

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Chronic disease and infection: potentially preventable hospitalisations

**The Second Australian
Atlas of Healthcare
Variation**

2017



The Australian Atlas of Healthcare Variation series



AUSTRALIAN COMMISSION
ON **SAFETY AND QUALITY** IN HEALTH CARE



Interactive Atlas Platform

The Australian Atlas of Healthcare Variation

Mapping variation is an invaluable tool for understanding how our healthcare system is providing care. The Australian Atlas of Healthcare Variation series illuminates variation by mapping use of health care according to where people live. Each Atlas identifies specific achievable actions for exploration and quality improvement.

Healthcare Variation - what does it tell us?

Some variation is expected and associated with need-related factors such as underlying differences in the health of specific populations, or personal preferences. However, the weight of evidence in Australia and internationally suggests that much of the variation documented in the Atlas is likely to be unwarranted. Understanding this variation is critical to improving the quality, value and appropriateness of health care.

The Second Australian Atlas of Healthcare Variation data set specifications are available at [METeOR](#)

The First Australian Atlas of Healthcare Variation data set specifications are available at [METeOR](#)

Interactive Atlas

**The First
Australian Atlas
of Healthcare
Variation**

2015



Interactive Atlas

**The Second
Australian Atlas
of Healthcare
Variation**

2017



Interactive Atlas



Second Australian Atlas of Healthcare Variation

Examines variation nationally in 18 clinical items, grouped into 4 themes



Chronic disease and infection

- Chronic obstructive pulmonary disease (COPD)
- Heart failure
- Cellulitis
- Kidney and urinary tract infections
- Diabetes complications



Cardiovascular conditions

- Acute myocardial infarction
- Atrial fibrillation



Women's health and maternity

- Hysterectomy
- Endometrial ablation
- Cervical loop excision or cervical laser ablation
- Vaginal deliveries with third or fourth degree perineal tear
- Caesarean section, ages 20 to 34 years



Surgical interventions

- Knee replacement
- Lumbar spinal decompression
- Lumbar spinal fusion
- Laparoscopic cholecystectomy
- Appendicectomy
- Cataract surgery





Australian Commission on Safety and Quality in Health Care

- Australian Government agency
- Leads & coordinates national improvements in safety & quality of health care based on best available evidence
- Works in partnership with patients, consumers, clinicians, managers, policy makers & health care organisations
- Aims to ensure that the health system is sustainable, better informed, supported & organised to deliver safe & high quality care





Inside this slide pack

- Why does variation matter?
- How is variation measured in the Atlas?
- How is variation presented in the Atlas?
- Chronic disease and infection: potentially preventable hospitalisations key findings
- Conclusion
- Further resources





Why does variation matter?

- Large variations in healthcare use have been documented by researchers around the world for many years
- A proportion of this variation is termed '*unwarranted*'
- Unwarranted variation:
 - is unrelated to patient need or preference
 - may signal inappropriate care
 - may signal ineffective use of resources
- It raises questions about appropriateness of care, health system efficiency, equity and access
- Can highlight opportunities for further investigation and for the health system to improve.





How is variation measured in the Atlas?

- Healthcare use is mapped **by residence of patient** (not location of the healthcare provider)
- Location of residence mapped to Statistical Area Level 3 (SA3)
- Data are **age- and sex-standardised**
- Data sources used:
 - National Hospital Morbidity Database (NHMD)
 - National Perinatal Data Collection (NPDC)
- Data analysis and extraction performed by the Australian Institute of Health and Welfare (AIHW).





How is variation presented in the Atlas?

- Data are presented in maps and graphs
- For items where there were small numbers, three years of data have been presented
- Statistical Area Level 3 data is presented for:
 - state and territory analysis
 - remoteness and socioeconomic disadvantage
- State and territory level data is presented for:
 - Aboriginal and Torres Strait Islander Australian status
 - public and private patient funding status.



Chronic disease and infection: potentially preventable hospitalisations key findings

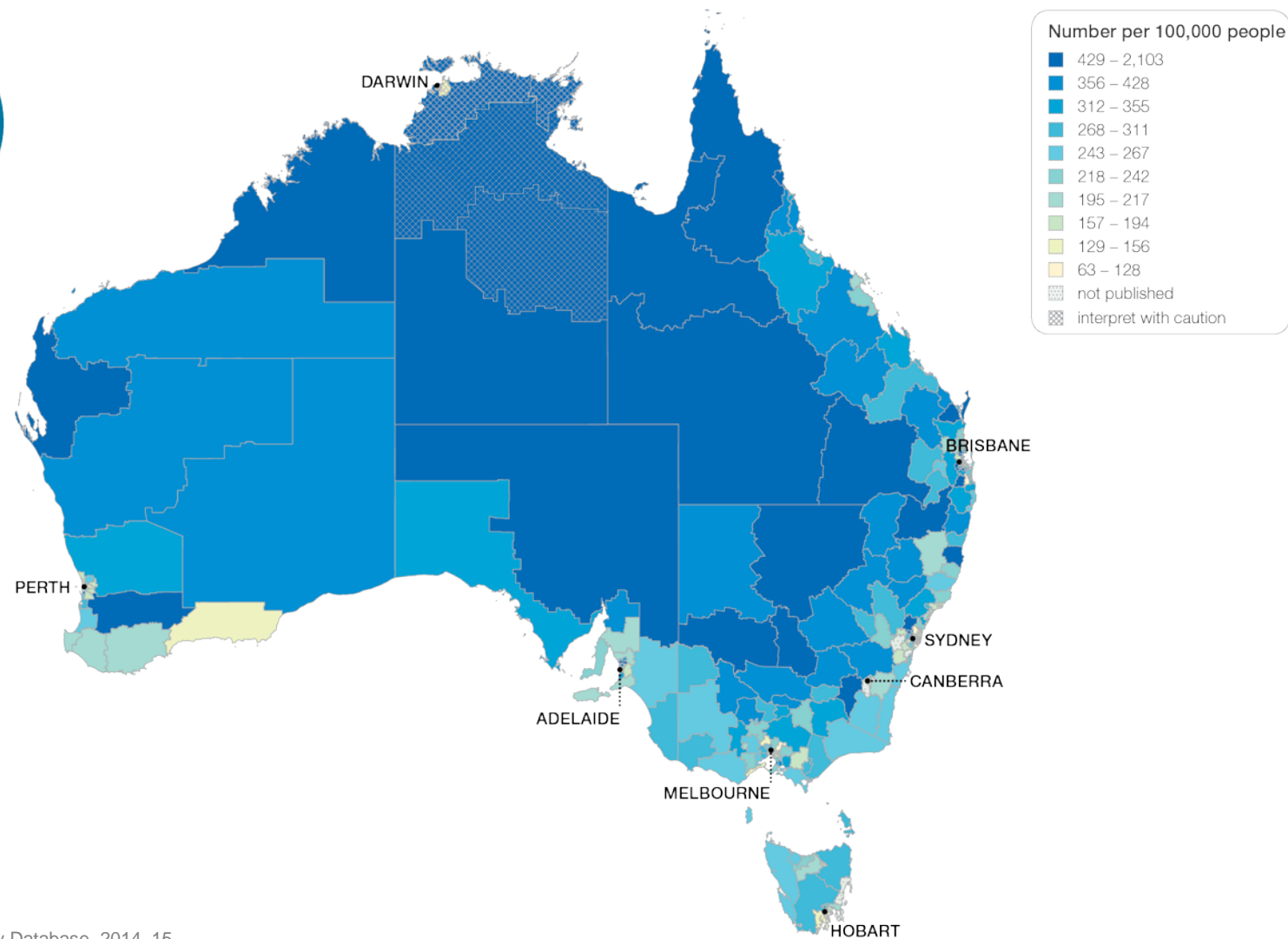
Data item	Range across SA3s per 100,000 people	Times difference	Times difference excluding top and bottom 10%	Number over one year
1.1 Chronic obstructive pulmonary disease Hospitalisations, all ages	63 to 990	15.7	3.3	66,250
1.2 Heart failure Hospitalisations, all ages	90 to 632	7.0	2.1	55,511
1.3 Cellulitis Hospitalisations, all ages	102 to 1,262	12.4	2.9	59,466
1.4 Kidney and urinary tract infections Hospitalisations, all ages	140 to 899	6.4	2.2	73,277
1.5 Diabetes complications Hospitalisations, all ages	52 to 601	11.6	2.8	43,737

National Hospital Morbidity Database , 2014–15



1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

15.7x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National Hospital Morbidity Database, 2014–15

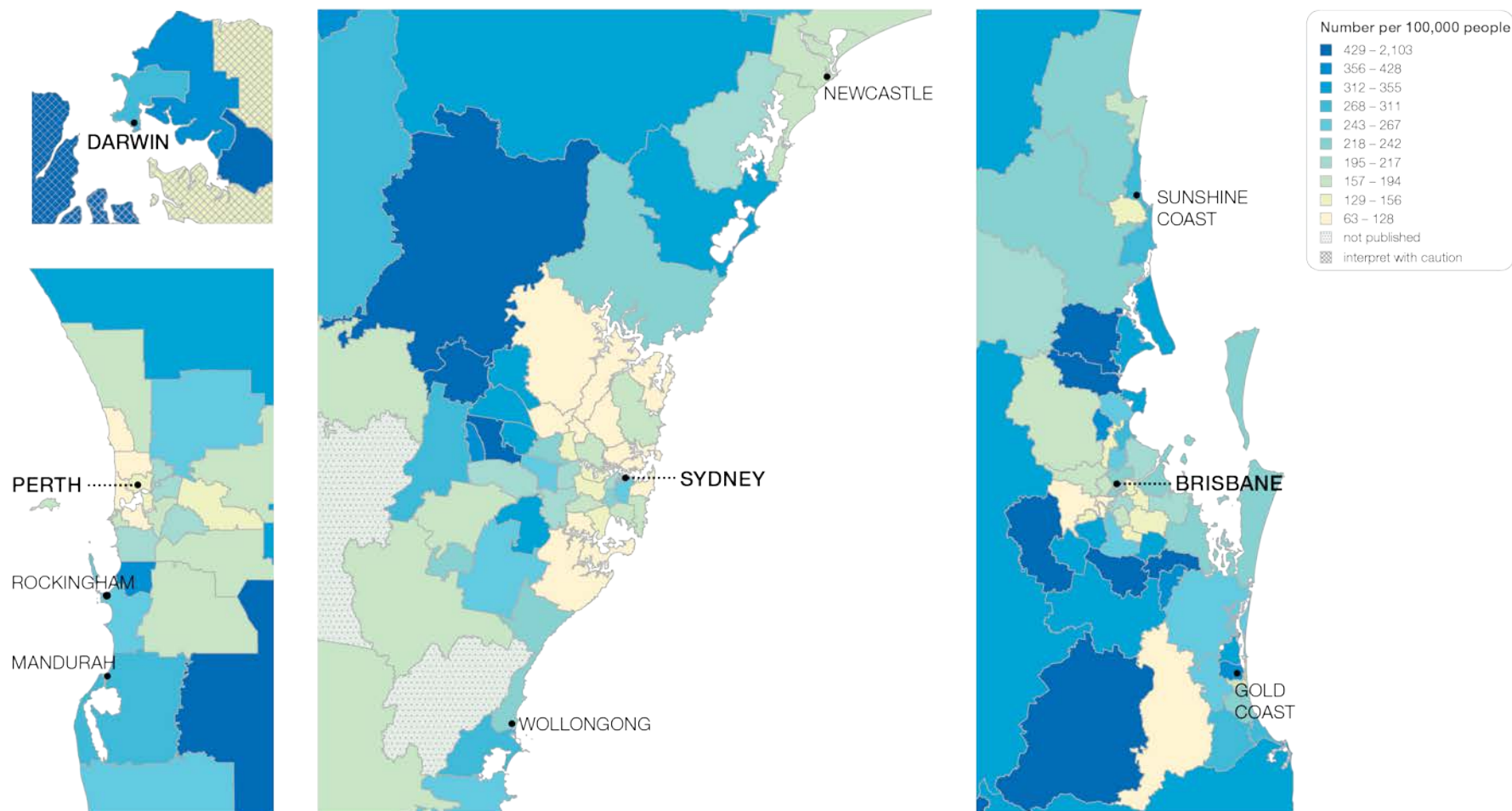


Chronic disease and infection

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017



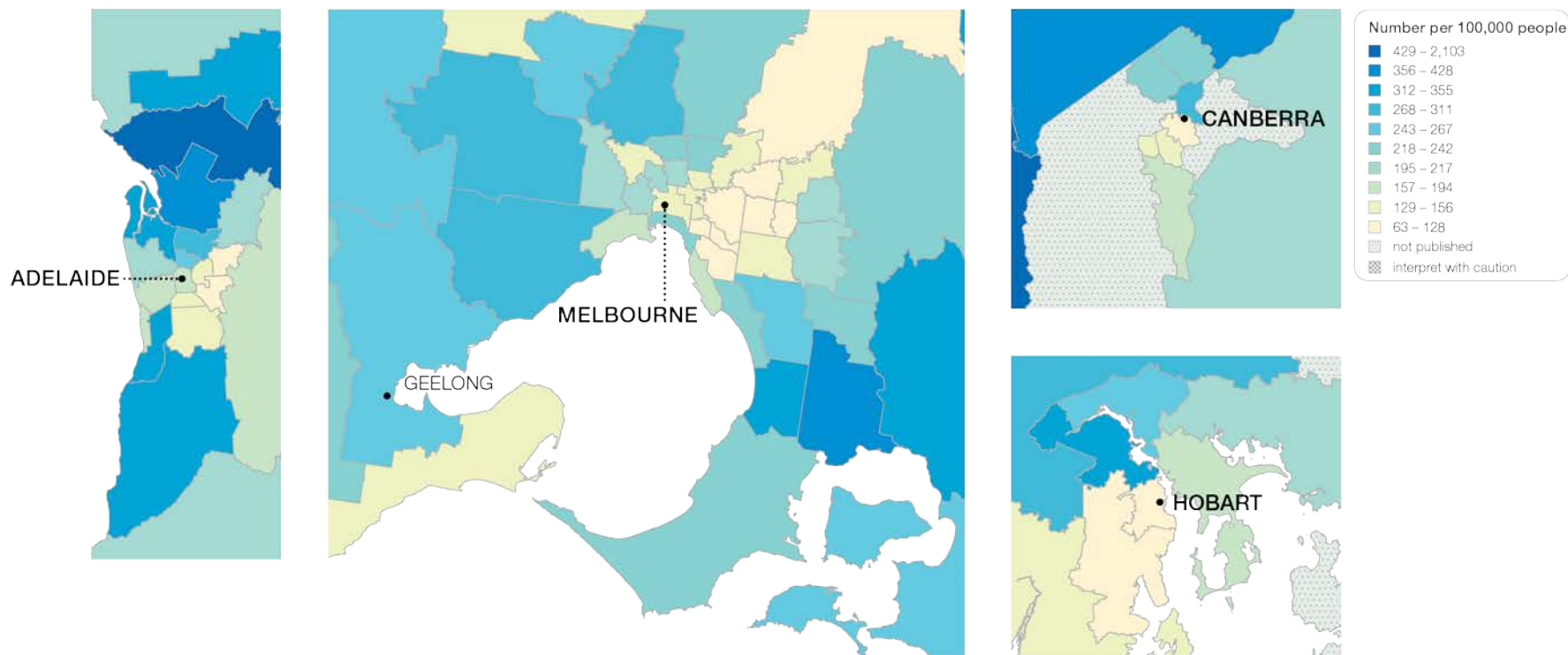
1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations



National Hospital Morbidity Database, 2014–15



1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

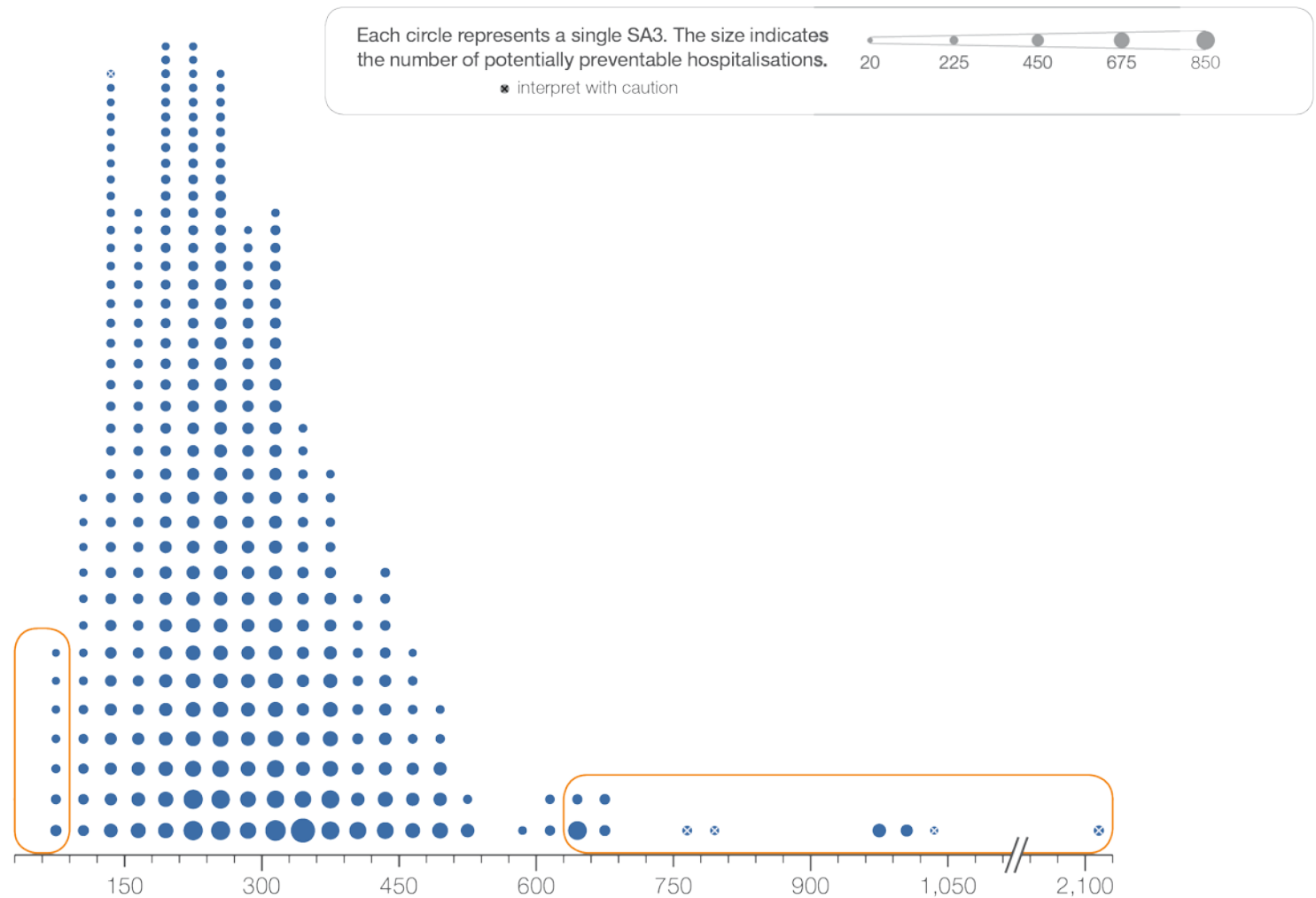


National Hospital Morbidity Database, 2014–15





1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations



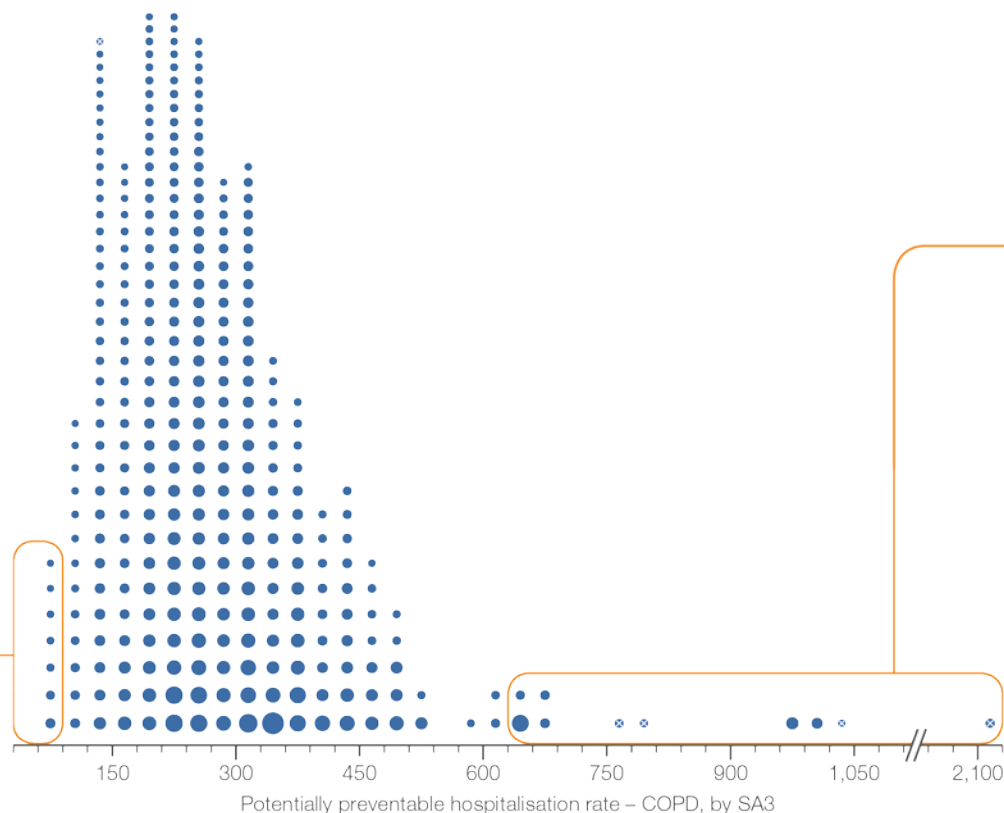
National Hospital Morbidity Database, 2014–15



1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

Each circle represents a single SA3. The size indicates the number of potentially preventable hospitalisations.

■ interpret with caution



Highest rate areas

SA3	State	Rate	Hospitalisations
East Arnhem	NT	2,103*	147
Barkly	NT	1,043*	42
Alice Springs	NT	990	244
Bourke - Cobar - Coonamble	NSW	965	311
Katherine	NT	789*	95
Daly - Tiwi - West Arnhem	NT	761*	122
Kimberley	WA	679	165
Outback - North and East	SA	663	186
Mount Druitt	NSW	659	570
Far North	Qld	631	146

Lowest rate areas

SA3	State	Rate	Hospitalisations
Sherwood - Indooroopilly	Qld	63	32
Cottesloe - Claremont	WA	71	71
Ku-ring-gai	NSW	72	135
Burnside	SA	74	59
North Sydney - Mosman	NSW	78	92
Boroondara	Vic	85	197
Hobart - South and West	Tas	89	38

National Hospital Morbidity Database, 2014–15



Chronic disease and infection

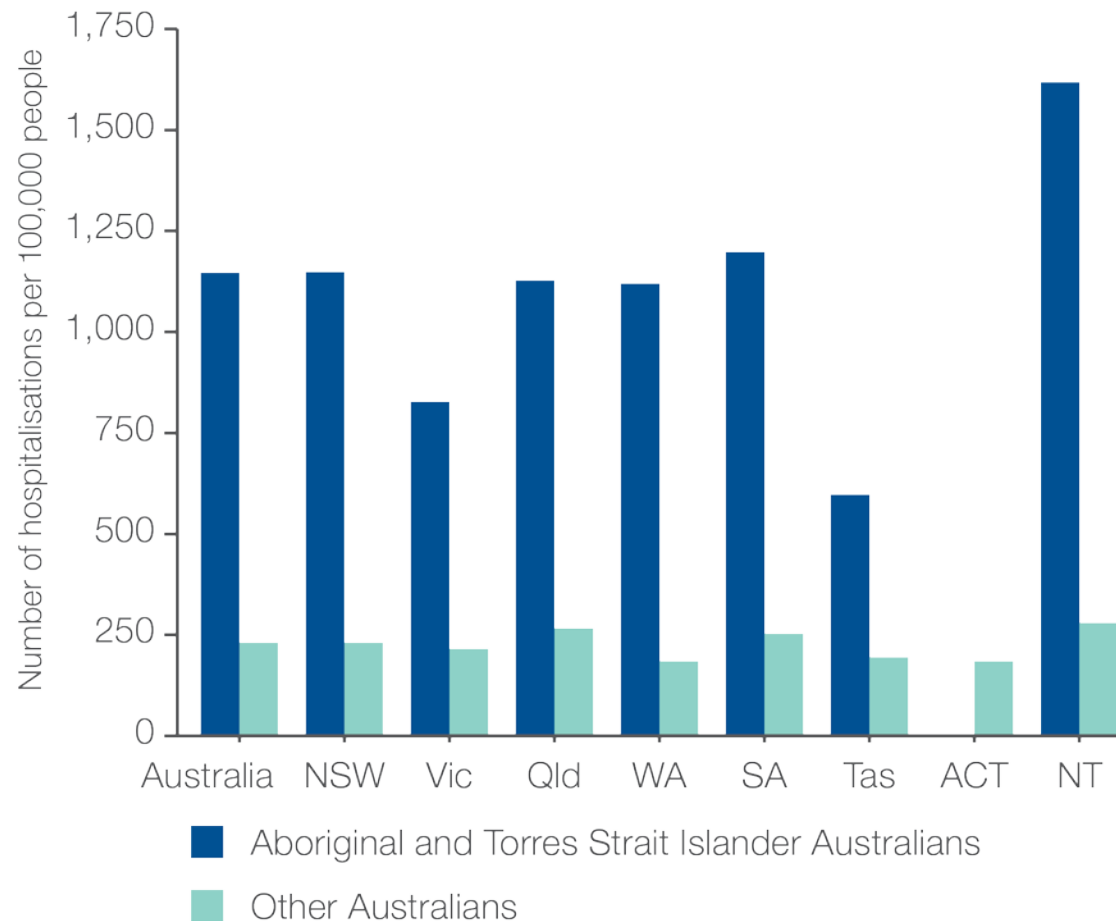
AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017





1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

Aboriginal and Torres Strait Islander status

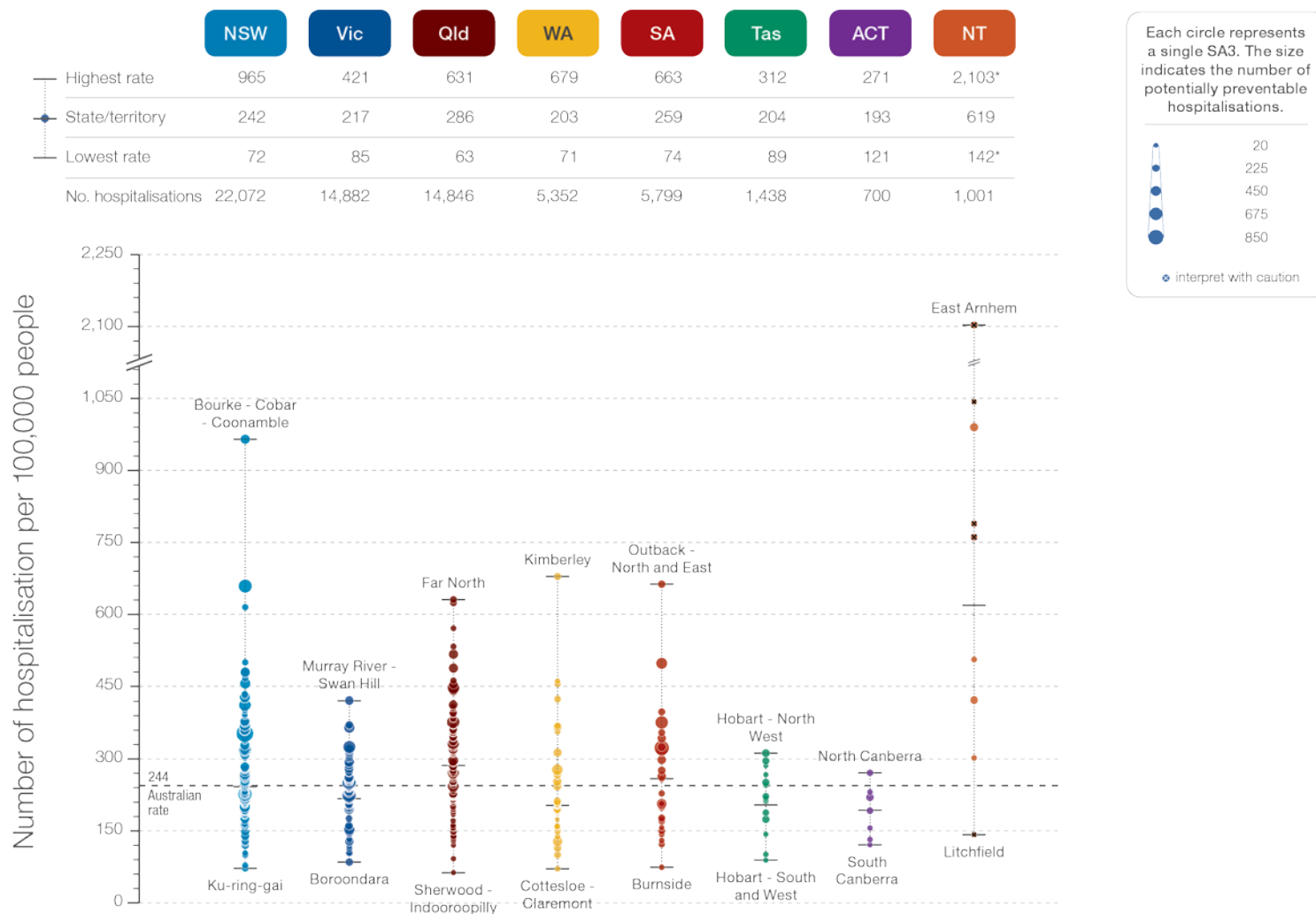


National Hospital Morbidity Database, 2014–15



1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

State and territory

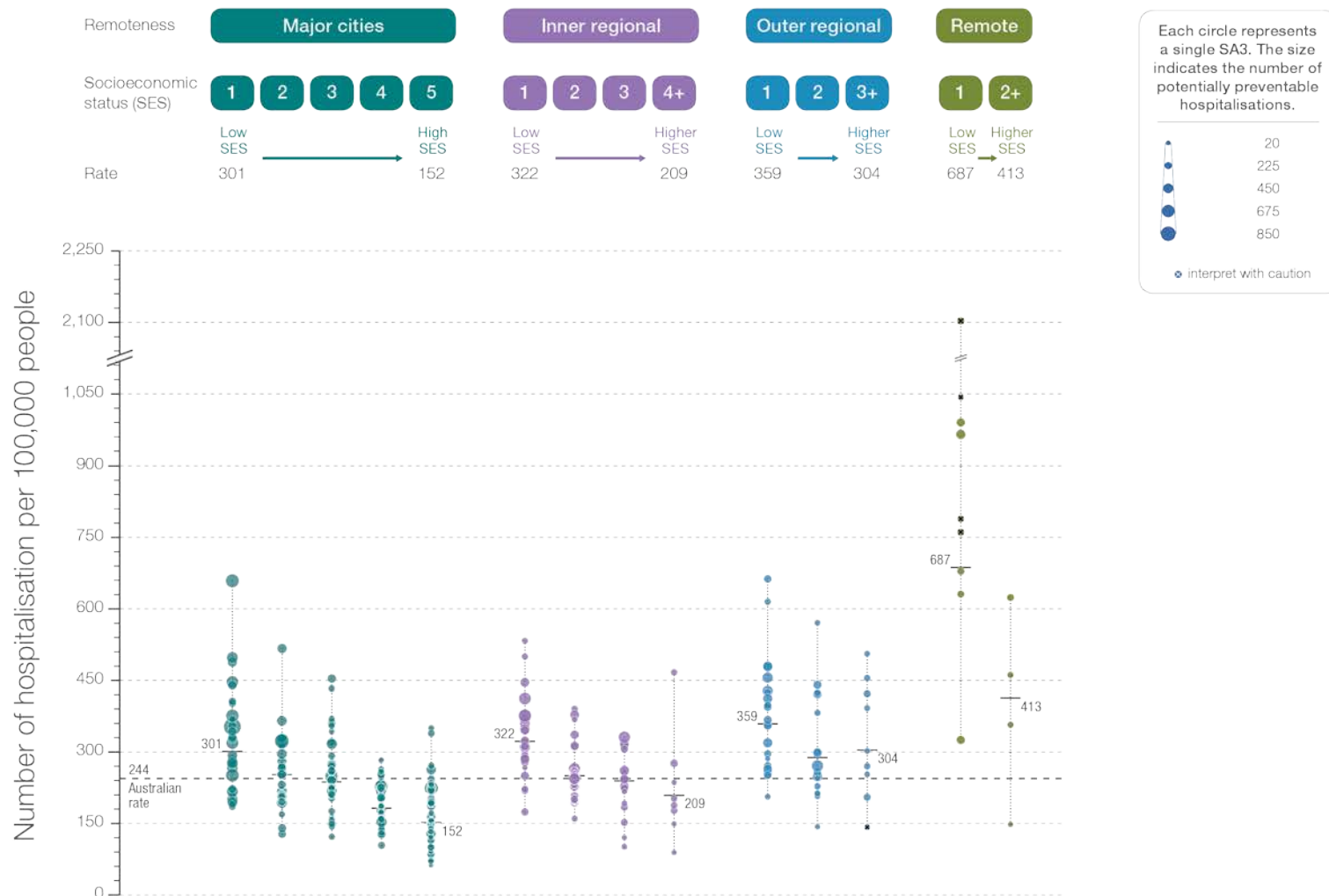


National Hospital Morbidity Database, 2014–15



1.1 Chronic obstructive pulmonary disease (COPD) hospitalisations

Remoteness and socioeconomic status

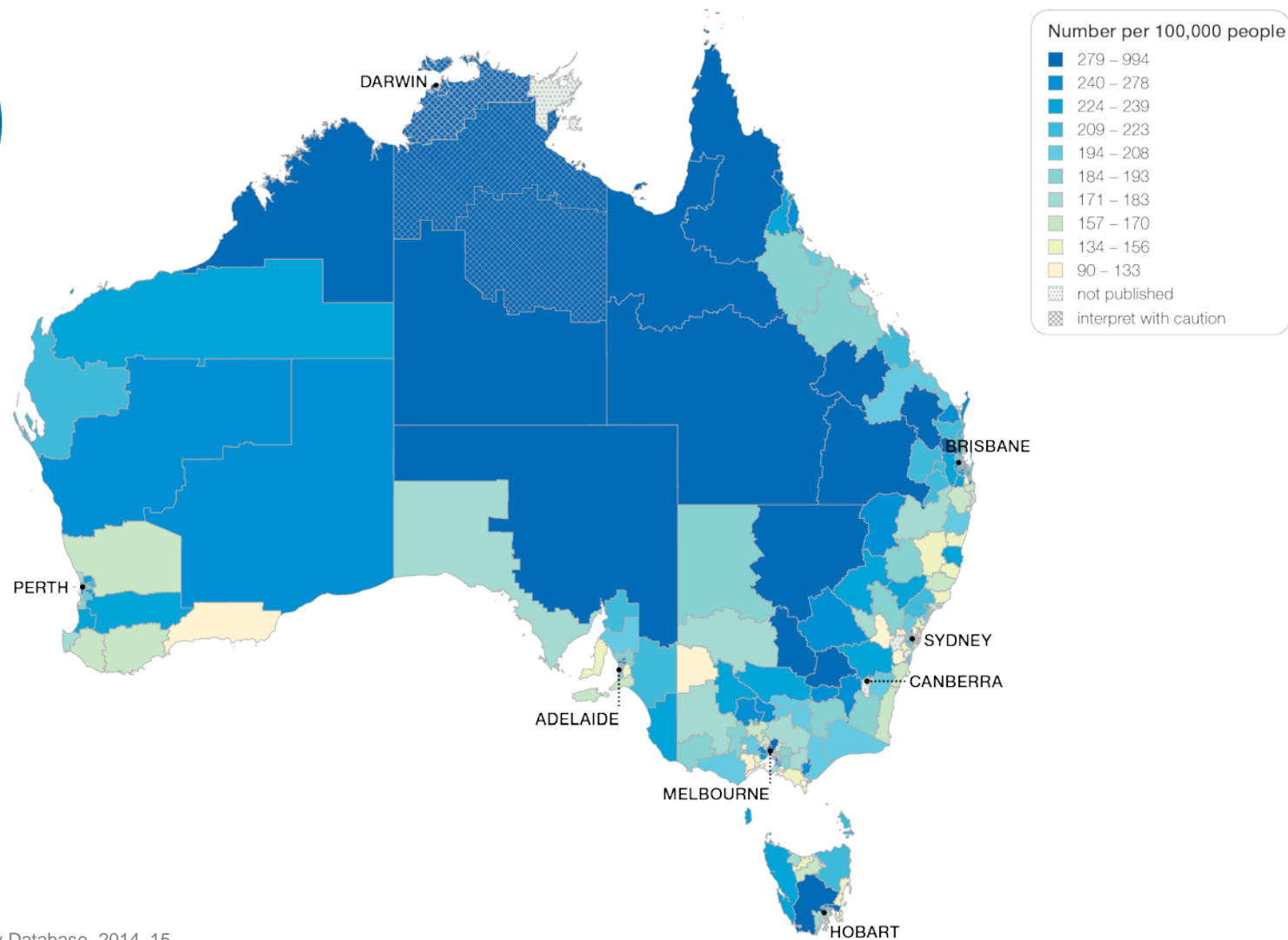


National Hospital Morbidity Database, 2014–15



1.2 Heart failure hospitalisations

7.0x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National Hospital Morbidity Database, 2014–15

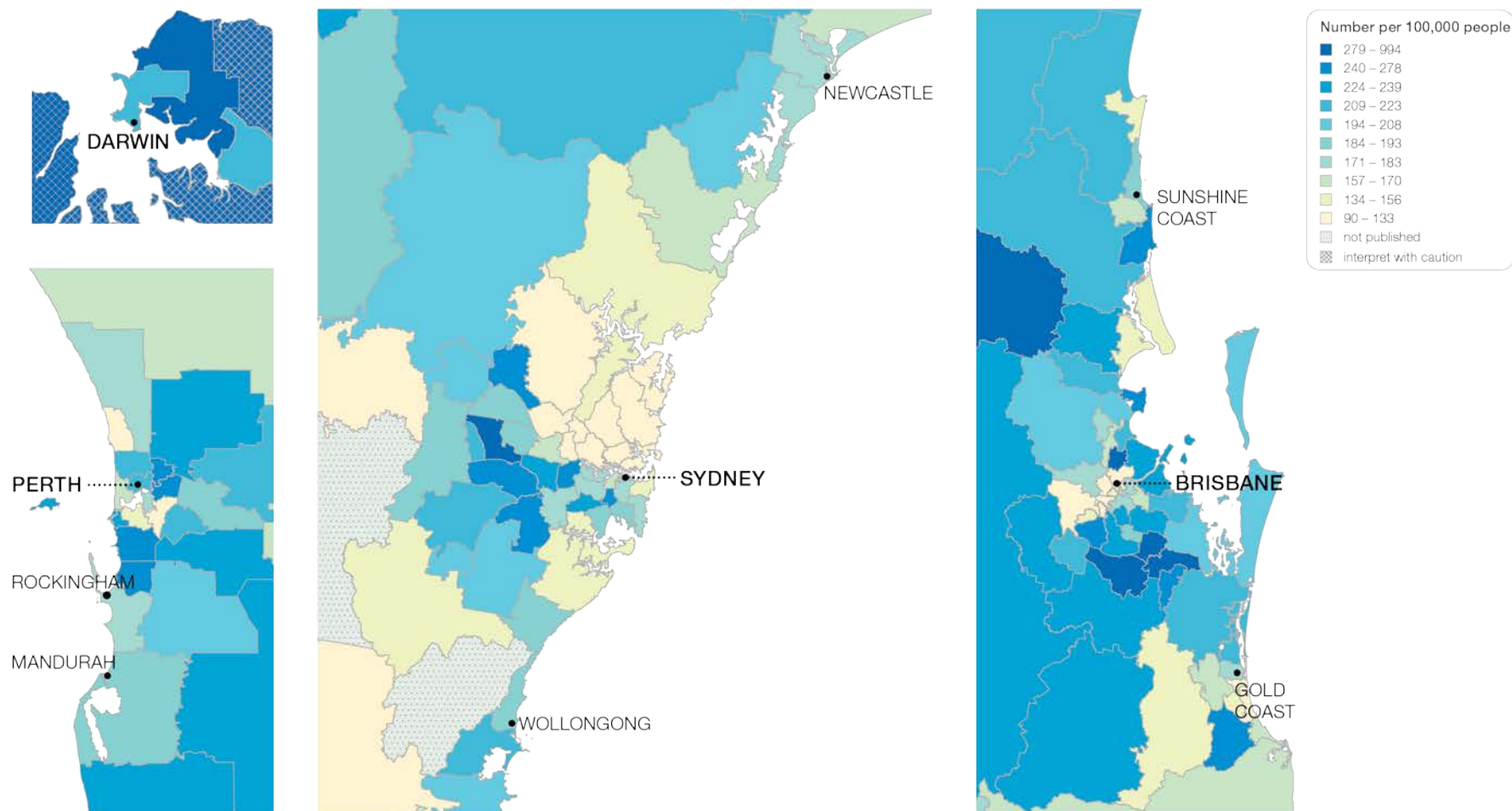


Chronic disease and infection

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017



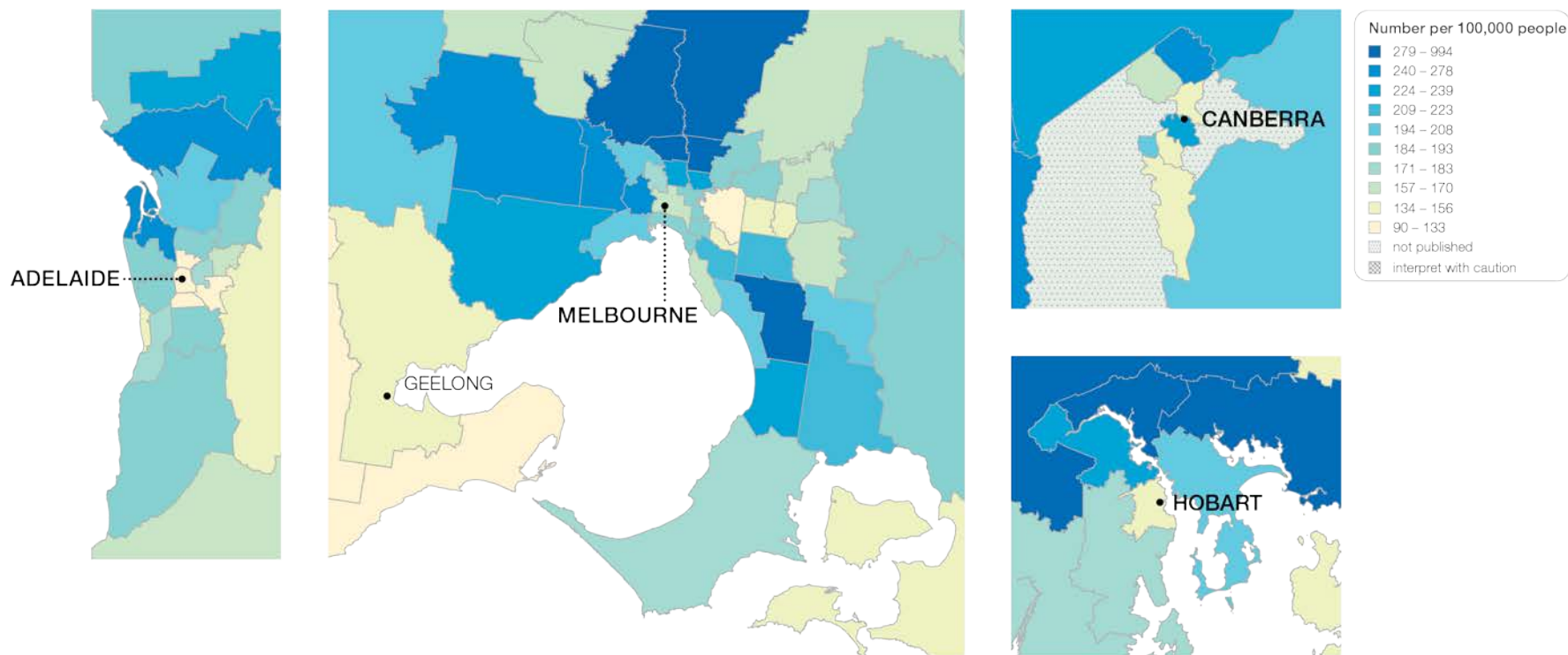
1.2 Heart failure hospitalisations



National Hospital Morbidity Database, 2014–15



1.2 Heart failure hospitalisations

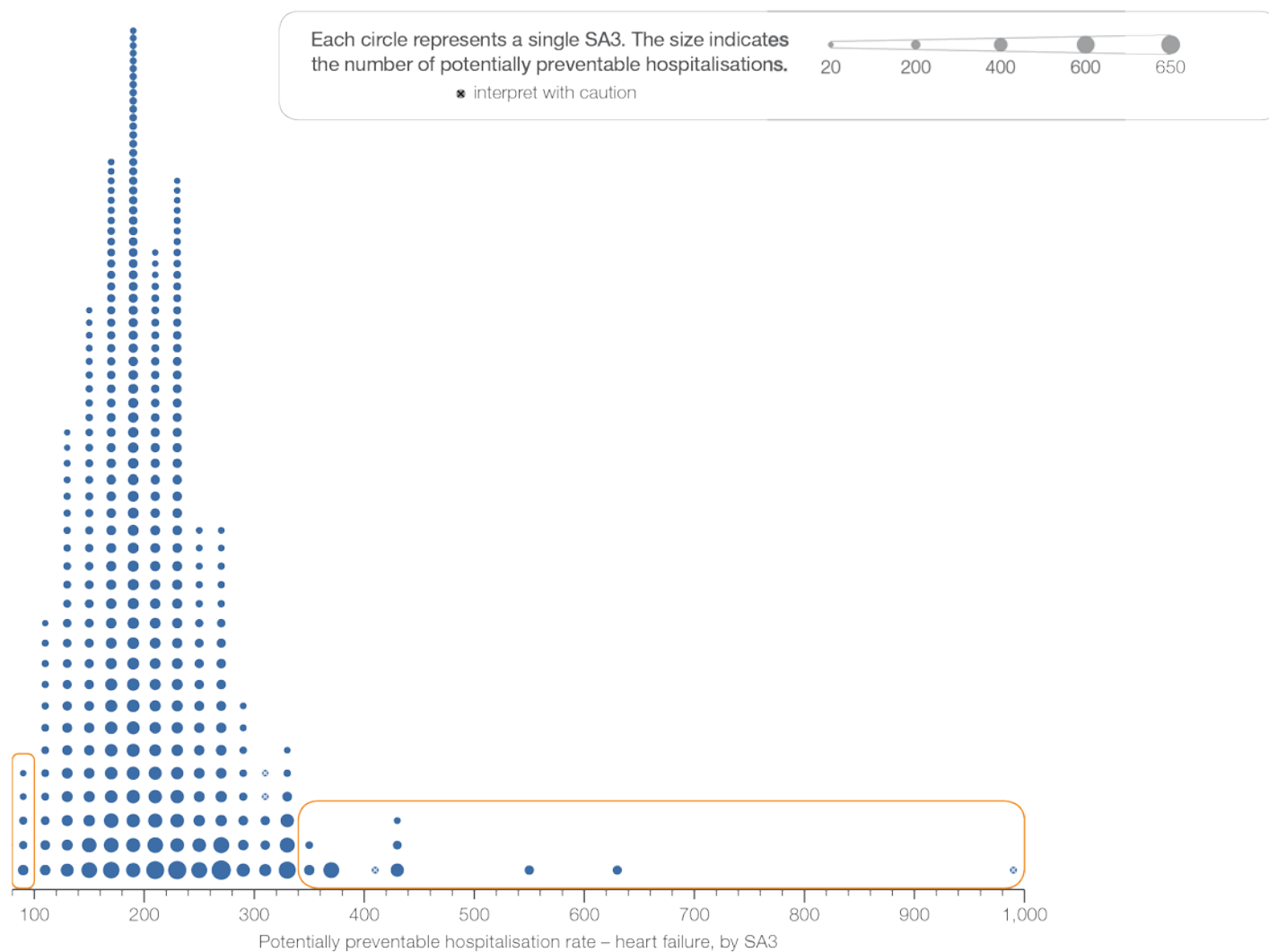


National Hospital Morbidity Database, 2014–15





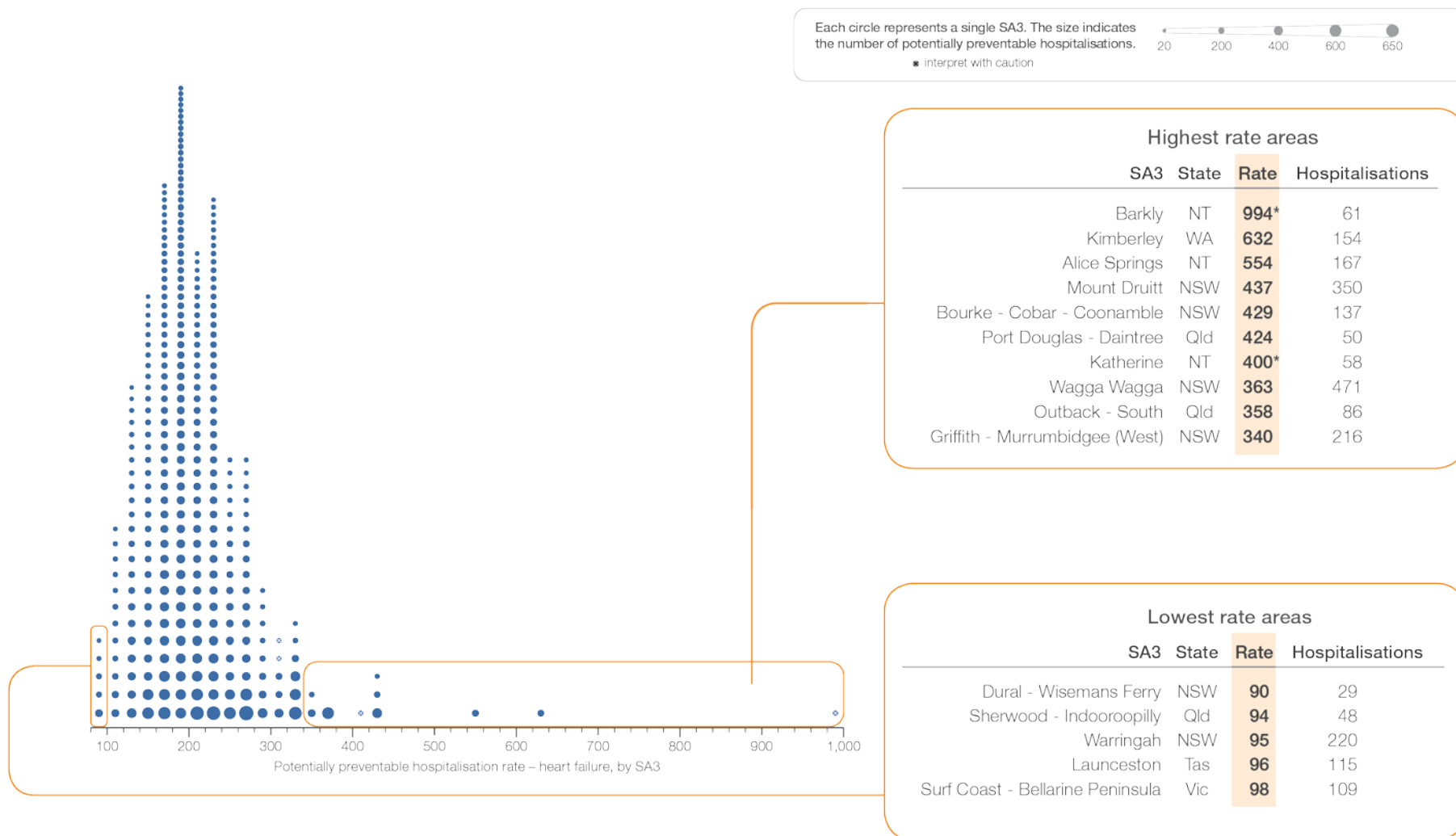
1.2 Heart failure hospitalisations



National Hospital Morbidity Database, 2014–15



1.2 Heart failure hospitalisations



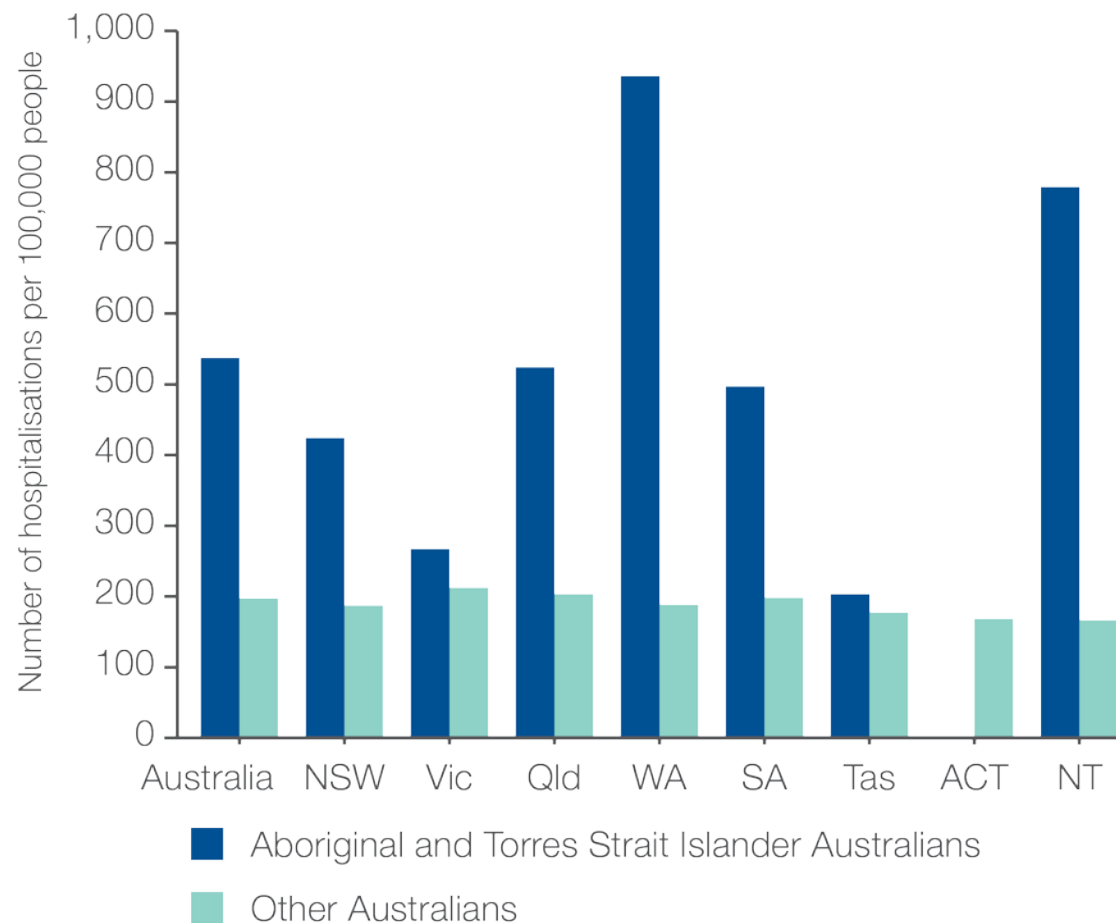
National Hospital Morbidity Database, 2014–15





1.2 Heart failure hospitalisations

Aboriginal and Torres Strait Islander status

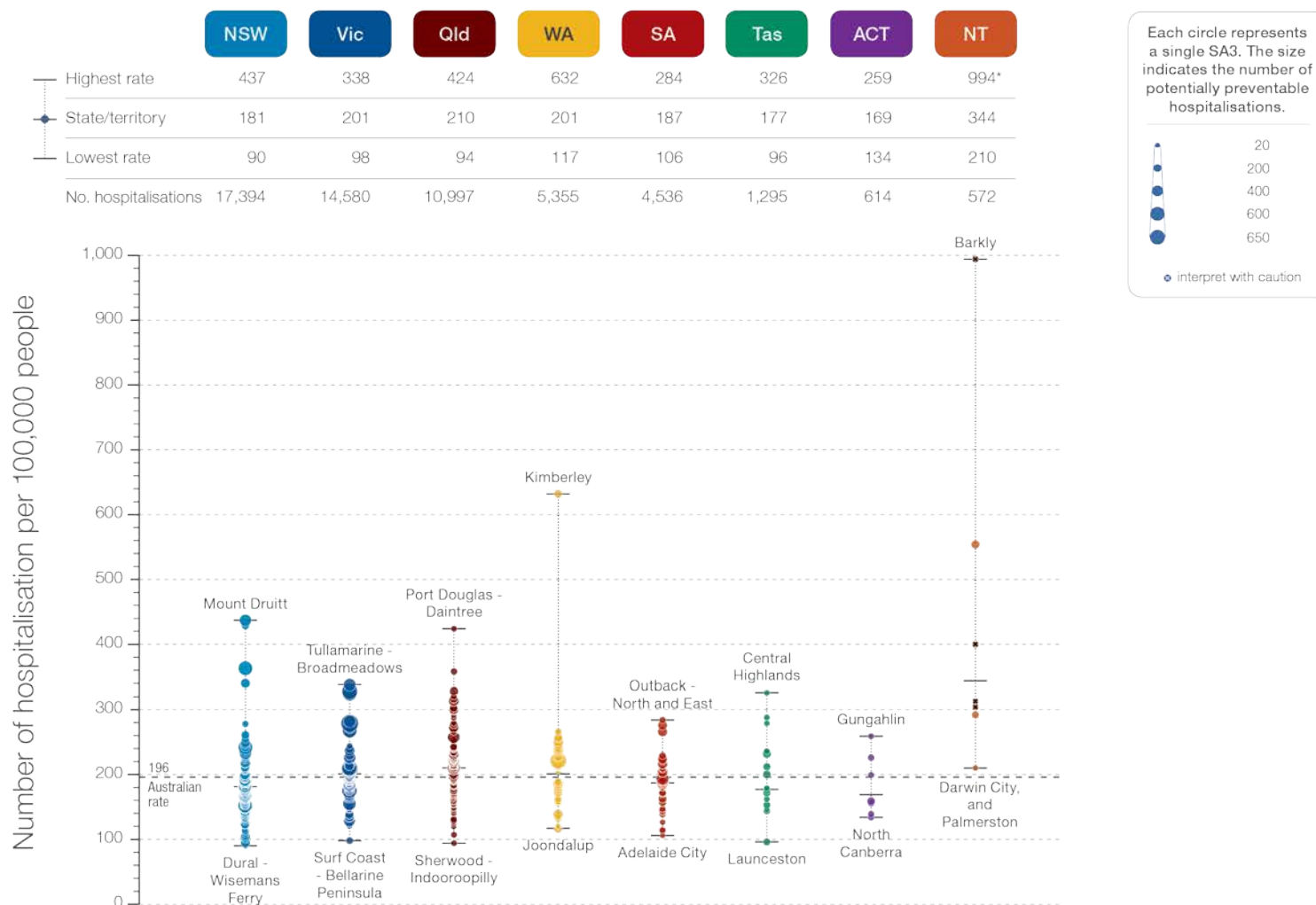


National Hospital Morbidity Database, 2014–15



1.2 Heart failure hospitalisations

State and territory



National Hospital Morbidity Database, 2014–15





1.2 Heart failure hospitalisations

Remoteness and socioeconomic status

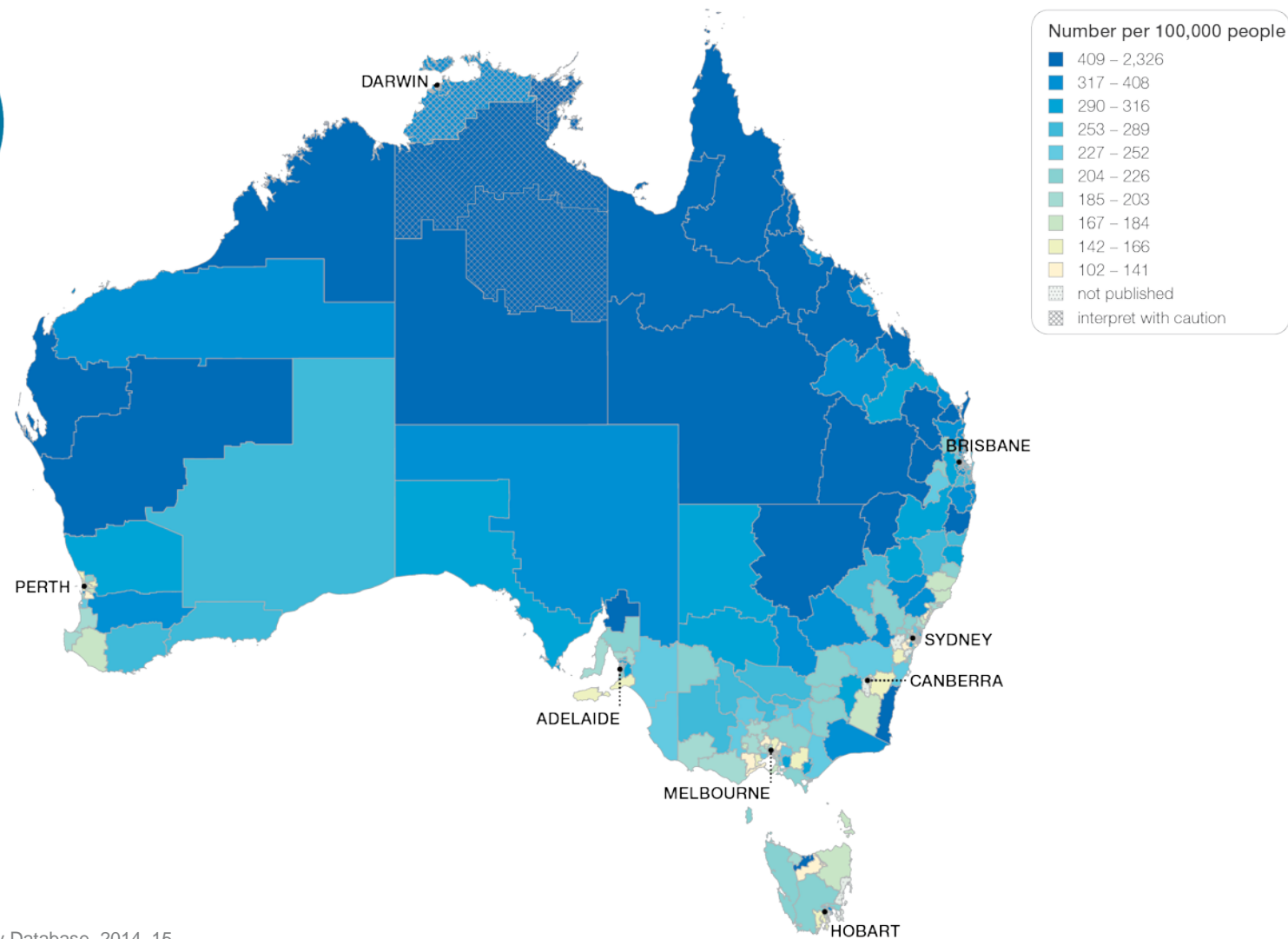


National Hospital Morbidity Database, 2014–15



1.3 Cellulitis hospitalisations

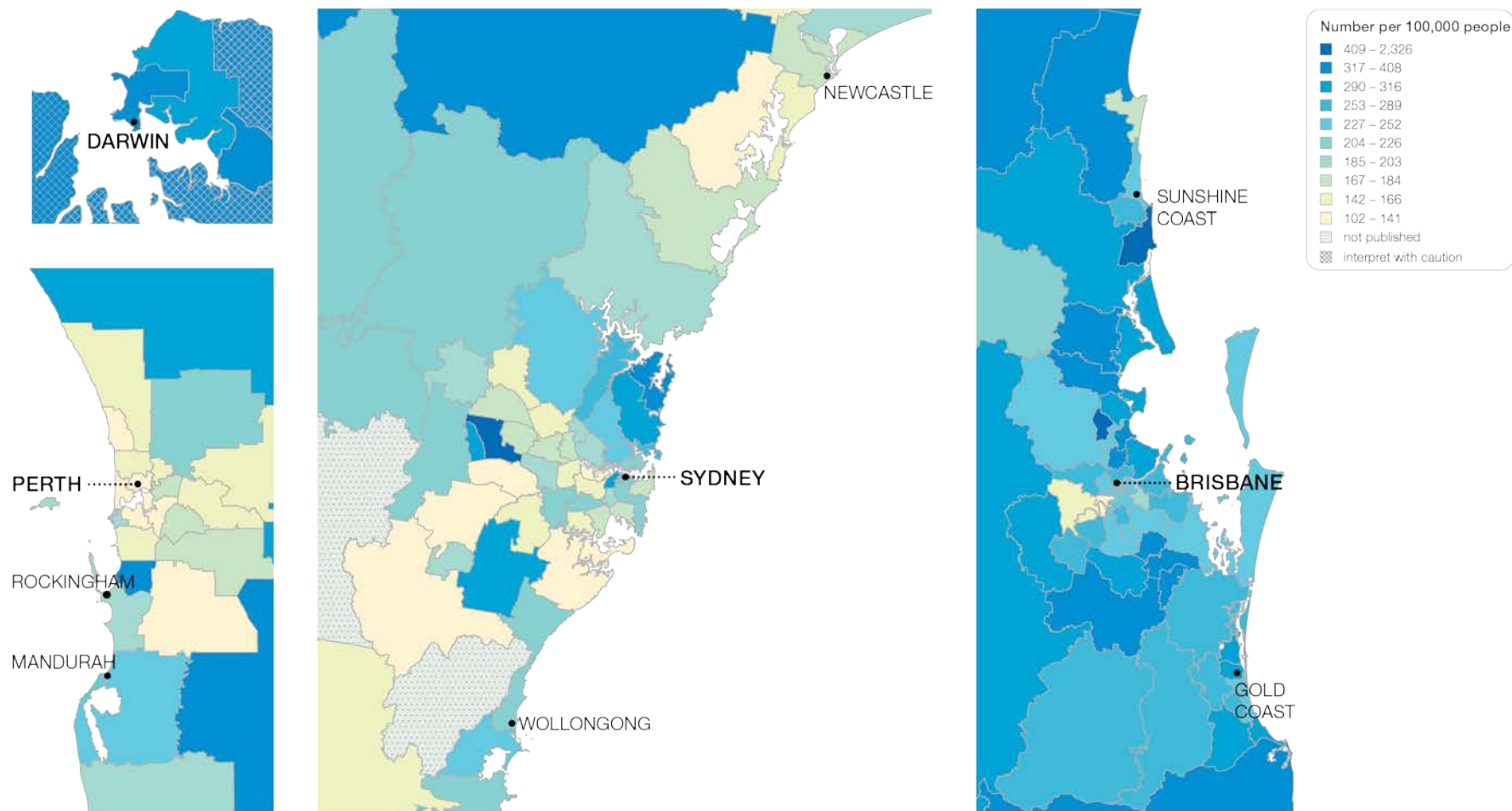
12.4x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National Hospital Morbidity Database, 2014–15



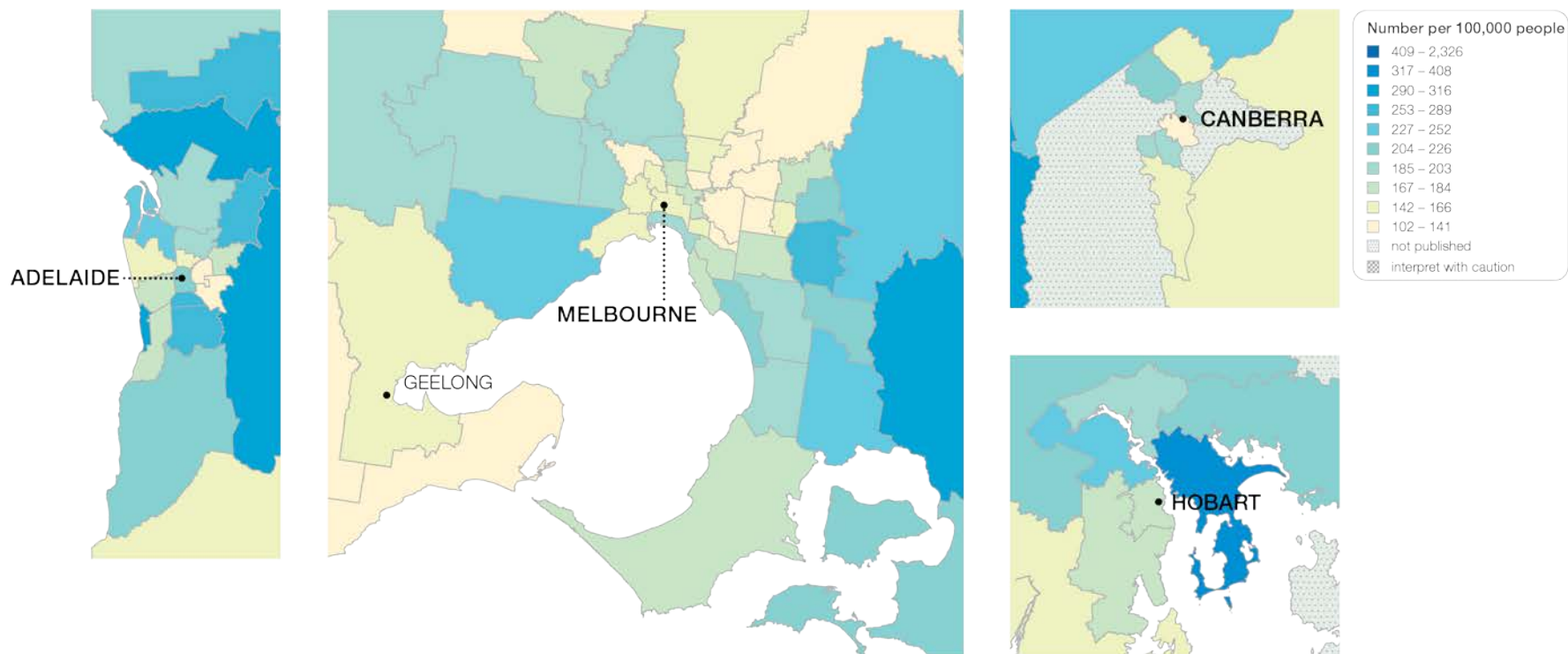
1.3 Cellulitis hospitalisations



National Hospital Morbidity Database, 2014–15



1.3 Cellulitis hospitalisations

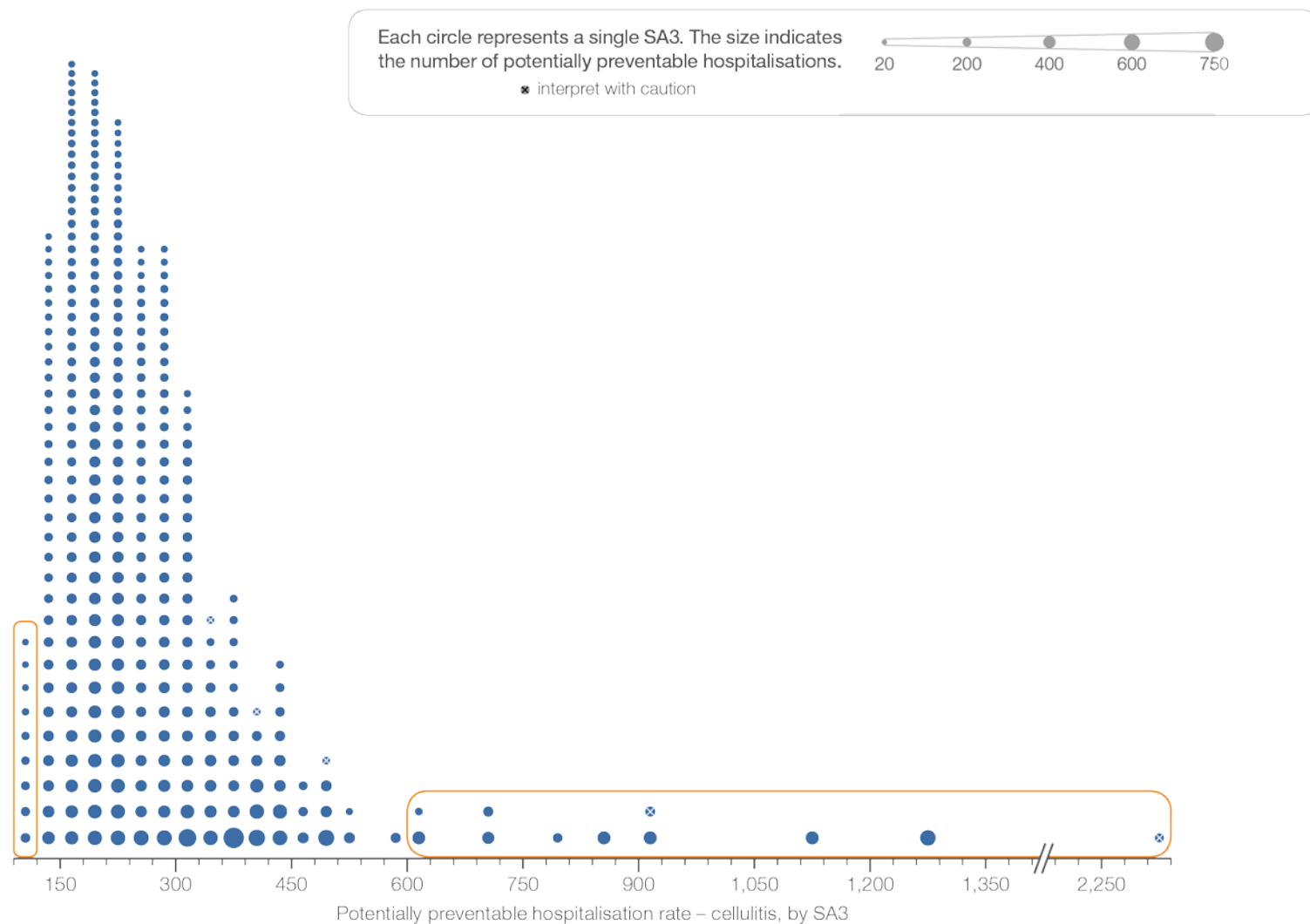


National Hospital Morbidity Database, 2014–15





1.3 Cellulitis hospitalisations



National Hospital Morbidity Database, 2014–15

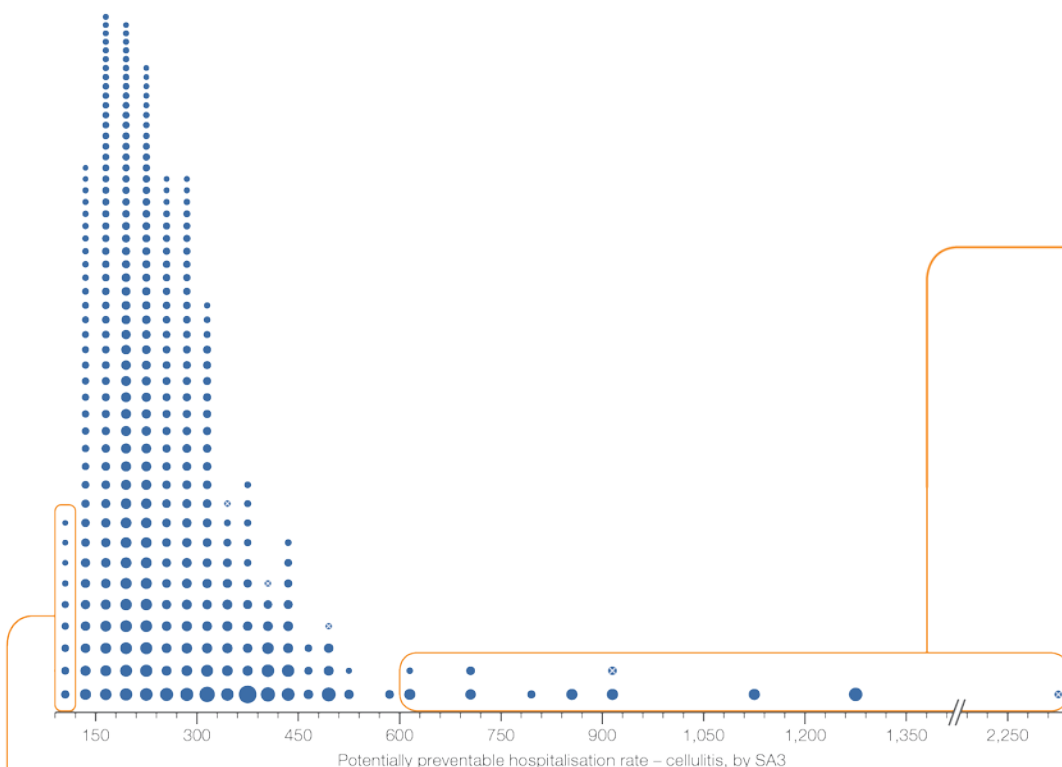


1.3 Cellulitis hospitalisations

Each circle represents a single SA3. The size indicates the number of potentially preventable hospitalisations.



★ interpret with caution



Highest rate areas

SA3	State	Rate	Hospitalisations
Barkly	NT	2,326*	138
Kimberley	WA	1,262	461
Far North	Qld	1,131	341
Innisfail - Cassowary Coast	Qld	922	341
Katherine	NT	910*	188
Alice Springs	NT	856	338
Outback - South	Qld	802	165
Tablelands (East) - Kuranda	Qld	717	297
Bourke - Cobar - Coonamble	NSW	693	198
Devonport	Tas	628	333
Port Douglas - Daintree	Qld	619	73

Lowest rate areas

SA3	State	Rate	Hospitalisations
Nillumbik - Kinglake	Vic	102	62
Meander Valley - West Tamar	Tas	102	24
Canning	WA	104	115
South Canberra	ACT	111	32
Sutherland - Menai - Heathcote	NSW	112	134
Launceston	Tas	112	106
Macedon Ranges	Vic	113	33
Cronulla - Miranda - Caringbah	NSW	117	175
Melville	WA	119	151

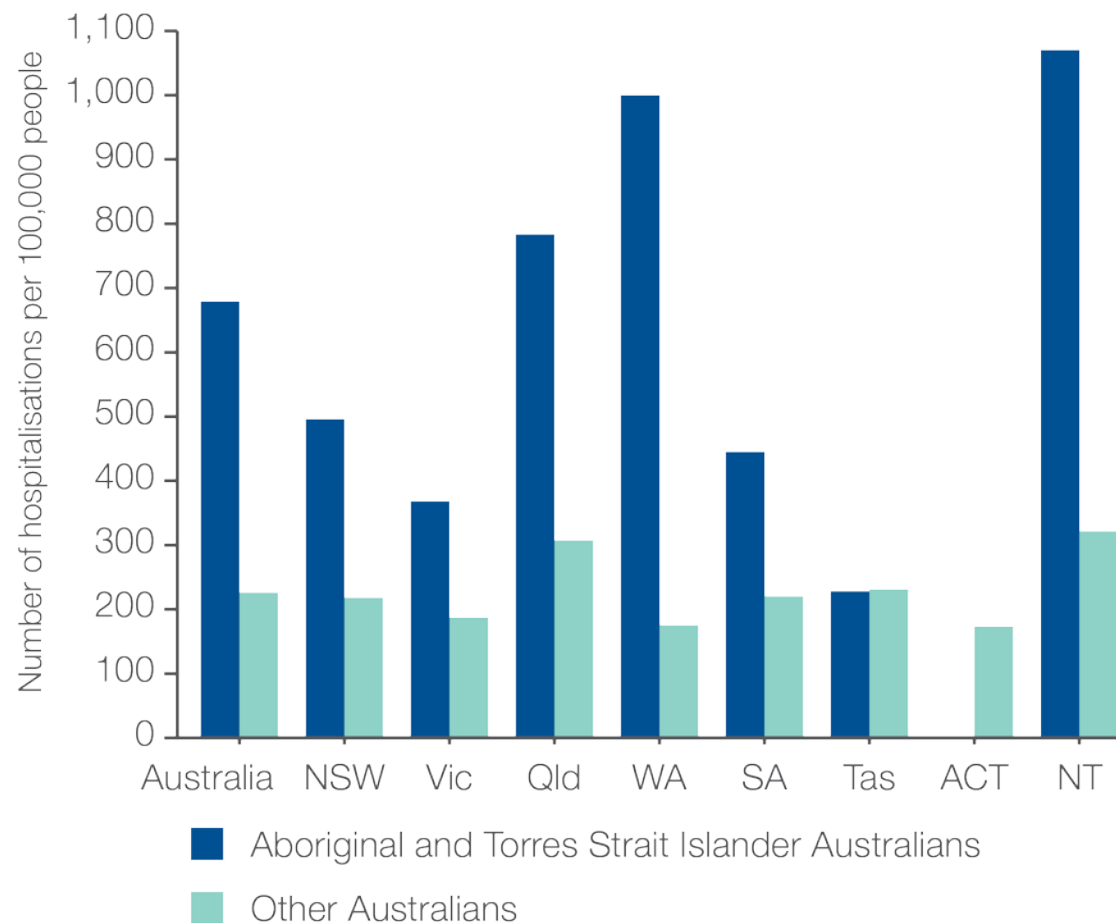
National Hospital Morbidity Database, 2014–15





1.3 Cellulitis hospitalisations

Aboriginal and Torres Strait Islander status

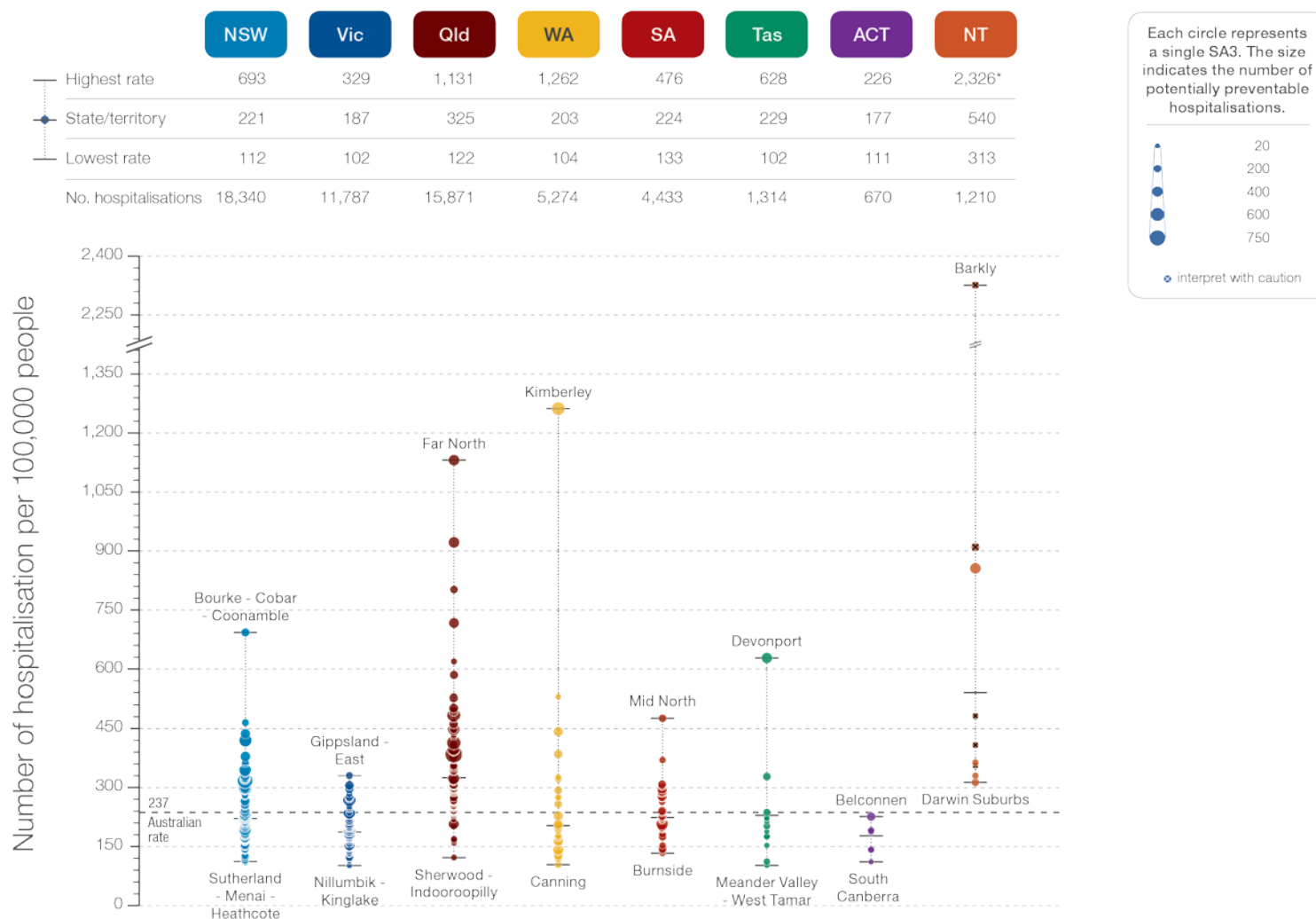


National Hospital Morbidity Database, 2014–15



1.3 Cellulitis hospitalisations

State and territory



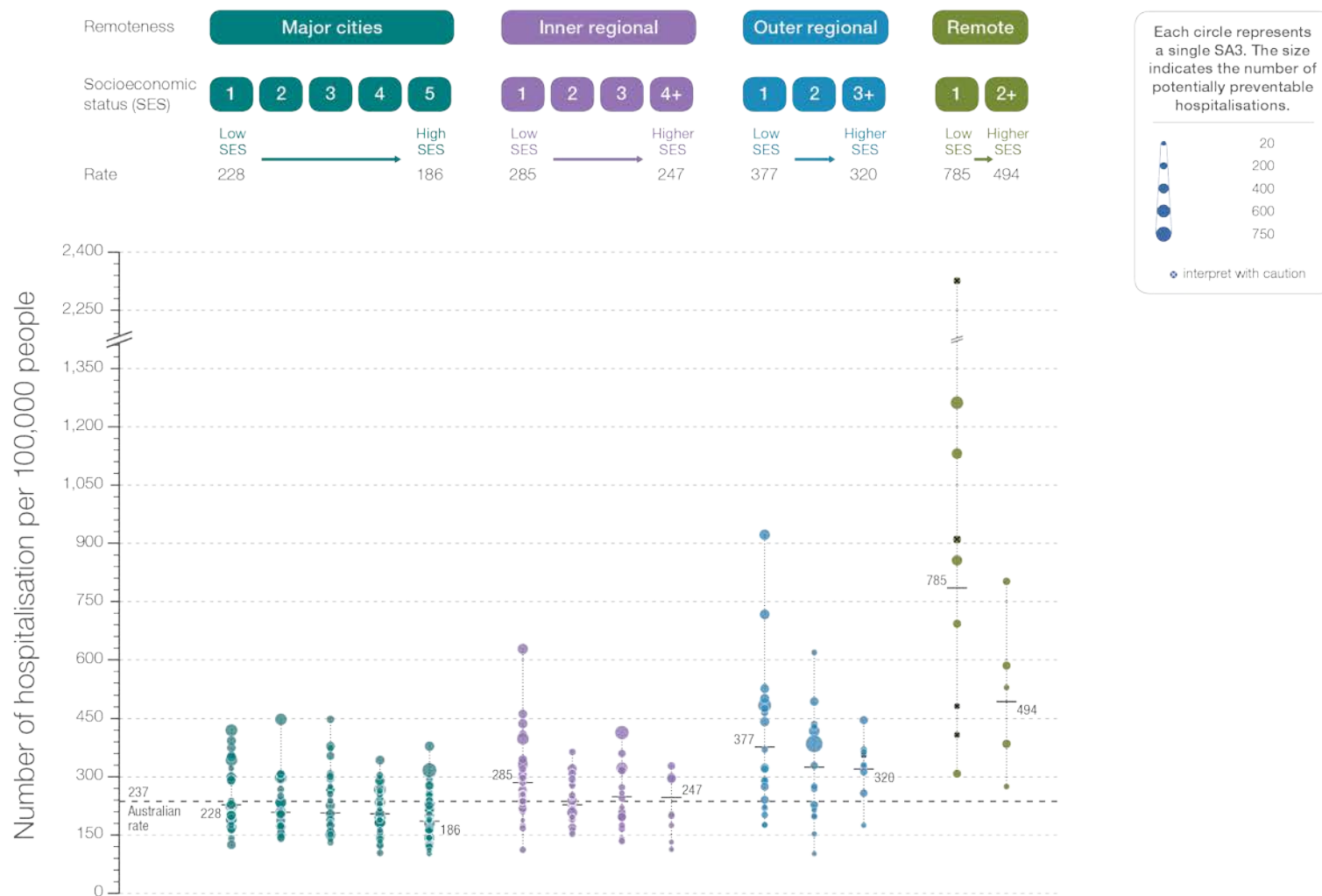
National Hospital Morbidity Database, 2014–15





1.3 Cellulitis hospitalisations

Remoteness and socioeconomic status

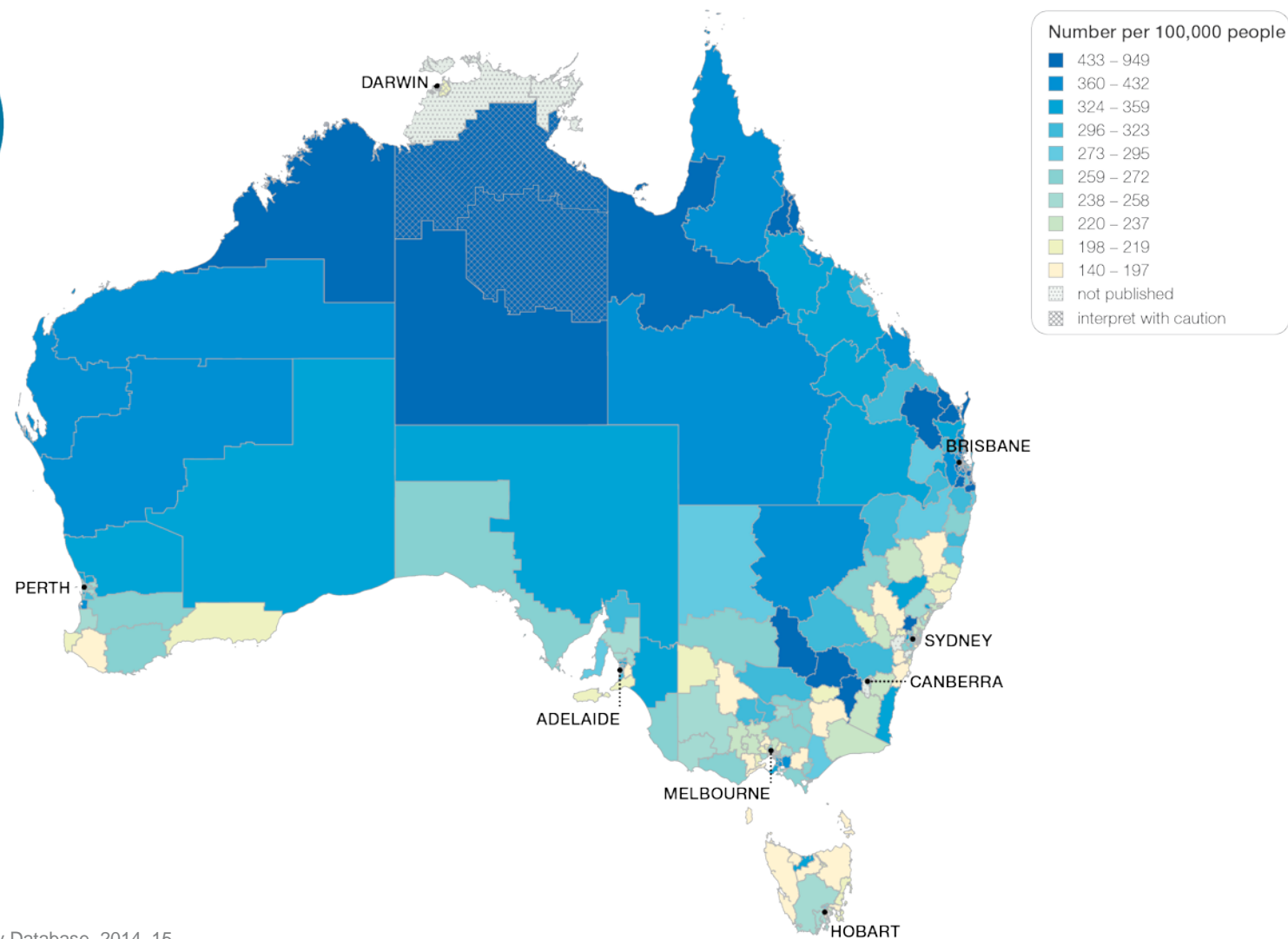


National Hospital Morbidity Database, 2014–15



1.4 Kidney and urinary tract infections hospitalisations

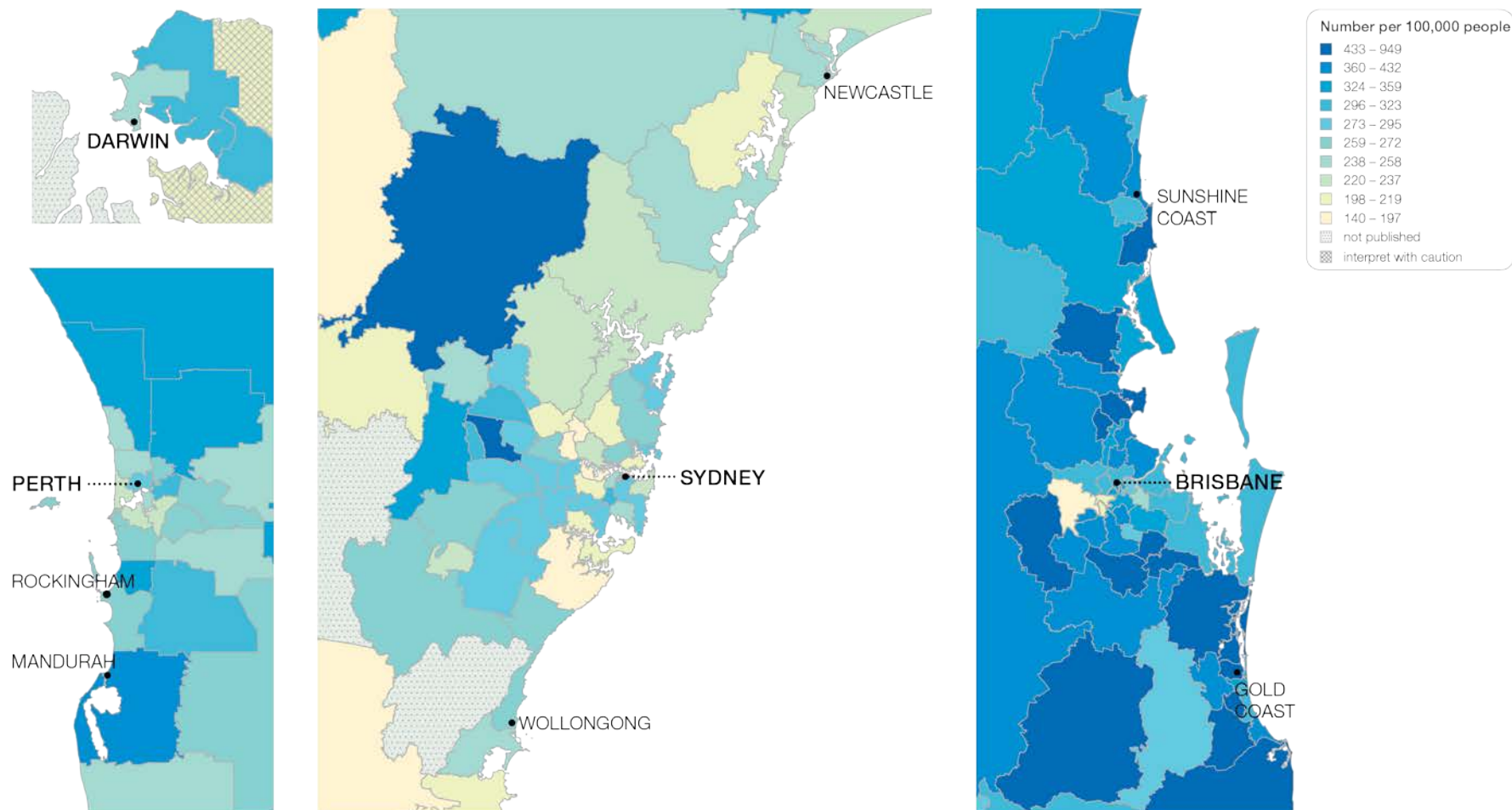
6.4x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National Hospital Morbidity Database, 2014–15



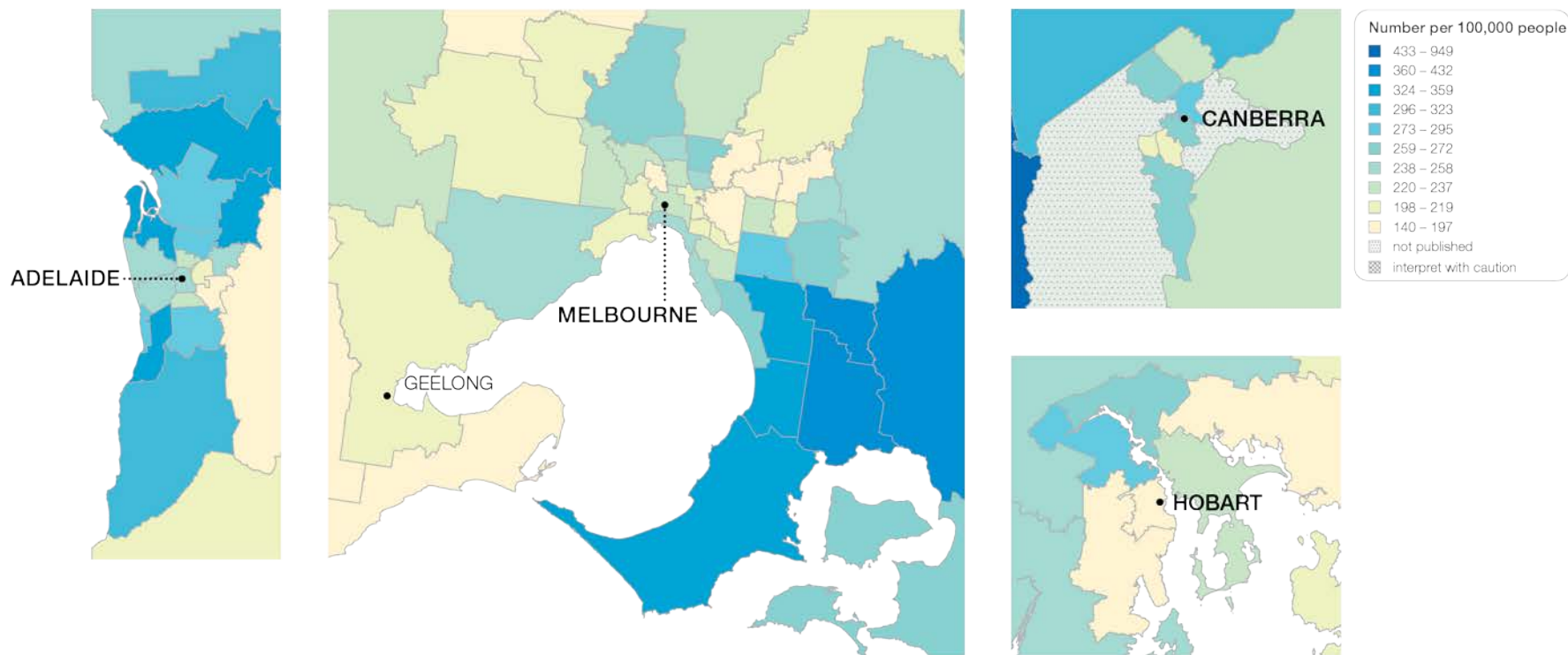
1.4 Kidney and urinary tract infections hospitalisations



National Hospital Morbidity Database, 2014–15



1.4 Kidney and urinary tract infections hospitalisations

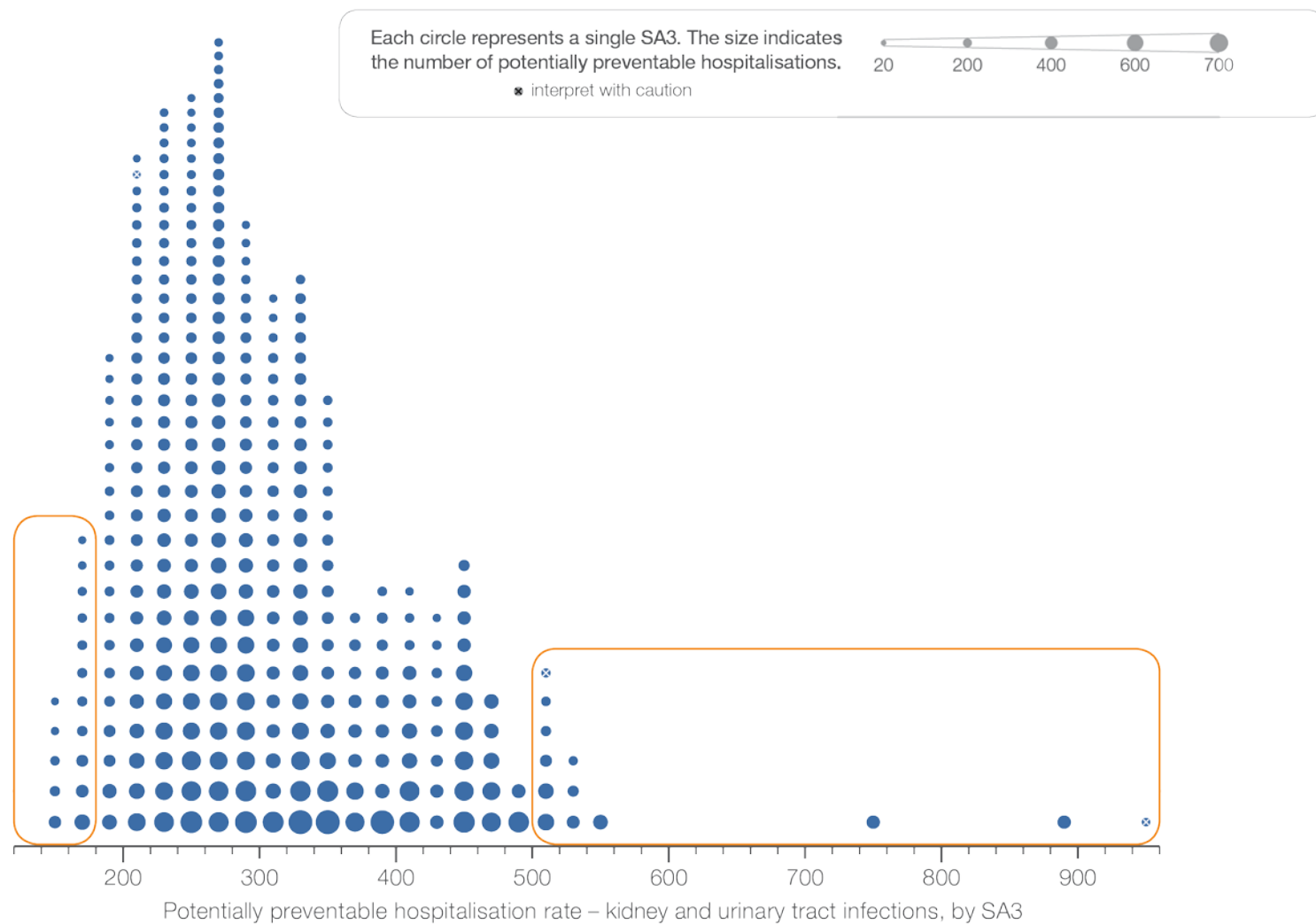


National Hospital Morbidity Database, 2014–15





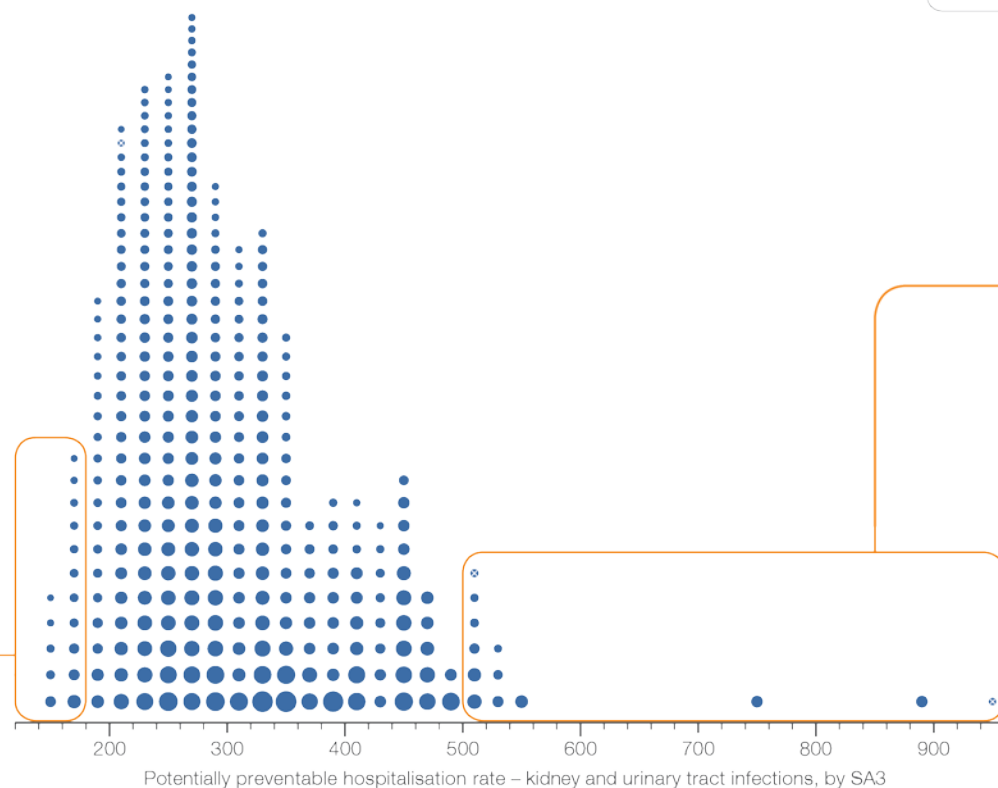
1.4 Kidney and urinary tract infections hospitalisations



National Hospital Morbidity Database, 2014–15



1.4 Kidney and urinary tract infections hospitalisations



Highest rate areas

SA3	State	Rate	Hospitalisations
Barkly	NT	949*	54
Kimberley	WA	899	248
Alice Springs	NT	750	249
Loganlea - Carbrook	Qld	543	308
Beautesert	Qld	533	82
Mudgeeraba - Tallebudgera	Qld	530	159
Tablelands (East) - Kuranda	Qld	523	234
Outback - North	Qld	517	125
Springwood - Kingston	Qld	516	388
Tumut - Tumbarumba	NSW	514	97
Katherine	NT	511*	83
Innisfail - Cassowary Coast	Qld	508	197
Southport	Qld	503	343

Lowest rate areas

SA3	State	Rate	Hospitalisations
Barwon - West	Vic	140	23
Burnie - Ulverstone	Tas	144	92
Shoalhaven	NSW	157	214
Surf Coast - Bellarine Peninsula	Vic	158	127
Manjimup	WA	158	43
Adelaide Hills	SA	161	117
Burnside	SA	162	104
Baw Baw	Vic	166	88
Sutherland - Menai - Heathcote	NSW	167	192
Macedon Ranges	Vic	167	50
Boroondara	Vic	171	343
North East	Tas	171	77
Southern Highlands	NSW	176	115
Manningham - West	Vic	177	225
Sorell - Dodges Ferry	Tas	178	30
Carlingford	NSW	179	130

National Hospital Morbidity Database, 2014–15





1.4 Kidney and urinary tract infections hospitalisations

Aboriginal and Torres Strait Islander status

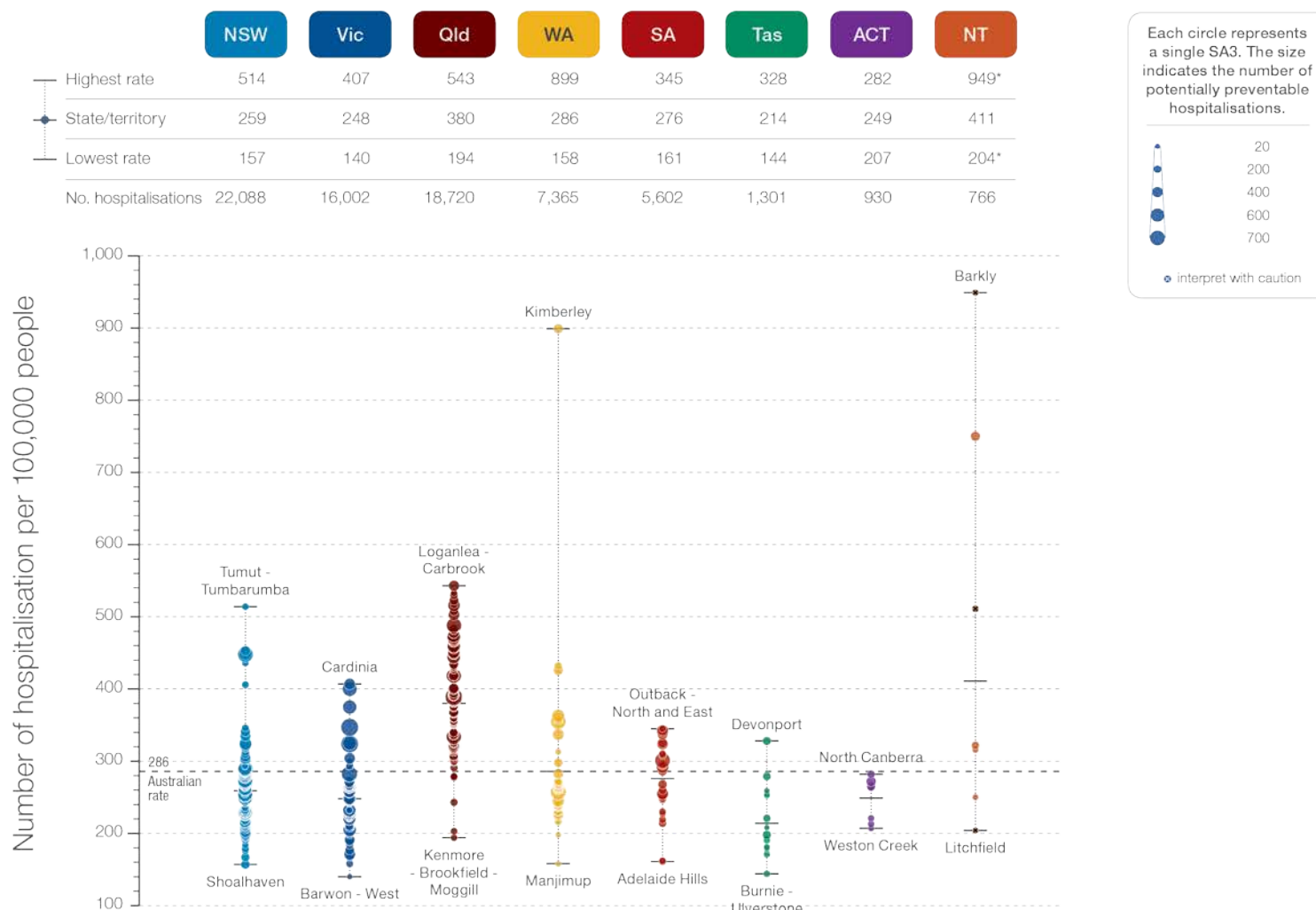


National Hospital Morbidity Database, 2014–15



1.3 Cellulitis hospitalisations

State and territory



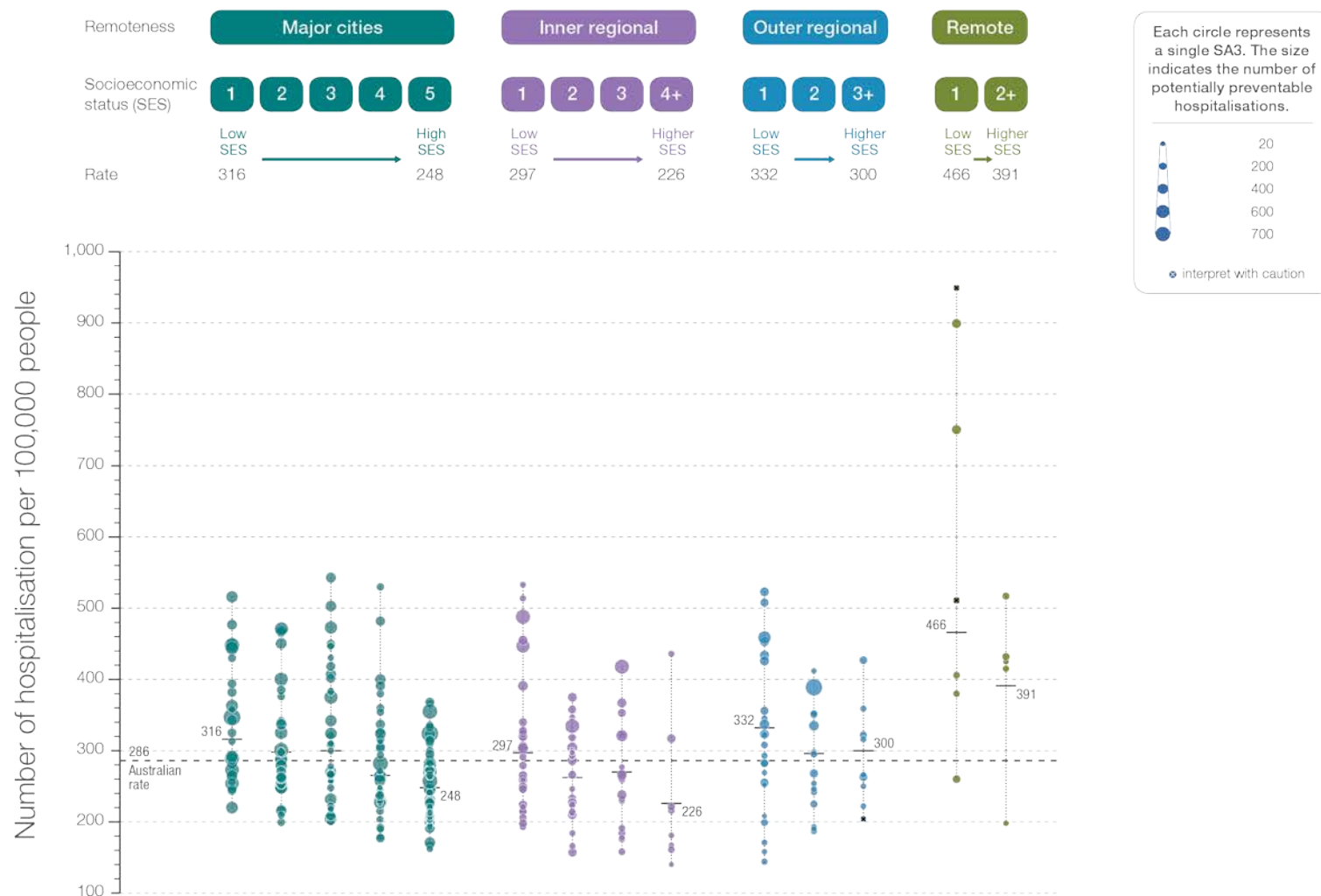
National Hospital Morbidity Database, 2014–15





1.4 Kidney and urinary tract infections hospitalisations

Remoteness and socioeconomic status

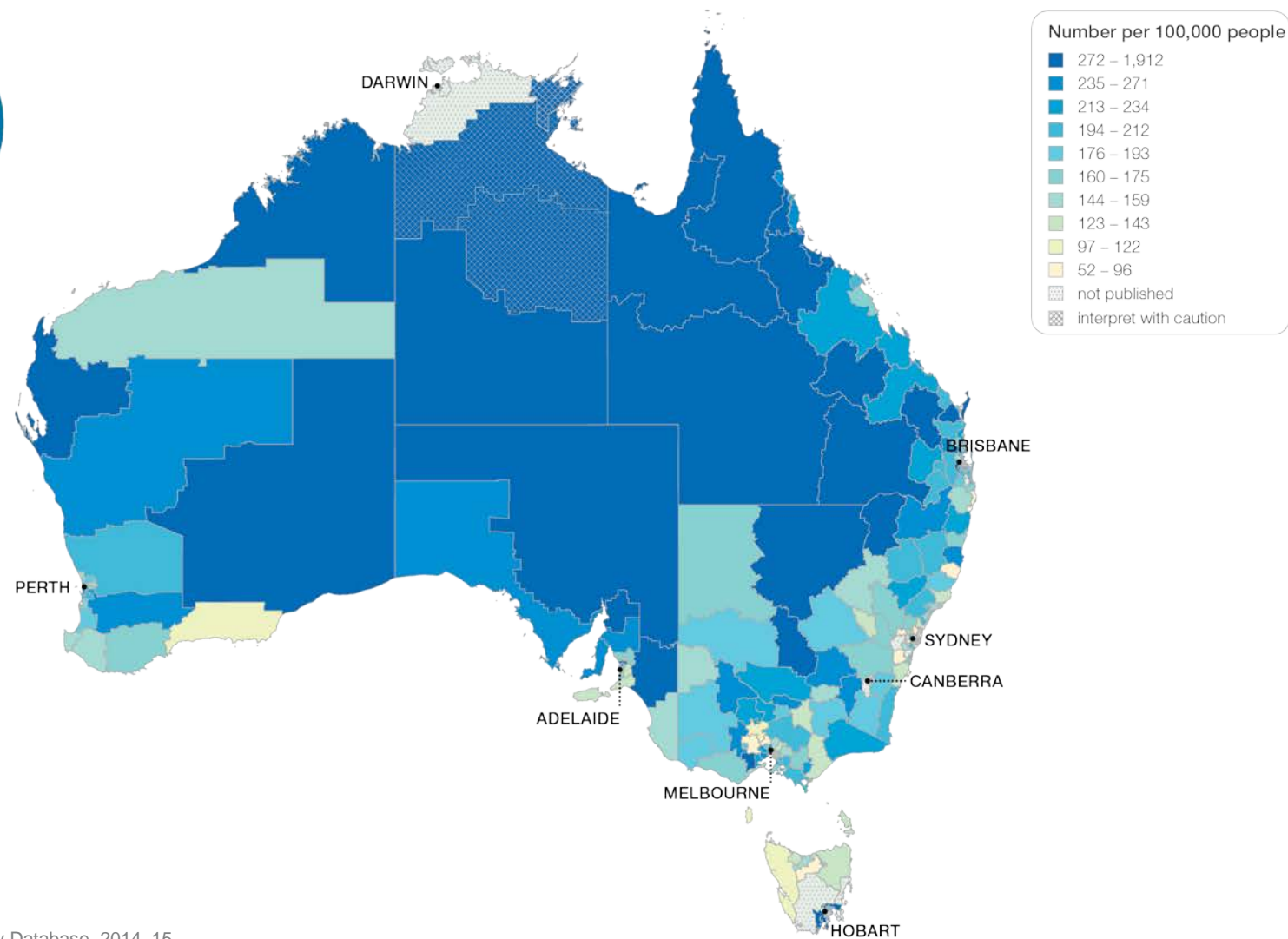


National Hospital Morbidity Database, 2014–15



1.5 Diabetes complications hospitalisations

11.6x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National Hospital Morbidity Database, 2014–15

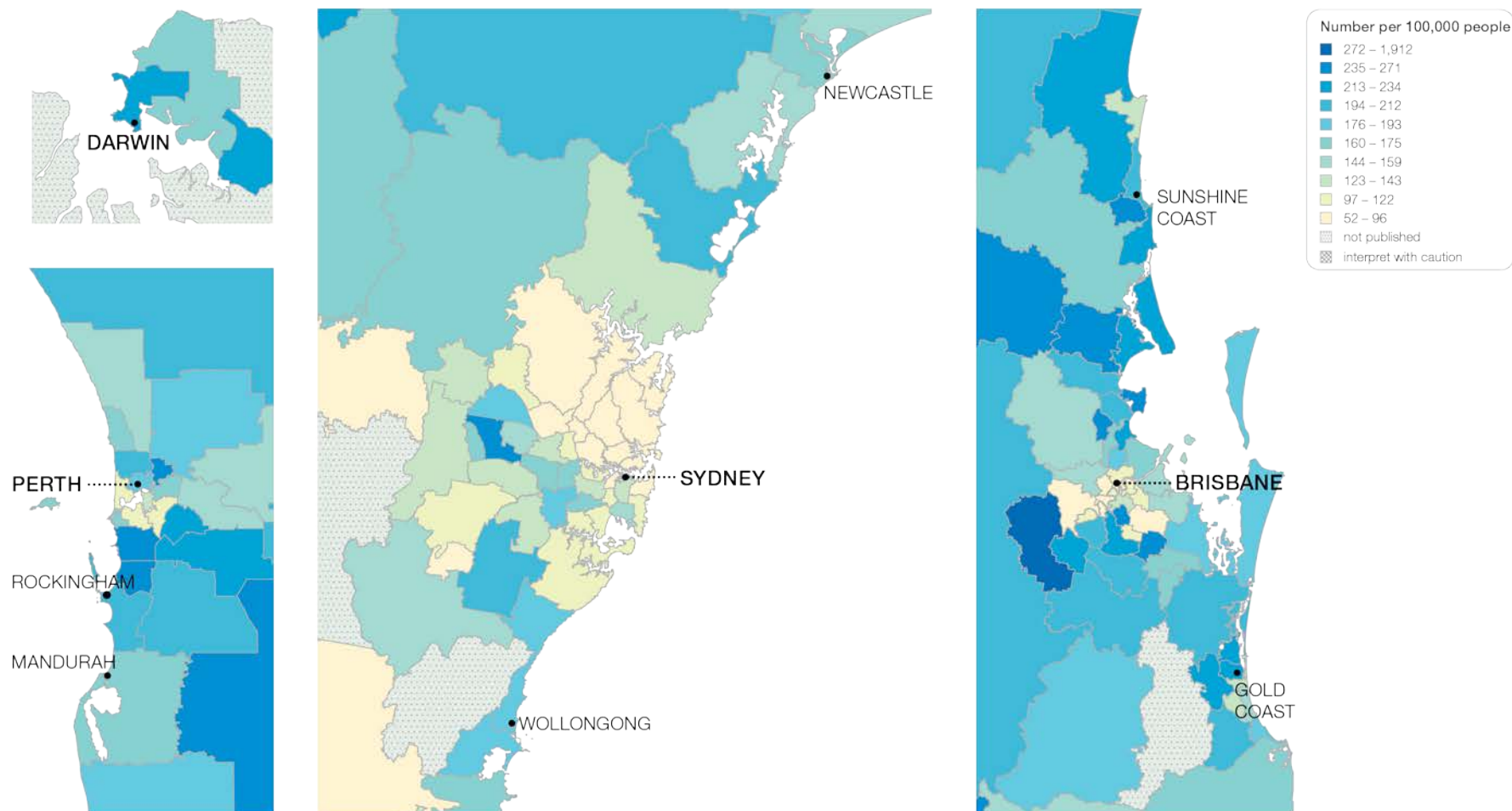


Chronic disease and infection

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017



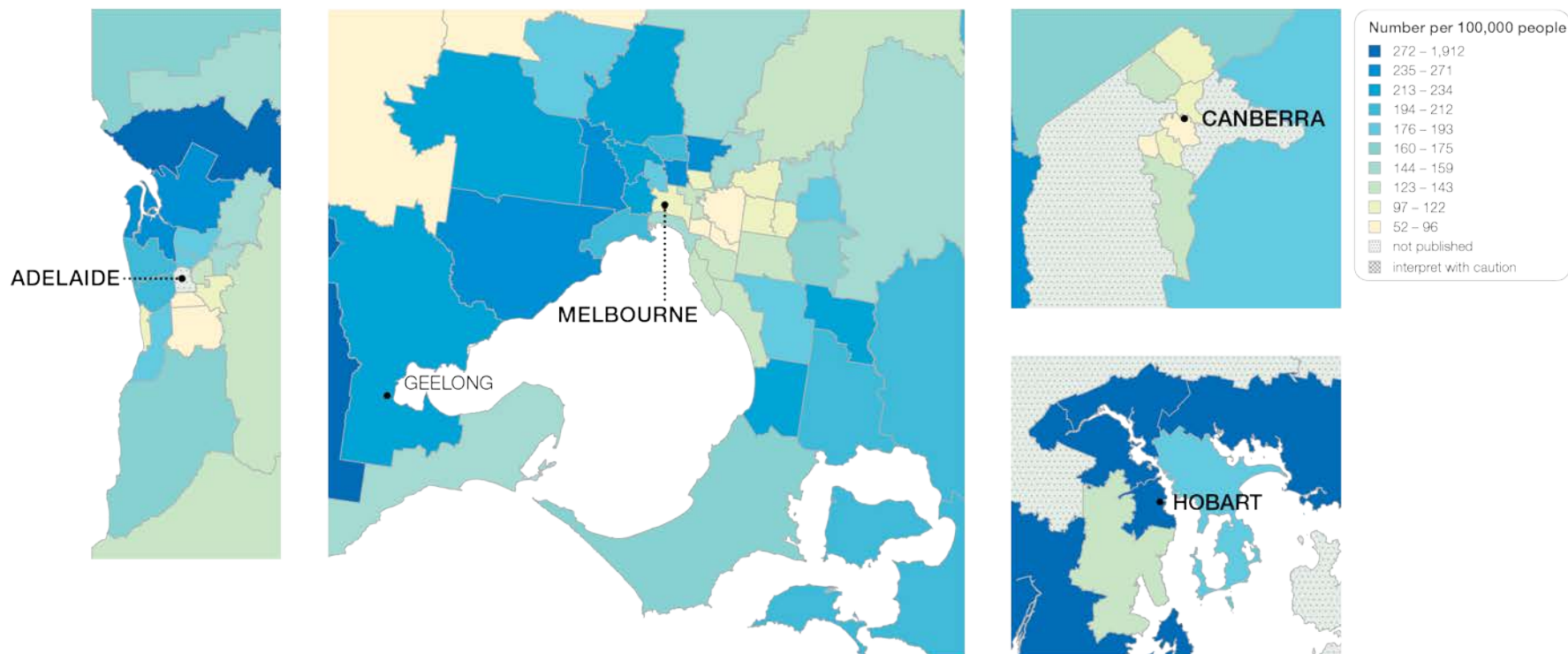
1.5 Diabetes complications hospitalisations



National Hospital Morbidity Database, 2014–15



1.5 Diabetes complications hospitalisations

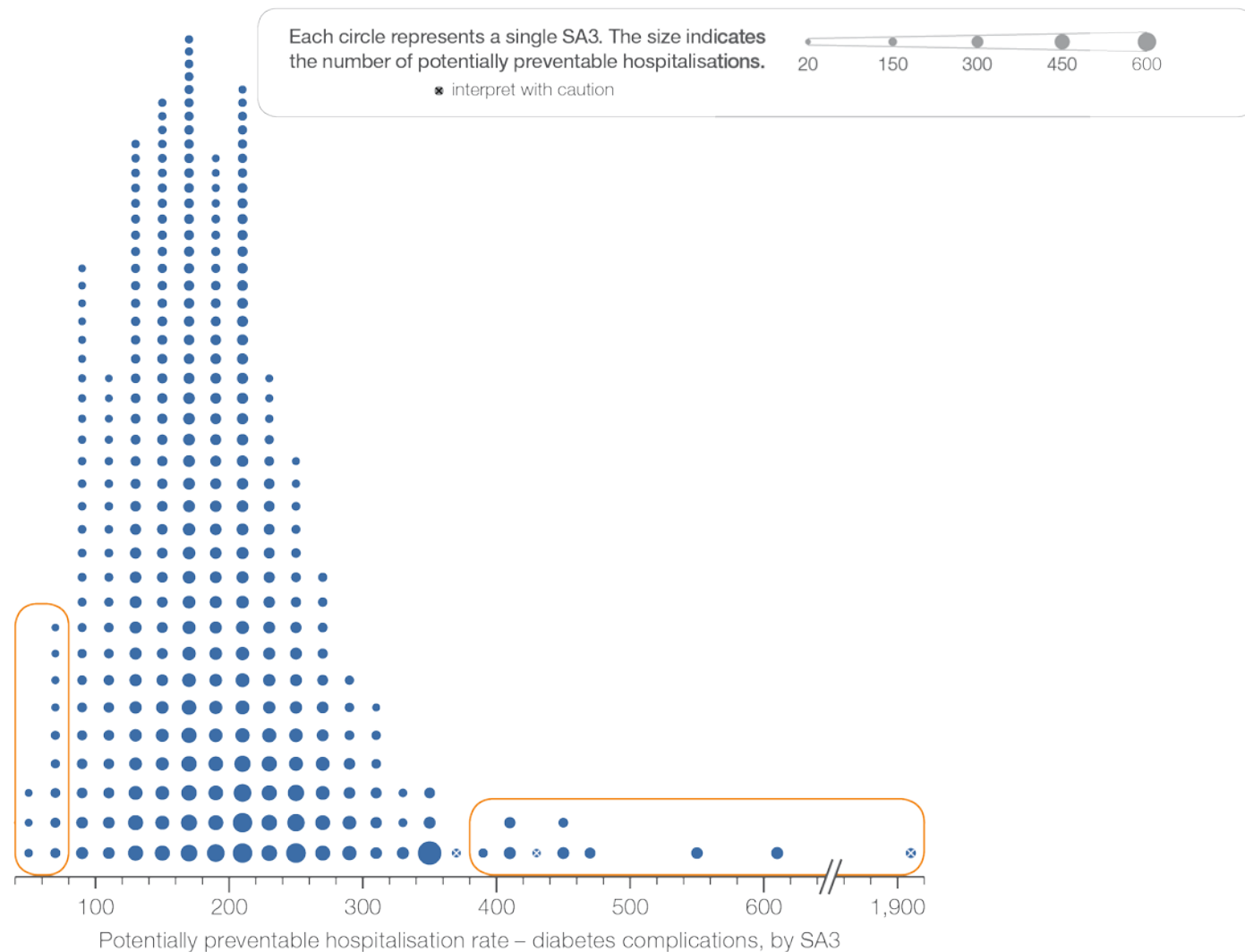


National Hospital Morbidity Database, 2014–15





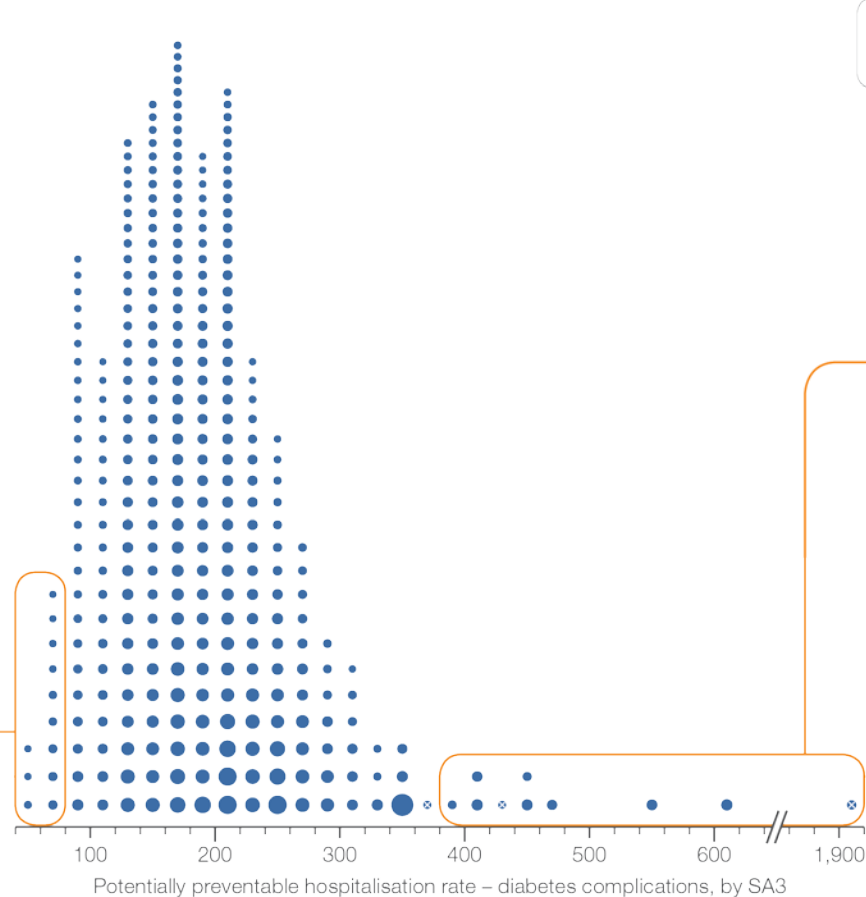
1.5 Diabetes complications hospitalisations



National Hospital Morbidity Database, 2014–15



1.5 Diabetes complications hospitalisations



Each circle represents a single SA3. The size indicates the number of potentially preventable hospitalisations.

• interpret with caution



Highest rate areas

SA3	State	Rate	Hospitalisations
Barkly	NT	1,912*	107
Outback - North	Qld	601	181
Far North	Qld	542	164
Outback - North and East	SA	473	141
Outback - South	Qld	453	95
Alice Springs	NT	452	173
East Arnhem	NT	421*	50
Kimberley	WA	408	152
Tablelands (East) - Kuranda	Qld	407	181
Barwon - West	Vic	395	84

Lowest rate areas

SA3	State	Rate	Hospitalisations
Brisbane Inner - West	Qld	52	28
Manly	NSW	52	26
Blue Mountains	NSW	58	53
Baulkham Hills	NSW	65	97
Eastern Suburbs - North	NSW	66	107
North Sydney - Mosman	NSW	69	72
Dural - Wisemans Ferry	NSW	69	22
Pennant Hills - Epping	NSW	72	38
Macedon Ranges	Vic	72	23
Ku-ring-gai	NSW	73	105
Stonnington - East	Vic	74	36
Mitcham	SA	78	75

National Hospital Morbidity Database, 2014–15



Chronic disease and infection

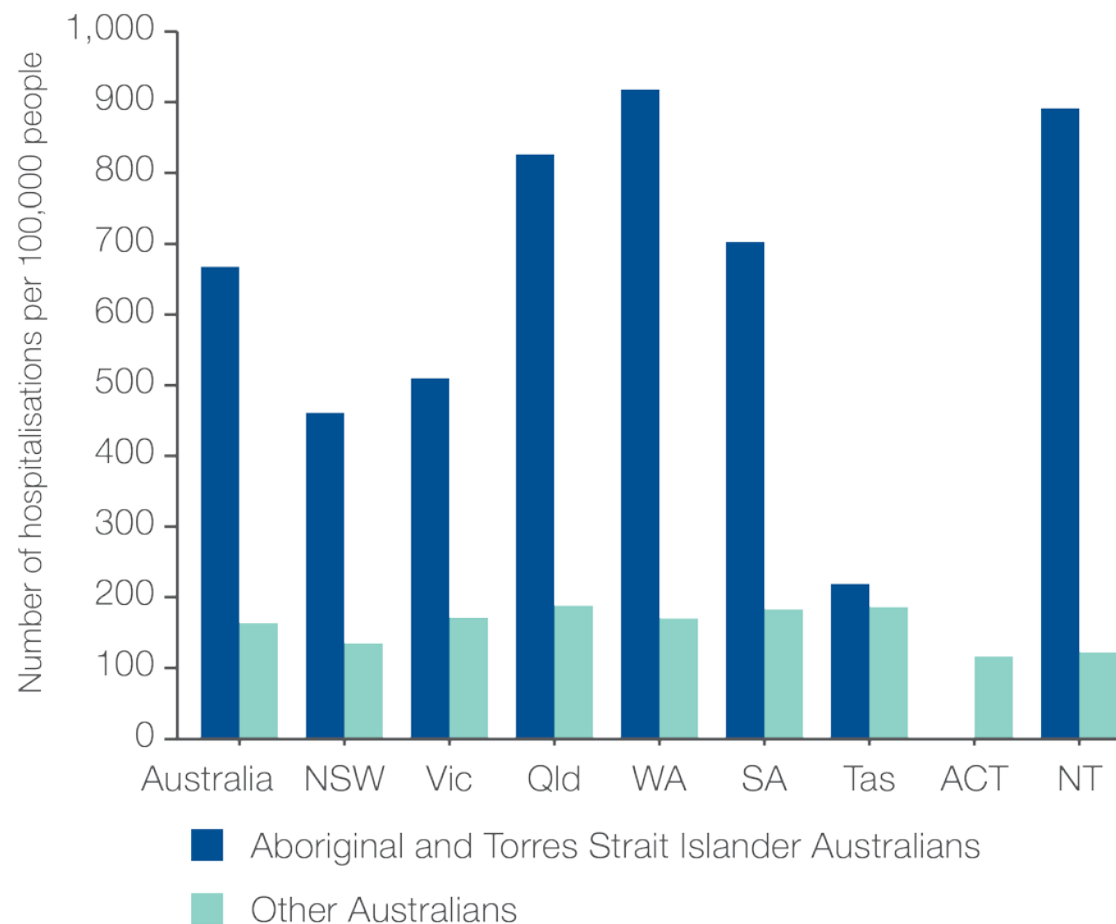
AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017





1.5 Diabetes complications hospitalisations

Aboriginal and Torres Strait Islander status



National Hospital Morbidity Database, 2014–15



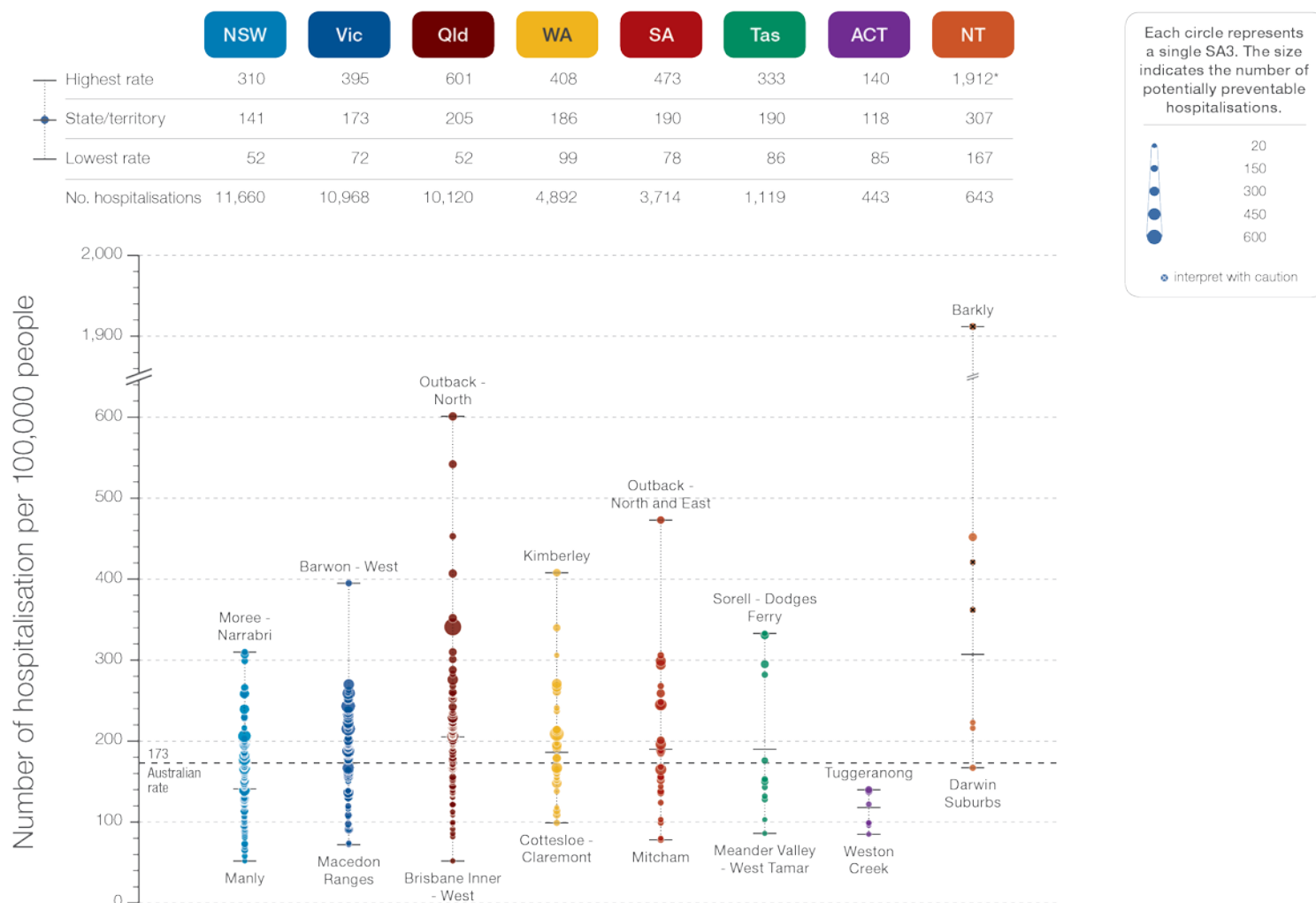
Chronic disease and infection

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE Atlas 2017



1.5 Diabetes complications hospitalisations

State and territory



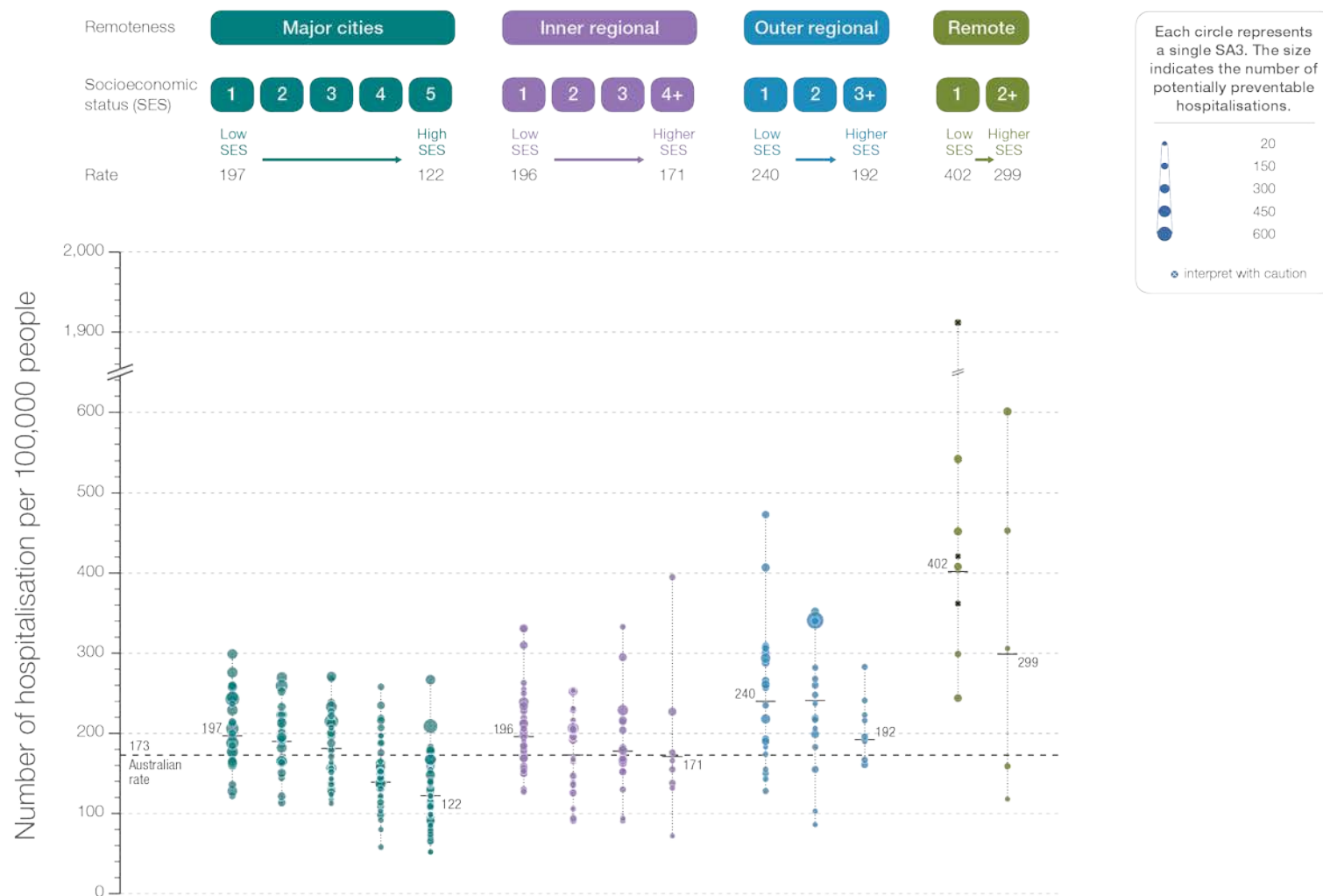
National Hospital Morbidity Database, 2014–15





1.5 Diabetes complications hospitalisations

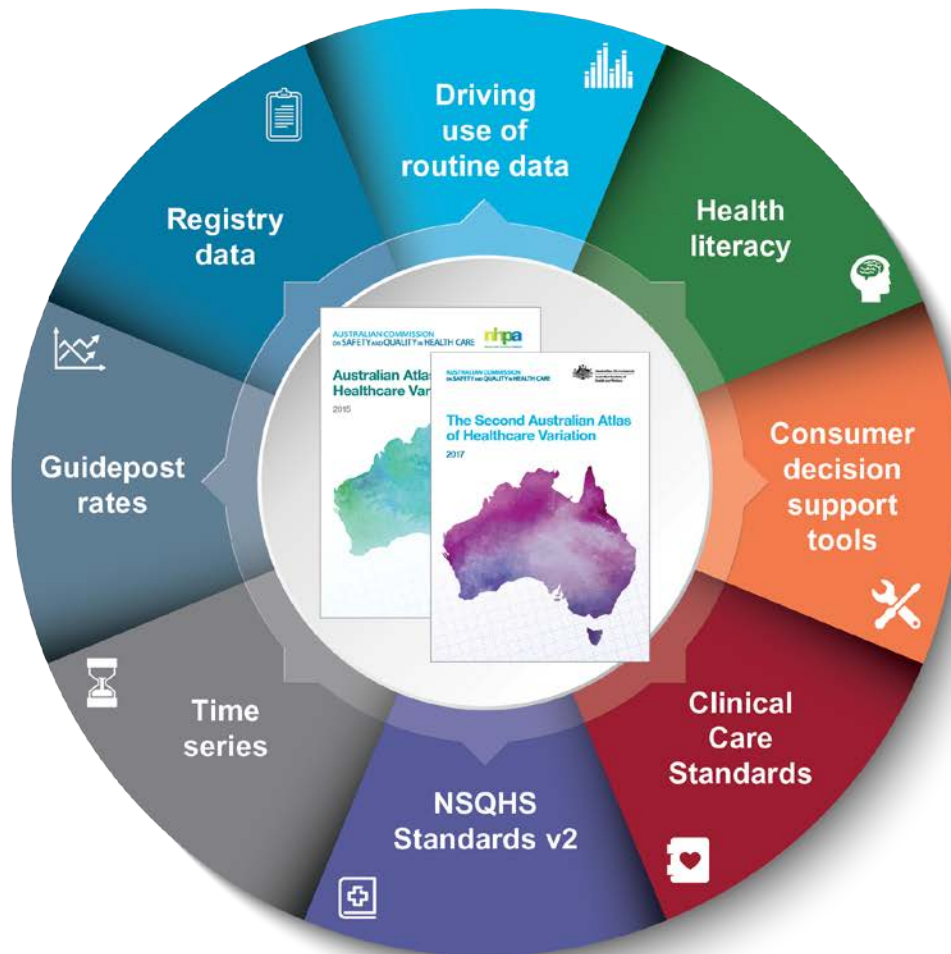
Remoteness and socioeconomic status



National Hospital Morbidity Database, 2014–15



Promoting appropriate care



Explore variation

Identify unwarranted variation

Address unwarranted variation





Further resources

- Explore the data further using the interactive Atlas at www.safetyandquality.gov.au/atlas/
- Please send any queries to atlas@safetyandquality.gov.au



AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

The Second Australian Atlas of Healthcare Variation

2017

