

2018

# ANNUAL REPORT

SUPPLEMENTARY REPORT



**ANZHF**

Australian & New Zealand Hip Fracture Registry

# Enhancing Outcomes for Older People

---



## ABBREVIATIONS AND DEFINITIONS

For the purposes of this report, the following interpretation of terms should be used.

**ACT** Australian Capital Territory

**CT** Computed Tomography

**ED** Emergency Department

**Hip fracture data** Data collected by hospitals that is in addition to information recorded in the patient's medical record

**MOC** Model of Care

**MRI** Magnetic Resonance Imaging

**N** Number of hospitals providing definitive management for hip fractures

**NSW** New South Wales

**NT** Northern Territory

**OT** Operating Theatre

**QLD** Queensland

**SA** South Australia

**TAS** Tasmania

**Therapy** Provision of allied health services primarily physiotherapy services

**VIC** Victoria

**VTE** Venous Thromboembolism

**WA** Western Australia

Extracts from this publication may be reproduced provided the source of the extract is acknowledged. For enquiries or comments, please contact the ANZHFR, Neuroscience Research Australia, 139 Barker Street, Randwick NSW Australia 2031.

Additional copies of this report can be accessed at [www.anzhfr.org](http://www.anzhfr.org)

**Report Design:** patterntwo creative studio [www.patterntwo.com.au](http://www.patterntwo.com.au)

**Photography:** Craig Fardell, Elizabeth Armstrong, Ian Harris, Jacqueline Close

**Suggested citation:** ANZHFR Bi-National Annual Report of Hip Fracture Care, Supplementary Report, Australian State and Territories 2018. Australian and New Zealand Hip Fracture Registry, August 2018.

ISBN-13 978-0-7334-3829-5

# CONTENTS

## 4 CO-CHAIRS FOREWORD

## 5 SUMMARY OF FINDINGS

## 6 ANZHFR PATIENT LEVEL AUDIT AUSTRALIAN STATES

- 6 **Figure S1** Patient count and proportion by state 2018
- Figure S2** Sex by state
- 7 **Figure S3** Usual place of residence by state
- Figure S4** Pre-admission of cognition by state
- 8 **Figure S5** Pre-admission walking ability by state
- Figure S6** Pre-operative cognitive assessment
- 9 **Figure S7** Nerve blocks by state
- Figure S8** Times in the emergency department (ED) by state
- 10 **Figure S9** Average time to surgery by state, (excludes transferred patients)
- Figure S10** Surgery within 48 hours by state
- Figure S11** Reason for surgical delay by state
- 11 **Figure S12** Mobilisation by state
- Figure S13** Bone medication on discharge by state
- 12 **Figure S14** Acute length of stay by state
- Figure S15** Discharge destination from acute ward by state

## 13 ANZHFR FACILITY LEVEL AUDIT AUSTRALIAN STATES AND TERRITORIES

### 13 2.1: NEW SOUTH WALES

- Table S1** NSW Hospitals reported elements of hip fracture care 2013-2018
- Figure S16** NSW Hospitals reported elements of hip fracture care 2013-2018

### 14 2.2: VICTORIA

- Table S2** Victorian Hospitals reported elements of hip fracture care 2013-2018
- Figure S17** Victorian Hospitals reported elements of hip fracture care 2013-2018

### 15 2.3: QUEENSLAND

- Table S3** Queensland Hospitals reported elements of hip fracture care 2013-2018
- Figure S18** Queensland Hospitals reported elements of hip fracture care 2013-2018

### 16 2.4: SOUTH AUSTRALIA

- Table S4** South Australian Hospitals reported elements of hip fracture care 2013-2018
- Figure S19** South Australian Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018

### 17 2.5: WESTERN AUSTRALIA

- Table S5** Western Australian Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018
- Figure S20** Western Australian Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018

### 18 2.6: TASMANIA

- Table S6** South Australian Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018
- Figure S21** South Australian Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018

### 19 2.7: NORTHERN TERRITORY (NT) AND AUSTRALIAN CAPITAL TERRITORY (ACT)

- Table S7** NT and ACT Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018
- Figure S22** NT and ACT Hospitals reported elements of hip fracture care year-by-year comparison 2013-2018



# NeuRA

*Discover. Conquer. Cure.*



# CO-CHAIRS FOREWORD



For the first time the Australian and New Zealand (ANZ) Hip Fracture Registry is reporting patient level data on a jurisdiction basis for Australia. In this supplementary report, we provide comparisons at both the patient level and the facility-level. As always, caution is needed when interpreting patient-level data, particularly for jurisdictions with a low participation rate. At a facility level, all public hospitals in all jurisdictions have contributed data for six years and this allows for a meaningful comparison over time within and between jurisdictions.

A number of opportunities exist to improve the delivery of care and align with the Australian Commission on Safety and Quality in Health Care's Hip Fracture Care Clinical Care Standard. Cognitive assessment using a validated tool in advance of surgical intervention is undertaken in just 35% of the population and is less than 10% in some jurisdictions.

The time patients with a hip fracture spend in the Emergency Department is long. Whether that time is used constructively in relation to pain management, medical optimisation, assessment and management of pressure care, nutrition, hydration and other important aspects of care is less clear. Protocols and pathways should be in place to expedite the transition through the Emergency Department, and to ensure that care is optimised whilst in the Emergency Department setting.

Time to surgery remains a challenge with access to and availability of operating theatres a common theme amongst jurisdictions struggling to meet the target of surgery within 48 hrs. This should be interpreted in the context of ongoing international research looking at the mortality and morbidity benefit of expedited surgery.

When looking at progress over time at the facility level, it is apparent where change is happening. Some of this

change may be locally driven, but in some jurisdictions the change is relatively quick and across a number of domains suggesting that a State level approach may have been the driver of that change.

Solutions can be at a number of levels, and the purpose of the State level report is to consider which aspects of care, from the structures and processes to the actual delivery of care, can be improved through a State-based approach. From forums that facilitate knowledge exchange and allow for the sharing of good practice, to the development of pathways and protocols, there is a great deal that can be achieved by hospitals working in partnership and supported in doing so by the respective governing health care organisations. Equally, where jurisdictions are doing well, others might seek to learn from practices and processes that have contributed to better performance.

We hope this jurisdiction-based report is used as an opportunity to reflect on current practice and performance and starts conversations around how to improve care. There is undoubtedly much that we can and should learn from each other. Over the coming year, the ANZ Hip Fracture Registry hopes to work with individual jurisdictions to focus on the sharing of good ideas, the celebration of great practice, and the development of partnerships to create solutions to common problems.

**Professor Jacqui 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

# SUMMARY OF FINDINGS



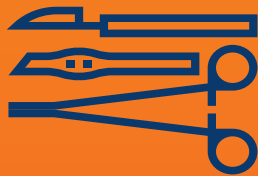
The assessment of a patient's cognition preoperatively varies from **6%** of patients in Victoria to **65%** of patient's in South Australia



The provision of nerve blocks for the management of pain before the operating theatre varies from **34%** in Tasmania to **86%** in Western Australia



The average time to surgery for hip fracture patients varies from **25 hours** in South Australia to **39 hours** in both Queensland and NSW



Surgery within 48 hours occurs **70%** of the time in Queensland to **88%** of the time in Western Australia



In NSW, **81%** of patients are given the opportunity to mobilise on the day of surgery or the day after surgery, ranging to **95%** in Western Australia

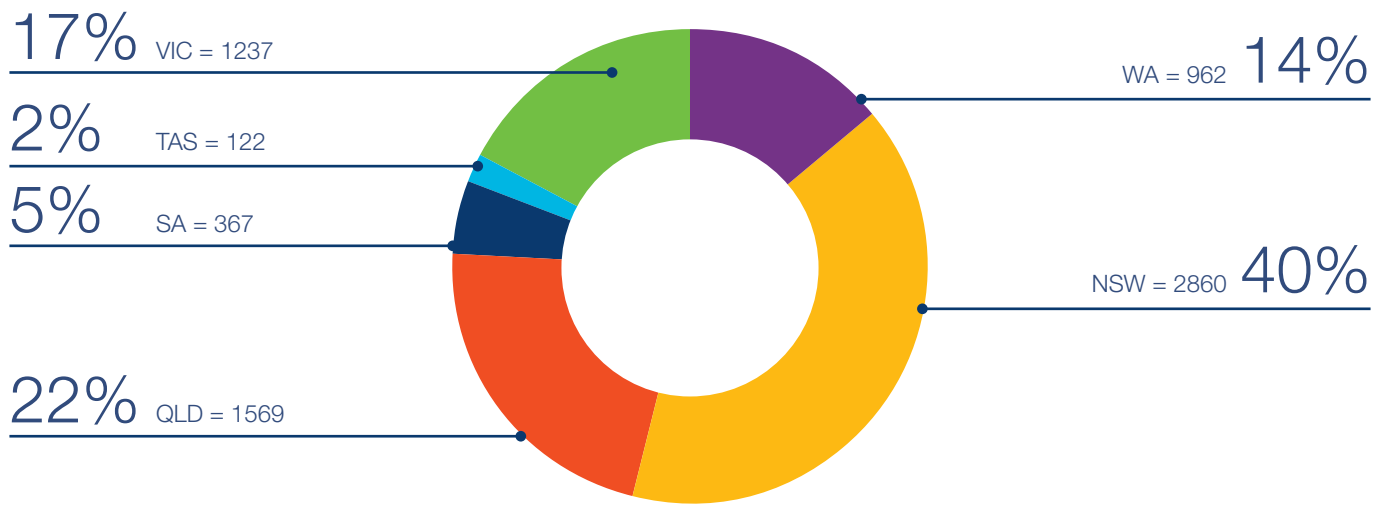


**7%** of hip fracture patients in Victoria ranging to **60%** in South Australia are discharged on active treatment for osteoporosis

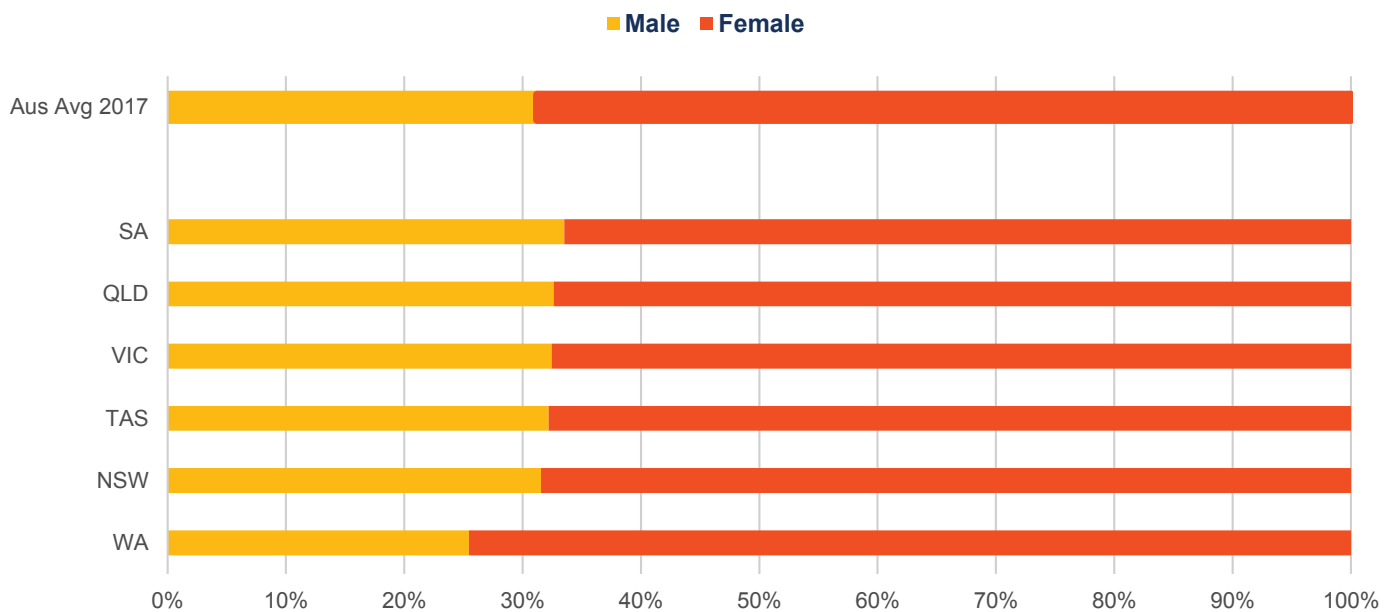
# SECTION I: PATIENT LEVEL AUDIT

## AUSTRALIAN STATES

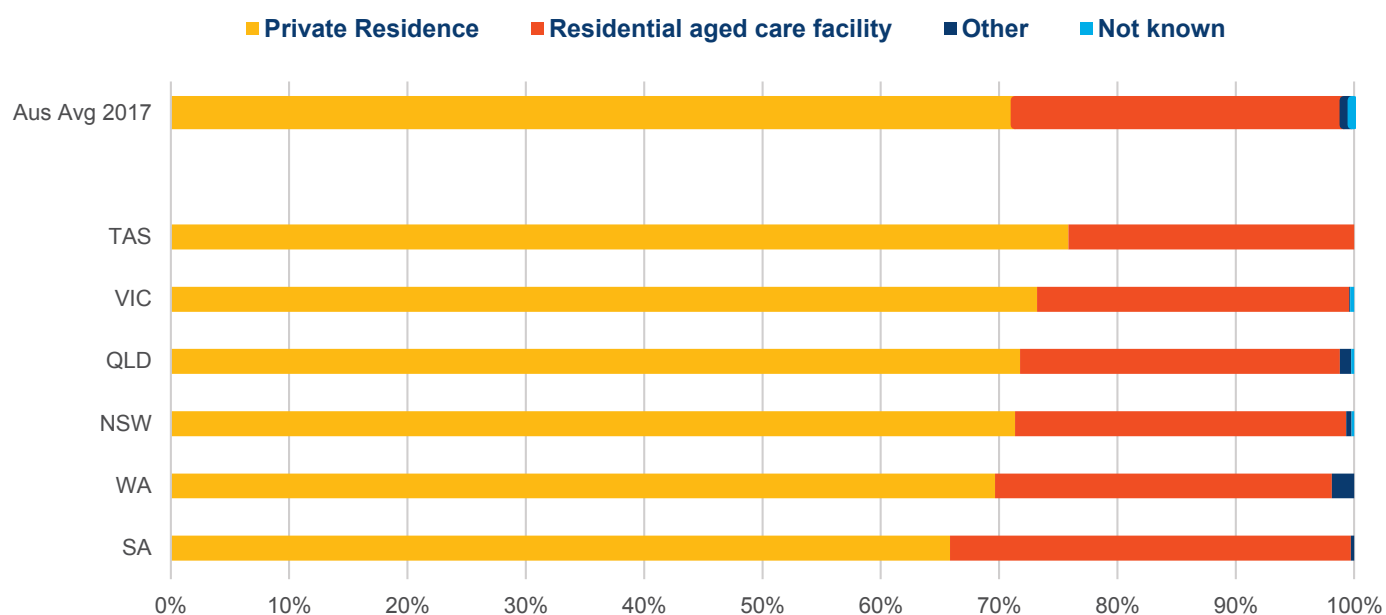
**FIGURE S1 PATIENT COUNT AND PROPORTION BY STATE 2018**



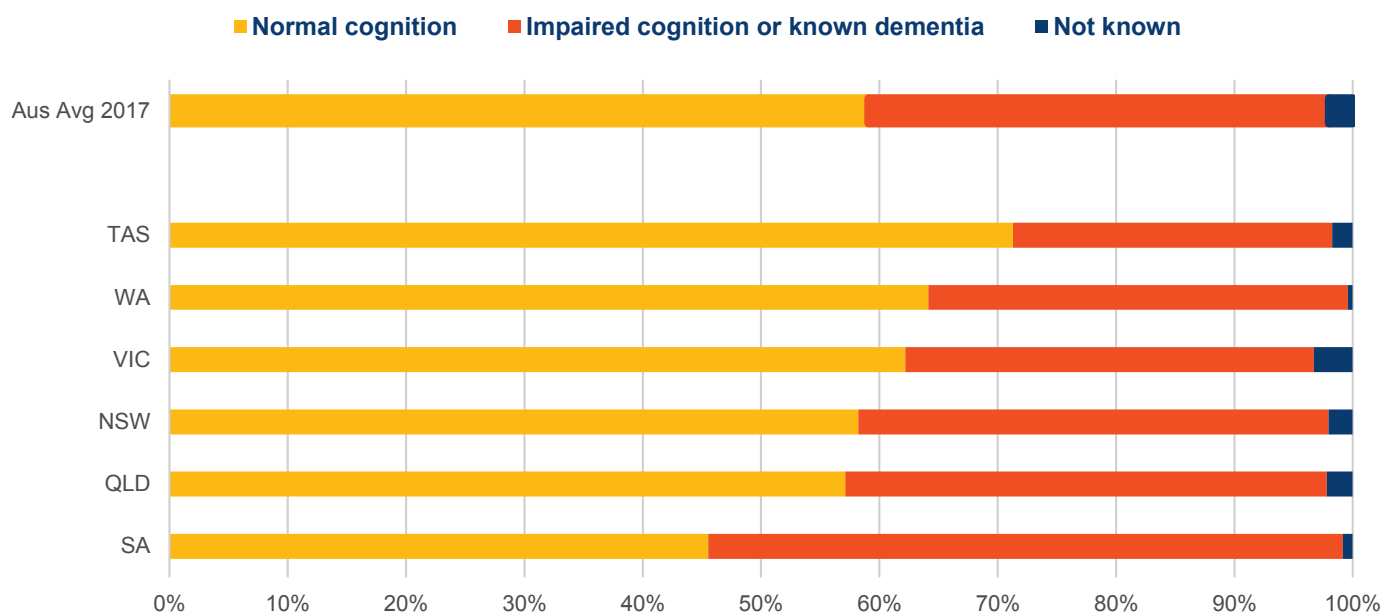
**FIGURE S2 SEX BY STATE**



**FIGURE S3 USUAL PLACE OF RESIDENCE BY STATE**

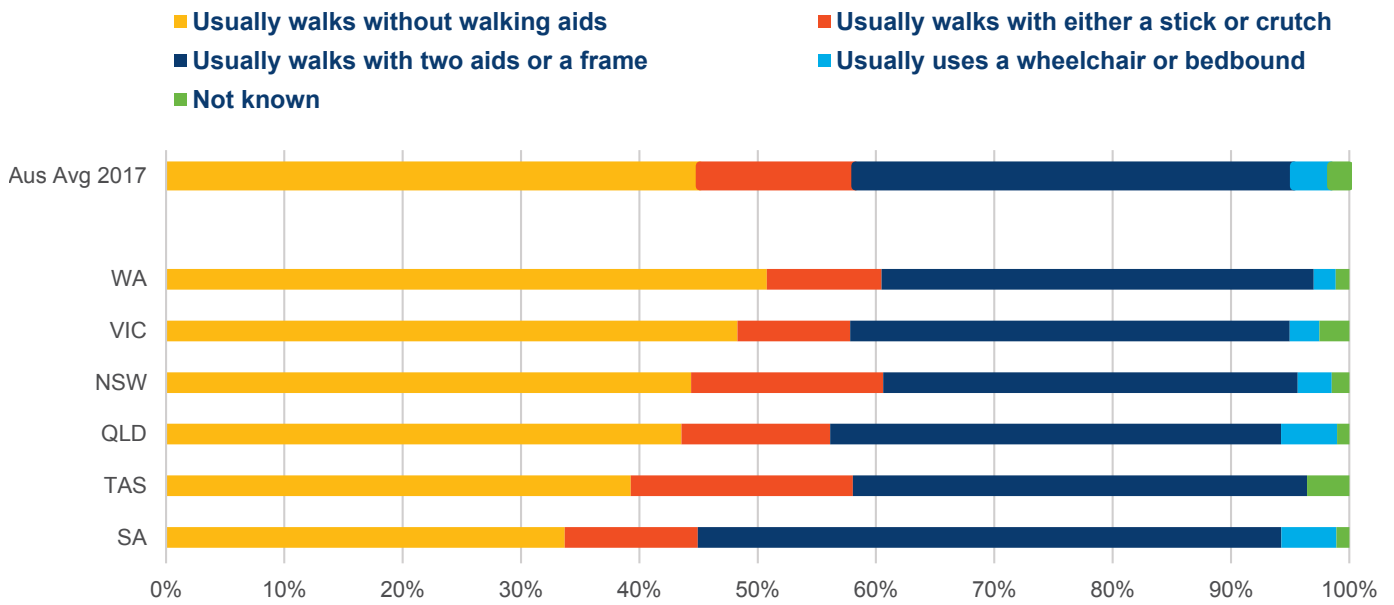


**FIGURE S4 PRE-ADMISSION COGNITION BY STATE**

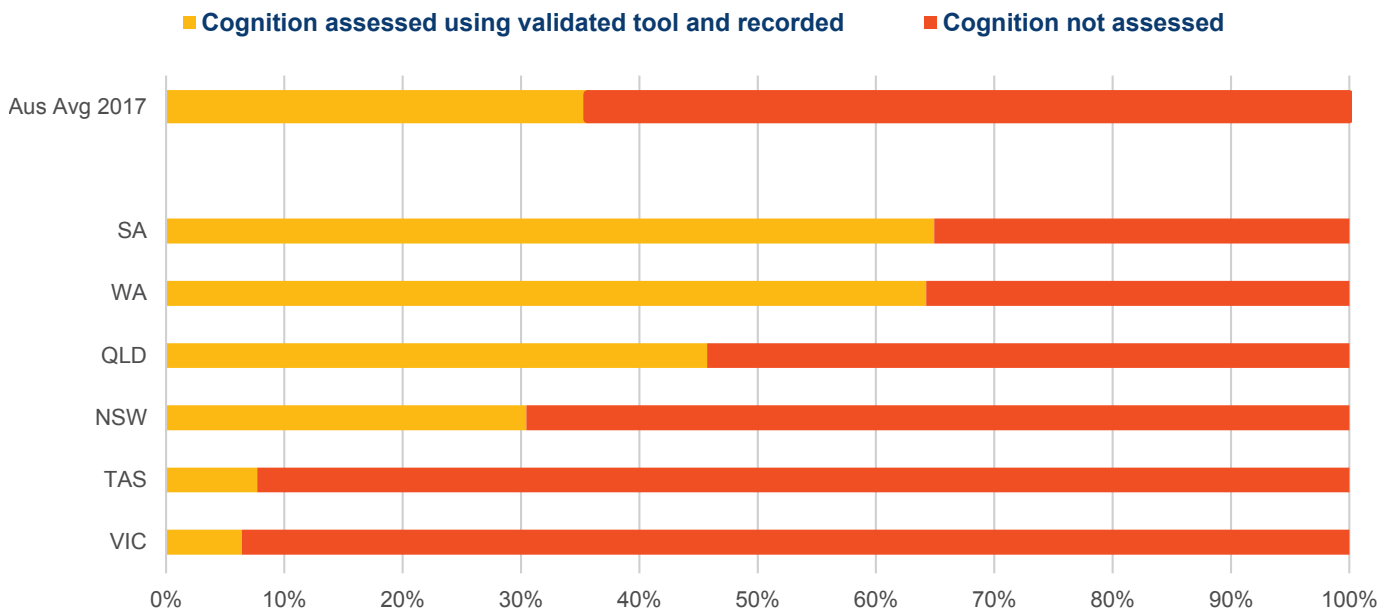




**FIGURE S5 PRE-ADMISSION WALKING ABILITY BY STATE**

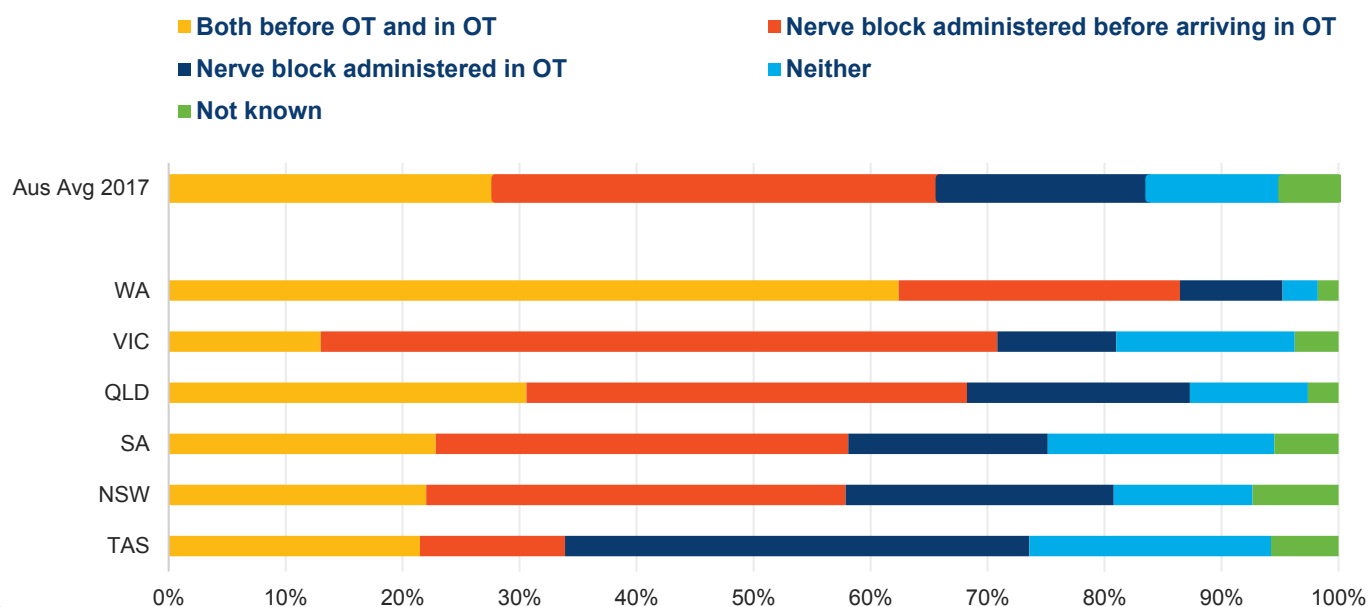


**FIGURE S6 PRE-OPERATIVE COGNITIVE ASSESSMENT BY STATE**

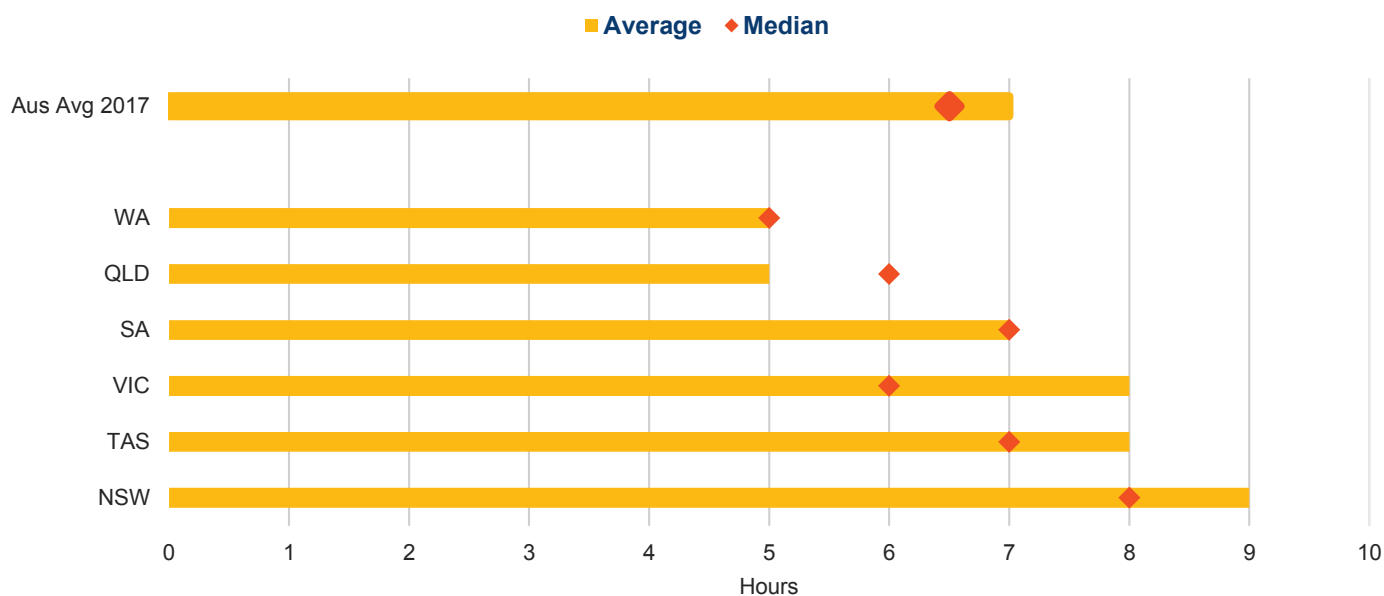




**FIGURE S7 NERVE BLOCKS BY STATE**

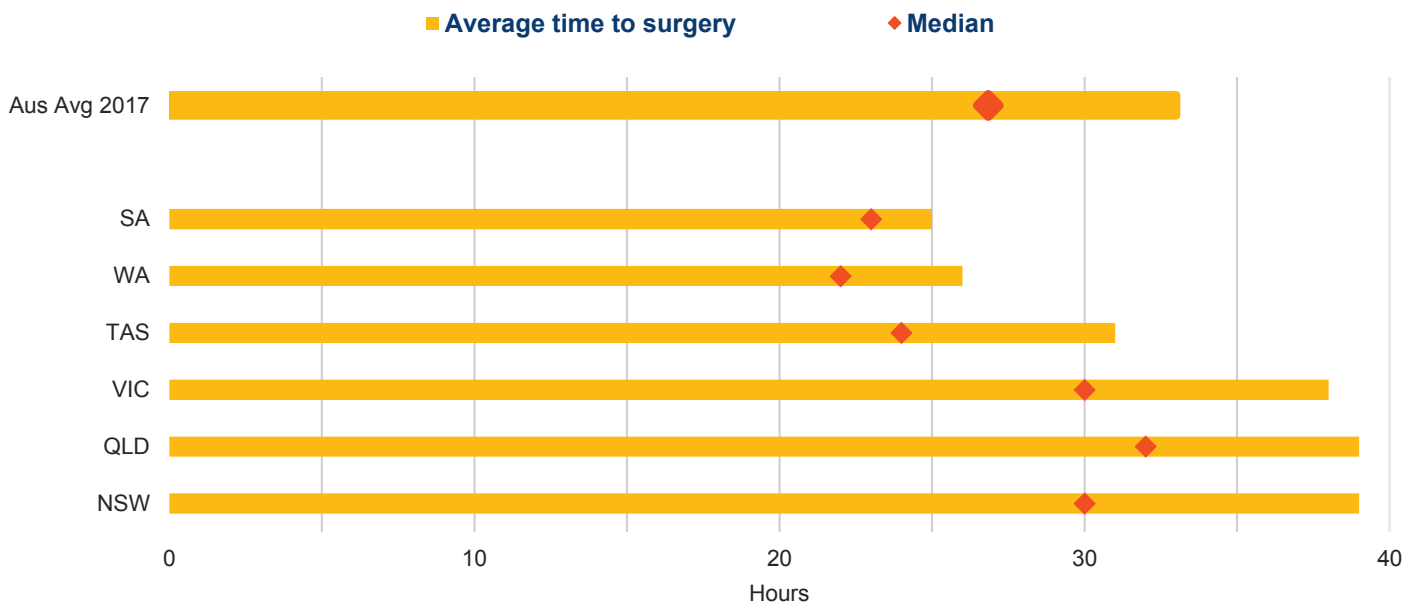


**FIGURE S8 TIME IN THE EMERGENCY DEPARTMENT (ED) BY STATE**

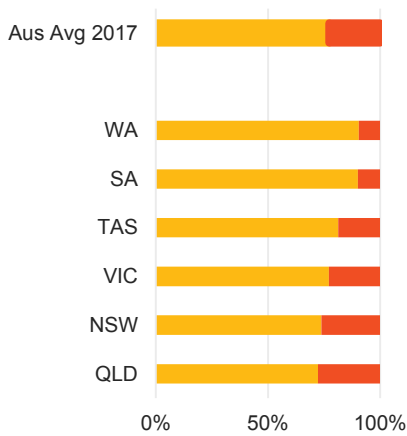




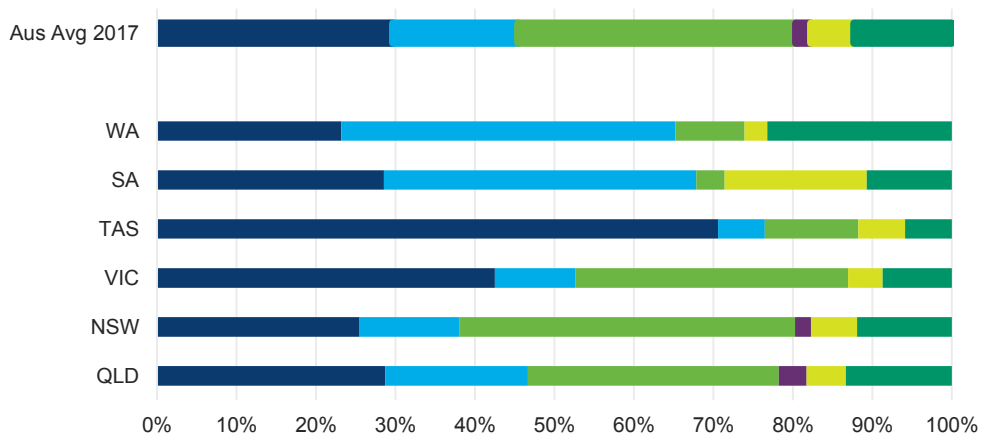
**FIGURE S9 TIME TO SURGERY BY STATE (excludes transferred patients)**



**FIGURE S10 SURGERY WITHIN 48 HOURS BY STATE**



**FIGURE S11 REASON FOR SURGICAL DELAY BY STATE**



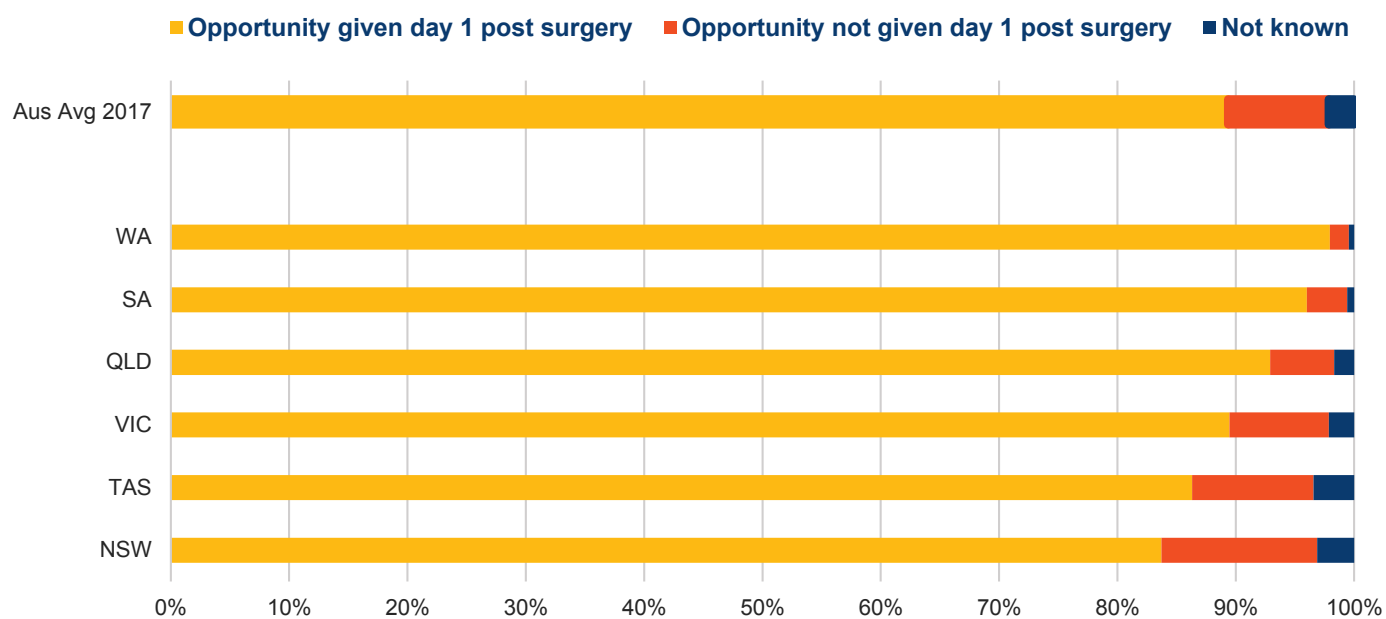
■ <= 48 hours ■ > 48 hours

■ Delay due to patient deemed medically unfit  
 ■ Delay due to issues with anticoagulation  
 ■ Delay due to theatre availability

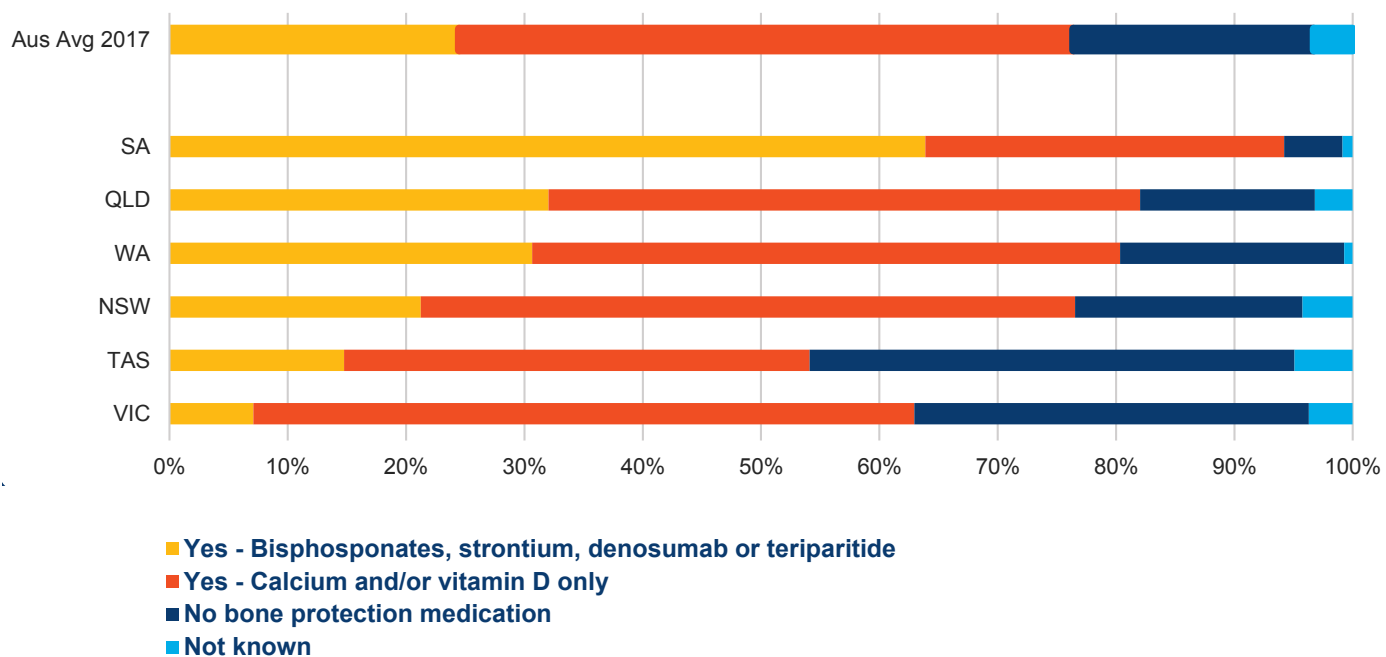
■ Delay due to surgeon availability  
 ■ Other type of delay  
 ■ Not known

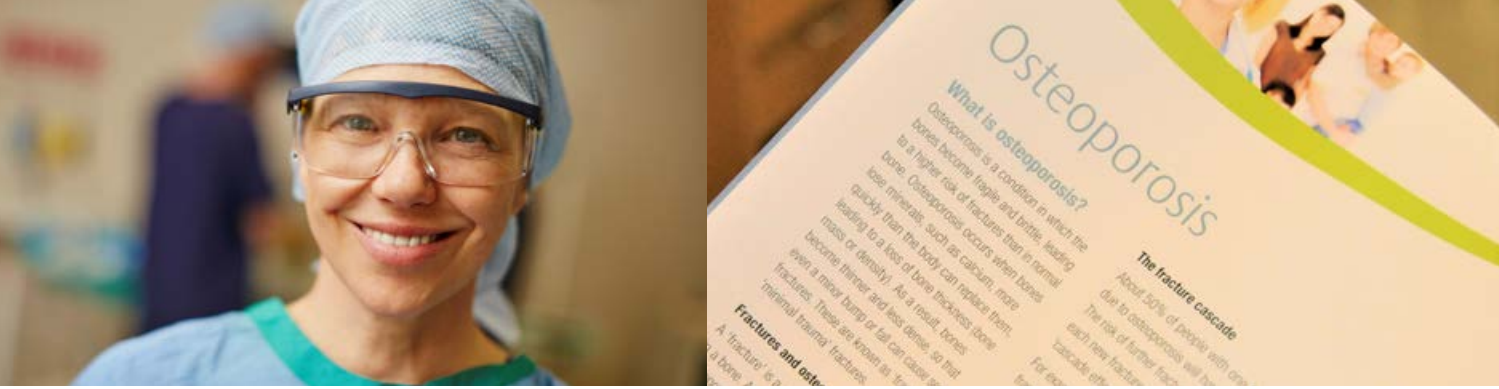


**FIGURE S12 MOBILISATION BY STATE**

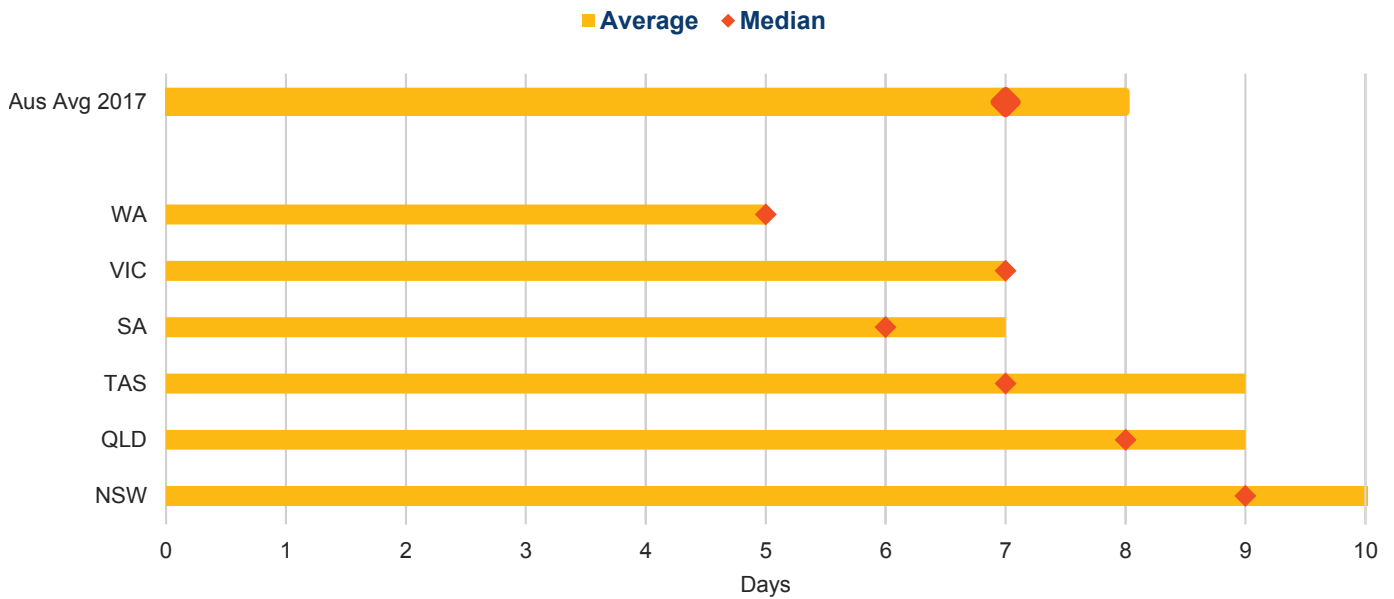


**FIGURE S13 BONE MEDICATION ON DISCHARGE BY STATE**

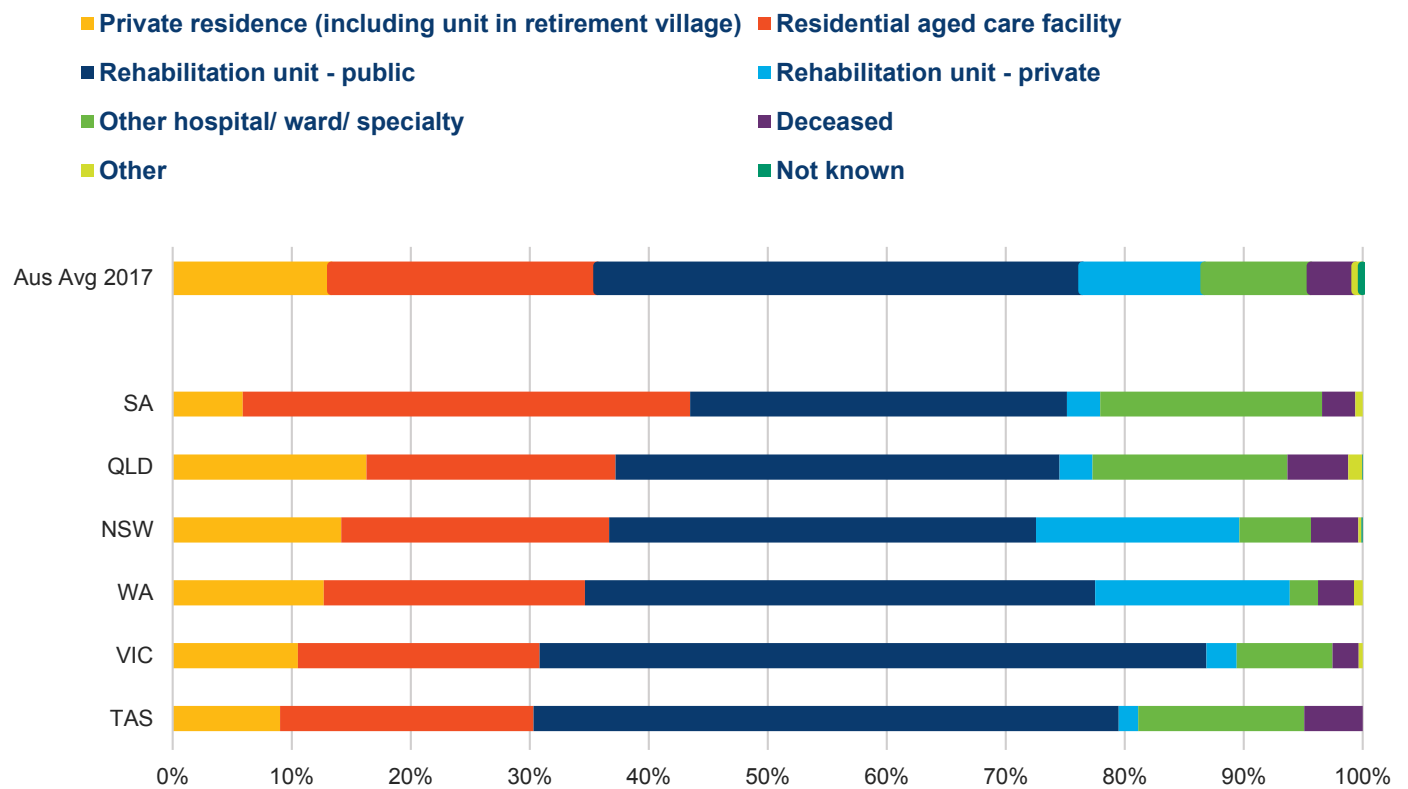




**FIGURE S14 ACUTE LENGTH OF STAY BY STATE**



**FIGURE S15 DISCHARGE DESTINATION FROM ACUTE WARD BY STATE**



# SECTION 2: FACILITY LEVEL AUDIT

## AUSTRALIAN STATES AND TERRITORIES

### 2.1 NEW SOUTH WALES

**TABLE S1 NSW HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

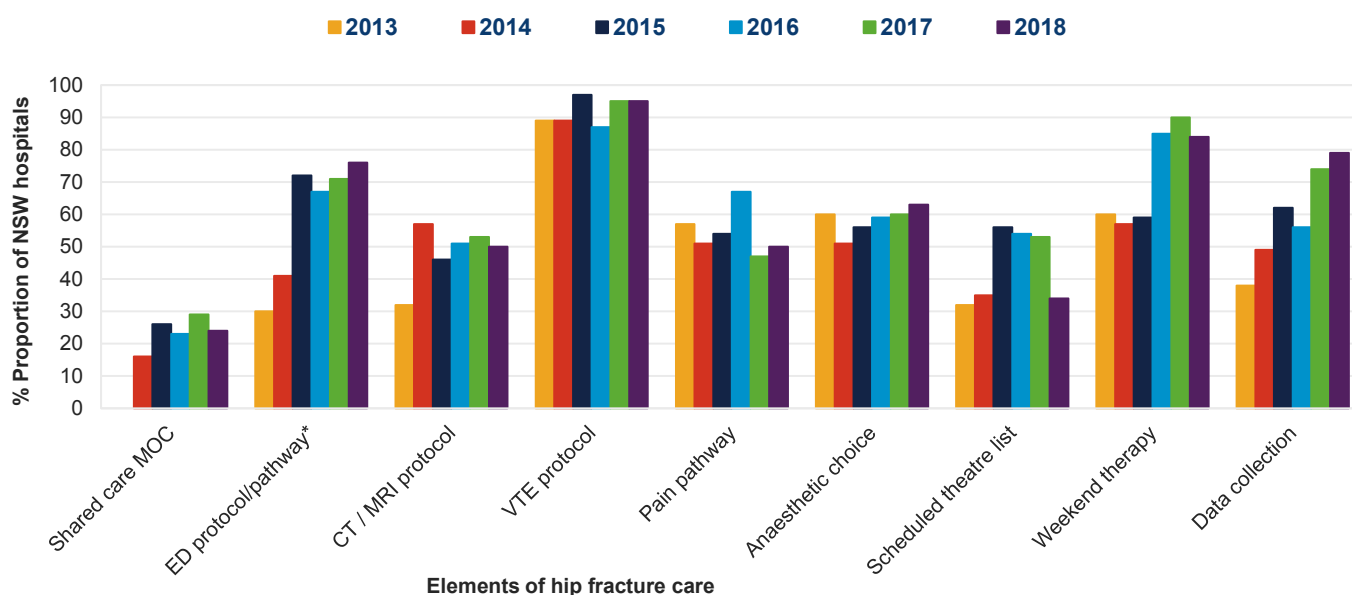
	2013 (n = 37)	2014 (n = 37)	2015 (n = 39)	2016 (n = 39)	2017 (n = 38)	2018 (n = 38)
Shared-care model of care (MOC)	n/a	16%	26%	23%	29%	24%
Protocol / pathway in the ED*	30%	41%	72%	67%	71%	76%
Protocol / pathway for access to CT / MRI	32%	57%	46%	51%	53%	50%
Protocol for VTE prevention	89%	89%	97%	87%	95%	95%
Protocol / pathway for management of pain	57%	51%	54%	67%	53%	50%
Given choice of anaesthesia^	60%	51%	56%	59%	60%	63%
Scheduled theatre list time	32%	35%	56%	54%	47%	34%
Provision of routine weekend therapy	60%	57%	59%	85%	90%	84%
Collecting hip fracture data	38%	49%	62%	56%	74%	79%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S16 NSW HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**



## 2.2 VICTORIA

**TABLE S2 VICTORIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

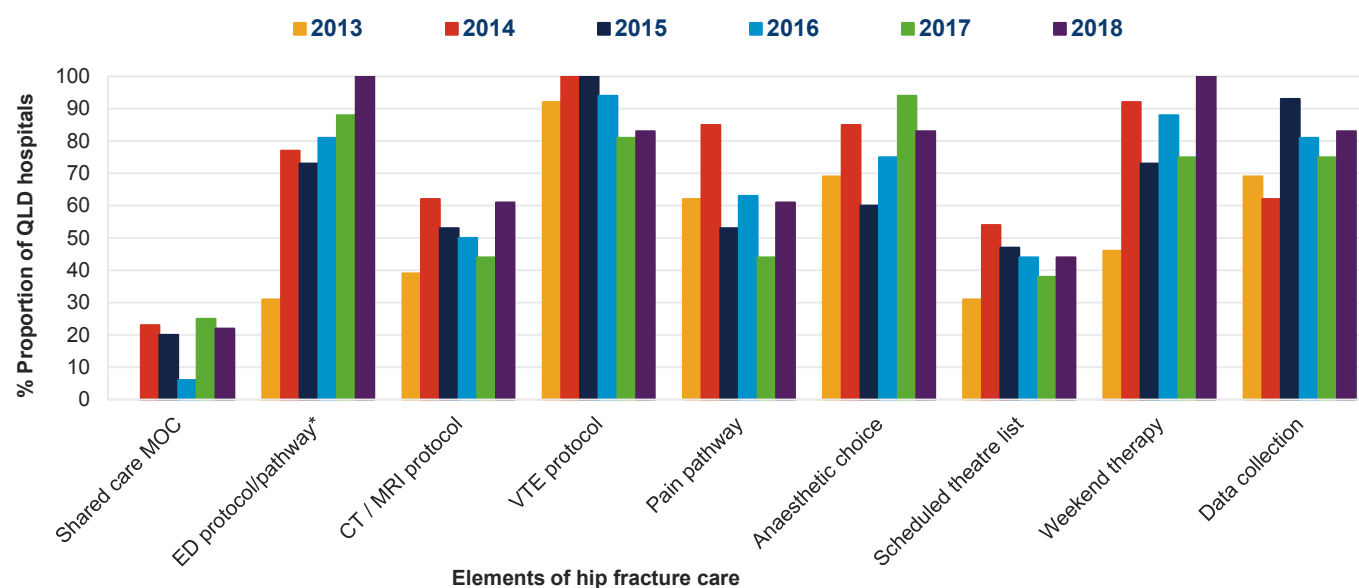
	2013 (n = 24)	2014 (n = 24)	2015 (n = 23)	2016 (n = 23)	2017 (n = 23)	2018 (n = 23)
Shared-care model of care (MOC)	n/a	8%	26%	13%	30%	22%
Protocol / pathway in the ED*	33%	46%	61%	74%	65%	65%
Protocol / pathway for access to CT / MRI	50%	46%	52%	57%	70%	61%
Protocol for VTE prevention	79%	96%	100%	100%	100%	87%
Protocol / pathway for management of pain	54%	71%	61%	57%	57%	52%
Given choice of anaesthesia^	71%	71%	65%	74%	61%	70%
Scheduled theatre list time	33%	50%	39%	35%	39%	48%
Provision of routine weekend therapy	58%	54%	74%	87%	78%	96%
Collecting hip fracture data	67%	63%	74%	78%	78%	61%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S17 VICTORIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**





## 2.3 QUEENSLAND

**TABLE S3 QUEENSLAND HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

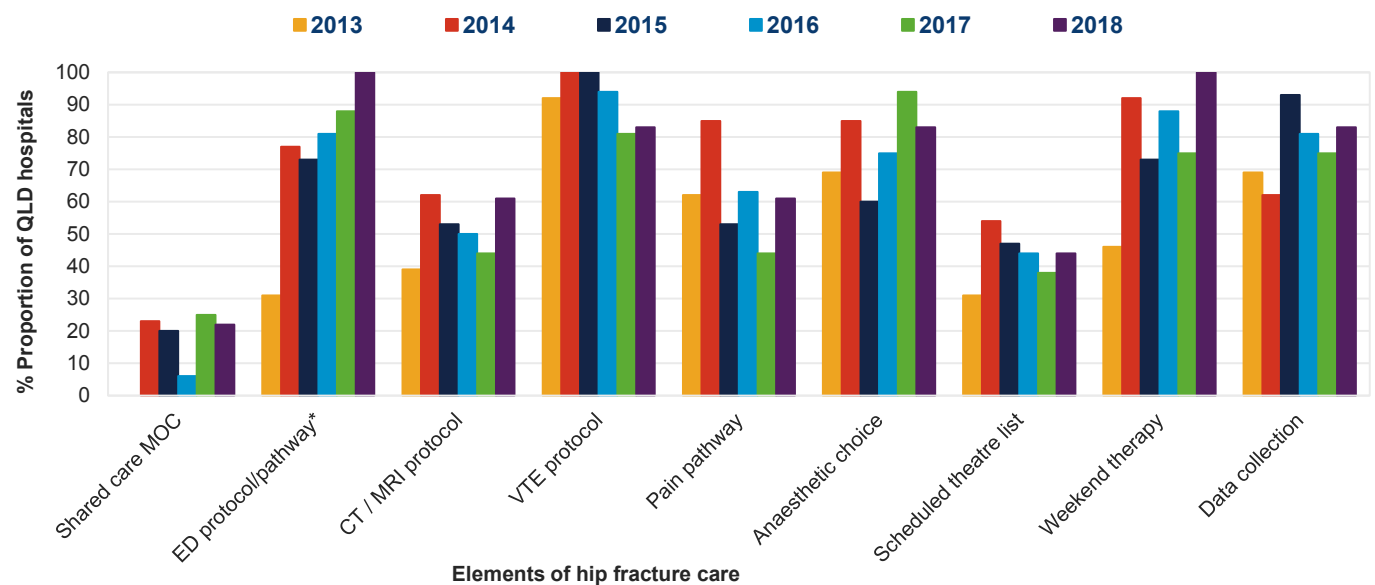
	2013 (n = 13)	2014 (n = 13)	2015 (n = 15)	2016 (n = 16)	2017 (n = 16)	2018 (n = 16)
Shared-care model of care (MOC)	n/a	23%	20%	6%	25%	22%
Protocol / pathway in the ED*	31%	77%	73%	81%	88%	100%
Protocol / pathway for access to CT / MRI	39%	62%	53%	50%	44%	61%
Protocol for VTE prevention	92%	100%	100%	94%	81%	83%
Protocol / pathway for management of pain	62%	85%	53%	63%	38%	61%
Given choice of anaesthesia^	69%	85%	60%	75%	94%	83%
Scheduled theatre list time	31%	54%	47%	44%	44%	44%
Provision of routine weekend therapy	46%	92%	73%	88%	75%	100%
Collecting hip fracture data	69%	62%	93%	81%	75%	83%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S18 QUEENSLAND HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**





## 2.4 SOUTH AUSTRALIA

**TABLE S4 SOUTH AUSTRALIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

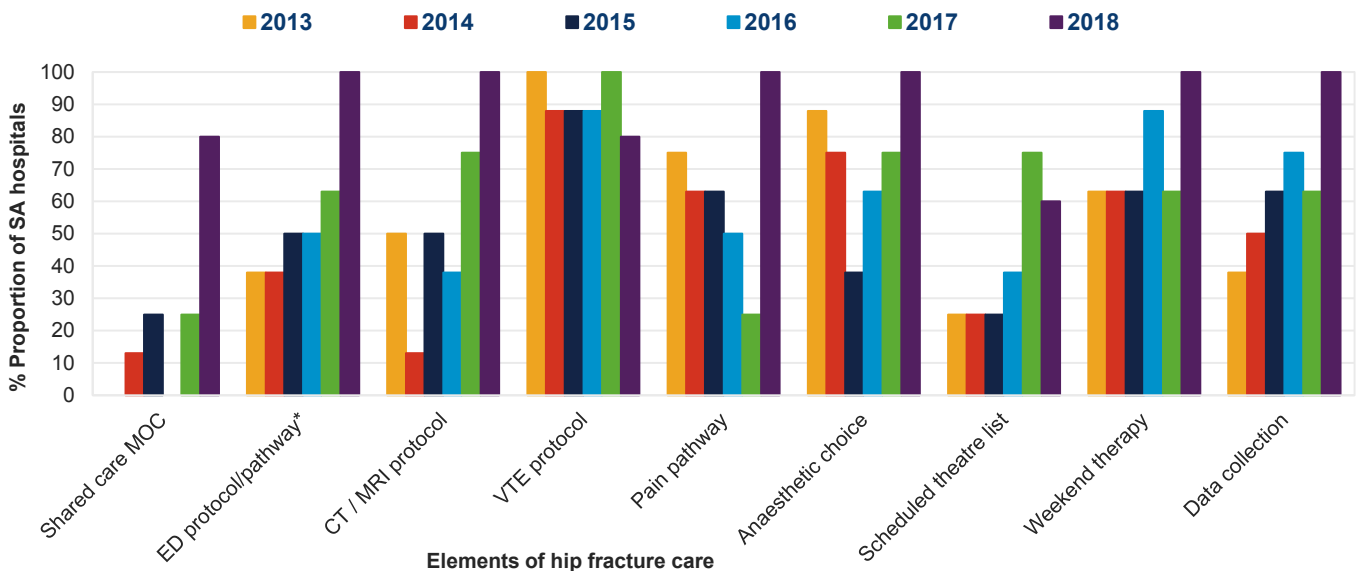
	2013 (n = 8)	2014 (n = 8)	2015 (n = 8)	2016 (n = 8)	2017 (n = 8)	2018 (n = 5)
Shared-care model of care (MOC)	n/a	13%	25%	0%	25%	80%
Protocol / pathway in the ED*	38%	38%	50%	50%	63%	100%
Protocol / pathway for access to CT / MRI	50%	13%	50%	38%	75%	100%
Protocol for VTE prevention	100%	88%	88%	88%	100%	80%
Protocol / pathway for management of pain	75%	63%	63%	50%	75%	100%
Given choice of anaesthesia^	88%	75%	38%	63%	75%	100%
Scheduled theatre list time	25%	25%	25%	38%	25%	60%
Provision of routine weekend therapy	63%	63%	63%	88%	63%	100%
Collecting hip fracture data	38%	50%	63%	75%	63%	100%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S19 SOUTH AUSTRALIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**





## 2.5 WESTERN AUSTRALIA

**TABLE S5 WESTERN AUSTRALIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

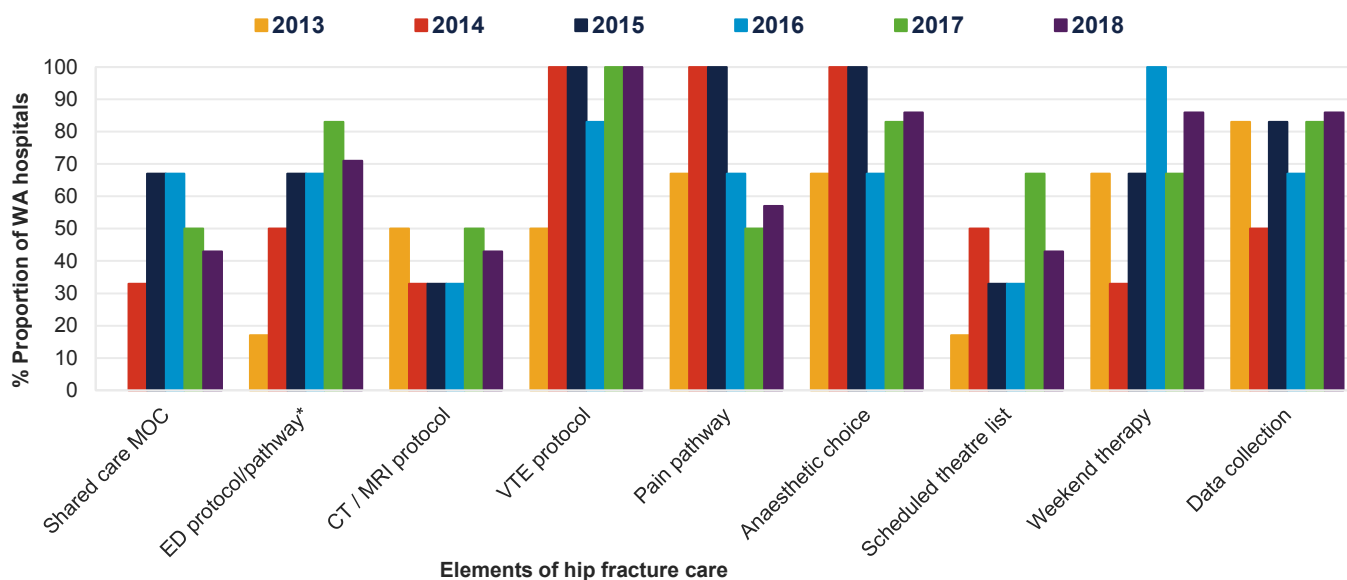
	2013 (n = 6)	2014 (n = 6)	2015 (n = 6)	2016 (n = 6)	2017 (n = 6)	2018 (n = 7)
Shared-care model of care (MOC)	n/a	33%	67%	67%	50%	43%
Protocol / pathway in the ED*	17%	50%	67%	67%	83%	71%
Protocol / pathway for access to CT / MRI	50%	33%	33%	33%	50%	43%
Protocol for VTE prevention	50%	100%	100%	83%	100%	100%
Protocol / pathway for management of pain	67%	100%	100%	67%	67%	57%
Given choice of anaesthesia^	67%	100%	100%	67%	83%	86%
Scheduled theatre list time	17%	50%	33%	33%	50%	43%
Provision of routine weekend therapy	67%	33%	67%	100%	67%	86%
Collecting hip fracture data	83%	50%	83%	67%	83%	86%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S20 WESTERN AUSTRALIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**





## 2.6 TASMANIA

**TABLE S6 TASMANIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

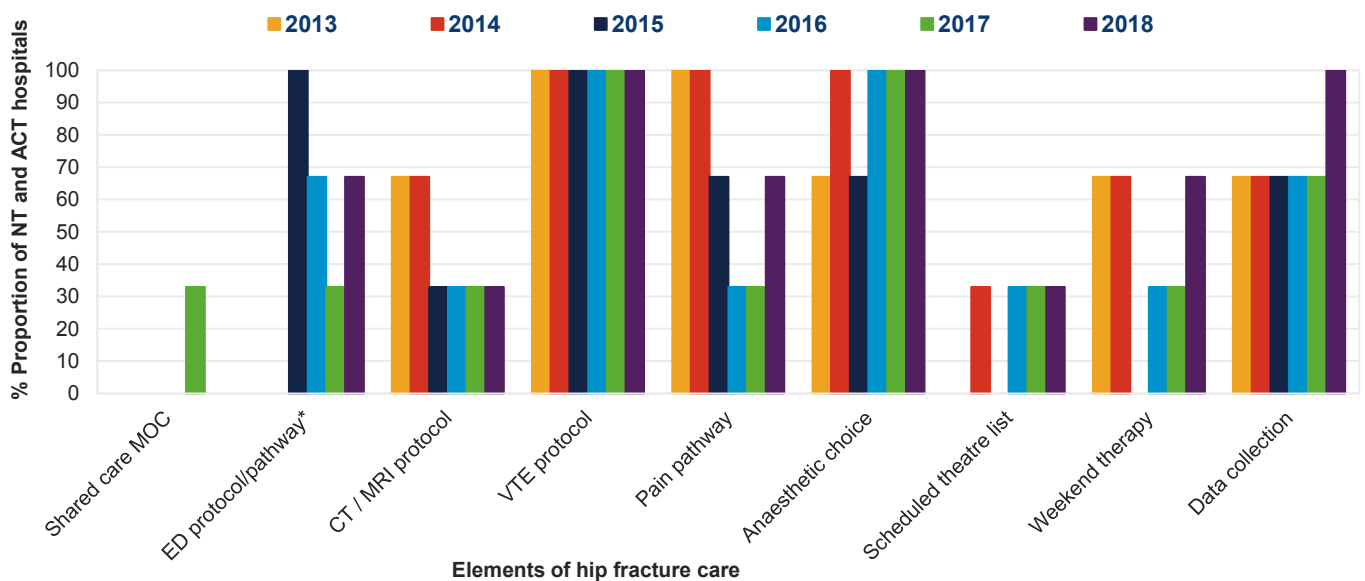
	2013 (n = 3)	2014 (n = 3)	2015 (n = 3)	2016 (n = 3)	2017 (n = 3)	2018 (n = 3)
Shared-care model of care (MOC)	n/a%	0%	0%	0%	0%	33%
Protocol / pathway in the ED*	0%	33%	33%	33%	33%	33%
Protocol / pathway for access to CT / MRI	33%	67%	67%	67%	67%	33%
Protocol for VTE prevention	67%	100%	100%	100%	100%	67%
Protocol / pathway for management of pain	67%	100%	33%	33%	33%	33%
Given choice of anaesthesia^	100%	100%	100%	100%	100%	67%
Scheduled theatre list time	0%	67%	0%	33%	0%	33%
Provision of routine weekend therapy	0%	33%	0%	33%	33%	67%
Collecting hip fracture data	0%	100%	100%	100%	100%	100%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S21 TASMANIAN HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**



## 2.7 NORTHERN TERRITORY (NT) AND AUSTRALIAN CAPITAL TERRITORY (ACT)

**TABLE S7 NT AND ACT HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**

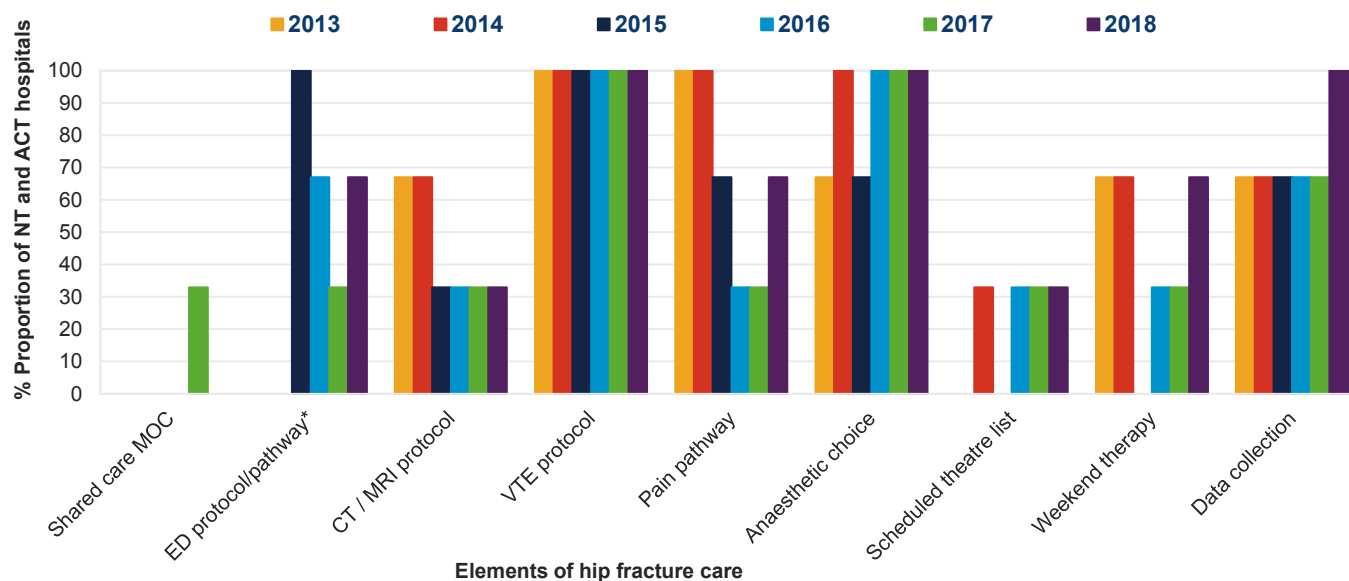
	2013 (n = 3)	2014 (n = 3)	2015 (n = 3)	2016 (n = 3)	2017 (n = 3)	2018 (n = 3)
Shared-care model of care (MOC)	n/a	0%	0%	0%	33%	0%
Protocol / pathway in the ED*	0%	0%	100%	67%	33%	67%
Protocol / pathway for access to CT / MRI	67%	67%	33%	33%	33%	33%
Protocol for VTE prevention	100%	100%	100%	100%	100%	100%
Protocol / pathway for management of pain	100%	100%	67%	33%	33%	67%
Given choice of anaesthesia^	67%	100%	67%	100%	100%	100%
Scheduled theatre list time	0%	33%	0%	33%	33%	33%
Provision of routine weekend therapy	67%	67%	0%	33%	33%	67%
Collecting hip fracture data	67%	67%	67%	67%	67%	100%

n/a = not asked

\* protocol/pathway in the ED: 2015 to 2018 includes pathway in ED only and pathway for the whole acute journey

^ given choice of anaesthesia: 2014 to 2018 Always or Frequently = Yes

**FIGURE S22 NT AND ACT HOSPITALS REPORTED ELEMENTS OF HIP FRACTURE CARE 2013–2018**





**ANZHF**

Australian & New Zealand Hip Fracture Registry