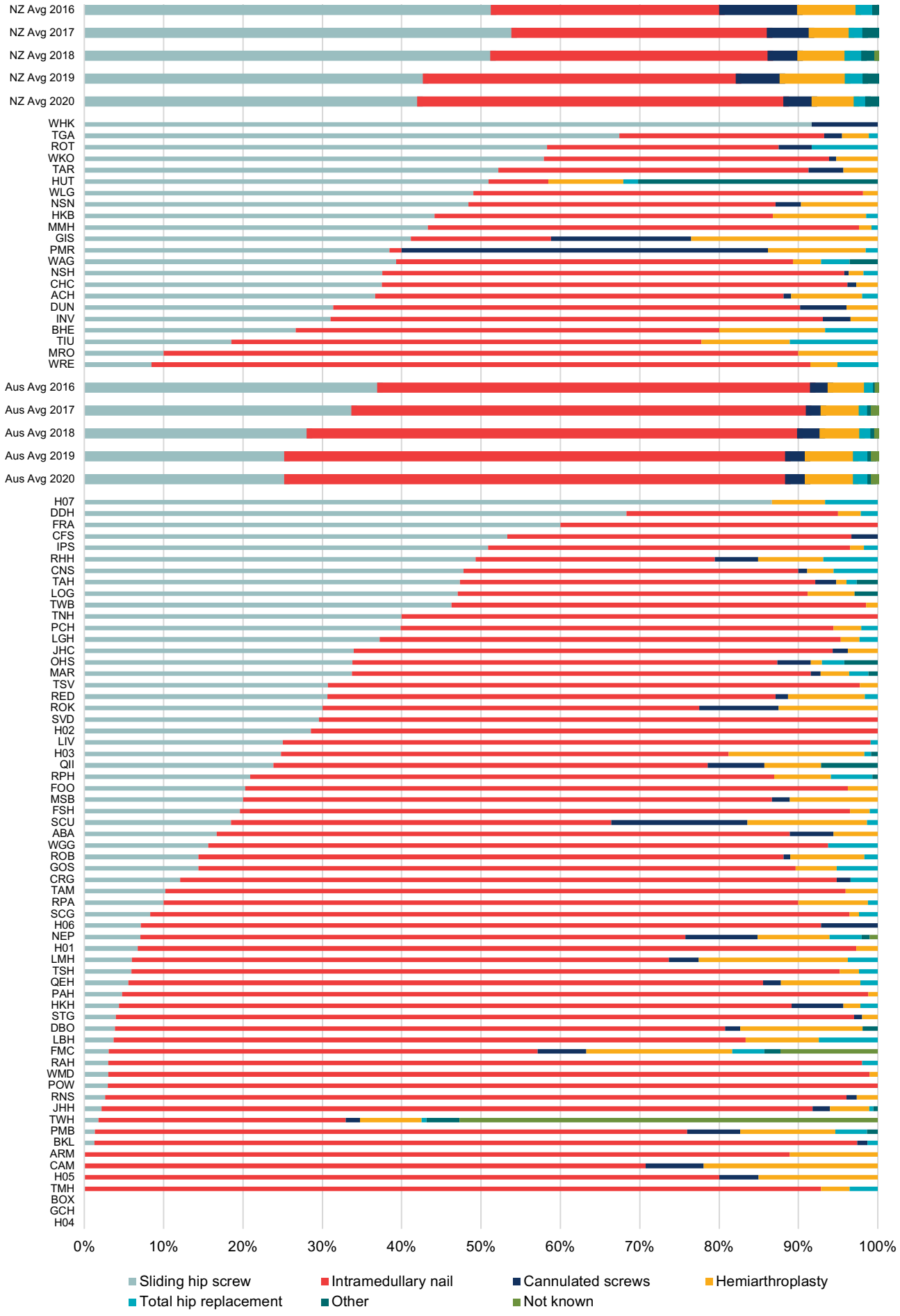


FIGURE 31 Procedure type for subtrochanteric fractures

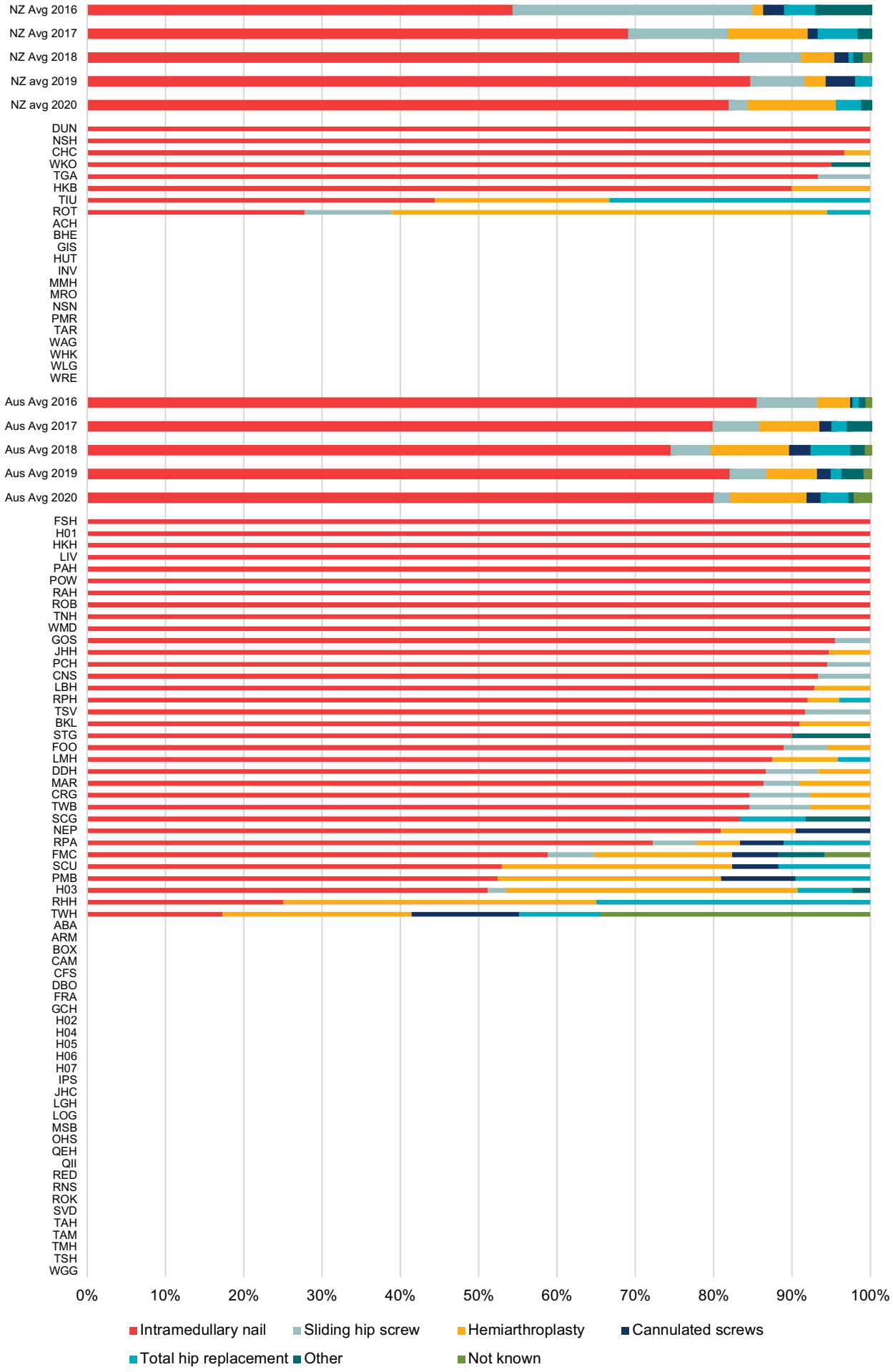


FIGURE 32 Hemiarthroplasty: use of cement

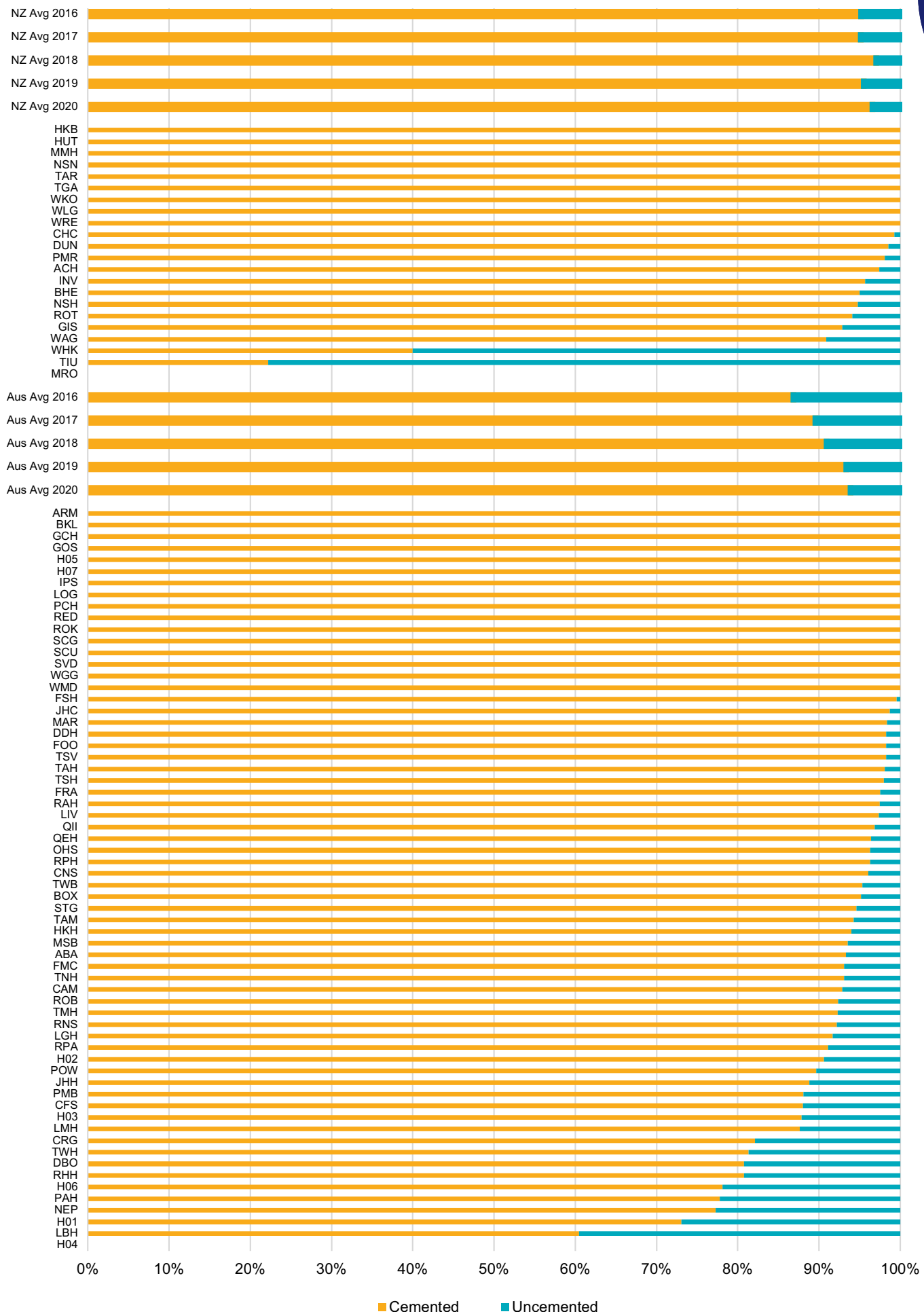
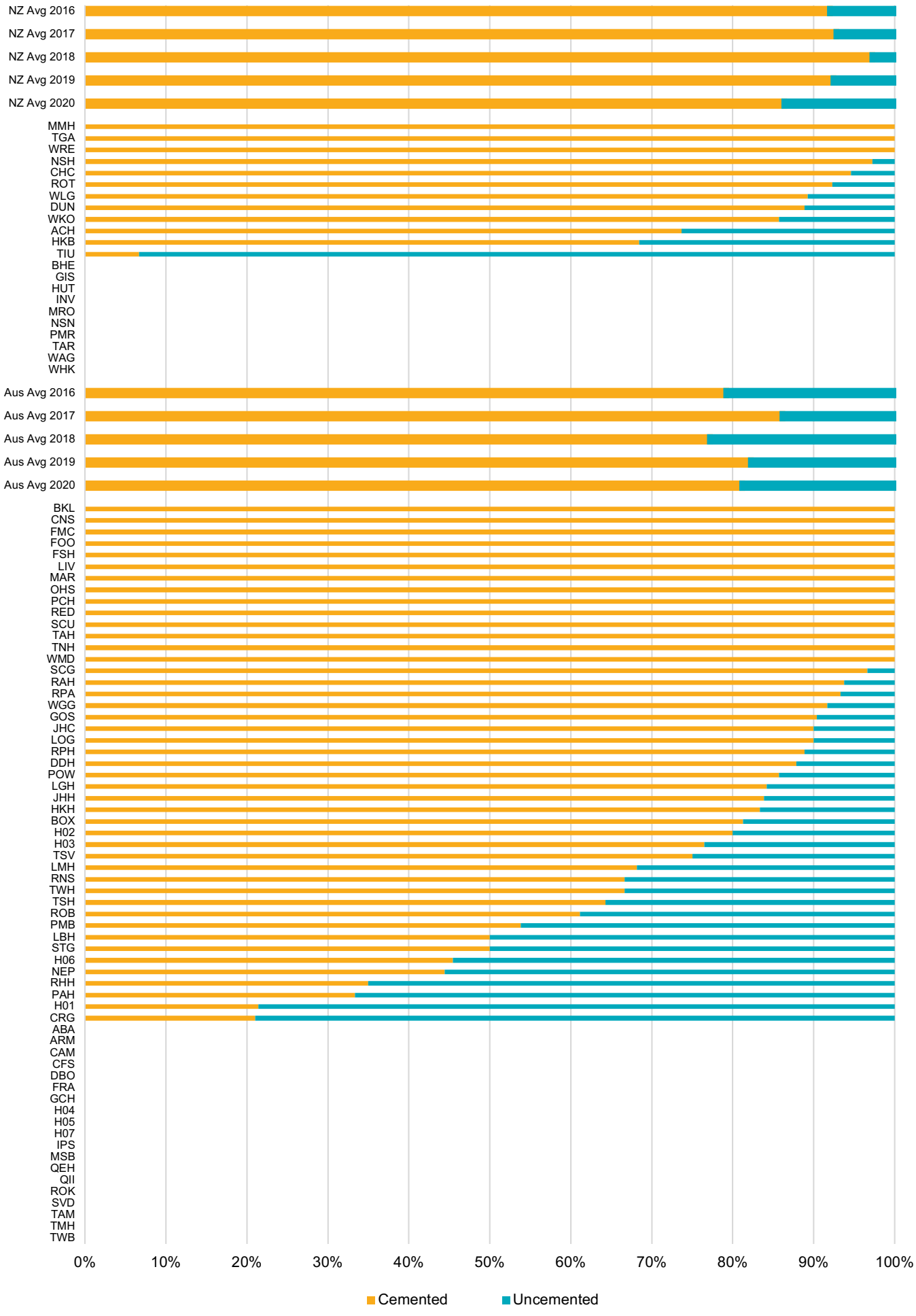


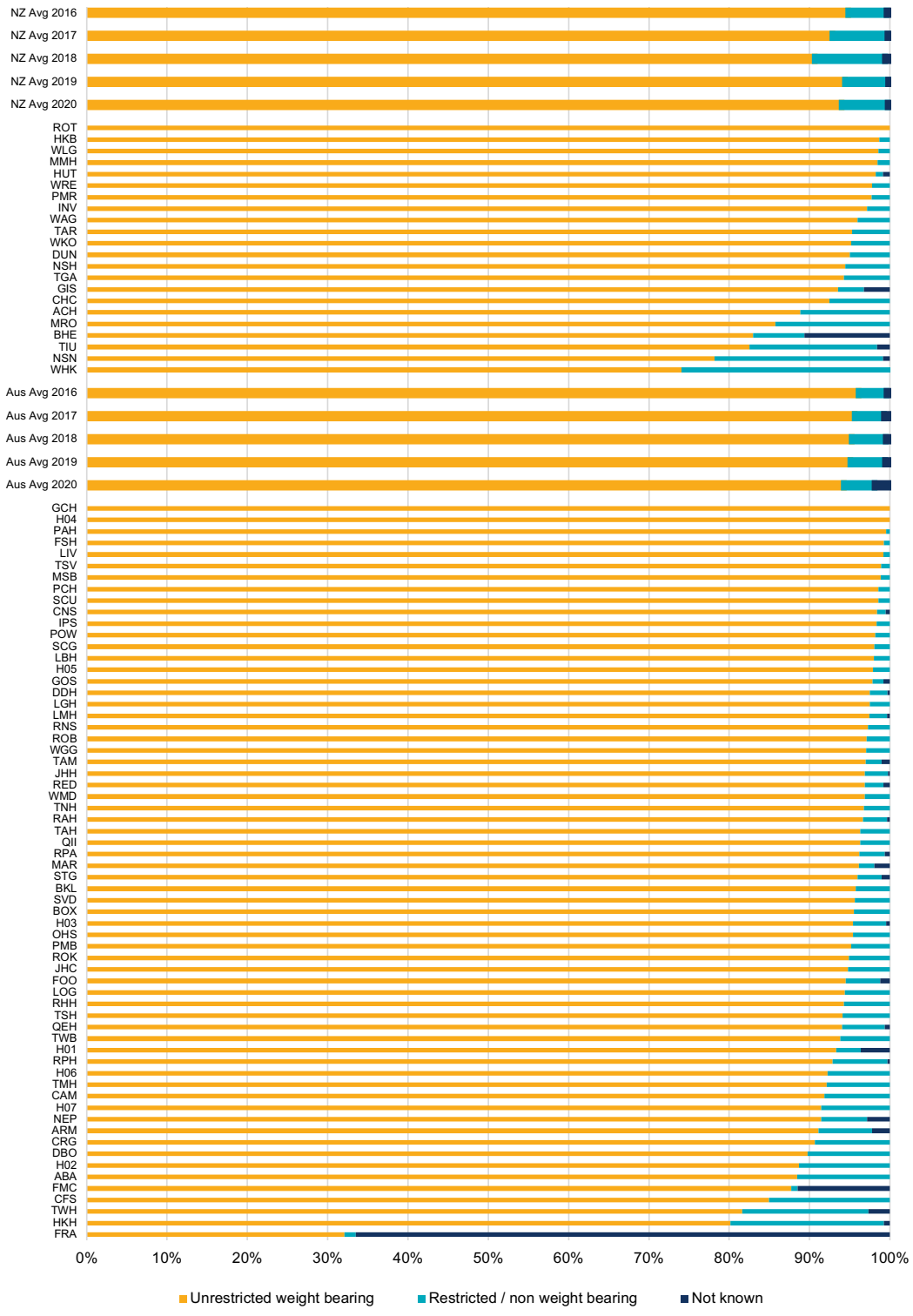
FIGURE 33 Total hip replacement: use of cement



SECTION 4: POSTOPERATIVE CARE

FIGURE 34 Weight bearing status after surgery

Allowing immediate unrestricted weight bearing after surgery supports early rehabilitation and functional recovery. Figure 34 shows that 94% of patients in New Zealand and Australia were permitted to weight bear without restriction after surgery.



While we are proud of our successes, our team is committed to using the ANZHFR data to guide ongoing service improvements.

PRINCESS ALEXANDRA HOSPITAL (PAH)

The Princess Alexandra Hospital (PAH) in Brisbane operates under an Orthogeriatric shared care model for patients with a hip fracture. The multidisciplinary team is very pleased with the results of this year's report, particularly:

- 98% of our patients received a femoral nerve block in ED
- 100% of our patients had unrestricted weight bearing
- 98% of our patients had the opportunity to mobilise day 1 post-op
- 97% of our patients achieved first day walking
- A pressure injury rate half that of the Australian average
- An acute length of stay almost half of the Australian average

The team attributes our results to strong leadership in key positions such as the hip fracture Clinical Nurse Consultant (CNC) and the Orthogeriatric Consultant and Registrar, as well as respect from all staff of the important role played by each and every team member.

Patients receive regional analgesia on arrival to ED. A protocol for the insertion of femoral nerve catheters with a continuous regional infusion was developed 12 months ago in conjunction with the emergency and anaesthetic departments and highlights the continual drive for service delivery improvement in our team.

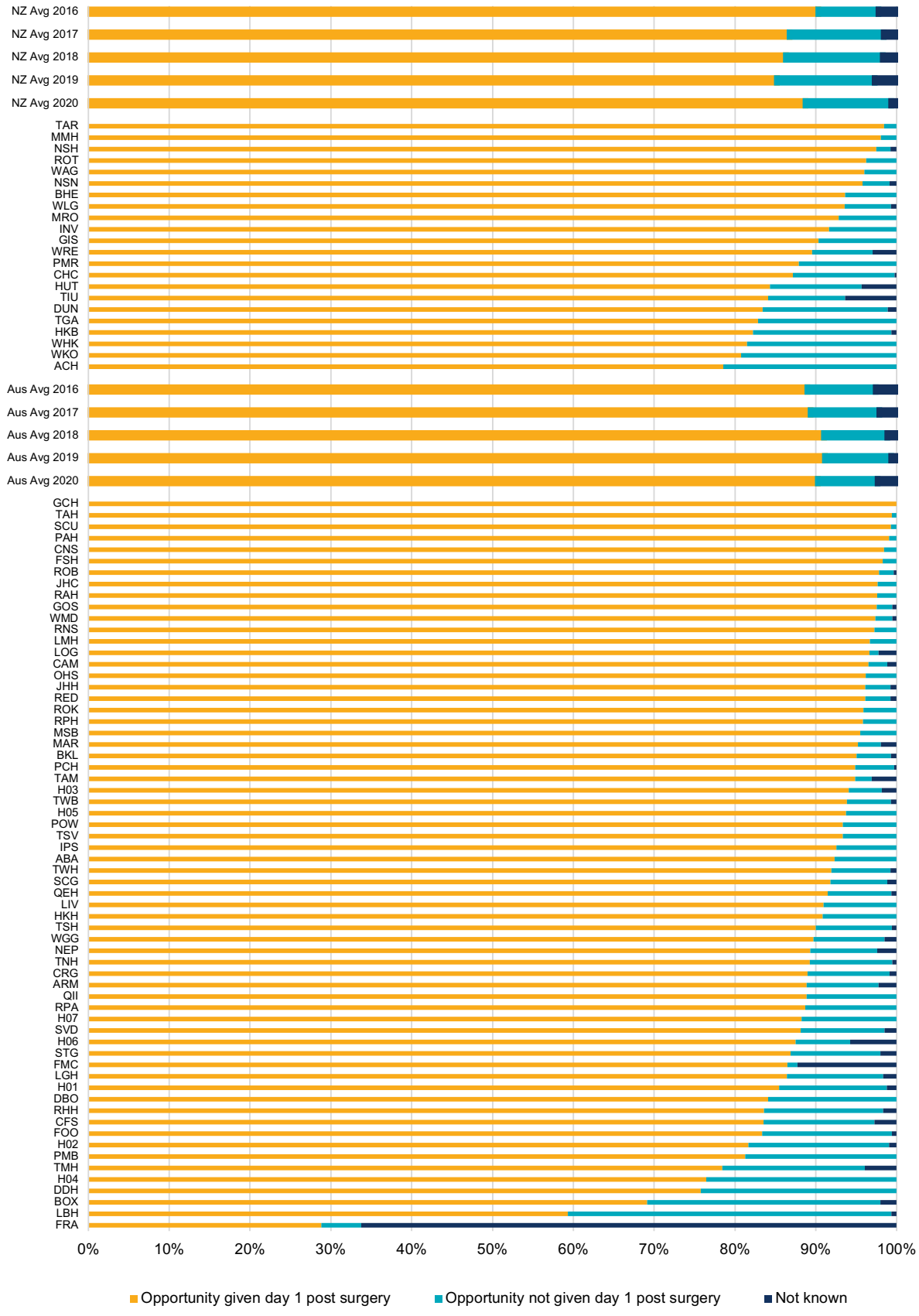
Our multidisciplinary team is committed to optimising patient well-being and reducing post-operative complications. Nursing staff and physiotherapists work closely to ensure mobilisation is incorporated into all aspects of post-operative care, such as sitting out for mealtimes, attending to regular toileting, and participating in hygiene cares. We feel this team approach has contributed to excellent outcomes in early mobility and reduced pressure injuries in our patients.

The short length of acute stay reflects multiple factors. However, key points of difference in our service includes:

- Our hip fracture CNC is the first point of contact of patient arrival to ED and plays a critical role supporting the patients' perioperative journey. She facilitates communication between health professionals, patients, and families, and supports interventions aimed at reducing both medical and surgical post-operative complications.
- The hip fracture CNC and orthopaedic NOF medical officer work together to ensure timely access to the daily hip fracture operating theatre list.
- The orthogeriatric team, including medical and allied health staff, assess and optimise patients preoperatively and commence early discharge planning to ensure efficient, safe transitions home or to subacute care.

FIGURE 35 Opportunity for first day mobilisation

Figure 35 shows that 89% of hip fracture patients in New Zealand and 90% in Australia were given the opportunity to mobilise the day after surgery.



84% of hospitals in Australia and 72% of hospitals in New Zealand can access weekend therapy services

FIGURE 36 Actual first day mobilisation

A new variable was included in 2020 to capture the proportion of patients with a hip fracture who actually mobilise on day one post surgery. Mobilise means the patient managed to stand and step transfer out of bed onto a chair/ commode and/or walk. This does not include only sitting over the edge of the bed or standing up from the bed without stepping/walking.

Despite 90% of patients being given the opportunity to mobilise on day one, 40% of patients in New Zealand and 49% of patients in Australia achieved first day mobilisation (Figure 36). Substantial variation exists between hospitals, which may partially reflect elements of care such as availability of weekend therapy.

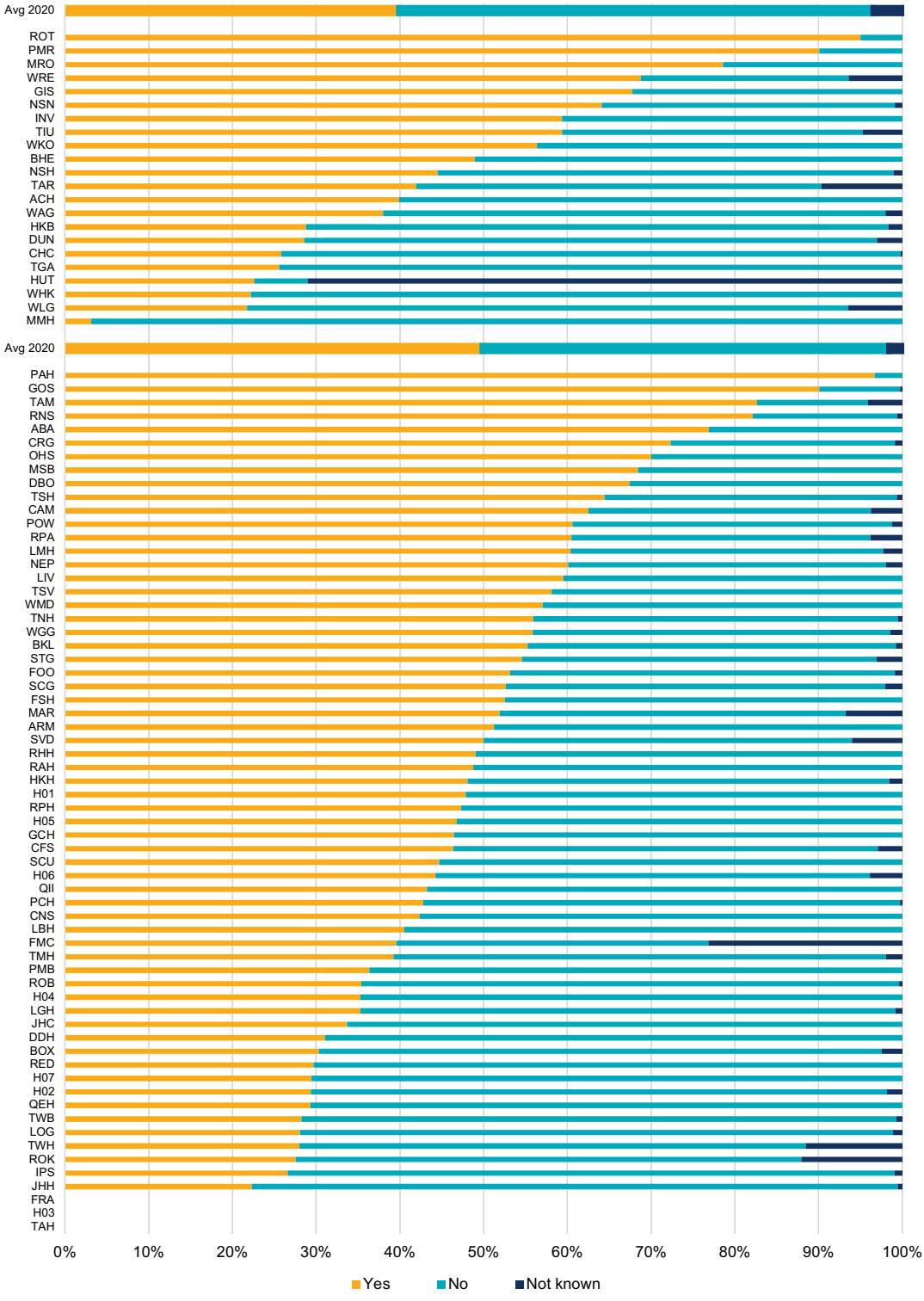
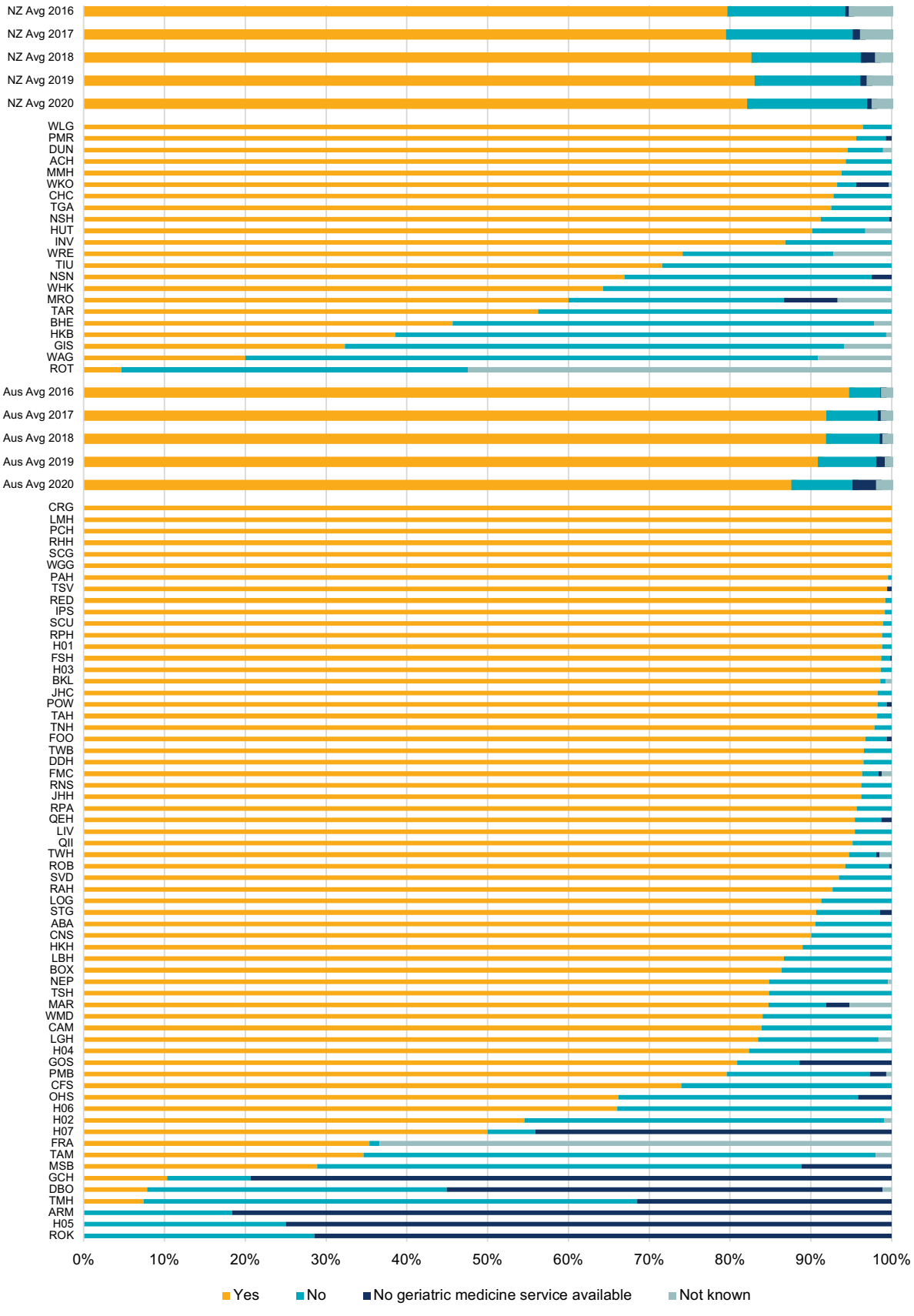


FIGURE 37 Assessed by geriatric medicine during acute admission

In New Zealand, 82% of hip fracture patients saw a geriatrician during their acute hospital stay, compared with 87% in Australia.



COVID'S IMPACT AT FRANKSTON HOSPITAL

We all appreciate that it takes a whole hospital approach to care for patients with a fractured hip. While we had many exciting ideas and plans to improve our hip fracture care at Frankston Hospital, the COVID-19 pandemic threw us a curveball in 2020. The COVID outbreak in the hospital led to more than 600 staff furloughed, including many in the orthogeriatric and orthopaedic team. There was a major re-structure of junior medical staffing, which included changing from unit/specialty-based allocation to location-based allocation. This resulted in junior doctors caring for patients outside of their specialty pathways. In addition, many staff were re-deployed to services of anticipated increased clinical needs, including our geriatric registrars and our associated investigator for the hip registry, which significantly increased the workload for the remaining staff hence impacting implementation of non-essential activities. The orthopaedic ward was converted to a COVID ward. As a result, patients with hip fracture were spread across multiple wards. Many staff were not experienced in caring for this vulnerable group of patients. We worked hard to provide education and resources to the different wards while adopting different ways to provide clinical care, such as virtual ward rounds, telehealth, and online meetings.

Apart from the impact on clinical staff, the COVID-19 pandemic also challenged how we have historically done things. For example, patients with hip fracture often needed COVID clearance before being brought to theatre, and this delay is reflected in the increased time to theatre from 25 hours previously to 38 hours in 2020. There were no visitors allowed, which was a challenge to every admitted patient but especially hard for those with cognitive impairment. Given that the priority was to provide safe and quality care with stretched resources while handling the operational inefficiencies brought on by the COVID measures, we were not able to manually collect many of the data for the hip registry as we relied on the JMOs from the orthogeriatric and orthopaedic teams to do data collection. This explains the many "unknowns" in this year's report. On a positive note, this is the first year that Frankston Hospital utilised routinely collected data from the electronic medical record such as basic demographics, length of stay and time to surgery to aid the population of the registry data leading to the reporting of 243 patient records (>95% of all cases), compared to 70-130 in the past few years.

I am very grateful for the dedication of all our team who persevered, adapted and rose to meet all the challenges of this unique year. We will continue to explore ways to improve our care for people with hip fractures.

Dr Angel Lee, Geriatrician and Principal Investigator

FIGURE 38 Hospital acquired pressure injuries of the skin

A pressure injury of the skin is a potentially preventable complication of hip fracture care. As a complication of a hip fracture, it is associated with delayed functional recovery and an increased length of stay. In New Zealand and Australia, 4% of patients were documented as acquiring a pressure injury of the skin during their acute hospital stay.

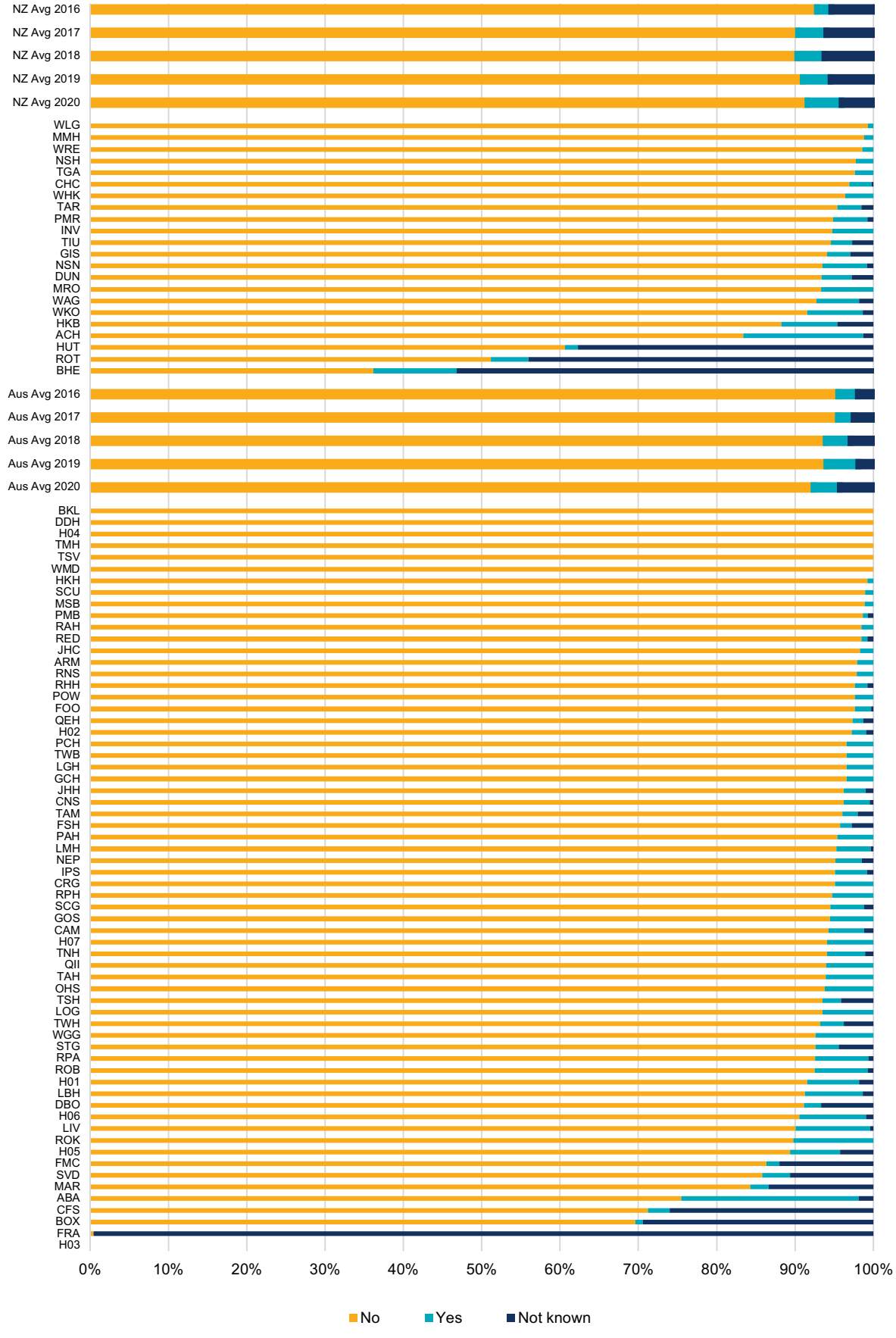


FIGURE 39 Specialist falls assessment

The Hip Fracture Care Clinical Care Standard requires that each hip fracture patient be assessed for future fall and fracture risk, and that a management plan addressing identified risks is documented. It is acknowledged that there is variation between sites as to how this element of the Standard is met, and that specialist falls assessment is not always possible in the acute hospital period. In 2020, 79% of patients in New Zealand and 69% in Australia were reported to have undergone a falls assessment during their inpatient stay.

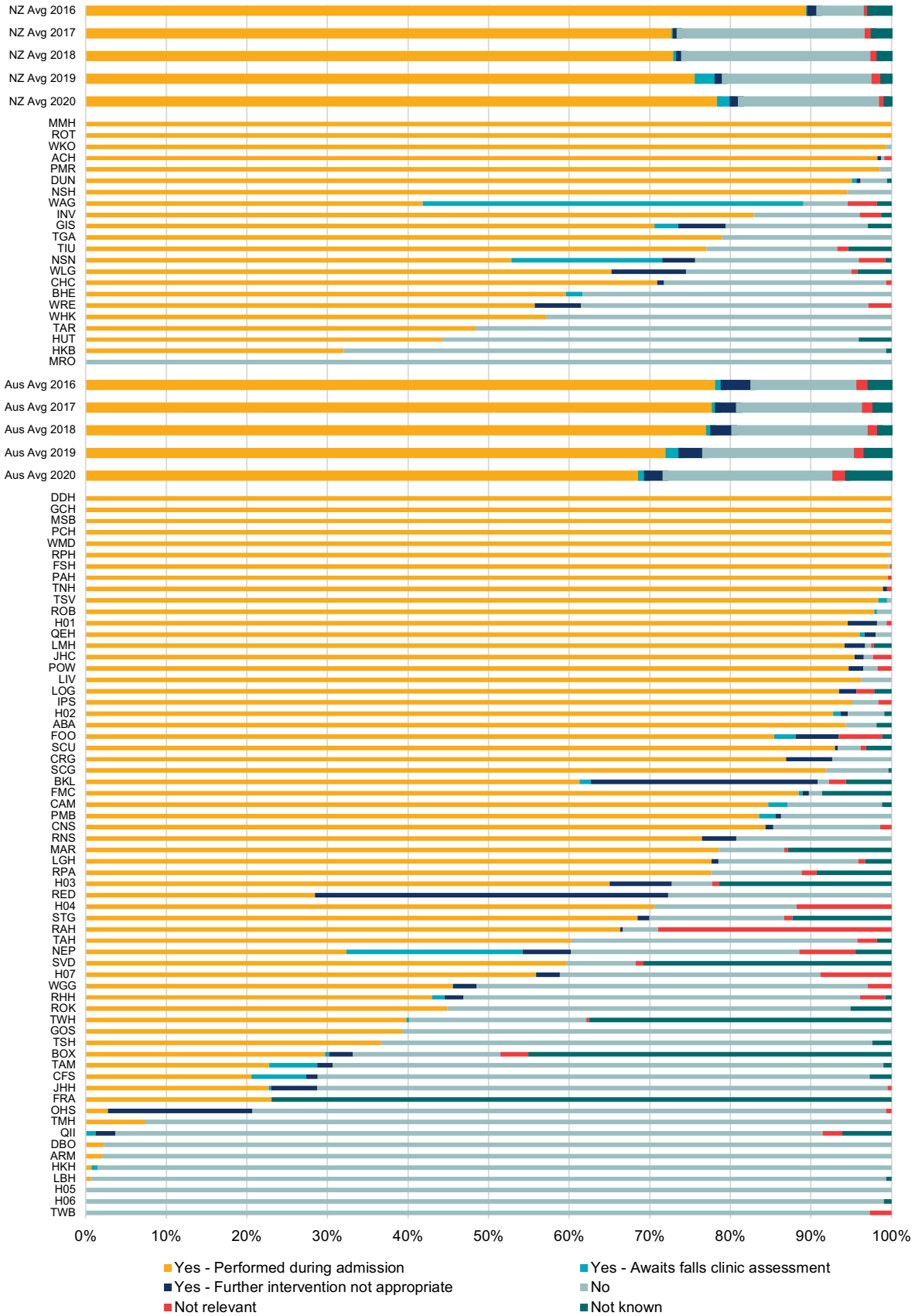


FIGURE 40 Assessment of delirium

Delirium is an acute change in mental status common among older patients hospitalised with a hip fracture. It is a condition more common in people with a cognitive impairment and can be poorly recognised. In New Zealand, 62% of patients had an assessment for delirium and 28% were identified as experiencing delirium during the acute hospital stay. In Australia, 70% of patients had an assessment for delirium and 27% were identified as experiencing delirium during the acute hospital stay. The assessment of delirium continues to improve each year, but in both countries a large proportion of patients were not assessed, suggesting delirium may be under reported in Figure 40.

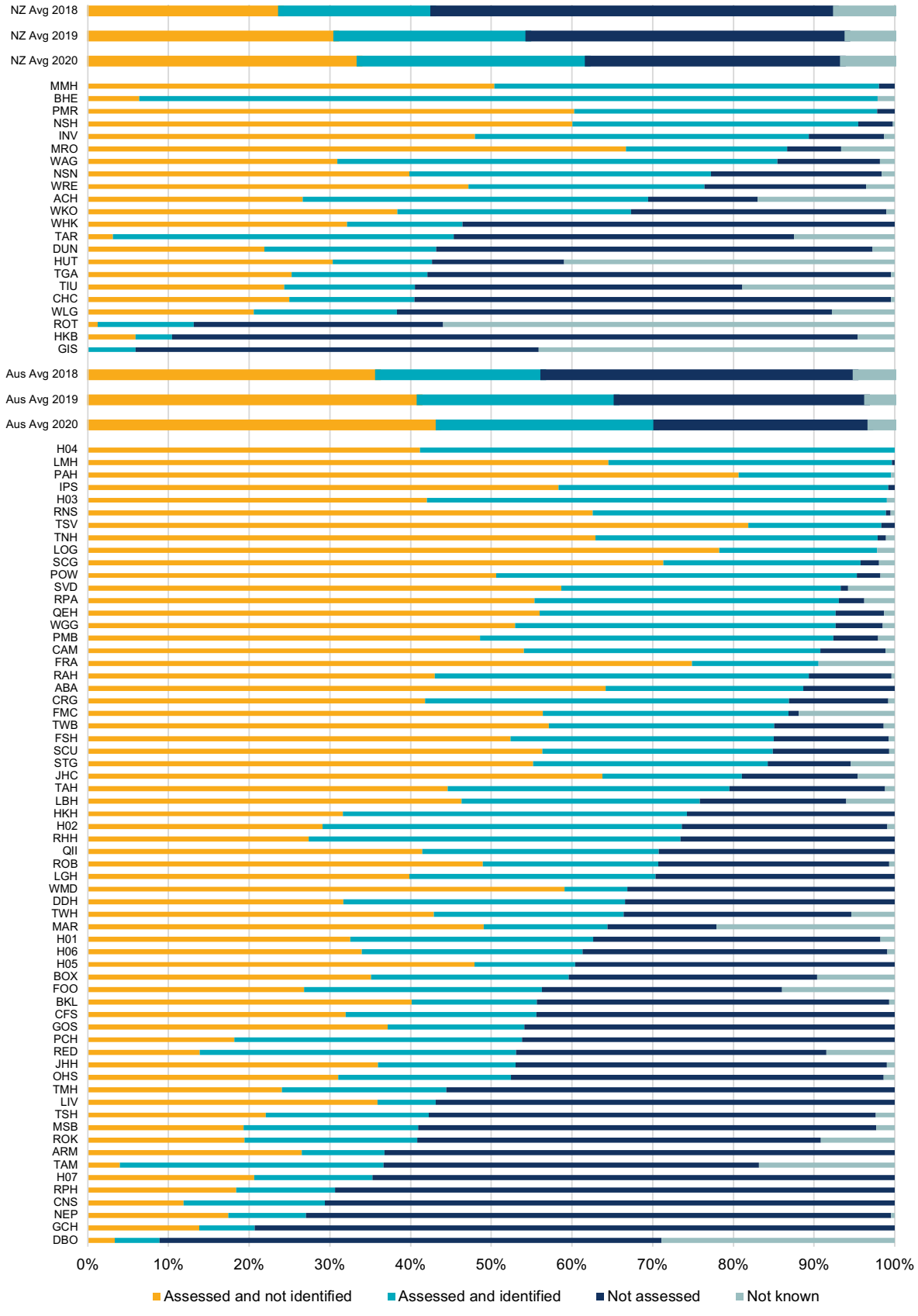


FIGURE 41 Clinical malnutrition assessment

Hip fracture patients are at high risk of malnutrition during hospital admission, or they may be malnourished on admission. Clinical assessment of a person's nutritional status is encouraged during acute hospital admission. In New Zealand, 46% of patients had an assessment for malnutrition and 14% were identified as being malnourished. In Australia, 69% of patients had an assessment for malnutrition and 20% were identified as being malnourished. In both countries, a large proportion of patients not assessed suggests malnutrition may be under reported in Figure 41.

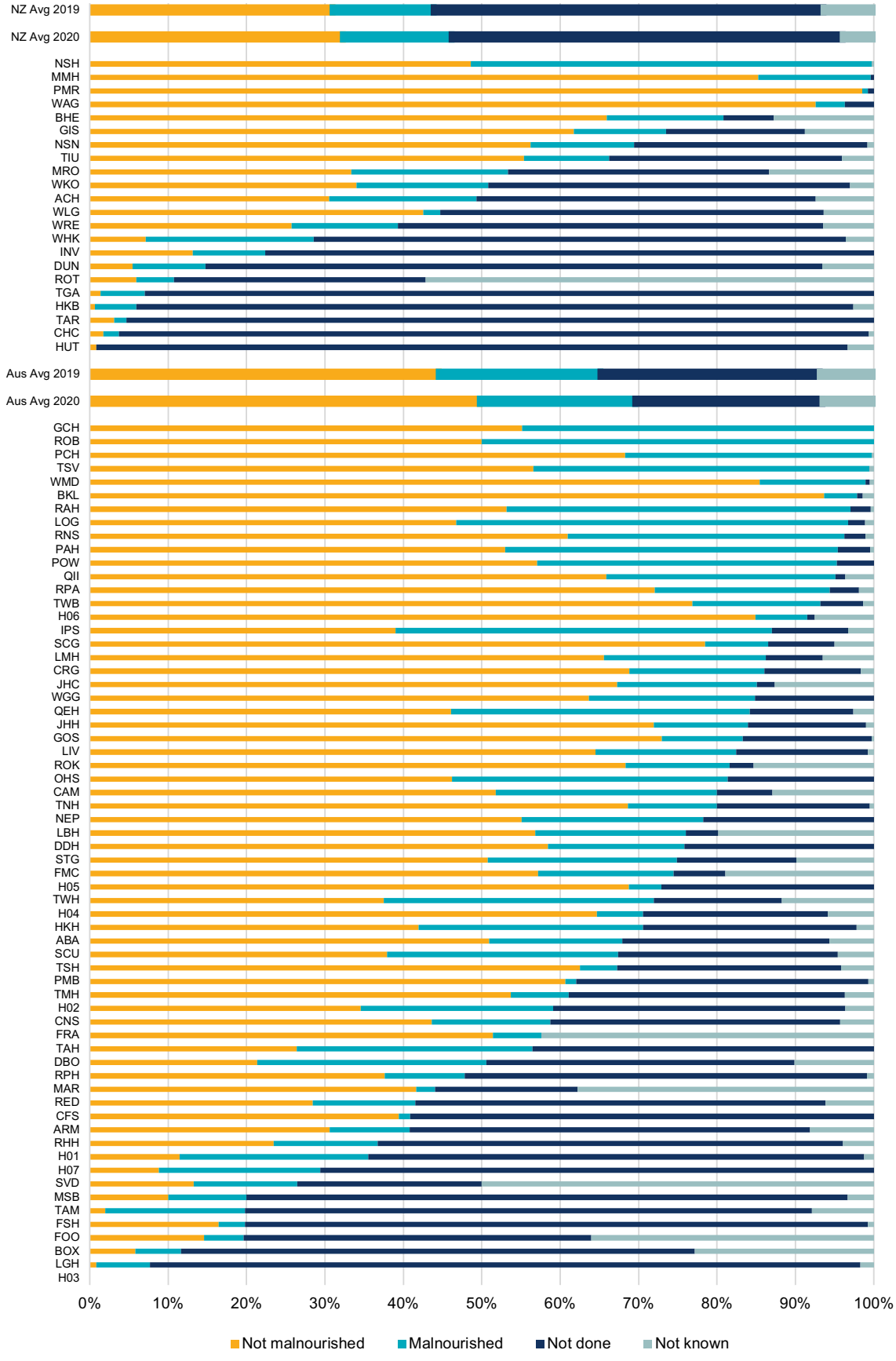


FIGURE 42 Average length of stay (LOS) in acute ward

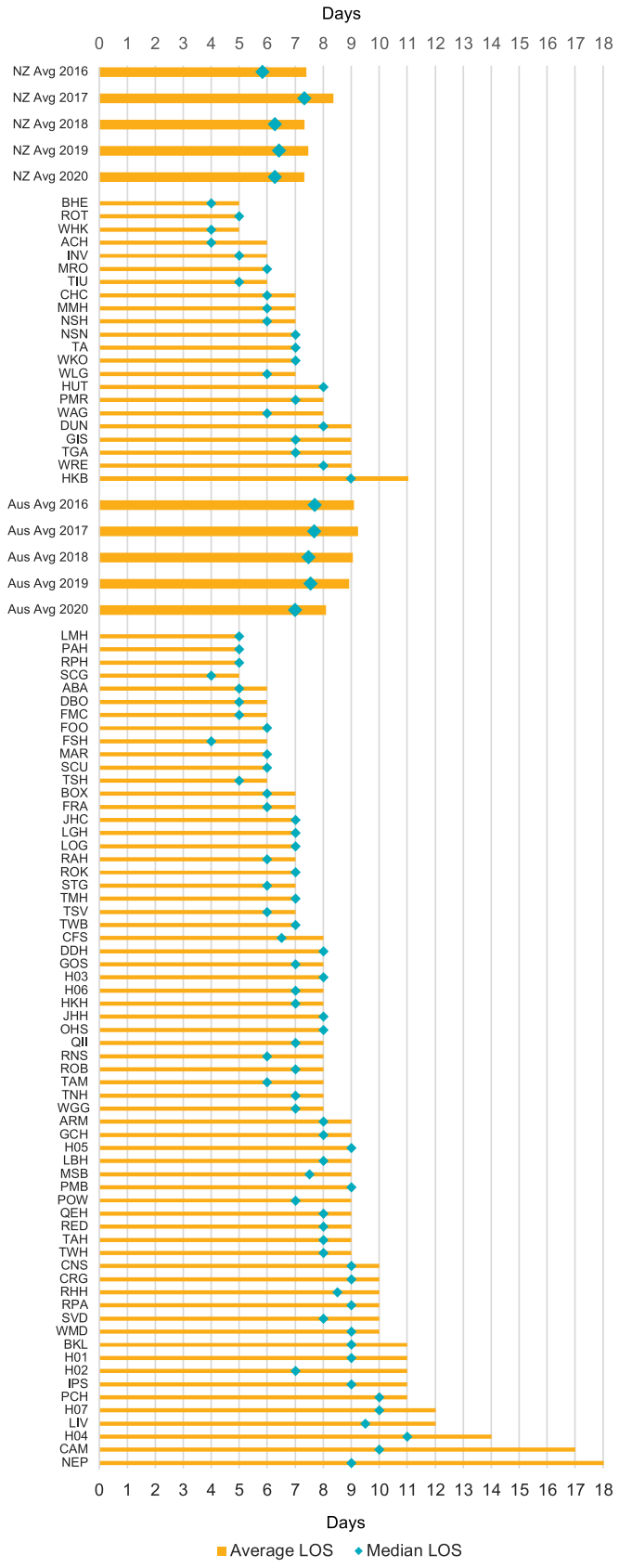
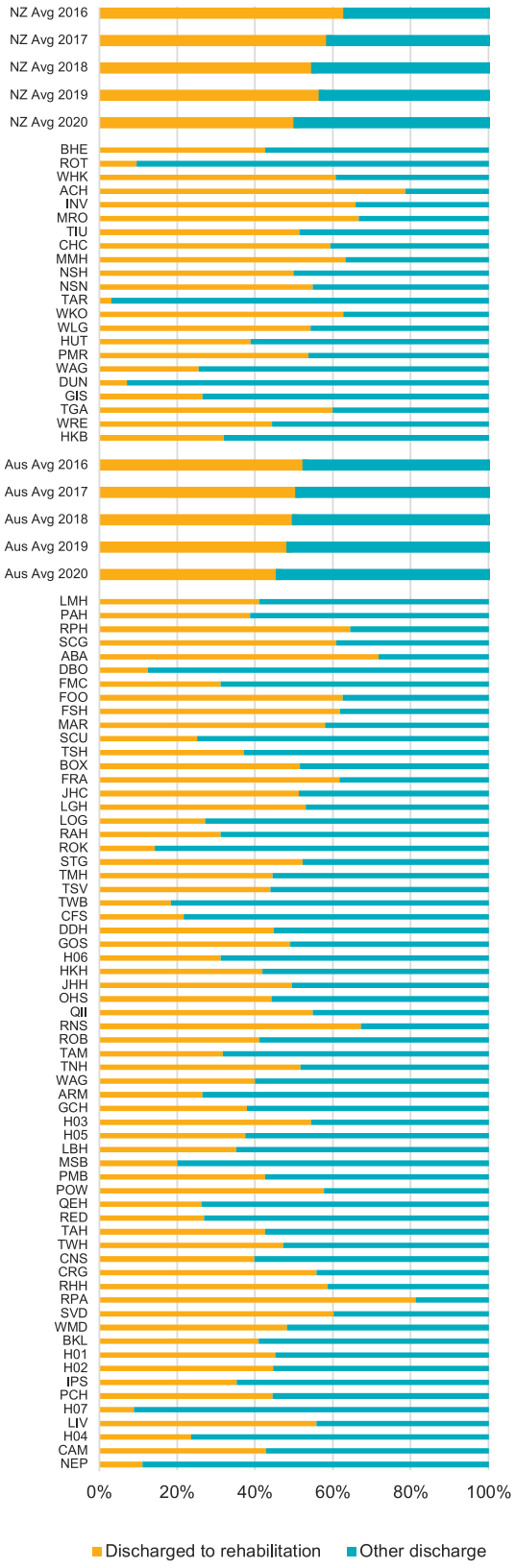


FIGURE 43 Discharge to rehabilitation



Variation continues to be seen in mean and median length of stay (LOS) in the acute ward. The median LOS in New Zealand was 6.2 days and 51% of patients were transferred to rehabilitation. In Australia, the median length of stay in the acute ward was 7.0 days and 46% were transferred to rehabilitation. There was a decrease in both the average and median LOS, and the proportion of people transferred to rehabilitation in 2020 in both countries when compared to previous years.

FIGURE 44 Discharge destination from acute ward

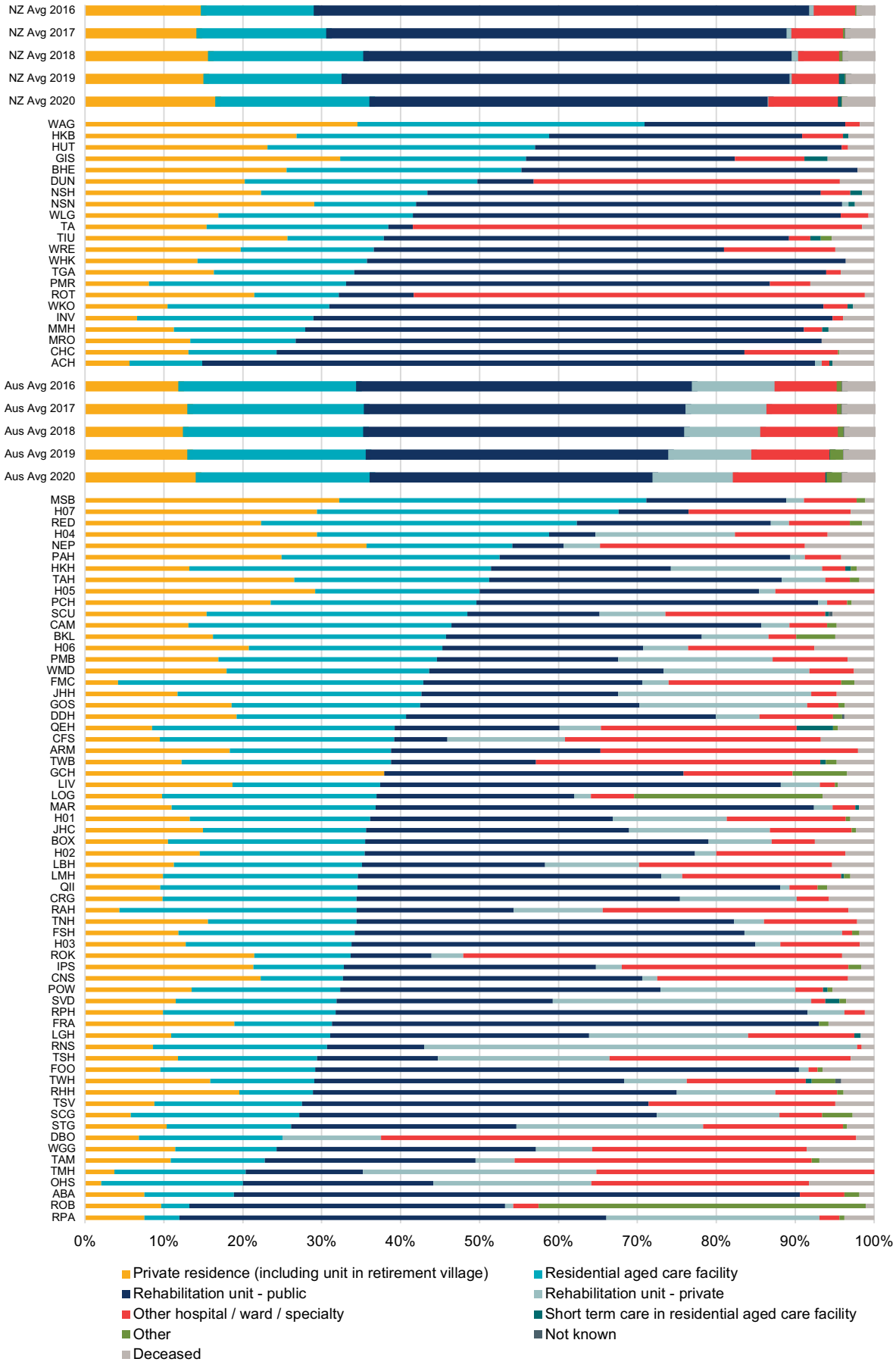
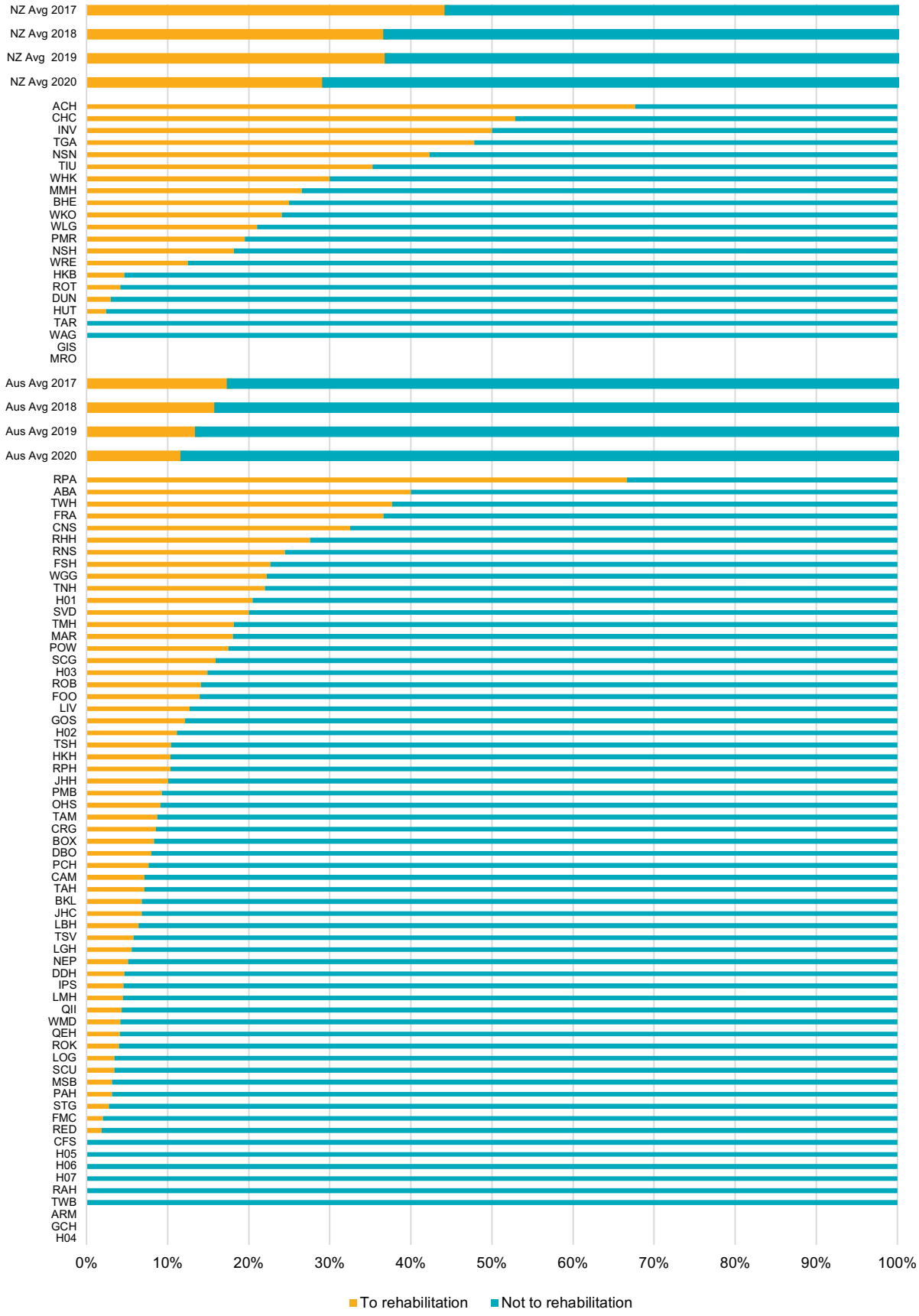


FIGURE 45 Residents of aged care facilities discharged to rehabilitation (public or private)



In New Zealand, 29% of people from residential care were transferred to rehabilitation after their acute episode of care. This contrasts to 12% in Australia. The proportion of aged care residents who are transferred to rehabilitation has been decreasing over time in both countries. Variation exists between hospitals, though the reasons for this remain unclear. The impact on the patient's outcomes and functional recovery longer term also warrants exploration.

FIGURE 46 Access to rehabilitation (public or private) for patients from private residence with preadmission impaired cognition

In New Zealand, 69% of people with pre-existing cognitive impairment, who lived in a private residence prior to their injury were transferred to rehabilitation. In Australia, 60% went to rehabilitation. Large variation in practice is evident. There has been a decrease in the proportion of people with cognitive impairment accessing inpatient rehabilitation over the last three years in both countries, the reasons for which are unclear and require further exploration.

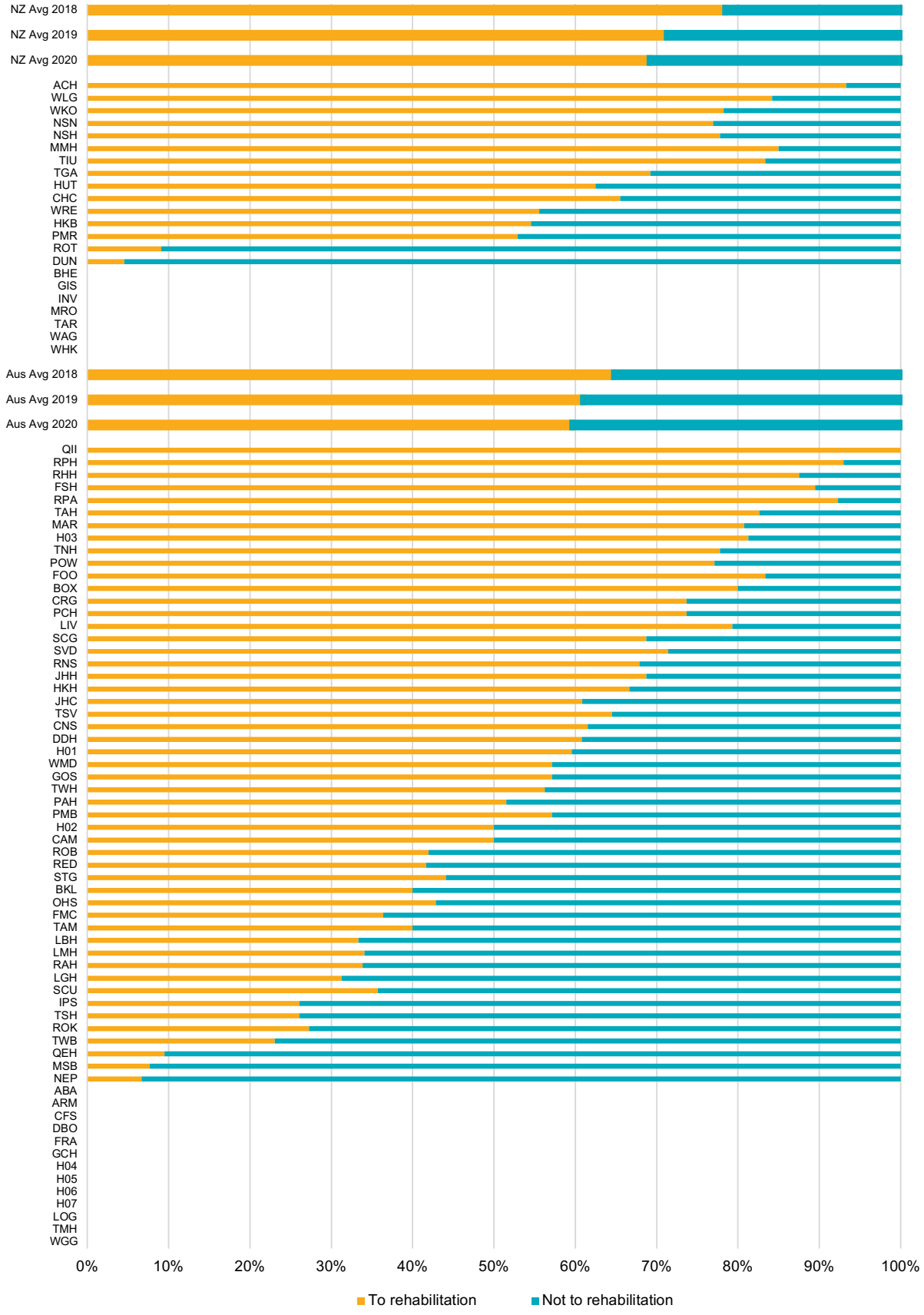


FIGURE 47 Bone protection medication on admission

Sixty-two percent of patients in New Zealand and 63% in Australia were not on any medication to protect their bones on admission. Only 9% of patients in New Zealand and 10% in Australia were on active treatment for osteoporosis, despite evidence demonstrating that up to half will have previously sustained a minimal trauma fracture.

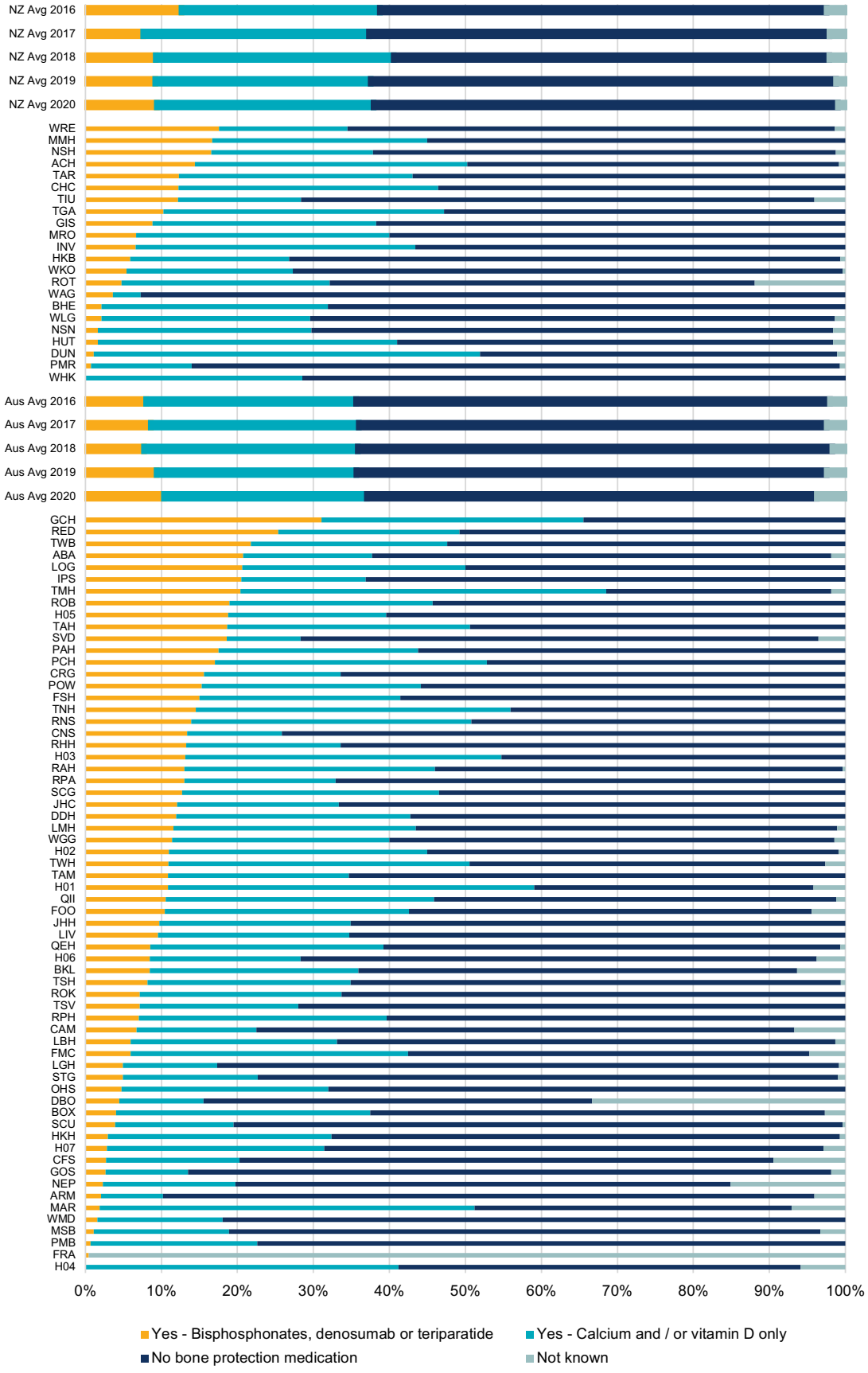
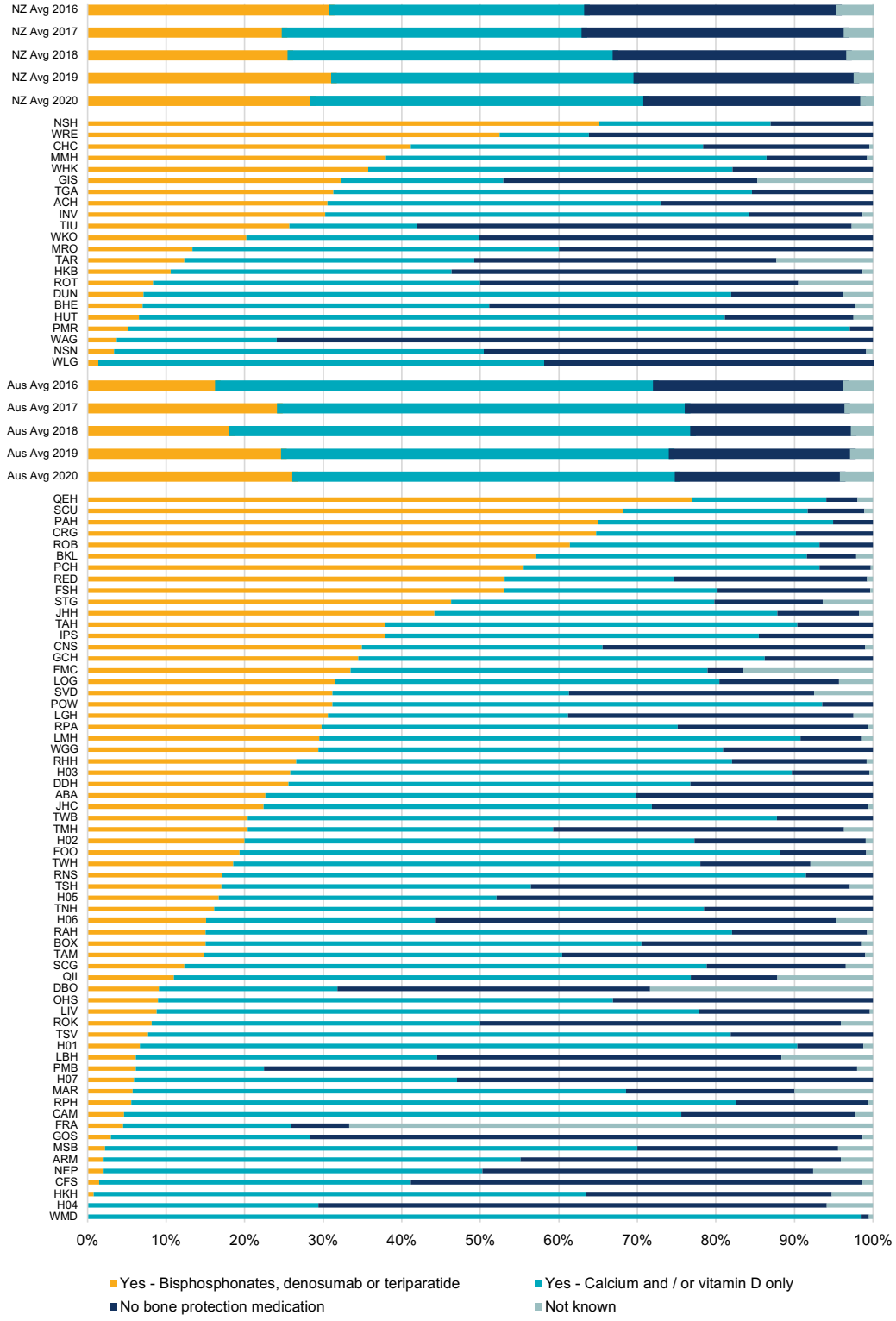


FIGURE 48 Bone protection medication on discharge

The Hip Fracture Care Clinical Care Standard requires an assessment and management plan for future fracture prevention, including initiation of treatment for osteoporosis in hospital where appropriate. The Registry is able to capture this in the acute setting but data reported here may underestimate the number of people treated for osteoporosis, particularly in cases where patients are transferred to another hospital for subacute care.

Figure 48 shows that in New Zealand, 29% of hip fracture patients left hospital on a bisphosphonate, denosumab or teriparatide, compared with 9% on admission. In Australia, 26% of patients left hospital on a bisphosphonate, denosumab or teriparatide, compared with 10% on admission. Whilst it's not always possible to initiate treatment in the acute setting, the data continues to highlight substantial variation between hospitals and a significant missed opportunity to contribute towards preventing another fracture. The ANZHFR will conduct a Sprint Audit later in 2021 to examine some of the issues around bone protection medication in more detail.



Our hospital's story demonstrates the value afforded by the registry in knowing your data and the benefit of collaborating across disciplines to care for our hip fracture patients to the highest standard.

THE ALFRED

Our hospital began contributing patient level data to the ANZHFR in 2019. Joining the registry provided us with the opportunity to look at our hip fracture data closely and highlight areas for improvement. One of the first things we noted was our low numbers of anti-resorptive prescription on discharge from the acute hospital. Looking through this in further detail, one of the barriers frequently documented was that of poor dentition.

Often our older patients, especially those from residential aged care, had not seen a dentist in many years and there was reluctance from clinicians to prescribe anti-resorptive therapy if patients had poor dentition in this setting. So, prescription was often deferred to their general practitioner to commence after patients were seen by a dentist, but we did not know if this was actually occurring.

Noting this, we spoke with our own hospital dental service and enlisted their help. From these discussions, our dental service began reviewing hip fracture patients with poor dentition during their inpatient stay and clearing those eligible to start anti-resorptive therapy. Patients requiring dental work prior to anti-resorptive commencement were given the option to return to our dental clinic after recovery from their hip fracture.

This collaboration between our departments, alongside an improved focus on bone health, has seen our health service increase anti-resorptive prescription on discharge for our hip fracture patients from 7% in 2019 to 30% last year. Even more importantly, our dentists provide a valuable service to many vulnerable residential aged care patients, who for a variety of reasons can find it difficult to access a dentist in the community.

SECTION 5: 120 DAY FOLLOW-UP

FIGURE 49 120 day follow-up

For figures related to 120 day follow-up, hospitals are only reported if they have followed up more than 80% of eligible patients and have at least 10 records. Figure 49 shows the rate of 120 day follow-up for each hospital. Follow-up is completed by staff at the treating hospital via telephone, and the variation reflects local differences in resources and prioritisation. In New Zealand, 92% of records had data for 120 days. In Australia, 50% had data for 120 days.

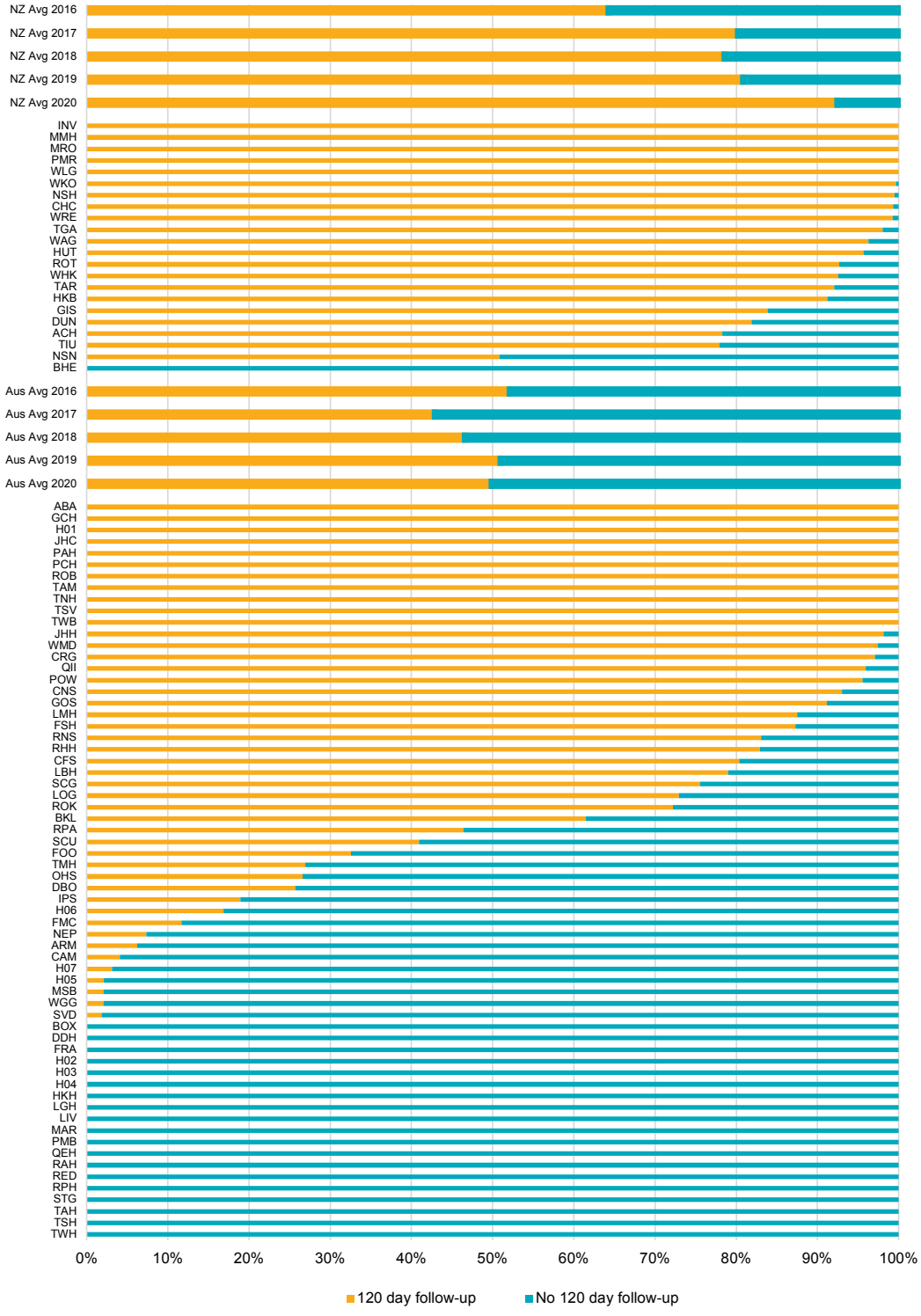


FIGURE 50 Reoperation within 120 days

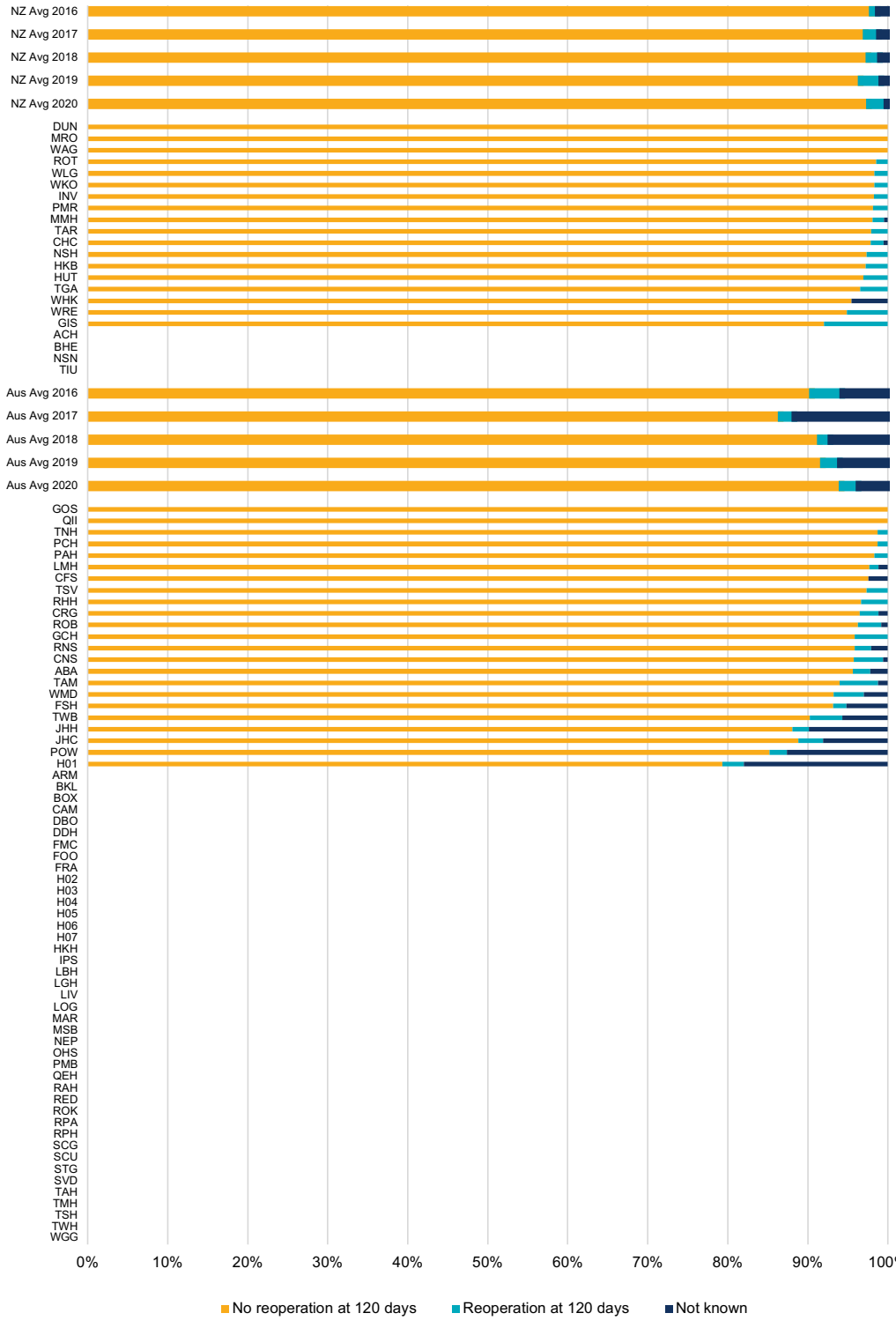


FIGURE 51 Bone protection medication at 120 days

Figure 51 shows the majority of patients were not on medication to prevent future fractures at 120 days after admission to hospital for a hip fracture. In New Zealand, follow-up is over 90% and 40% of patients reported receiving bone protection medication to reduce the risk of another fracture. Follow-up rates are low in Australia and 36% of patients were receiving bone protection medication at 120 days.

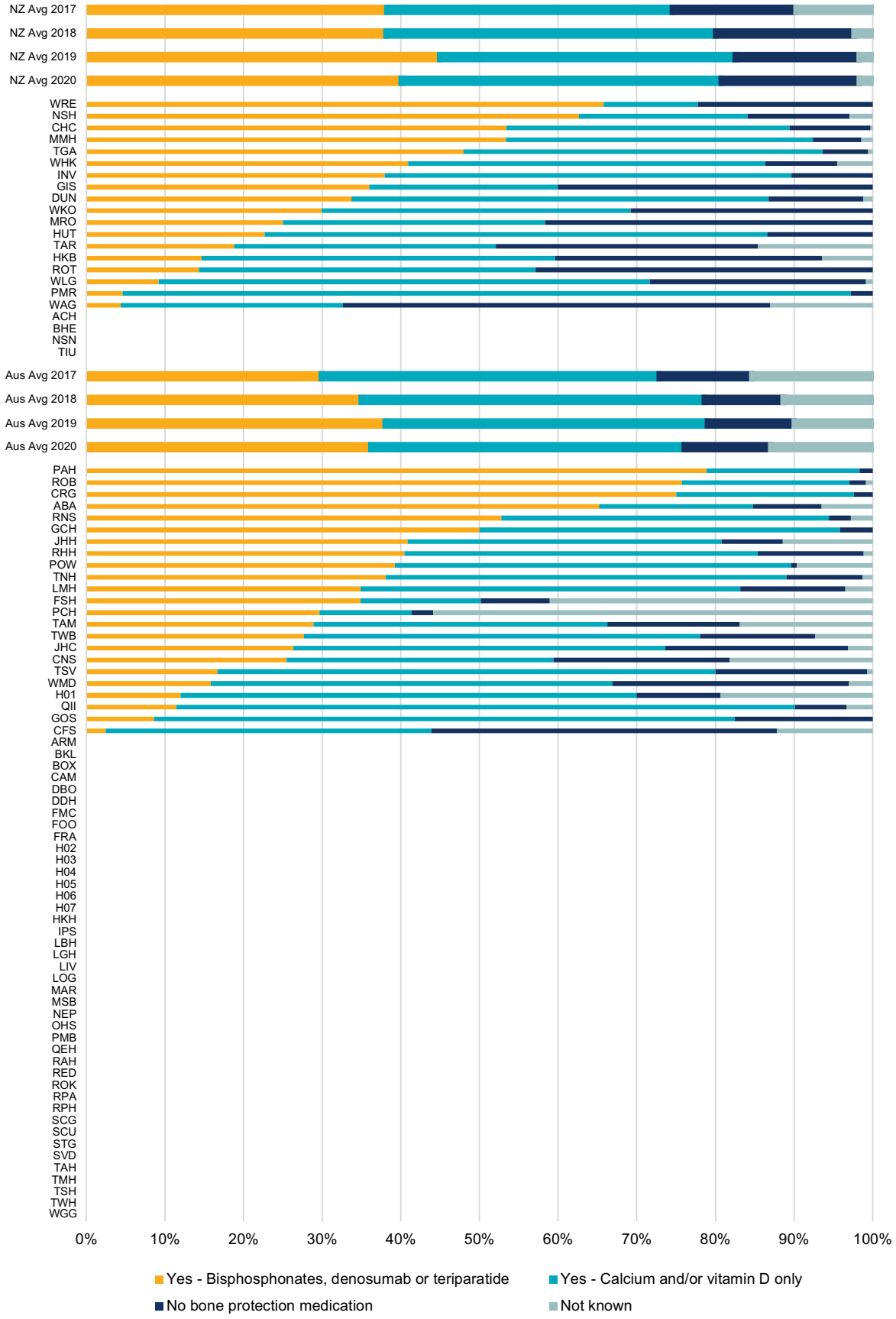
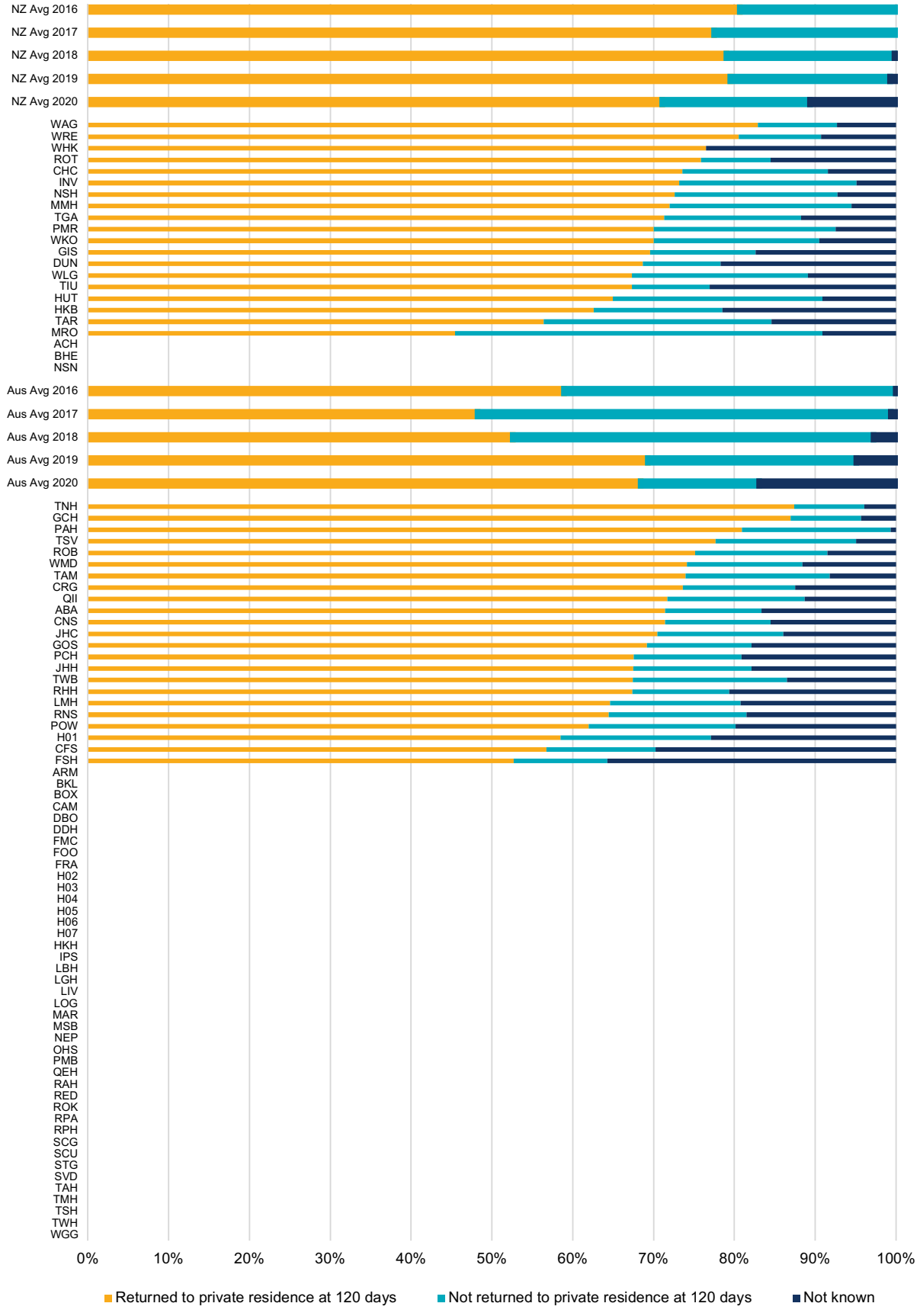


FIGURE 52 Return to private residence at 120 days

Figure 52 includes records for patients who came from private residence and were followed up at 120 days. In 2020, 71% of patients in New Zealand and 68% of patients in Australia returned to private residence after their hip fracture. Data is also presented for patients who did not return to private residence or where the outcome is not known.



SECTION 6: OUTLIER REPORT

The 16 quality indicators in the Hip Fracture Care Clinical Care Standard focus on the priority areas for quality improvement in hip fracture care and, as such, were selected for the identification of outliers of hospital-level performance and subsequent investigation of the causes of variation by participating hospitals.

Outliers constitute unusually low or high values for an indicator of clinical care quality. Information on Indicators 1a, 2a, and 7a are obtained from the annual facility level survey and are reported as either 'evidence provided' (green) or 'evidence not provided' (red). Information on the remaining indicators (excluding Indicator 6b that is not currently collected, and 8b that is reported separately) is obtained from the patient-level data. All clinical care quality indicators are reported as a percentage for each hospital in the ANZHFR annual report, where:

- Excellence is in the top 2.5th percentile from the average performance of all hospitals
- Normal variation is less than 2 standard deviations from the average performance of all hospitals
- An alert is between 2 and 3 standard deviations from the average performance of all hospitals
- An outlier is greater than 3 standard deviations from the average performance of all hospitals for the indicator

The ANZHFR data outlier review protocol details the identification and management of outlier values for binational indicators of hip fracture care at the level of the participating hospital. It can be found at www.anzhfr.org

FIGURE 53 New Zealand hospital data indicators

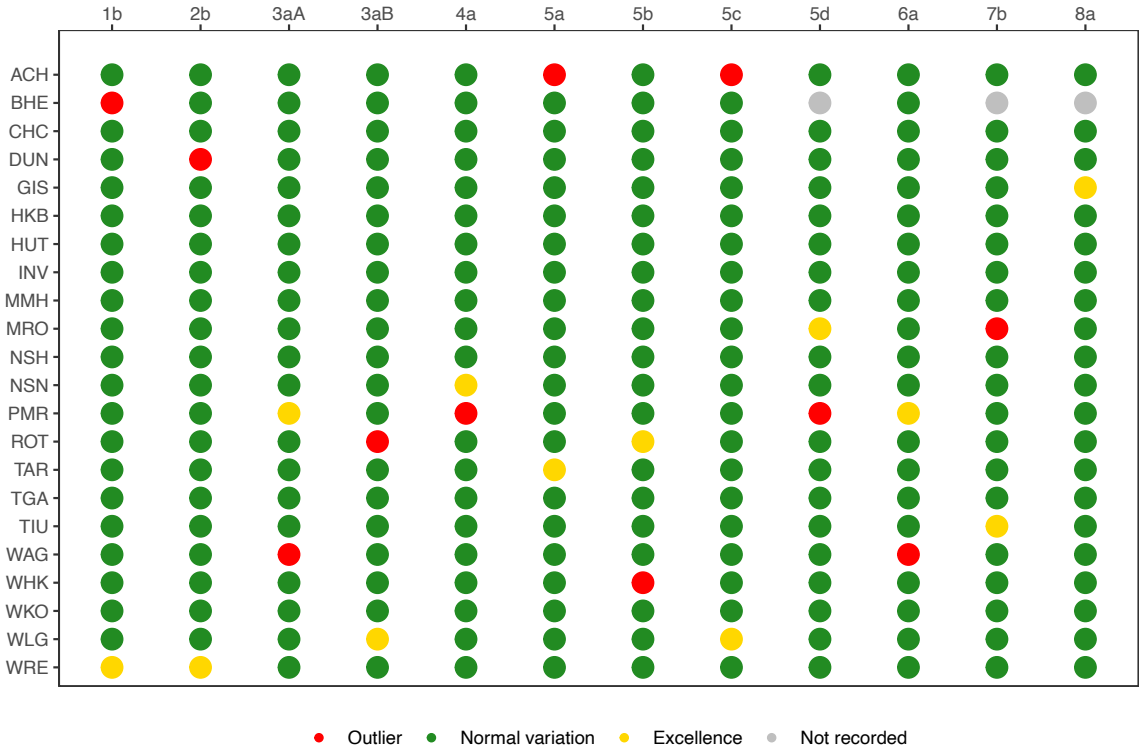
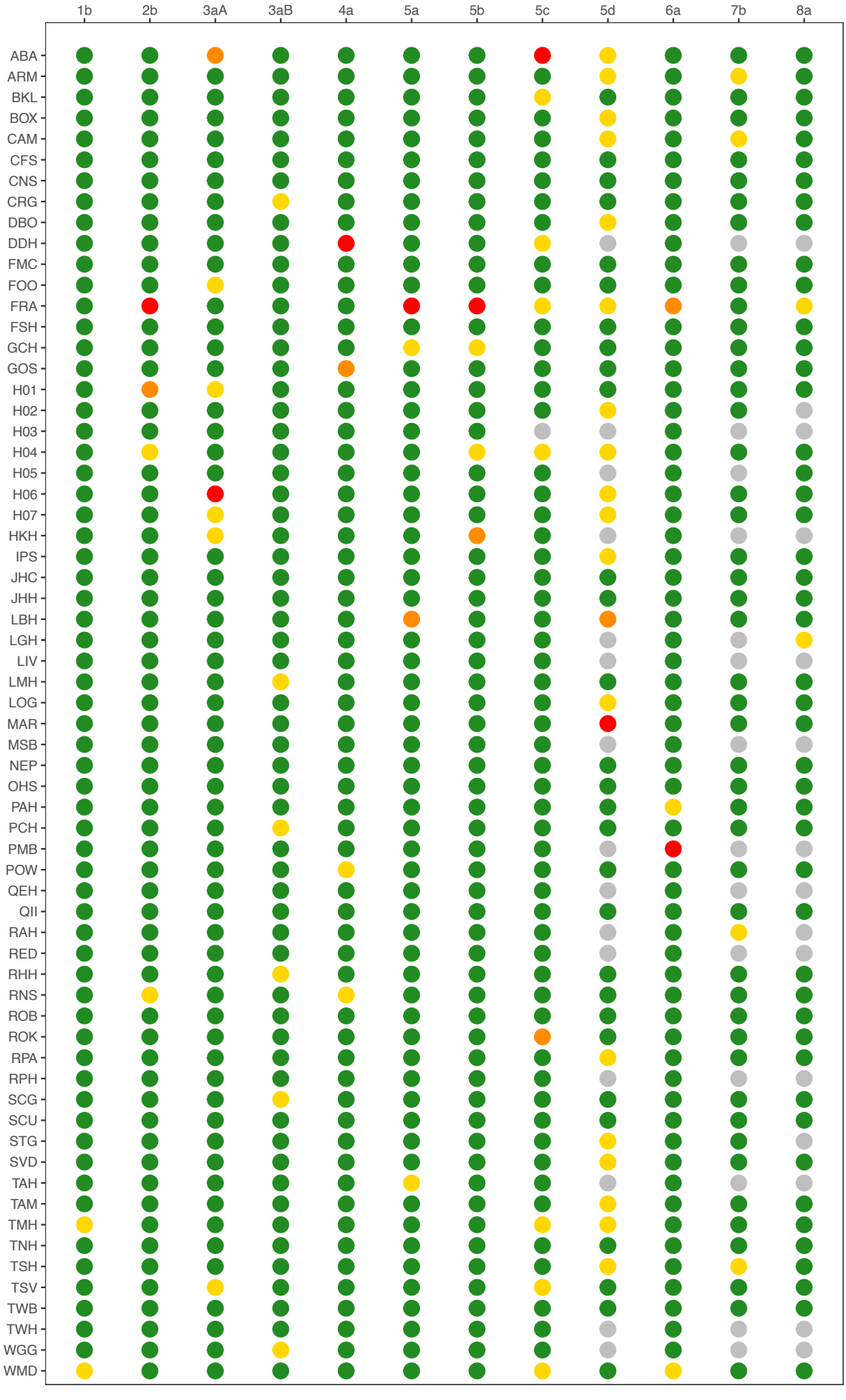


FIGURE 54 Australian hospital data indicators



Hospital data indicators:

Indicator 1b
Proportion of patients with a hip fracture who have had their preoperative cognitive status assessed

Indicator 2b
Proportion of patients with a hip fracture who have documented assessment of pain within 30 minutes of presentation to the emergency department AND either receive analgesia within this time or do not require it according to the assessment

Indicator 3aA
Proportion of patients with a hip fracture receiving a preoperative medical assessment

Indicator 3aB
Proportion of patients with a hip fracture receiving a geriatric medicine assessment during the acute phase of the episode of care

Indicator 4a
Proportion of patients with a hip fracture receiving surgery within 48 hours of presentation with the hip fracture

Indicator 5a
Proportion of patients with a hip fracture who are mobilised on day one post hip fracture surgery

Indicator 5b
Proportion of patients with a hip fracture with unrestricted weight bearing immediately post hip fracture surgery

Indicator 5c
Proportion of patients with a hip fracture experiencing a new Stage II or higher pressure injury during their hospital stay

Indicator 5d
Proportion of patients with a hip fracture returning to pre-fracture mobility

Indicator 6a
Proportion of patients with a hip fracture receiving bone protection medicine at discharge from the operating hospital

Indicator 7b
Proportion of patients with a hip fracture living in a private residence prior to their hip fracture returning to private residence within 120 days post-surgery

Indicator 8a
Proportion of patients undergoing re-operation of hip fracture patients within 120 days post-surgery

FIGURE 55 New Zealand survey data indicators

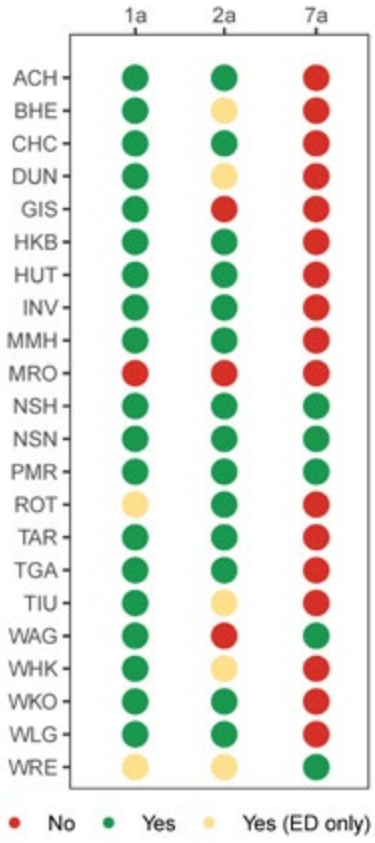


FIGURE 56 Australian survey data indicators

Survey data indicators:

Indicator 1a
Evidence of local arrangements for the management of patients with hip fracture in the emergency department

Indicator 2a
Evidence of local arrangements for timely and effective pain management for hip fracture

Indicator 7a
Evidence of local arrangements for the development of an individualised care plan at discharge for hip fracture patients

The outlier report monitors hospital performance against 14 quality indicators set out in the Hip Fracture Care Clinical Care Standard and enables sites to easily see areas of high-quality care or those that require review.

SECTION 7: MORTALITY

The Annual Report includes mortality data derived from linking registry data with the National Death Index (NDI) in Australia and, for the first time, the Ministry of Health mortality data in New Zealand.

Mortality has been adjusted for age, sex, premorbid level of function (mobility), fracture type, residence type and ASA grade and data is presented for two follow-up periods and in two ways. The follow-up periods are 30 and 365 days. 30-day mortality is a common benchmark for hip fracture care. 365-day mortality is more likely to be influenced by factors beyond hospital care, but remains an important outcome for patients. ASA grade has been aggregated as (i) ASA grades 1 to 2; (ii) ASA grade 3 and unknown; and (iii) ASA grades 4 and 5 according to relevant literature[1]. It is important to note that ASA grade was recorded as unknown in 2,418 (10.9%) of patient records in 2018-2020 and 2,995 (13.7%) of patient records in 2017-2019. The proportion of unknowns affects mortality data at the hospital level. Reviewing and where needed, increasing, the proportion of patients for whom a known ASA grade is recorded as part of the data should be an area of focus for hospitals.

In this report, the adjusted mortality rate at 30 days and 365 days is presented by year for Australian states for the period 2016 to 2020, and New Zealand for the period 2017 to 2020 (Figure 57). South Australia was not able to be reported separately in Figures 57 and 58 as patient identifiers were not permitted to be collected for a period of time, which meant the majority of records were unable to be linked to the NDI. Tasmania was also not reported separately due to small numbers. Both South Australia and Tasmania were included in the rates calculation for Australia (combined states).

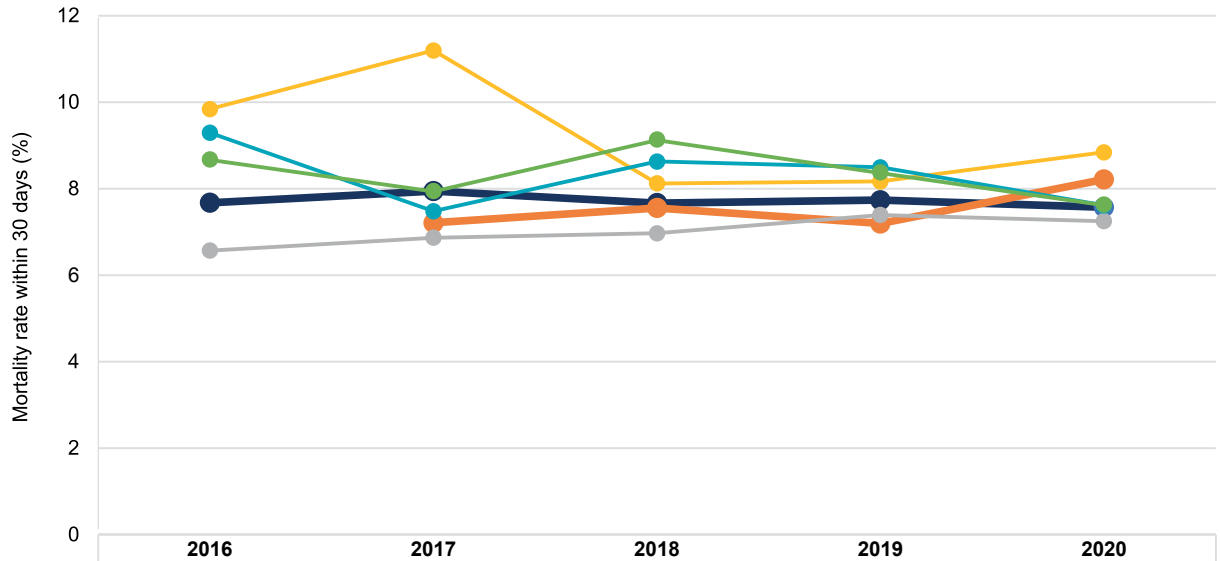
Pooled data is used for all patients included in the Registry from each site, from the start of 2018 to the end of 2020 for 30-day mortality and from the start of 2017 to the end of 2019 for 365-day mortality (as the 12-month follow up period was not complete to enable inclusion of 2020 data at the time of publication). Results have been aggregated over a 3-year period to limit the effect of yearly fluctuations at hospital level. Hospitals that have not been contributing patient level data for the specified 3-year period have not been included for this reason.

Data are presented in funnel plots, where each dot represents a hospital, and the x-axis represents hospital volume. Because of the higher precision from the greater number of patients, data points should 'funnel' to a narrower distribution on the right side of the funnel plot. The horizontal line represents the national mortality rate over the three-year time period. Hospitals above the line have a higher mortality rate than the national rate and those below the line have a lower mortality rate than the national rate. Confidence limits set at 2 and 3 standard deviations are included so that outlier hospitals can be seen. In this report, outlier hospitals, or those that sit outside the funnel and above the line, have a mortality rate greater than 3 standard deviations above the national rate.

Figures 60, 62, 64 and 66 are 'caterpillar' plots (named because of their resemblance to a caterpillar) where each hospital is ranked according to the mortality rate and the 'legs' of the caterpillar represent the 95% confidence interval.

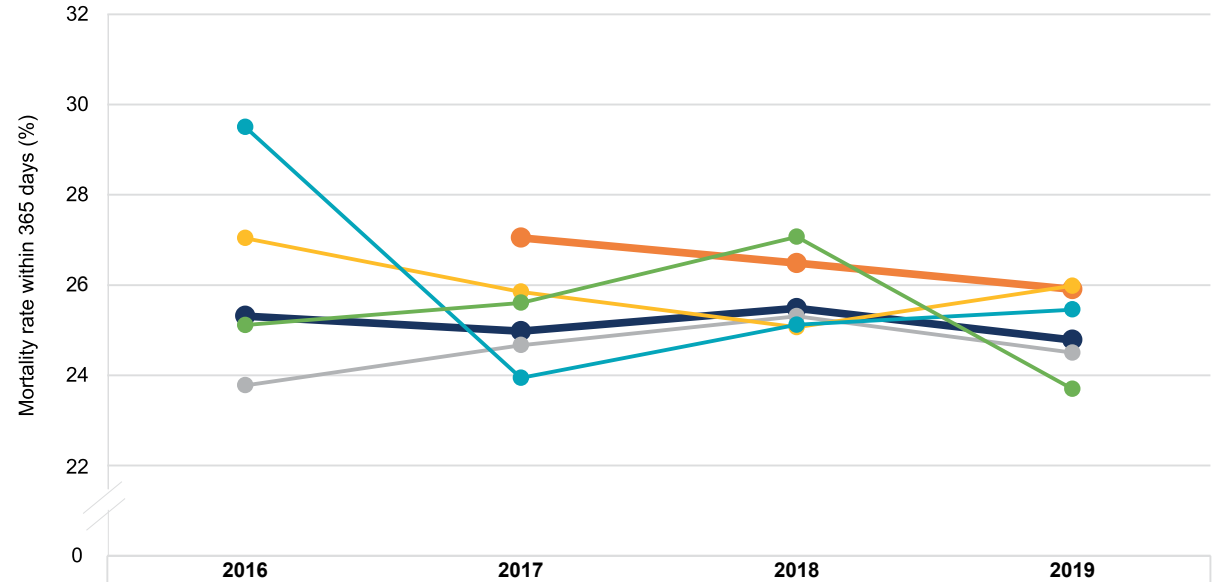
1 Tsang C CD. Statistical methods developed for the National Hip Fracture Database annual report, 2014: a technical report. London: The Royal College of Surgeons of England, 2014

FIGURE 57 Adjusted mortality rate at 30 days by year for Australian states and New Zealand (2016–2020)



	2016	2017	2018	2019	2020
AU states combined	7.7%	7.9%	7.7%	7.7%	7.6%
NZ		7.2%	7.6%	7.2%	8.2%
NSW	6.6%	6.9%	7.0%	7.4%	7.3%
QLD	9.8%	11.2%	8.1%	8.2%	8.8%
VIC	9.3%	7.5%	8.6%	8.5%	7.6%
WA	8.7%	7.9%	9.1%	8.4%	7.6%

FIGURE 58 Adjusted mortality rate at 365 days by year for Australian states and New Zealand (2016–2019)



	2016	2017	2018	2019
AU states combined	25.3%	25.0%	25.5%	24.8%
NZ		27.0%	26.5%	25.9%
NSW	23.8%	24.7%	25.3%	24.5%
QLD	27.0%	25.8%	25.1%	26.0%
VIC	29.5%	23.9%	25.1%	25.5%
WA	25.1%	25.6%	27.1%	23.7%

FIGURE 59 Funnel plot of adjusted mortality rate at 30 days – New Zealand hospitals (2018–2020)

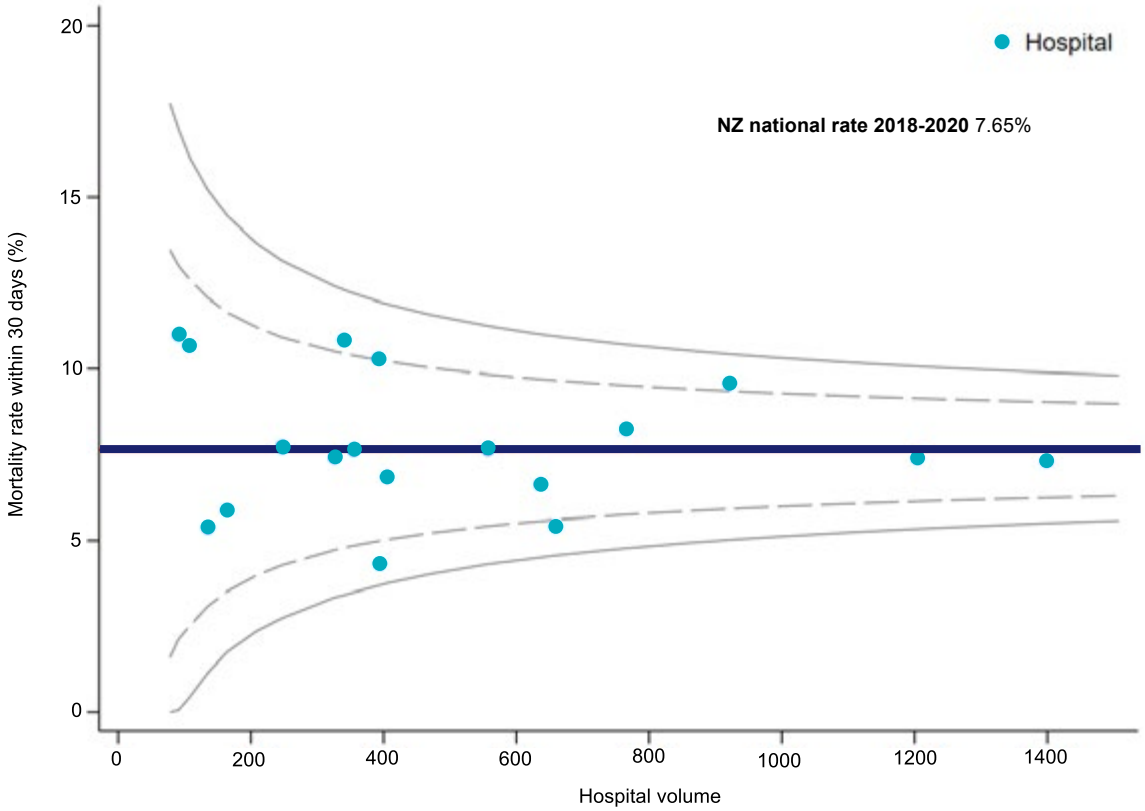


FIGURE 60 Caterpillar plot of adjusted mortality rate at 30 days – New Zealand hospitals (2018–2020)

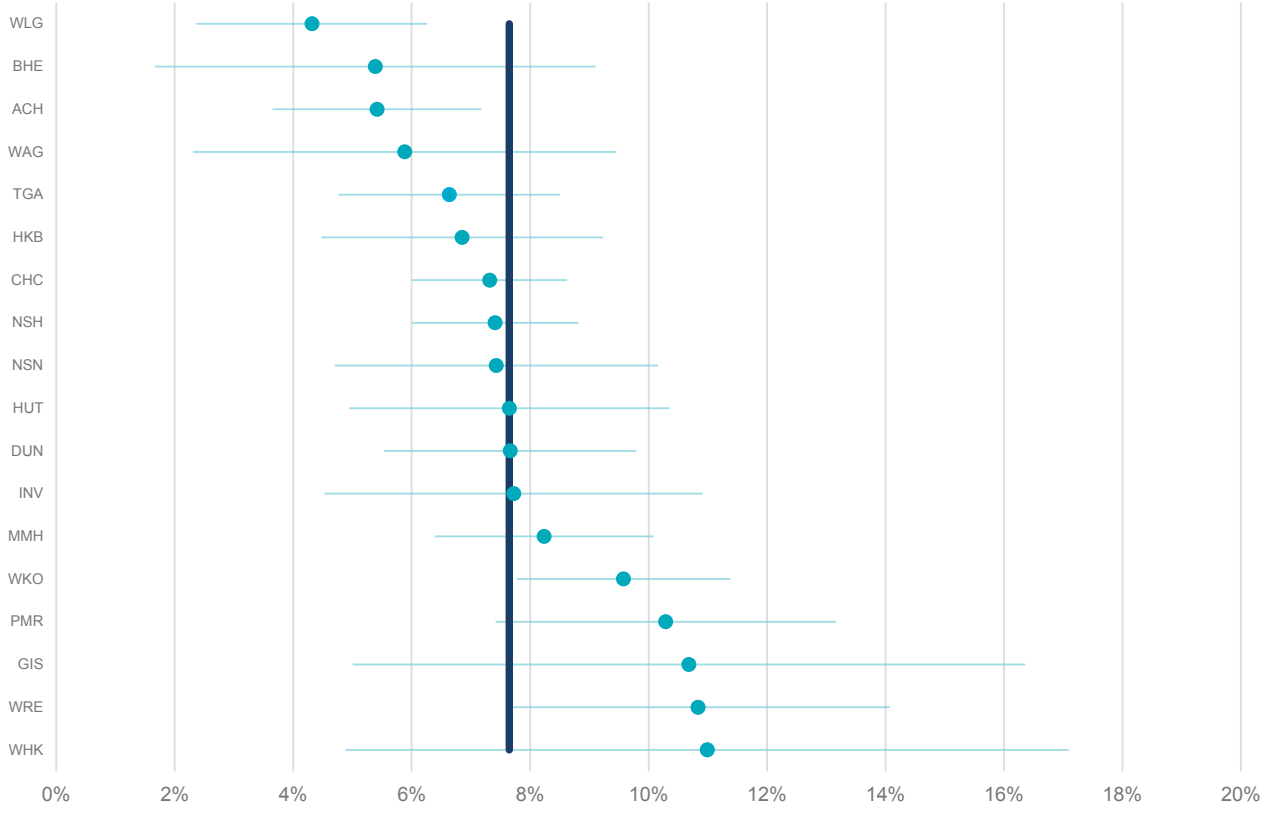


FIGURE 61 Funnel plot of adjusted mortality rate at 365 days – New Zealand hospitals (2017–2019)

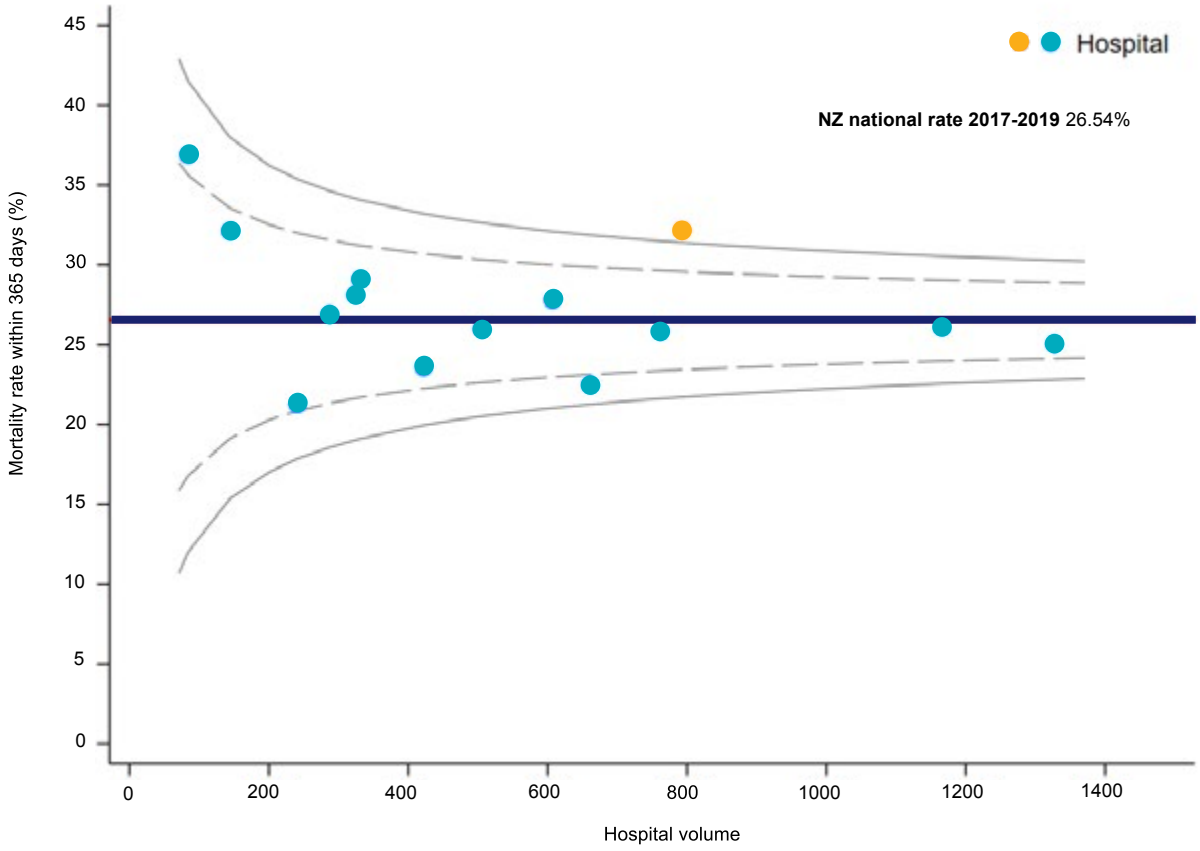


FIGURE 62 Caterpillar plot of adjusted mortality rate at 365 days – New Zealand hospitals (2017–2019)

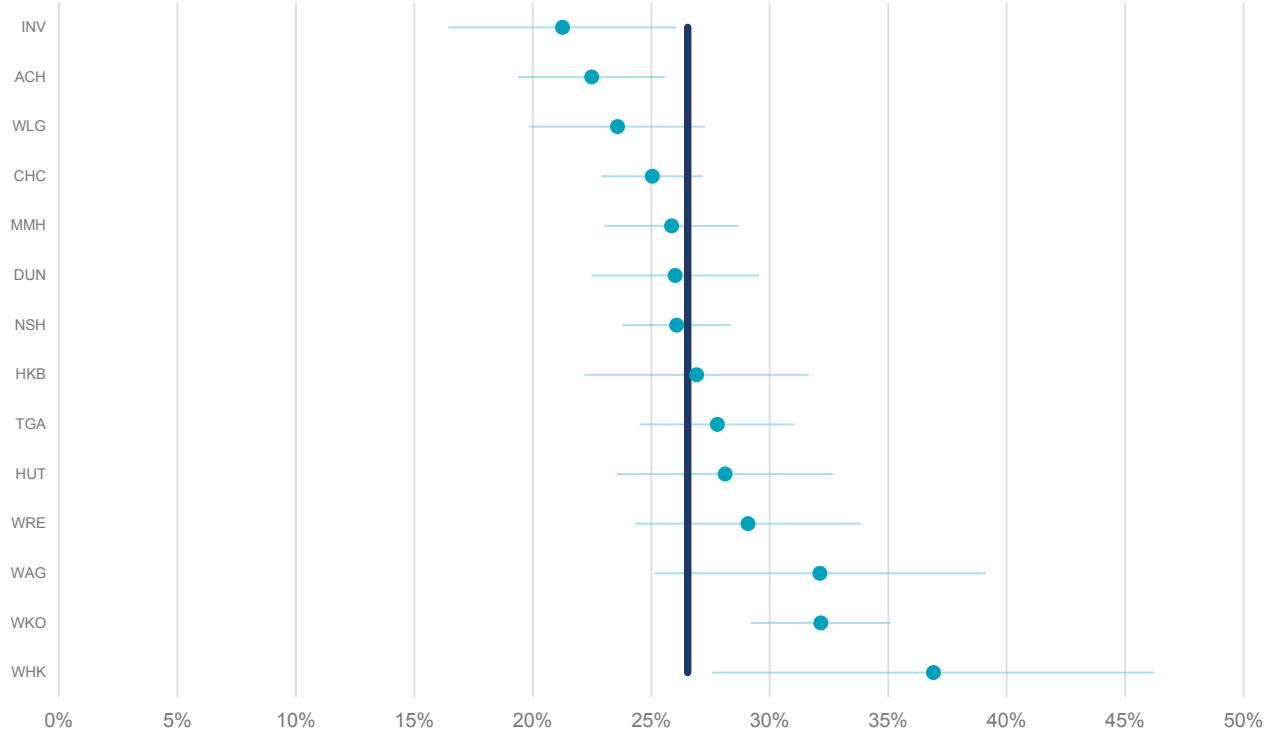


FIGURE 63 Funnel plot of adjusted mortality rate at 30 days – Australian hospitals (2018–2020)

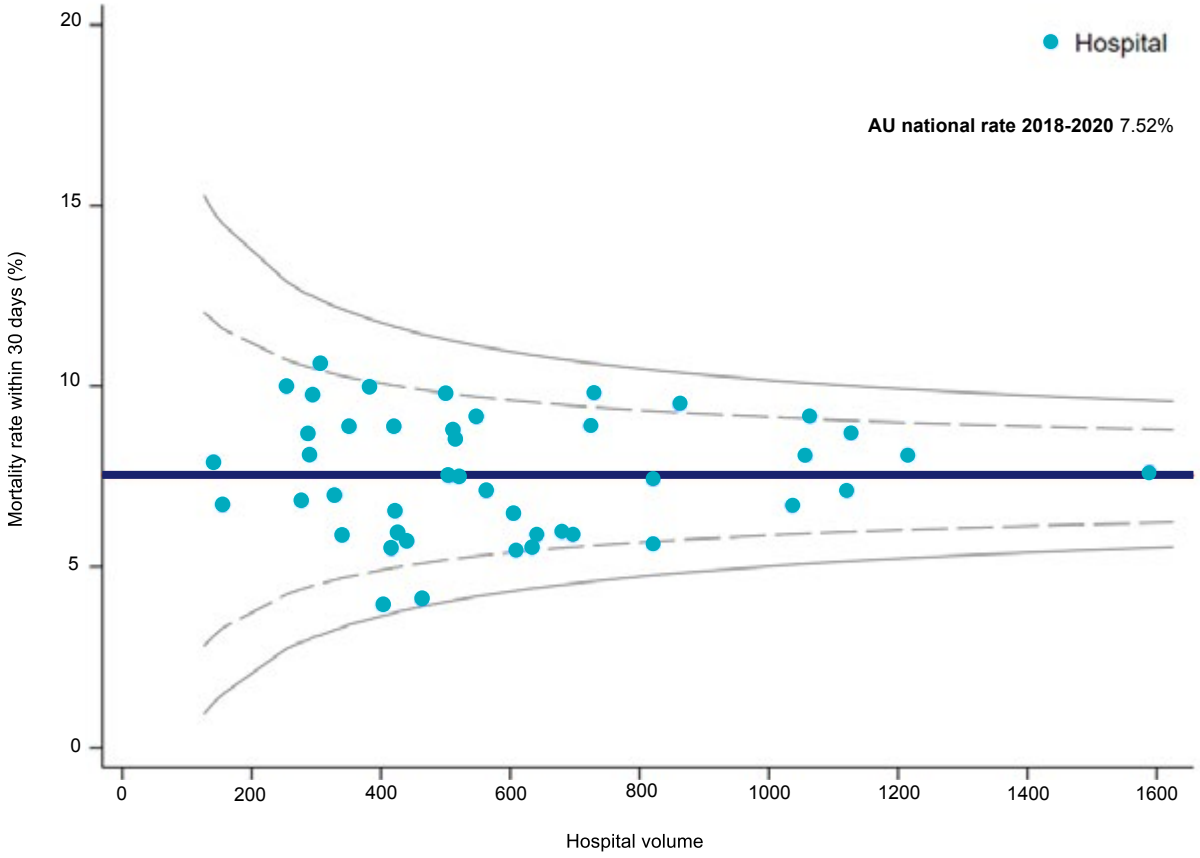


FIGURE 64 Caterpillar plot of adjusted mortality rate at 30 days – Australian hospitals (2018–2020)

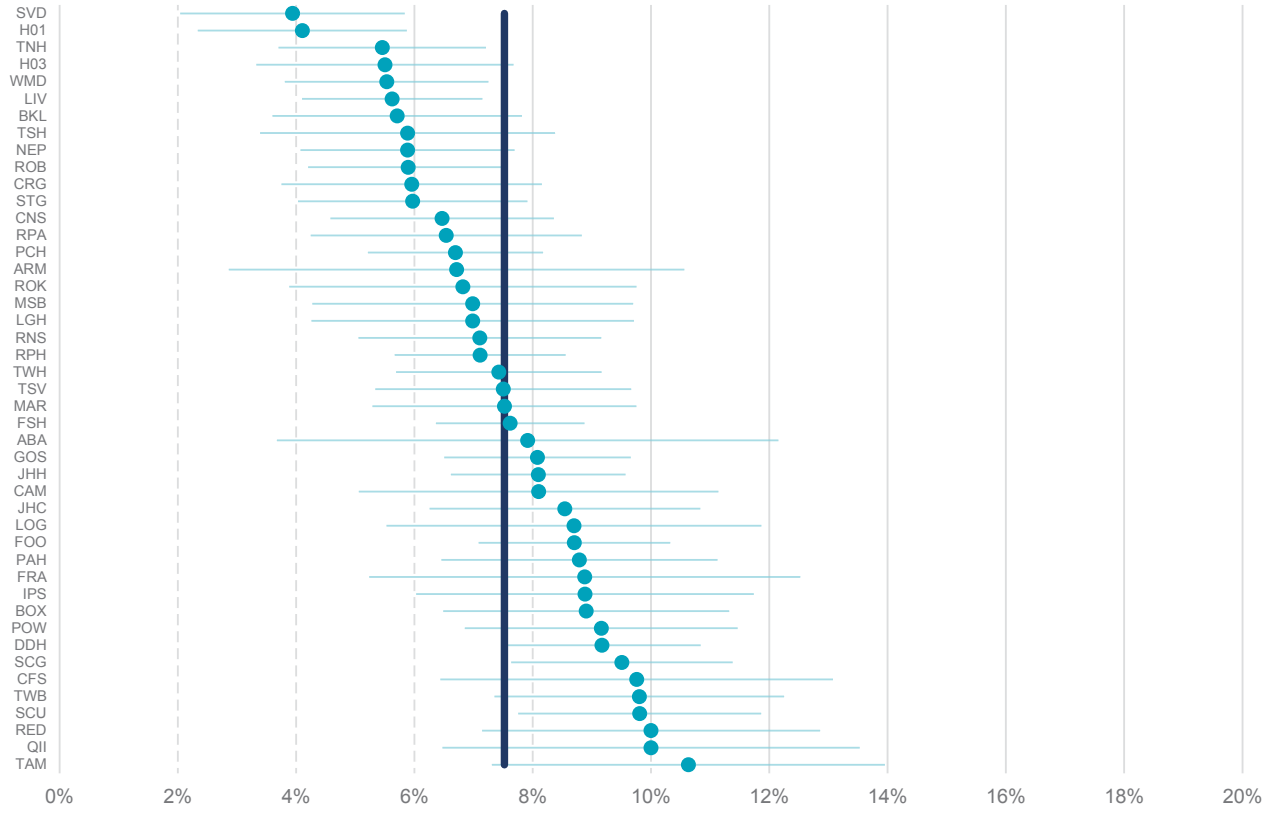


FIGURE 65 Funnel plot of adjusted mortality rate at 365 days – Australian hospitals (2017–2019)

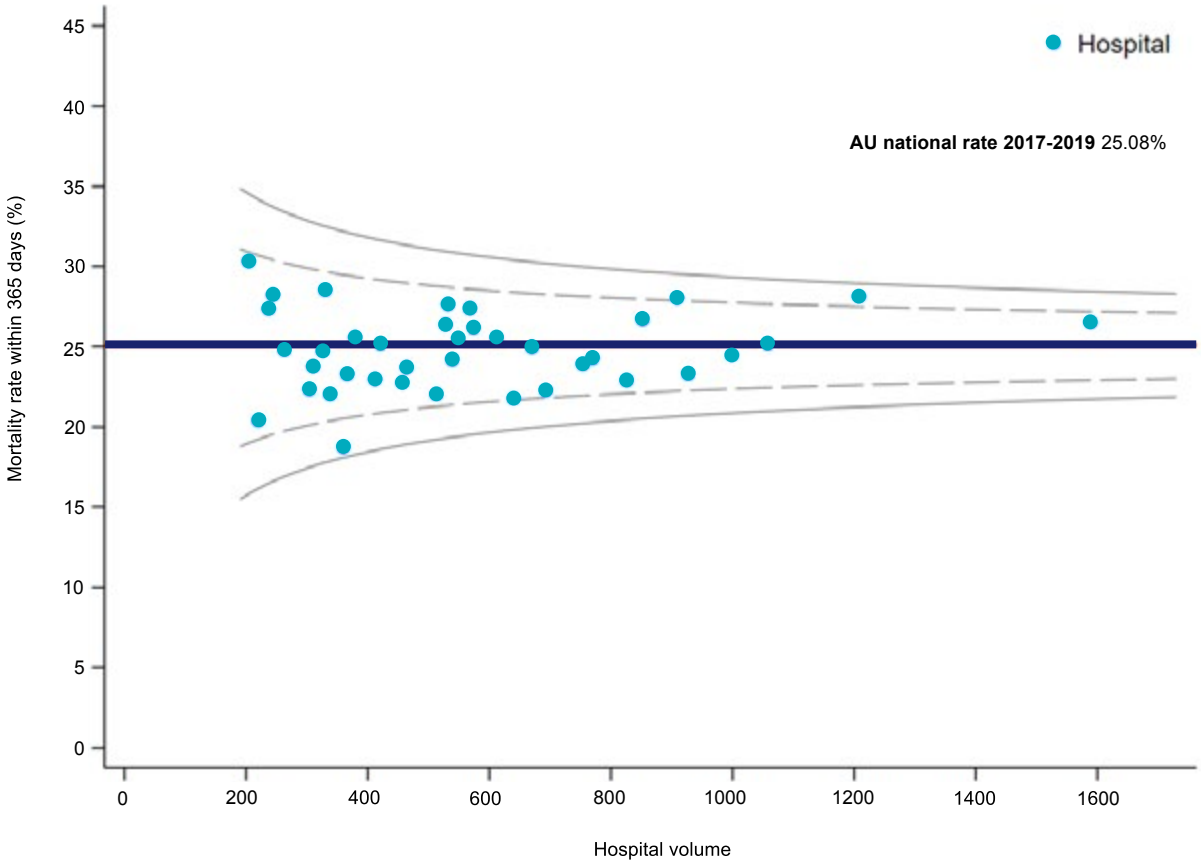
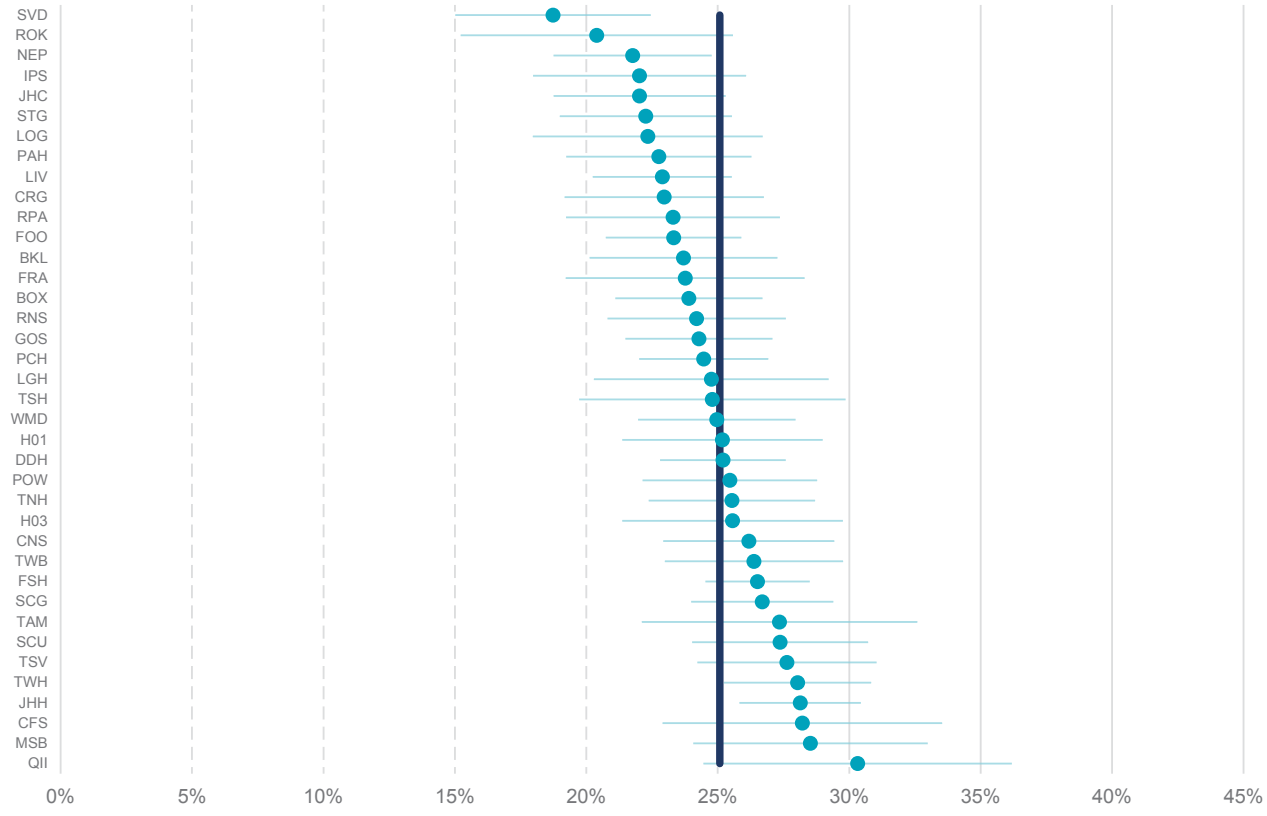


FIGURE 66 Caterpillar plot of adjusted mortality rate at 365 days – Australian hospitals (2017–2019)



FACILITY LEVEL AUDIT

This is the 9th facility level audit of Australian and New Zealand hospitals undertaking definitive management of older people with a hip fracture. The aim of the audit is to document over time the services, resources, policies, protocols and practices that exist across both countries. This year, 117 hospitals completed the audit for the 2020 calendar year and the results are provided here.

RESULTS 1: GENERAL INFORMATION

FIGURE 67 Number of hip fractures treated in 2020

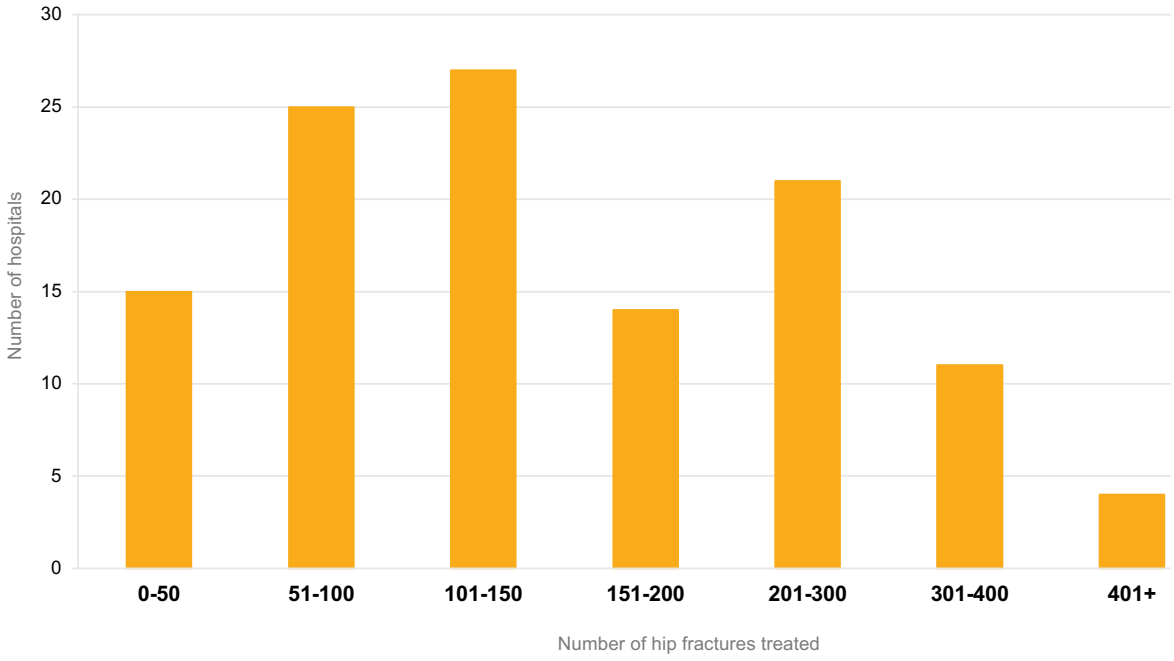
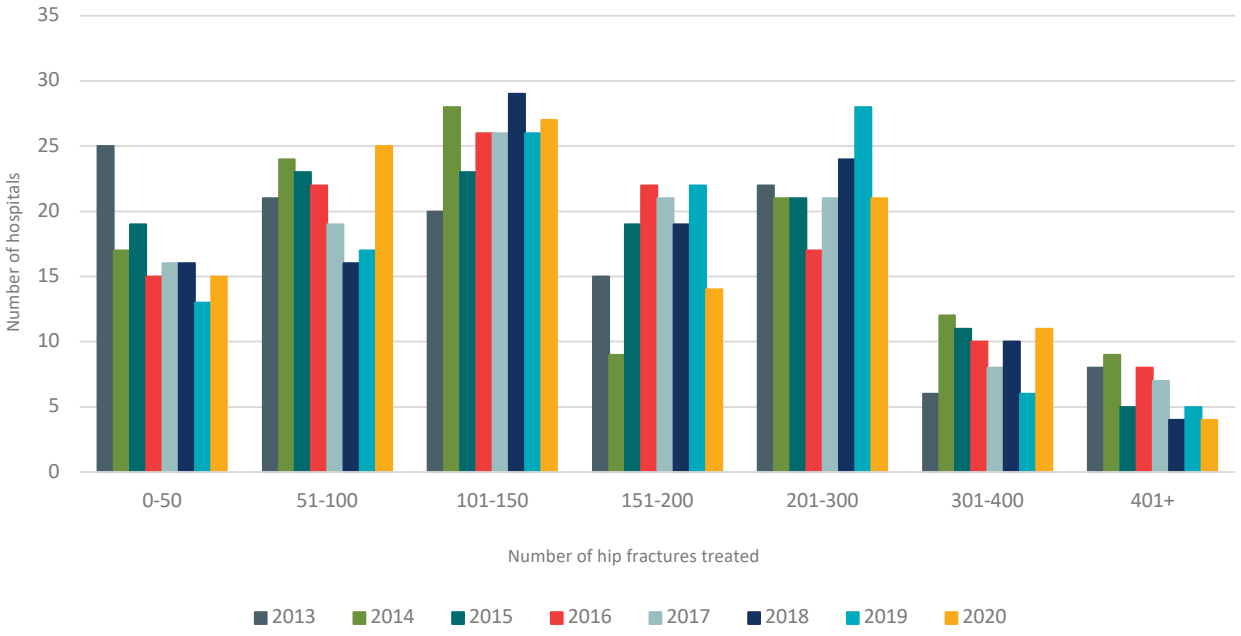


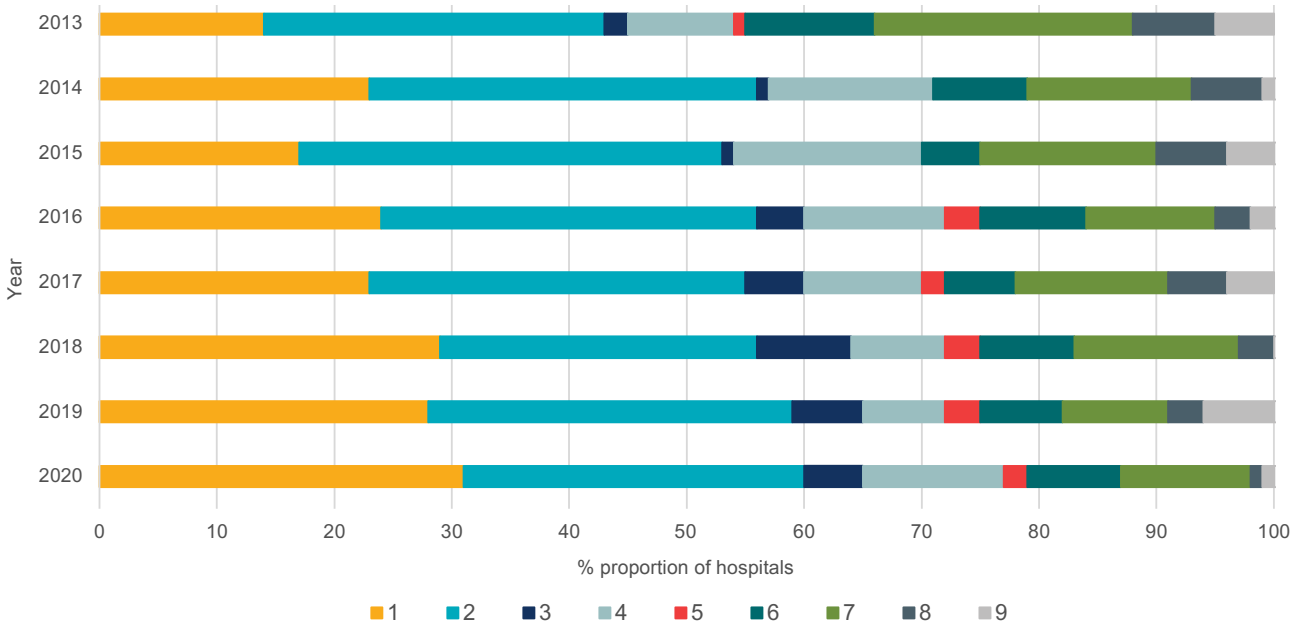
FIGURE 68 Number of hip fractures treated 2013–2020



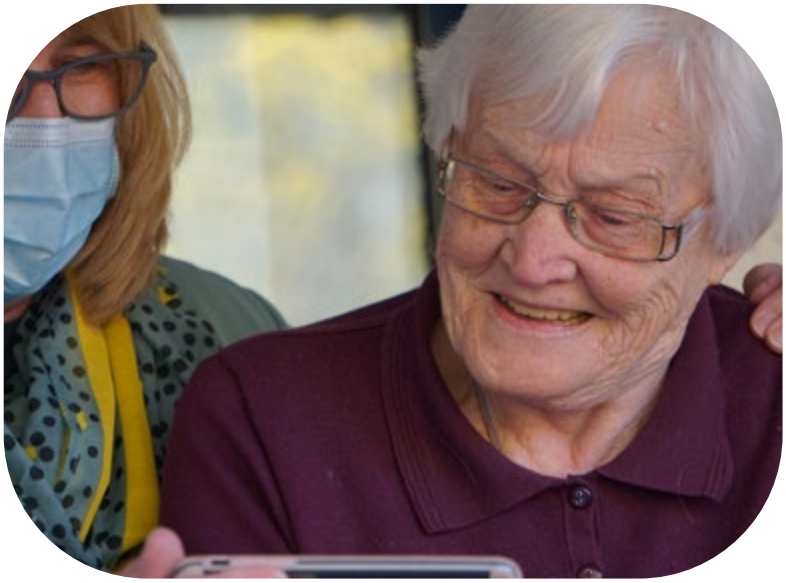
RESULTS 2: SERVICE MODEL OF CARE

Geriatricians continue to be increasingly involved in the management of older people who have fractured their hip, represented by the growing number of ANZ hospitals reporting shared care arrangements or regular input by an orthogeriatric liaison service, the two most common models of care reported. In 2020, shared care arrangements were reported in 31% of New Zealand and Australian hospitals (36/117). A weekday orthogeriatric liaison service was reported in 29% (34/117) of New Zealand and Australian hospitals. Fewer hospitals reported that no formal arrangements for review exist (Figure 69).

FIGURE 69 Orthogeriatric care service model by hospital (New Zealand and Australia combined) 2013–2020



1. A shared care arrangement where there is joint responsibility for the patient from admission between orthopaedics and geriatric medicine for all older hip fracture patients.
2. An orthogeriatric liaison service where geriatric medicine provides regular review of all older hip fracture patients (daily during working week)
3. A medical liaison service where a general physician or GP provides regular review of all older hip fracture patients (daily during working week)
4. An orthogeriatric liaison service where geriatric medicine provides intermittent review of all older hip fracture patients (2-3 times weekly)
5. A medical liaison service where a general physician or GP provides intermittent review of hip fracture patients (2-3 times weekly)
6. An orthogeriatric liaison service (2014) / geriatric service (2015) where a consult system determines which patients are reviewed
7. A medical liaison service (2014) / medical service (2015) where a consult system determines which patients are reviewed
8. No formal service exists
9. Other



RESULTS 3: PROTOCOLS AND ELEMENTS OF CARE

Protocols and pathways are interventions used in the provision of health care that aim to improve the quality, cost and satisfaction of that care. They help to sequence specific aspects of care for a given condition, such as hip fracture, and support improved communication and collaboration between health care professionals.

HIP FRACTURE PATHWAY

In 2020, 91% (106/117) of facilities reported having a hip fracture pathway. While the overall proportion of facilities is similar to last year, there has been an increase in hospitals reporting a hip fracture pathway for the whole acute journey from 60% in 2019 to 69% in 2020.

COMPUTED TOMOGRAPHY (CT) / MAGNETIC RESONANCE IMAGING (MRI)

In 2020, 71% (83/117) reported the availability of a protocol or pathway to access either CT or MRI if plain imaging of a suspected fracture was inconclusive. This compares with 54% in 2019, showing considerable improvement for the first time in the last five years. For some hospitals, the introduction of a protocol may be an opportunity to improve the diagnosis of clinically suspicious fractures.

VENOUS THROMBOEMBOLISM (VTE)

VTE is a serious complication of lower limb trauma and agreed protocols to prevent its onset are common. In 2020, 94% (110/117) of respondents reported that their hospitals did utilise a protocol for the prevention of VTE. This is consistent with last year.

PAIN PATHWAY

In 2020, the facility level audit showed a protocol or pathway for pain was available at 86% (101/117) of hospitals: 64 hospitals for the whole acute journey and 37 hospitals in the Emergency Department only. These results demonstrate an increase in the overall proportion of hospitals using a pathway, with the greatest change in the proportion of respondents reporting a pathway for the whole acute journey.

The facility level audit also asks respondents if patients are offered local nerve blocks as part of preoperative and postoperative pain management. This year, 98% (115/117) responded that patients were offered nerve blocks preoperatively and 86% (101/117) responded that patients were offered nerve blocks for postoperative pain relief ‘always’ or ‘frequently’, an increase from 78% in 2019.

CHOICE OF ANAESTHESIA

In 2020, 82% (96/117) of hospitals reported routinely offering a choice of anaesthesia ‘always’ or ‘frequently’.

PLANNED THEATRE LIST

The ANZ Guideline for Hip Fracture Care in Adults recommends that older hip fracture patients are operated on a scheduled list in daytime working hours. In 2020, 43% (50/117) of respondents reported having access to a planned operating theatre list, or planned trauma list, for hip fracture patients. The proportion of ANZ hospitals reporting access to a planned theatre list has remained relatively steady in the past five years and may represent an opportunity to address delay to surgery, with access to operating theatres remaining the primary reason for delay if surgery is not done within 48 hours.

WEEKEND THERAPY

Mobilisation on the day of, or day after, hip fracture surgery helps to restore movement and function and prevent complications. Low, or delayed, mobility after surgery for a hip fracture is more likely to result in poorer short-term outcomes and recovery of mobility. Provision of access to weekend therapy ensures the day of surgery does not negatively impact the rehabilitation process. In 2020, 82% (96/117) of respondents reported their hospital as providing routine access to weekend physiotherapy services. This figure is relatively unchanged over the past five years.

FIGURE 70

New Zealand hospitals reported elements of hip fracture care 2013–2020

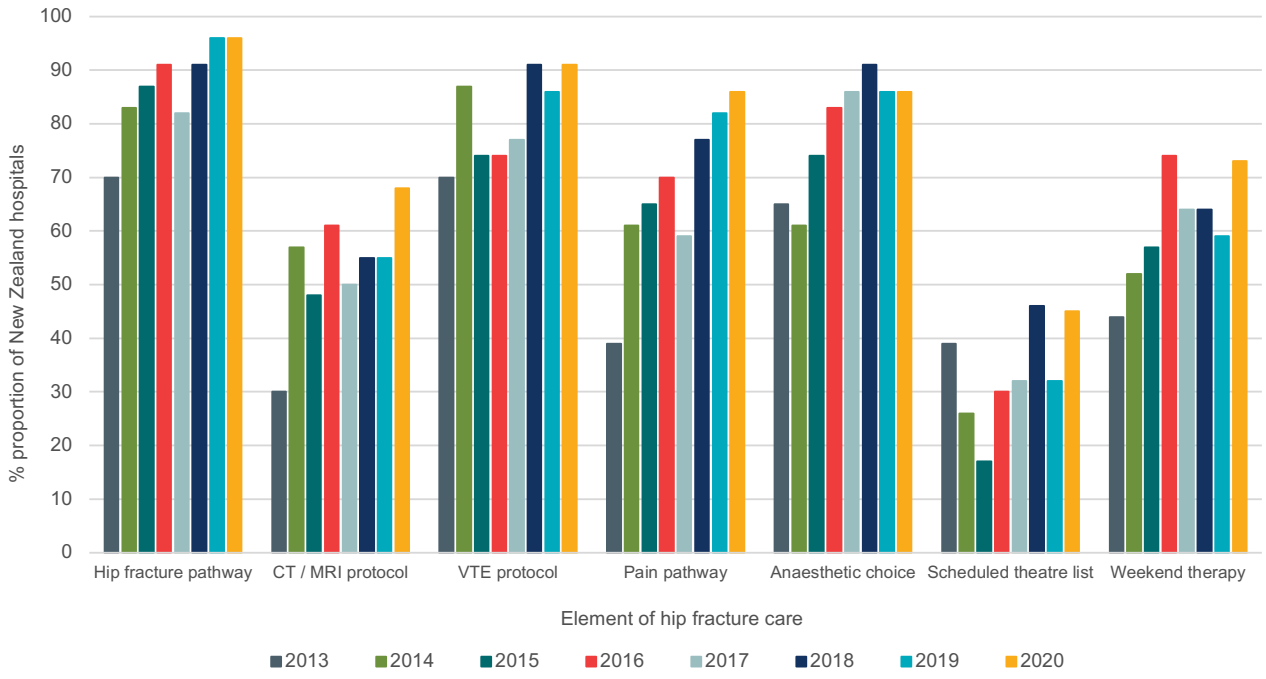
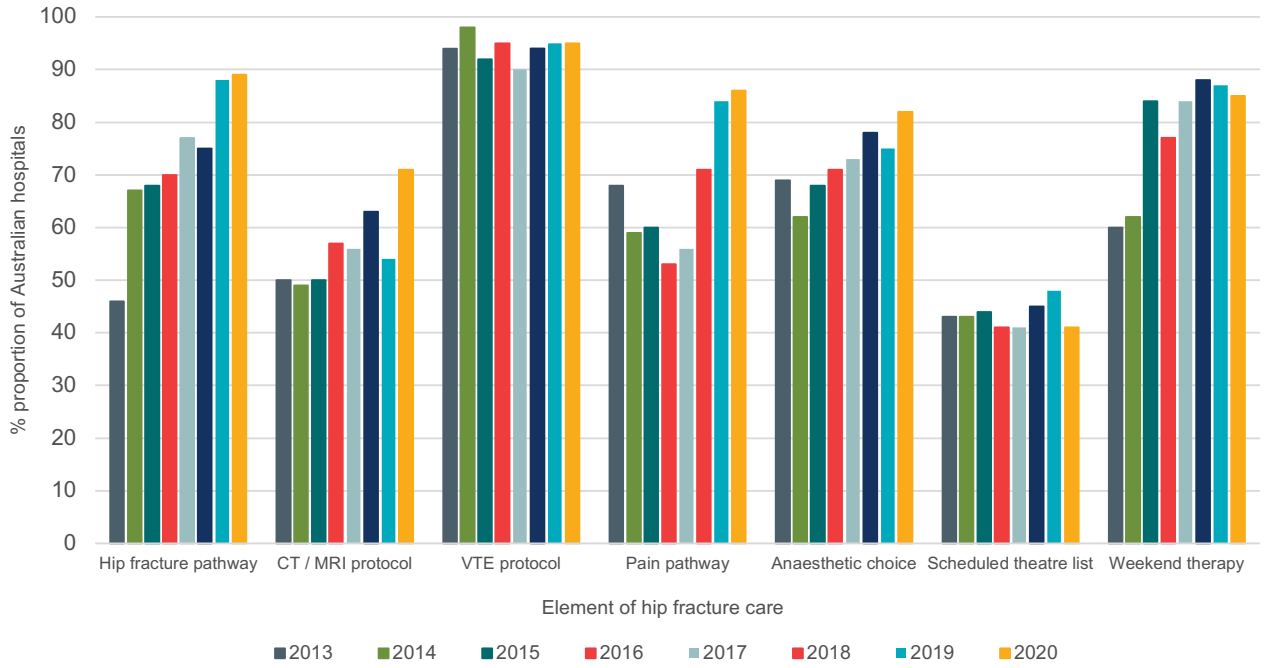


FIGURE 71

Australian hospitals reported elements of hip fracture care 2013–2020



IMPACT OF COVID

In this year's Facility Level Audit, we asked if there were any changes in the way older patients with a hip fracture were cared for during 2020 due to the impact of COVID-19 on health care services. Eighteen percent of New Zealand hospitals and 54% of Australian hospitals reported changes to usual care.

Whilst the majority of services reported there was no discernible impact on care against the quality indicators in the Clinical Care Standard, the most commonly reported changes were:

- Delay to surgery whilst awaiting COVID swab results
- Changes in ward configuration, with conversion of orthopaedic wards to dedicated COVID wards
- Hip fracture patients being cared for on outlying wards, either whilst awaiting swab results or due to the absence of a dedicated orthopaedic ward.

Some hospitals reported less access to operating theatres, whilst others reported increased theatre availability for a period when elective surgeries were cancelled.

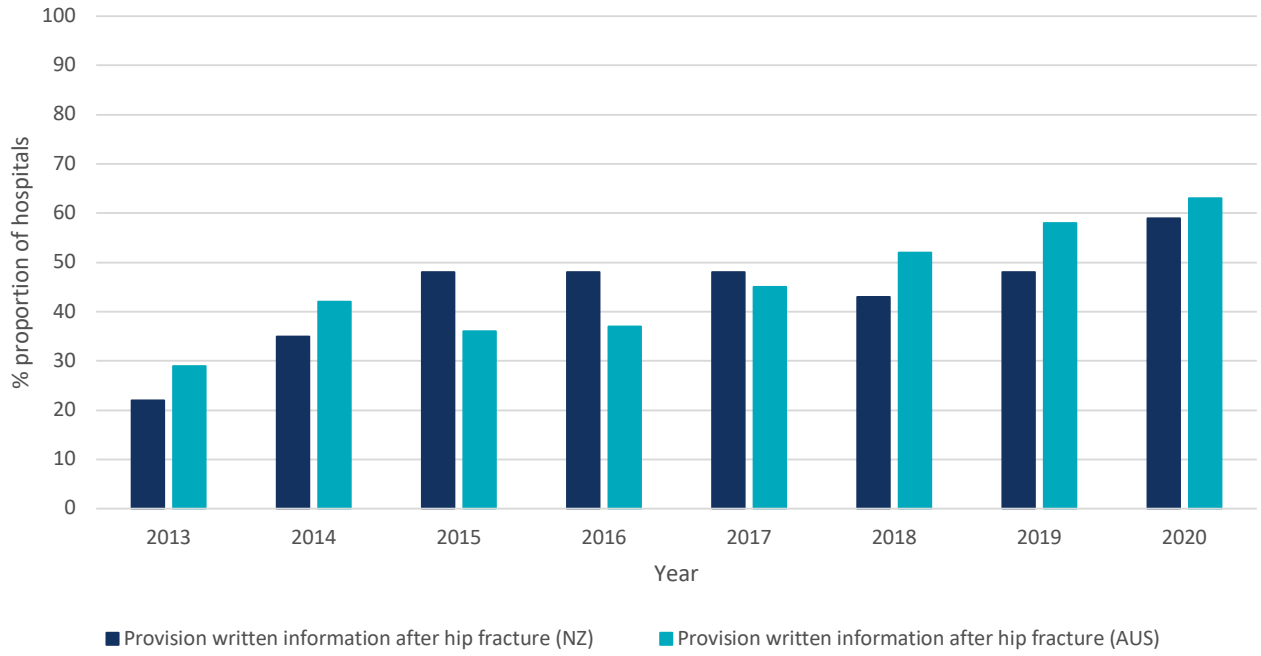
The significant negative impact on hip fracture patients was noted, particularly related to visitor restrictions and the challenges associated with effective communication while care teams were wearing masks.

RESULTS 4: BEYOND THE ACUTE HOSPITAL STAY

PATIENT AND CARER INFORMATION

Health systems should be set up to enable development of an individualised care plan with patients prior to discharge, and to refer patients to the relevant services as required. A steady increase in the provision of written information on treatment and care after hip fracture continues to be seen over the years of the facility level audit. This year, 62% (73/117) reported providing this at their hospital, compared to 56% in 2019 (Figure 72). The provision of individualised written information on the prevention of future falls and fractures has also increased for the first time this year, with 33% (39/117) of hospitals reporting that they routinely provide individualised falls prevention information to hip fracture patients (Figure 73).

FIGURE 72 Proportion of New Zealand and Australian hospitals reporting routine provision of written information on treatment and care after hip fracture 2013–2020



THE ANZHFR 'MY HIP FRACTURE CARE INFORMATION' IS AVAILABLE IN HARD COPY AND ONLINE IN 15 LANGUAGES.

> Being able to access the booklet in Italian for the patient and his family was empowering for all involved in his care.
>
> **CNC, NSW**

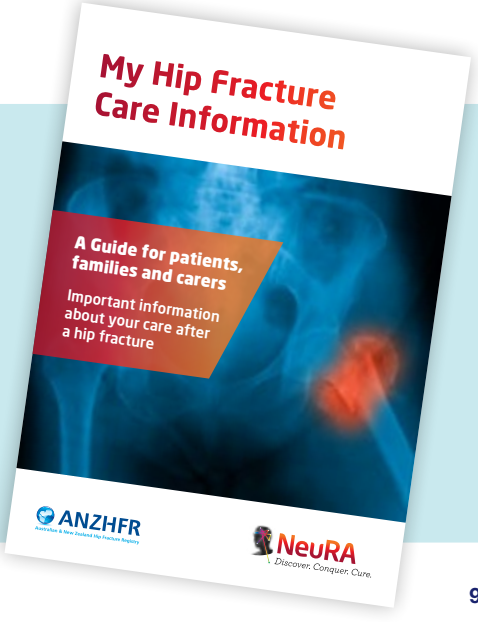
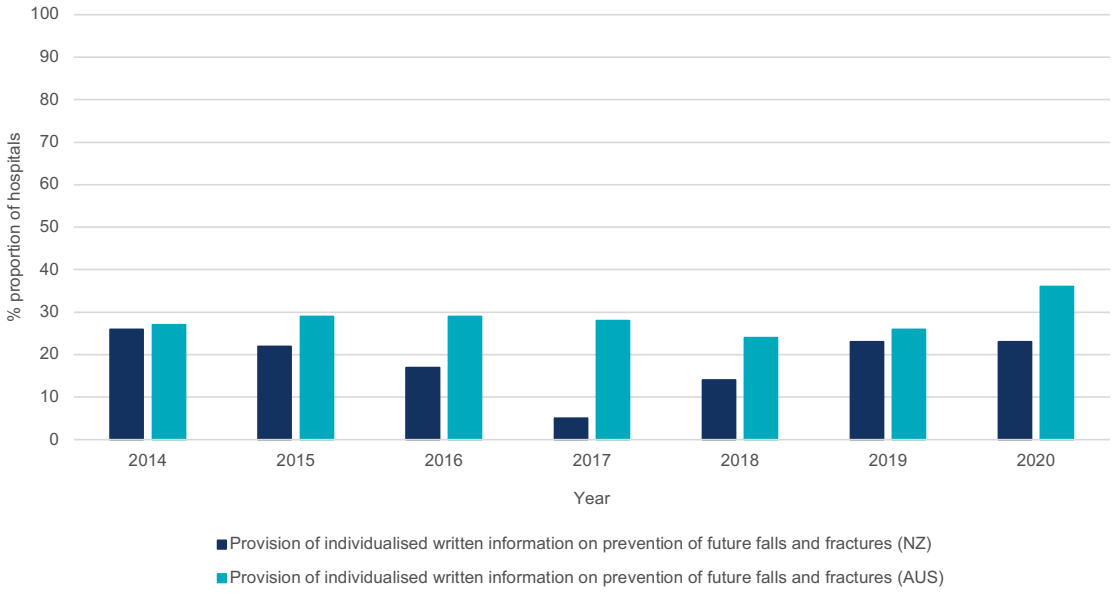


FIGURE 73 Proportion of New Zealand and Australian hospitals reporting routine provision of individualised written information on prevention of future falls and fractures 2014–2020



REHABILITATION

Early mobilisation and rehabilitation should be encouraged as it leads to improved functional mobility. Structured, multidisciplinary programmes supporting early discharge home, or discharge to a rehabilitation facility are recommended to enhance functional recovery. In 2020, 39% reported access to both onsite and offsite rehabilitation; 48% reported access to home-based rehabilitation (Figure 74).

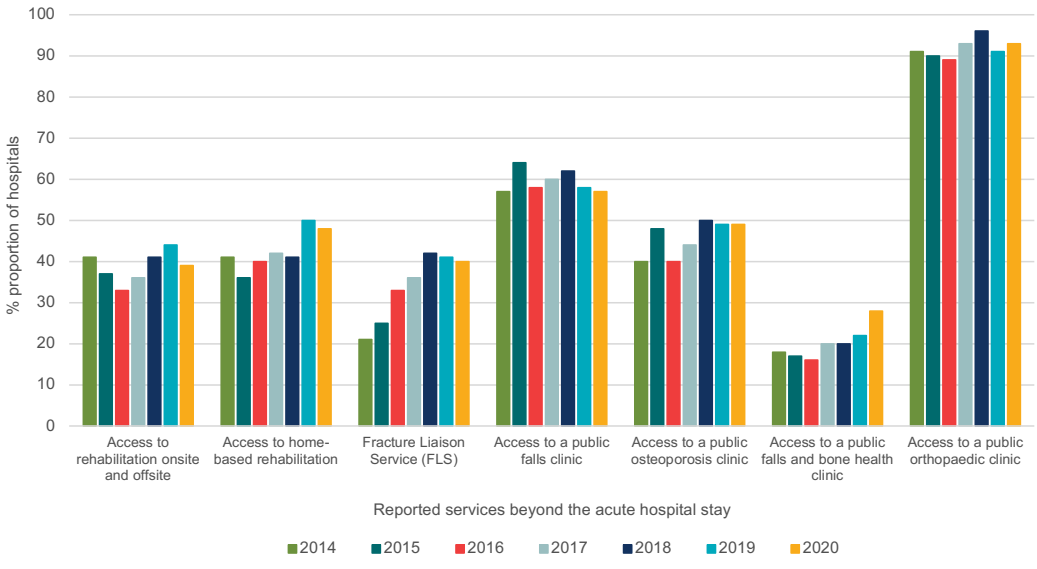
FRACTURE LIAISON SERVICES

Dedicated resources allocated to the identification, management and follow-up of minimal trauma fractures are successful in reducing refracture rates in people with osteopenia and osteoporosis. Despite consistent evidence supporting these services, the availability of fracture liaison services remains unchanged over the last three years. It was reported at 40% (47/117) in 2020.

OUTPATIENT CLINICS

Access to orthopaedic clinics remains high at 93% (109/117). In 2020, access to a combined falls and bone clinic increased to 28% (33/117), while access to separate public falls clinic (57%) and osteoporosis clinic (49%) remained unchanged, compared with the previous year.

FIGURE 74 Proportion of New Zealand and Australian hospitals reporting specific services beyond the acute hospital stay 2014–2020



AUSTRALIAN STATE REPORT

Unlike the previous sections of the report, which provide information broken down by hospital, this section details results broken down by Australian state, allowing interstate comparisons of performance of hip fracture care. Using this information, states can consider where best care is delivered and provide a benchmark for future performance. The interstate data comparisons use data from the 2020 calendar year, including records from 11,482 patients treated in 64 hospitals in Australia.

FIGURE 75 Patient count by state

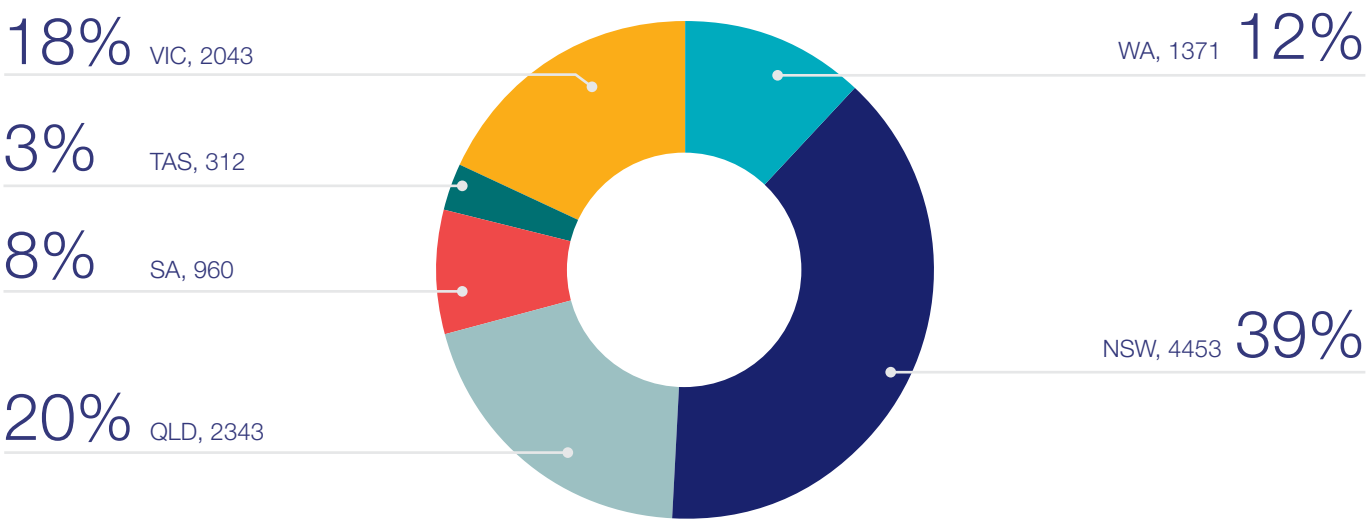


FIGURE 76 Preoperative cognitive assessment by state

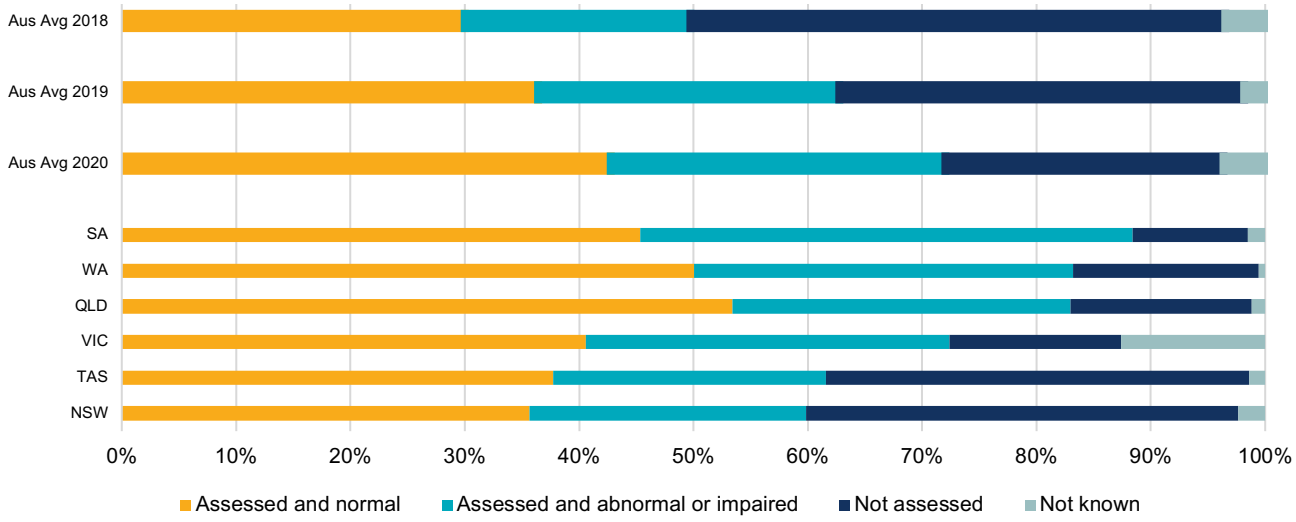


FIGURE 77 Nerve blocks by state

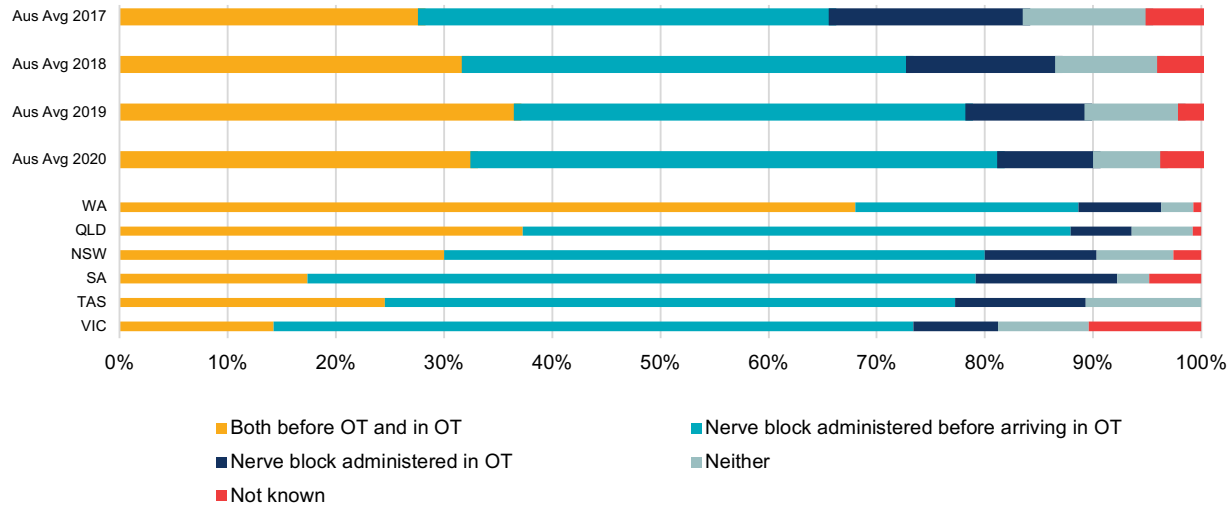


FIGURE 78 Emergency Department (ED) length of stay (LOS) by state

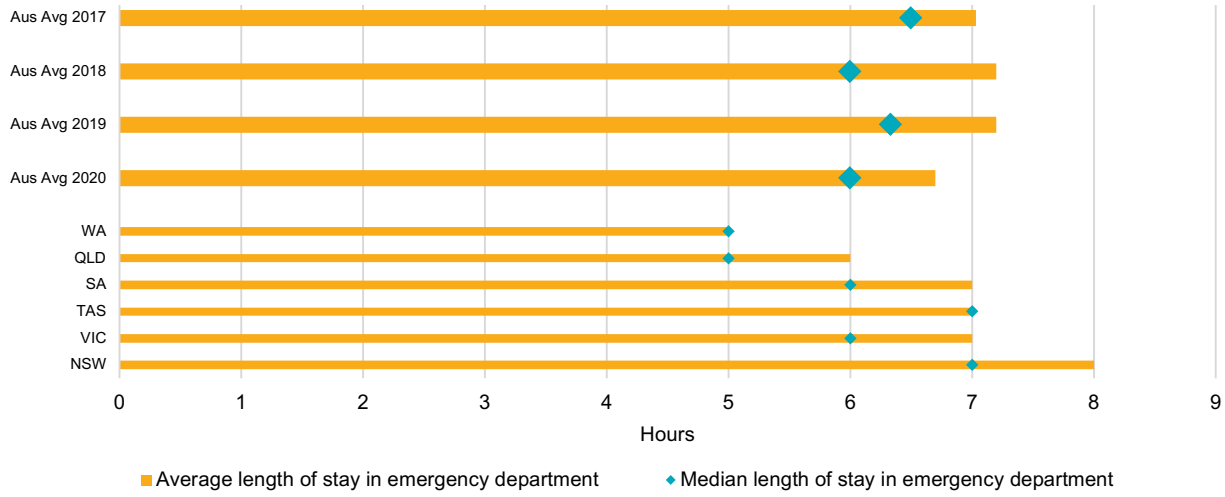


FIGURE 79 Average time to surgery by state

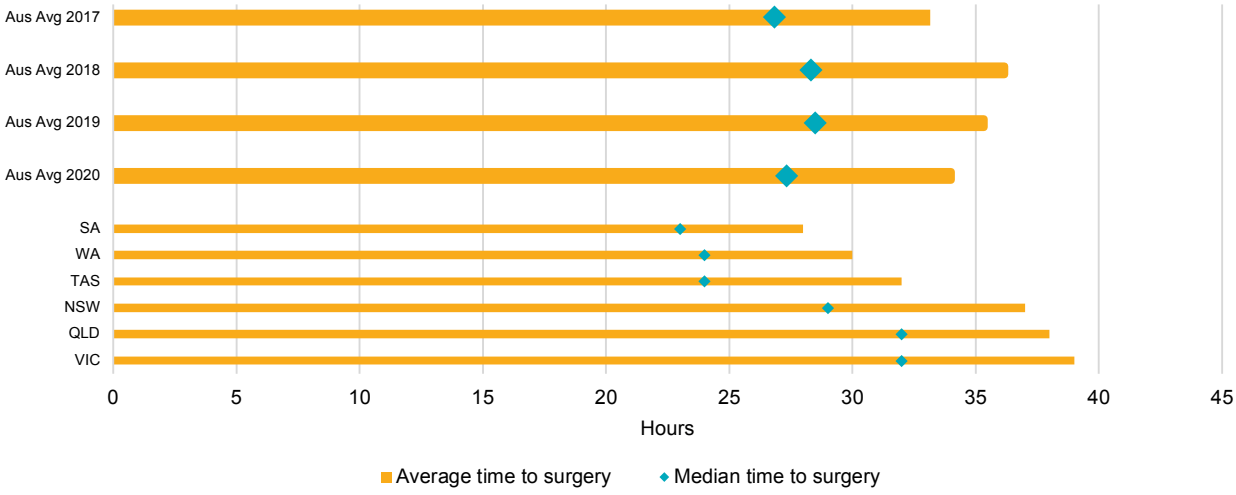


FIGURE 80
Surgery within 48 hours

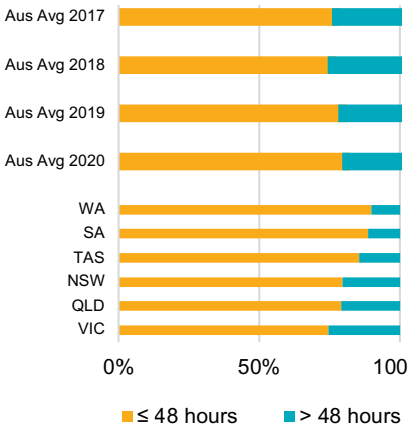


FIGURE 81
Reason for delay longer than 48 hours by state

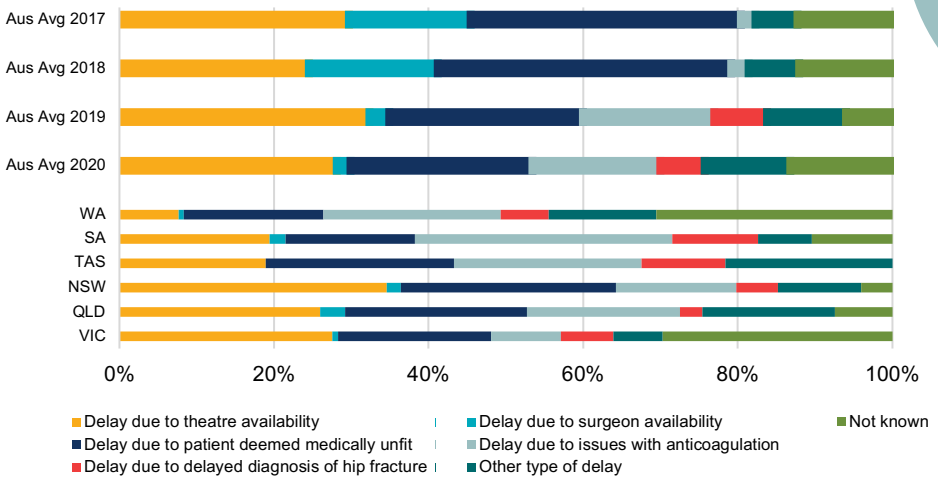


FIGURE 82
Opportunity first day mobilisation by state

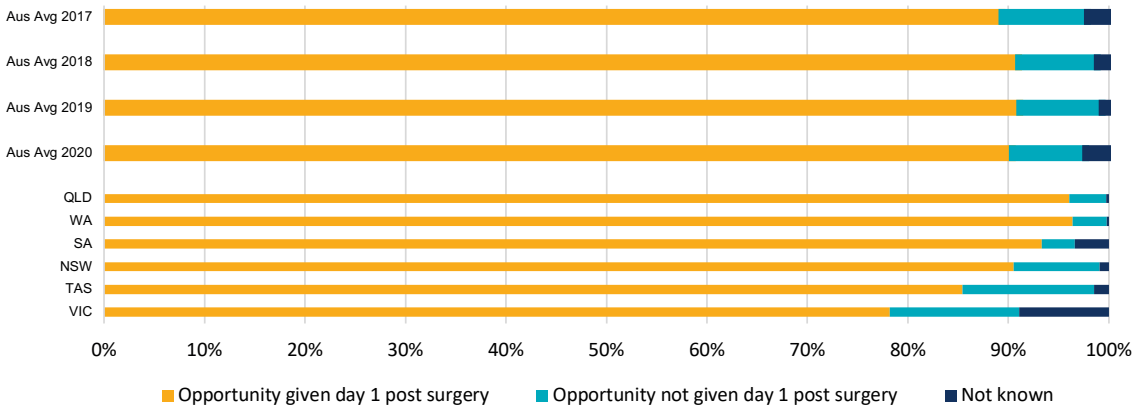


FIGURE 83
Actual first day mobilisation by state

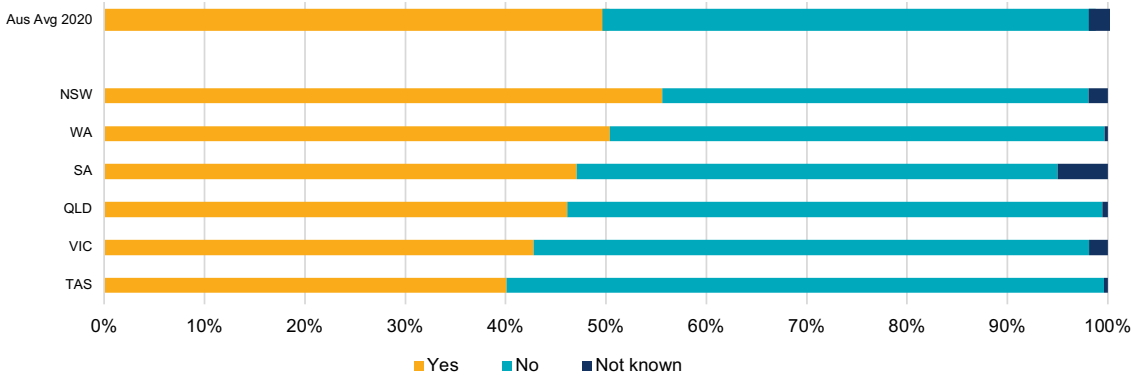
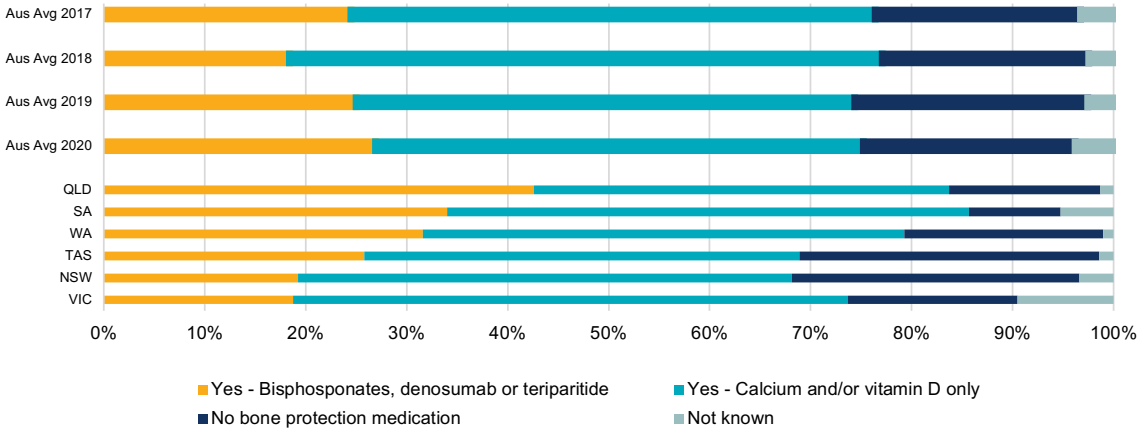


FIGURE 84
Bone protection medication on discharge by state



APPENDIX I

ANZHFR STEERING GROUP MEMBERSHIP

MEMBERS OF THE ANZHFR STEERING GROUP ARE:

Professor Jacqueline Close, Geriatrician Co-Chair

Professor Ian Harris, Orthopaedic Surgeon Co-Chair

Ms Elizabeth Armstrong, Australian Registry Manager

Mr Brett Baxter, Physiotherapist, Australian Physiotherapy Association

Dr Jack Bell, Advanced Accredited Practising Dietitian, Dietitians Australia

Professor Ian Cameron, Rehabilitation Physician, Australasian Faculty of Rehabilitation Medicine

A/Professor Mellick Chehade, Orthopaedic Surgeon, Australian and New Zealand Bone and Mineral Society

Dr Owen Doran, Emergency Medicine Physician, Australasian College of Emergency Medicine

A/Professor Kerin Fielding, Orthopaedic Surgeon, Royal Australasian College of Surgeons

Mr Stewart Fleming, Webmaster

Dr Roger Harris, Geriatrician, Osteoporosis New Zealand

Dr Sarah Hurring, Geriatrician, Clinical Lead New Zealand

Dr Angel Hui-Ching Lee, Geriatrician, Royal Australasian College of Physicians

Dr Catherine McDougall, Orthopaedic Surgeon, Australian Orthopaedic Association

Dr Sean McManus, Anaesthetist, Australian and New Zealand College of Anaesthetists

A/Professor Rebecca Mitchell, Injury Epidemiologist, Australian Institute Health Innovation, Macquarie University

Mr Pierre Navarre, Orthopaedic Surgeon, New Zealand Orthopaedic Association

A/Professor Marinis Pirpiris, Orthopaedic Surgeon, Victoria

Dr Gretchen Poiner, Consumer

Dr Hannah Seymour, Geriatrician, Australian and New Zealand Society for Geriatric Medicine

Ms Anita Taylor, Orthopaedic Nurse Practitioner, Australian and New Zealand Orthopaedic Nurses Alliance

Ms Nicola Ward, New Zealand National Coordinator

Mr Mark Wright, Orthopaedic Surgeon, New Zealand

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Ms Narelle Payne, Project Officer

Ms Niamh Ramsay, Research Assistant

Ms Linda Roylance, Executive Assistant

THANK YOU TO ALL THE TEAMS WORKING ACROSS OUR HOSPITALS IN AUSTRALIA AND NEW ZEALAND.

YOUR EFFORTS ARE DRIVING IMPROVEMENTS IN HIP FRACTURE CARE.

ANZHFR

Australian & New Zealand Hip Fracture Registry