

Reducing Medical Practice Variation

Achievements in the land downunder

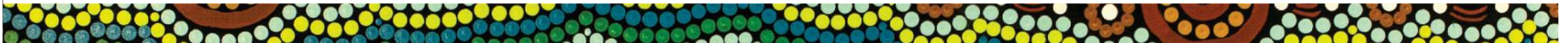
Dr Diane Watson

Chief Executive Officer, Bureau of Health Information

September 2018

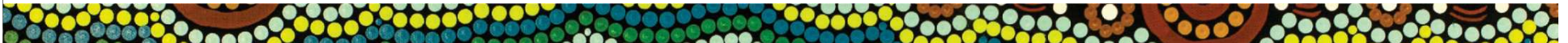
Purpose

- Describe Australian examples where information on clinical variation has informed interventions to reduce unwarranted care
 - Underuse
 - Discretionary care
 - Unnecessary care
 - Poor outcomes of care
- Describe the levers for change being used to reduce unwarranted variation



Purpose

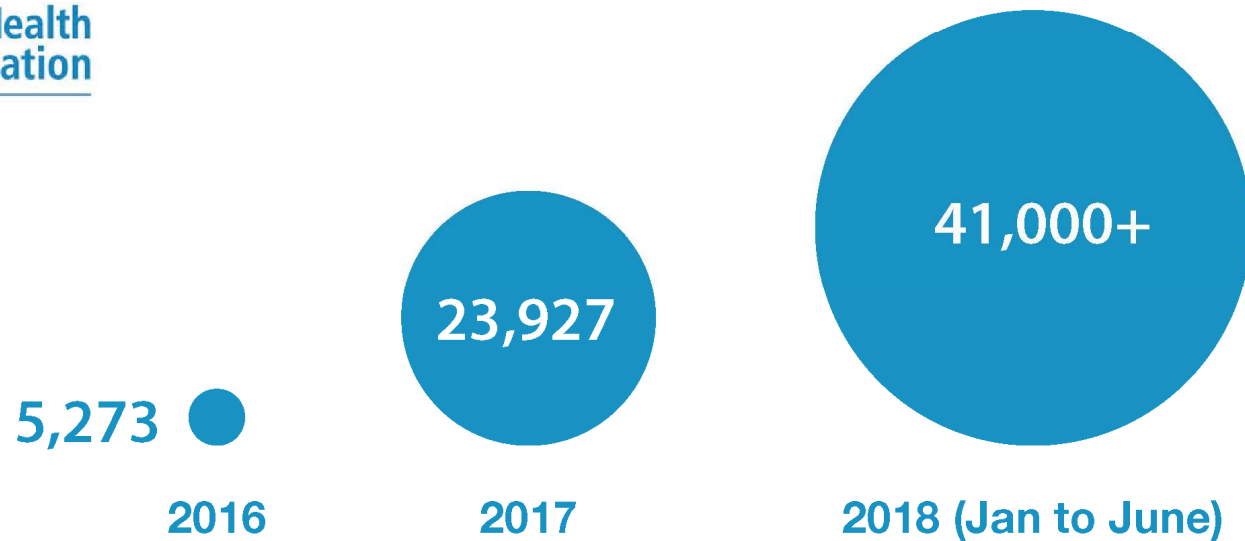
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Underuse: The case of child immunisation

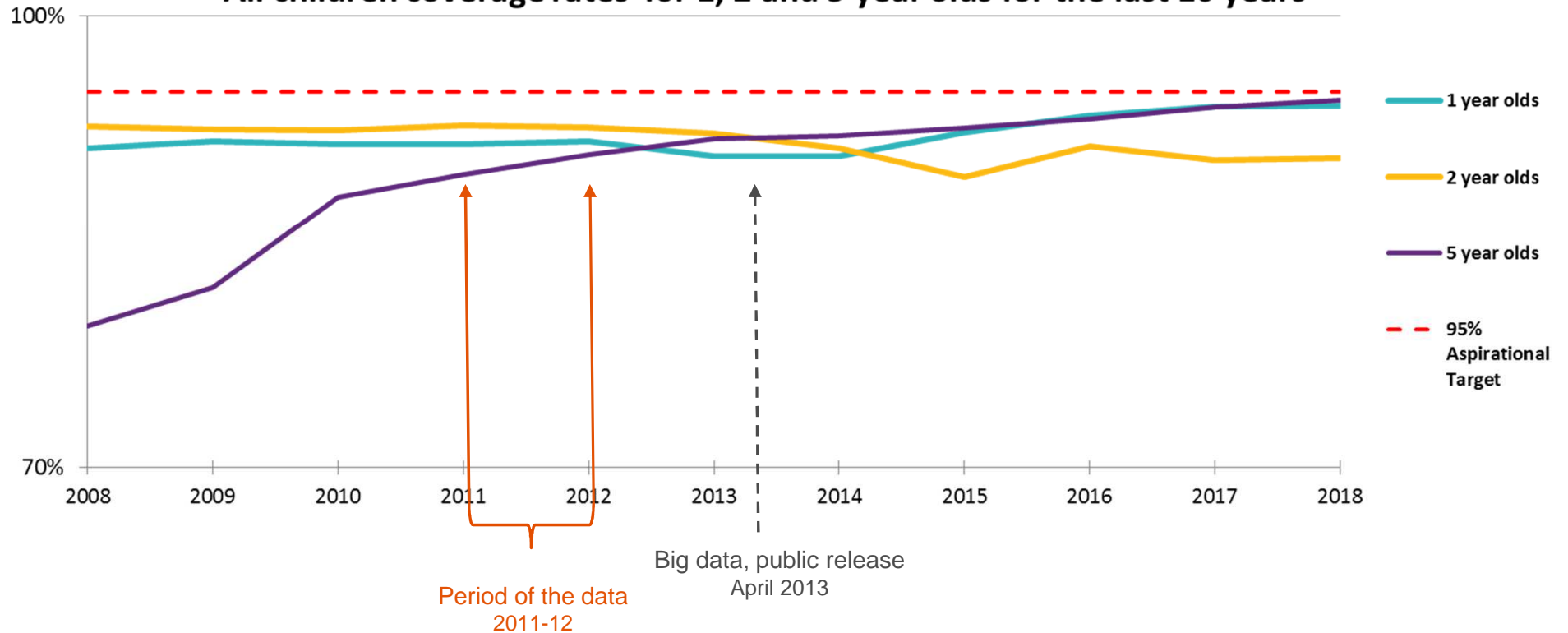
MEASLES CASES

in the WHO European Region



Underuse: The case of child immunisation

All children coverage rates for 1, 2 and 5 year olds for the last 10 years

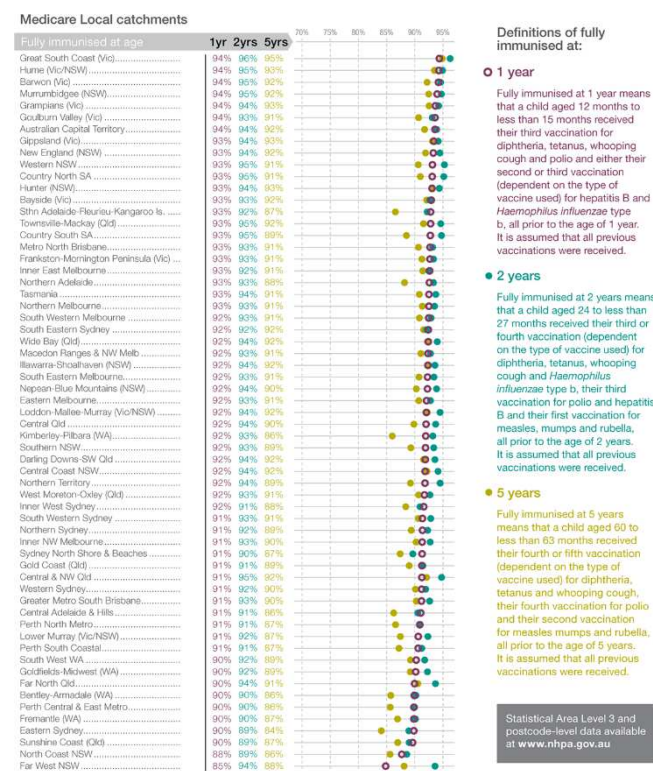


Underuse: The case of child immunisation

In 2013 Australia's National Health Performance Authority named 30 local communities where:

- 85% or less of 1, 2 or 5 year children who were not been fully immunised and, accordingly, at risk of being exposed to contagious diseases such as measles and whooping cough
- Among all 5 year olds, 23 of 61 catchments recorded less than 90% fully immunised. This was a much larger number of catchments than for all children aged 1 year (two out of 61 catchments) and 2 years (three out of 61 catchments)
- Percentages of Aboriginal and Torres Strait Islander children fully immunised were lower than for all children.

Figure 3: Percentages of all children¹ in each of 61 Medicare Local catchments that are fully immunised by age, 2011-12



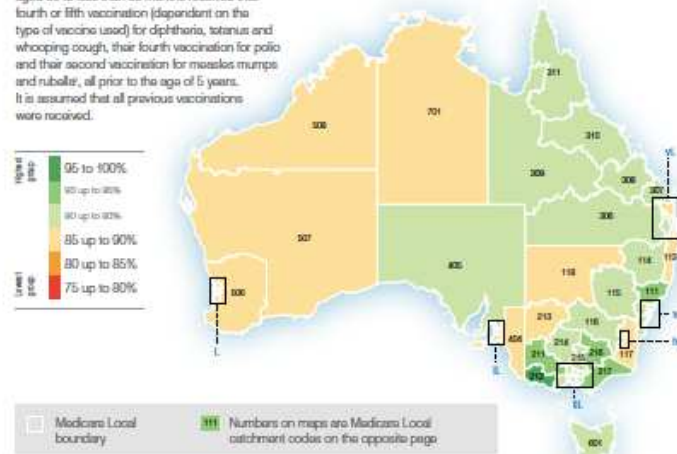
¹ Data are reported as whole numbers. However, for graphical display they are plotted by 2 decimal places. Source: Department of Human Services, Australian Childhood Immunisation Register statistics 2011-12, data supplied 14/01/2013.

Underuse: The case of child immunisation

Children aged 5 years who were fully immunised, 2011–12

Percentages of children aged 5 years fully immunised, by Medicare Local catchment, 2011–12

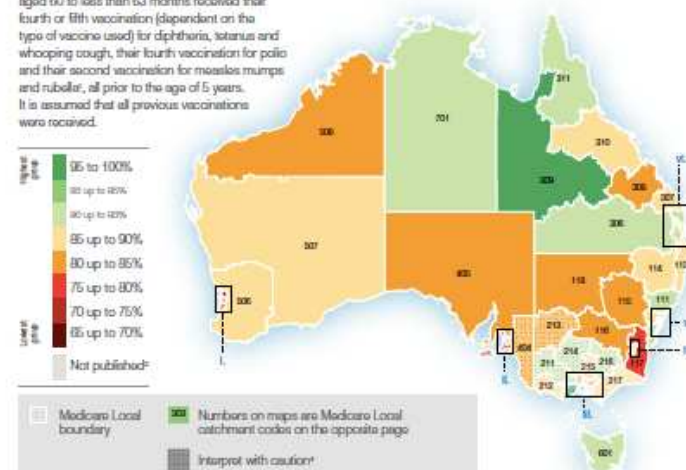
Fully immunised at 5 years means that a child aged 60 to less than 63 months received their fourth or fifth vaccination (dependent on the type of vaccine used) for diphtheria, tetanus and whooping cough, their fourth vaccination for polio and their second vaccination for measles mumps and rubella, all prior to the age of 5 years. It is assumed that all previous vaccinations were received.



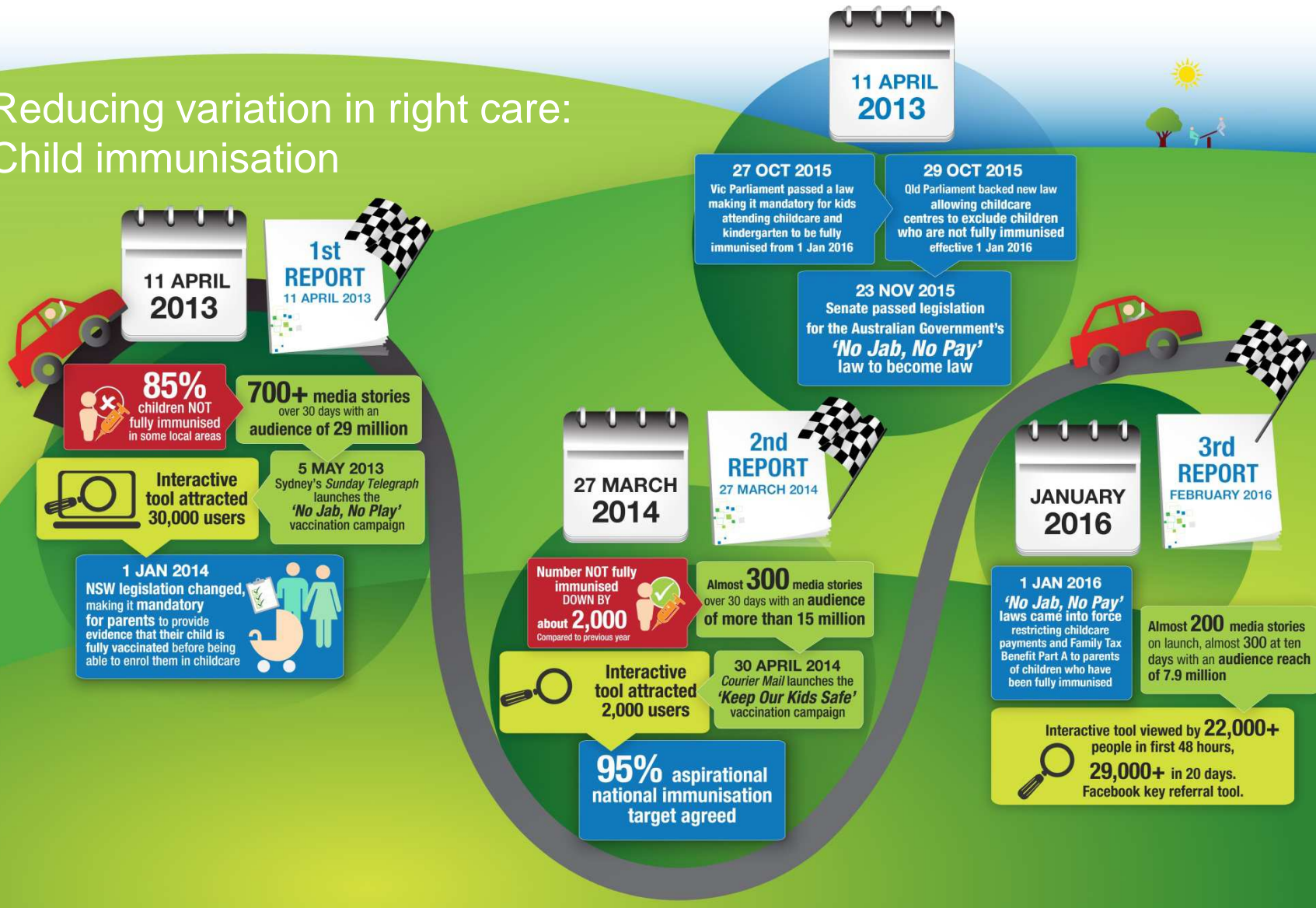
Aboriginal and Torres Strait Islander children aged 5 years who were fully immunised, 2011–12

Percentages of Aboriginal and Torres Strait Islander children aged 5 years fully immunised, by Medicare Local catchment, 2011–12

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Reducing variation in right care: Child immunisation



Underuse: The case of child immunisation

Cognitive and competitive levers

- Public reporting of 1, 2 & 5 year olds (small area) with resultant media campaign in 2013
- Aspirational national immunisation target agreed (95%) in 2015

Normative, coercive and structural

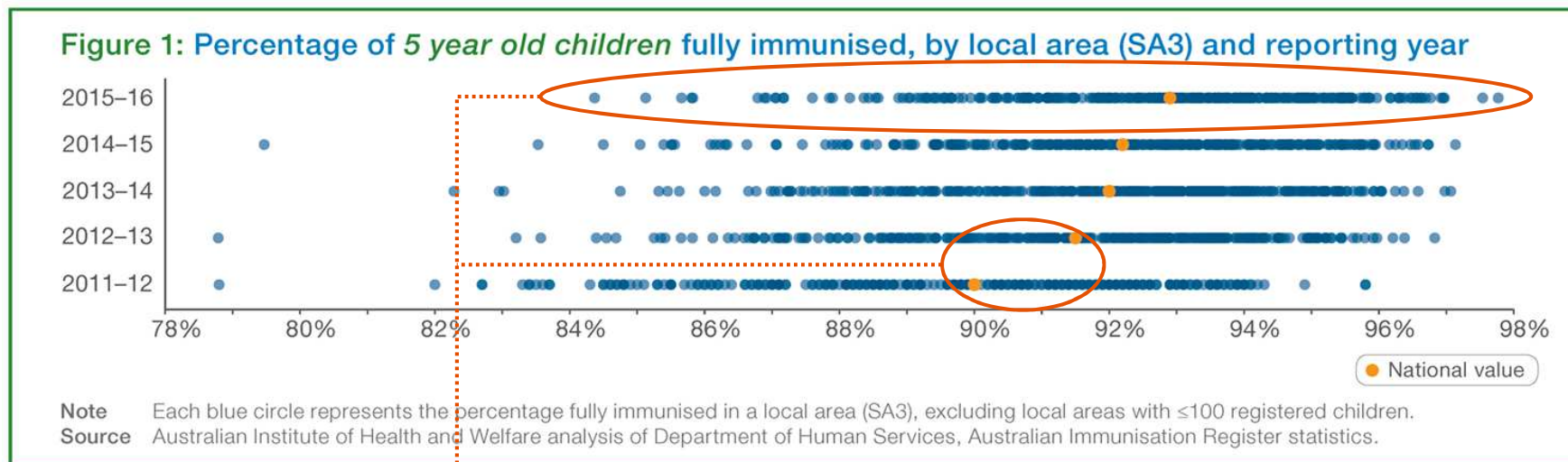
- Change in legislation & regulations (*No jab, no play*) from 2014 to 2016 across states
- Change in family benefits policy (*No jab, No pay*) in 2016
- Performance Agreements with Primary Health Networks in 2015

Supportive levers

- Information for parents, educators and health professionals
- Decision support tools for parents



The result: Increased use of right care, reduction in variation



Reducing variation and increasing the national rate: Largest gain from commencement of public reporting and resultant media campaign in 2012-13. Subsequent gains related to changes to public health policy (No Jab, No Play) and social policy (No Jab, No Pay), establishment of an aspirational target (95%) and continued annual reporting of immunisation rates across small areas.

The result: Increased use of right care, reduction in variation

In 2012-13 **2/31** Primary Health Networks areas had rates **above the National target of 95% for fully immunised children (5 year olds)**.

In 2015-16 **3/31** Primary Health Network areas had rates **above the National Target of 95% for fully immunised children (5 year olds)**.

..... (see figure)

In 2016-17 **10/31** Primary Health Networks areas had rates **above the National target of 95% for fully immunised children (5 year olds)** (data available online).

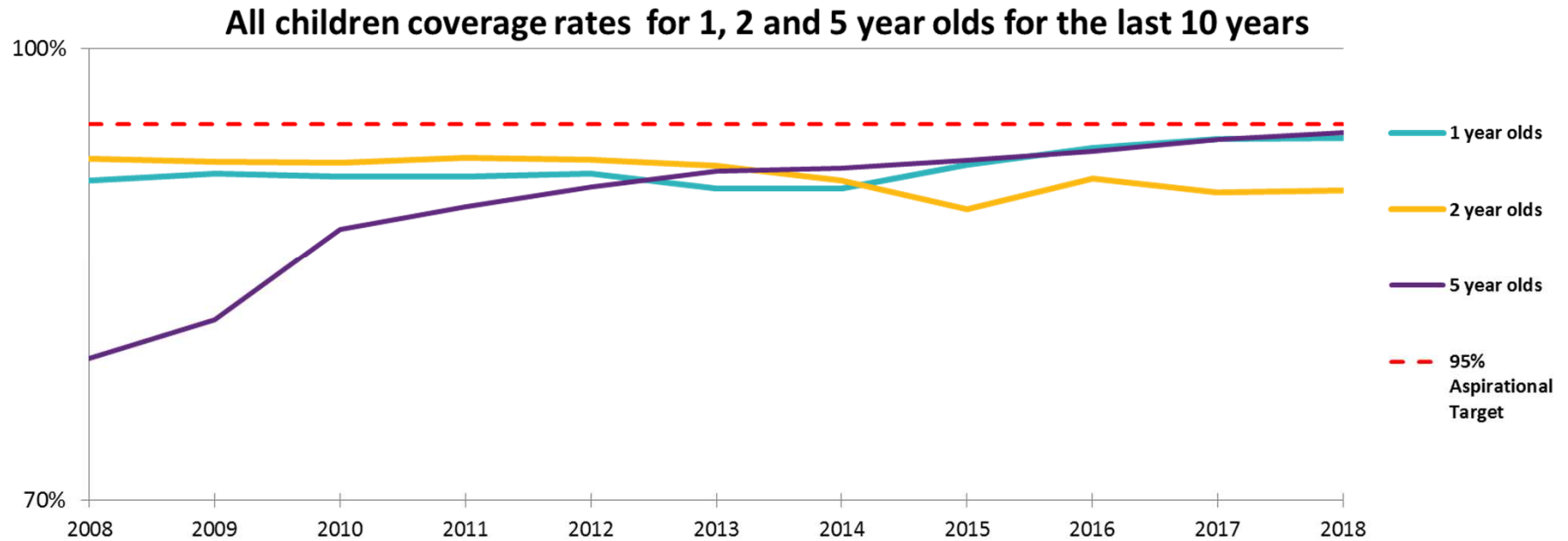
By March 2018 **17/31** Primary Health Network areas had rates **above the National Target of 95% for fully immunised children (5 year olds)** (data available online)

Figure 4: Immunisation rates for 5 year old children, by Primary Health Network area, 2012-13 to 2015-16

Primary Health Network area	2012-13	2013-14	2014-15	2015-16
Western NSW	94.0	94.3	95.6	96.1
Murrumbidgee (NSW)	93.7	95.0	95.7	96.0
Hunter New Eng. & Cent. Coast (NSW)	93.9	94.5	94.8	95.4
Gippsland (Vic)	94.2	93.4	93.5	94.9
South Eastern NSW	93.1	93.9	93.5	94.7
Nepean Blue Mountains (NSW)	92.9	93.3	94.0	94.7
Western Queensland	92.2	94.5	92.9	94.4
Western Victoria	93.8	93.6	93.5	94.2
Murray (Vic & part NSW)	92.7	93.2	93.5	94.2
Northern Queensland	92.7	93.2	93.7	94.1
South Western Sydney (NSW)	92.5	93.0	93.8	94.0
Darling Downs & West Moreton (Qld)	93.0	93.2	93.3	94.0
Tasmania	92.9	92.7	92.6	93.8
Country WA	91.2	92.3	92.0	93.6
Australian Capital Territory	92.3	92.7	93.2	93.5
Country SA	92.0	92.5	91.7	93.4
North Western Melbourne (Vic)	92.4	92.5	92.5	93.2
Eastern Melbourne (Vic)	92.1	92.4	92.4	93.2
Western Sydney (NSW)	91.7	92.2	92.4	93.0
Brisbane North (Qld)	92.0	92.7	93.0	92.9
South Eastern Melbourne (Vic)	92.1	91.7	92.1	92.6
Brisbane South (Qld)	91.0	92.2	92.0	92.3
Northern Territory	90.9	91.4	92.4	91.9
Adelaide (SA)	90.4	90.4	90.5	91.9
Cent. Qld, Wide Bay & Sunshine Coast	90.8	91.6	91.0	91.6
Central & Eastern Sydney (NSW)	89.4	90.1	90.8	91.5
Northern Sydney (NSW)	89.0	89.9	90.4	91.3
Gold Coast (Qld)	89.3	90.1	90.7	90.8
Perth South (WA)	88.6	88.9	90.0	90.8
Perth North (WA)	89.2	89.1	90.3	90.6
North Coast (NSW)	88.0	88.7	89.2	90.3
National	91.5	92.0	92.2	92.9



Underuse: The case of child immunisation



By March 2018 **17/31** Primary Health Network areas had rates **above the National Target of 95%** for fully immunised children for **5 year olds** and **12/31** Primary Health Networks had rates **above the National Target of 95%** for fully immunised children for **1 year olds** (data available online)



Purpose

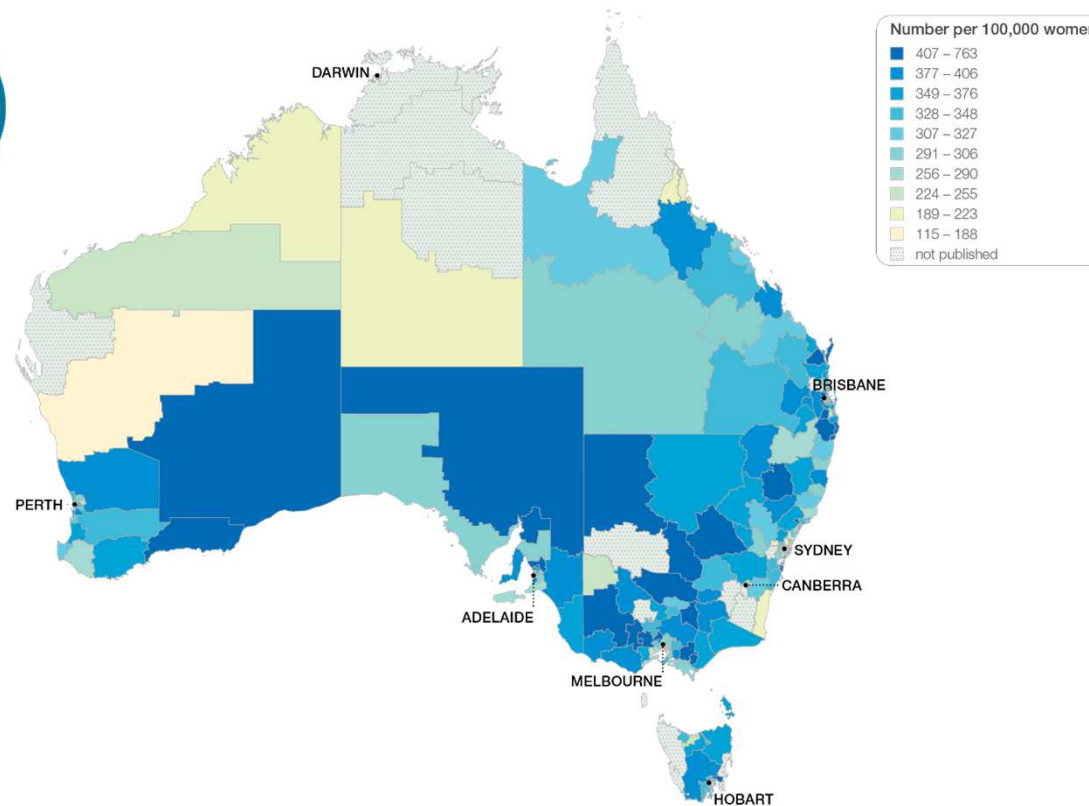
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Discretionary: The case of hysterectomy

Hysterectomy hospitalisations 15 years and over, Australian rate is one of the highest in OECD

6.6x
AS HIGH
in the highest rate area
compared to the
lowest rate area

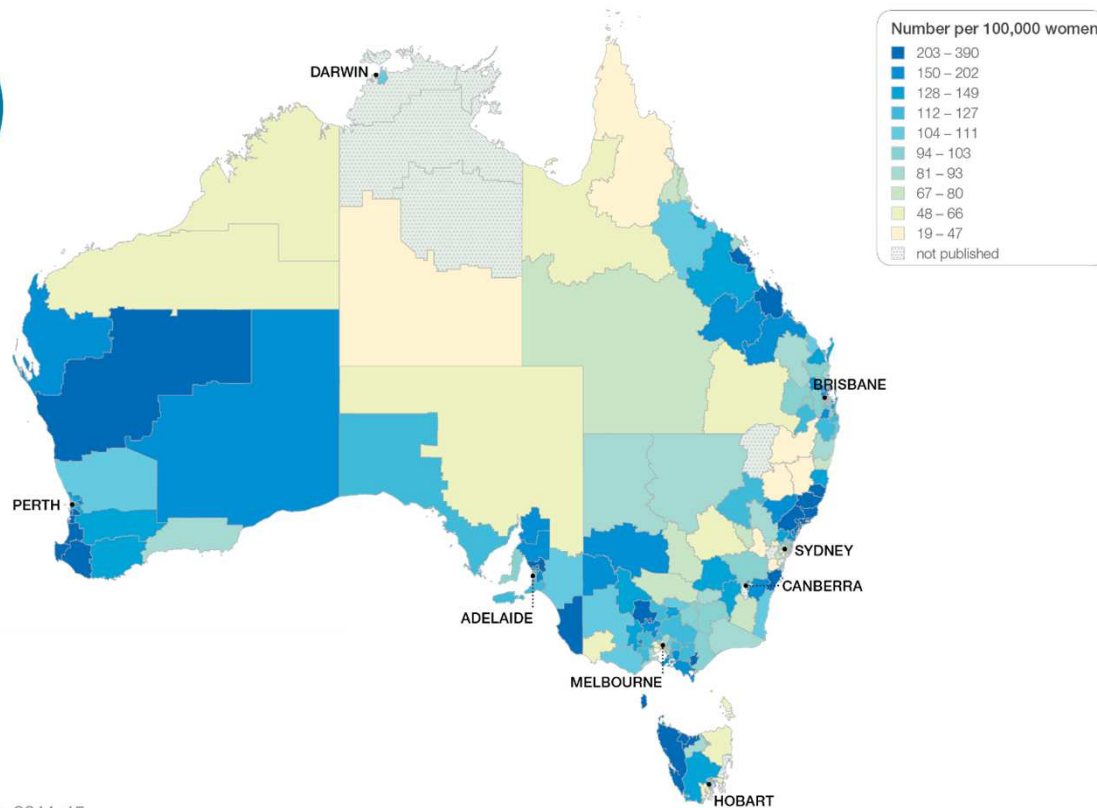


National data: 2012–14

Discretionary: The case of endometrial ablation

Endometrial ablation hospitalisations 15 years and over

20.5x
AS HIGH
in the highest rate area
compared to the
lowest rate area



National data: 2012–13 to 2014–15

Discretionary care, increasing use of appropriate care

Cognitive and competitive levers

- Public reporting of rates across small areas nationally in 2015

Normative and structural recommendations

- Changes to advanced training programs for health professionals, change to the national fee-for-service schedule item descriptors to align with Clinical Care Standard, require women to be offered clinically appropriate treatment according to the Clinical Care Standard before put on surgical wait lists

Supportive levers

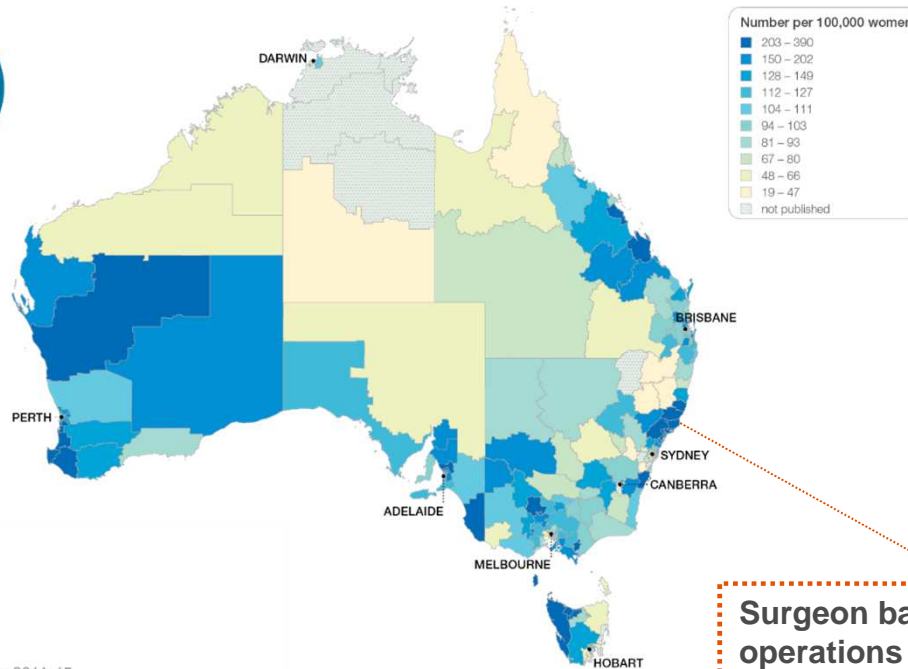
- Clinical Care Standards for health professionals in 2018
- Decision support tools for women in 2018



Discretionary: The case of endometrial ablation

Endometrial ablation hospitalisations 15 years and over

20.5x
AS HIGH
in the highest rate area
compared to the
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National data, 2012–13 to 2014–15

Surgeon banned after performing unneeded operations without consent
Exclusive: Emil Shawky Gayed banned from practising medicine for three years as health district apologises.
The Guardian, 14 June 2018



Purpose

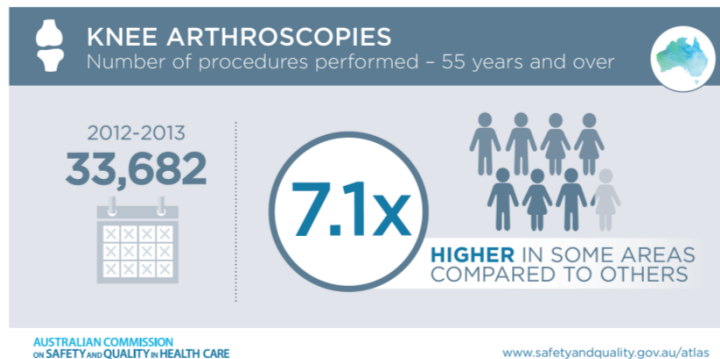
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Unnecessary care: The case of knee arthroscopies

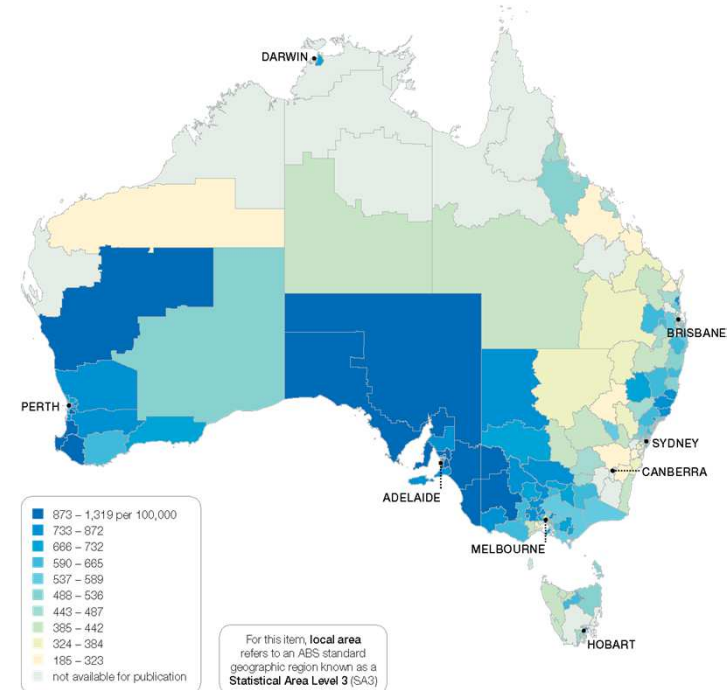
In 2015 ACSQHC and NHPA named local communities where:

- 33,682 knee arthroscopies are performed despite evidence the procedure is of limited value for people with osteoarthritis



Knee arthroscopy hospital admissions 55 years and over

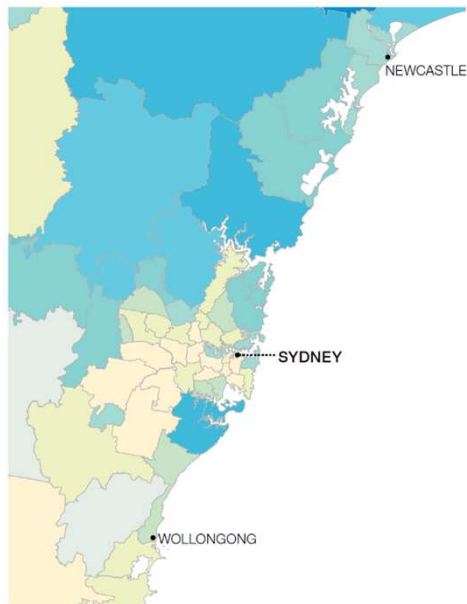
Figure 30: Number of knee arthroscopy admissions to hospital per 100,000 people aged 55 years and over, age standardised, by local area, 2012–13



Unnecessary care: The case of knee arthroscopies

In NSW

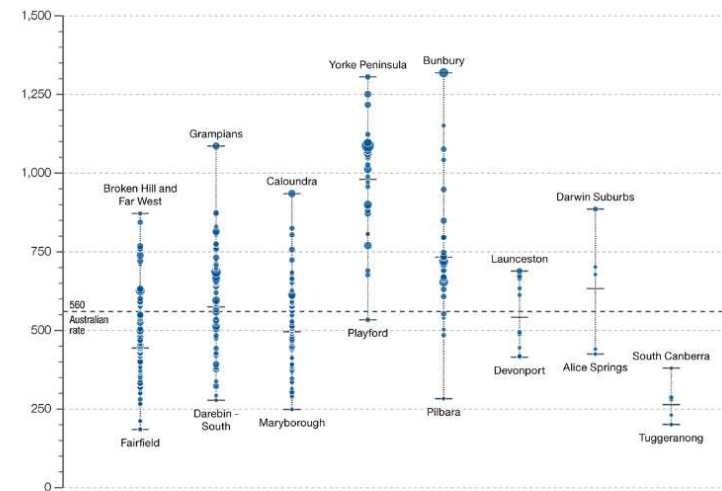
- 8,700 knee arthroscopies are performed despite evidence the procedure is of limited value for people with osteoarthritis



Bureau of Health Information

Figure 31: Number of knee arthroscopy admissions to hospital per 100,000 people aged 55 years and over, age standardised, by local area, state and territory, 2012–13

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Highest rate	872	1,086	935	1,306	1,319	689	886	360
State/territory	444	575	496	980	733	542	633	264
Lowest rate	185	278	249	534	283	415	425	201
No. admissions	8,796	8,507	5,888	4,683	4,421	868	271	225



For this item, local area refers to an ABS standard geographic region known as a Statistical Area Level 3 (SA3)

The size of each circle represents the number of admissions in each local area

Unnecessary care, increasing use of appropriate care

Cognitive and competitive levers

- Public reporting of rates across small areas nationally in 2015

Formative and structural recommendations

- Changes to advanced training programs for health professionals regarding the management of knee pain
- Remove knee arthroscopy from the national fee-for-service schedule for this group

Supportive levers

- Clinical Care Standards for osteoarthritic knee pain in 2017
- Decision support tools for patients in 2017



Unnecessary care: The case of knee arthroscopy

Cognitive and structural levers

- In 2011, a clinical governance process was introduced in Southwestern Sydney Local Hospital District requiring department head approval within hospitals for knee arthroscopy surgery for patients aged 50 years or older. Additionally, a letter was written to all primary care providers in the Local Hospital District explaining evidence against knee arthroscopy in this group and against unnecessary investigations.
- At the same time, international evidence was mounting in relation to the effectiveness of knee arthroscopy for this patient group.



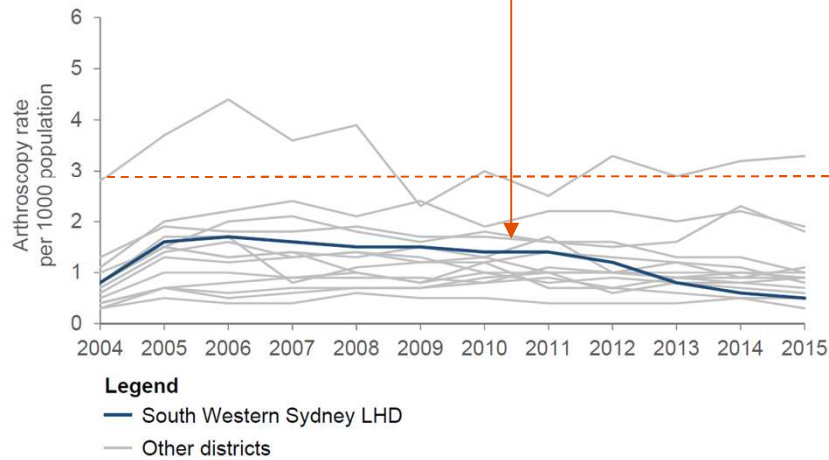
The result

Southwestern Sydney Local Health District, public hospitals

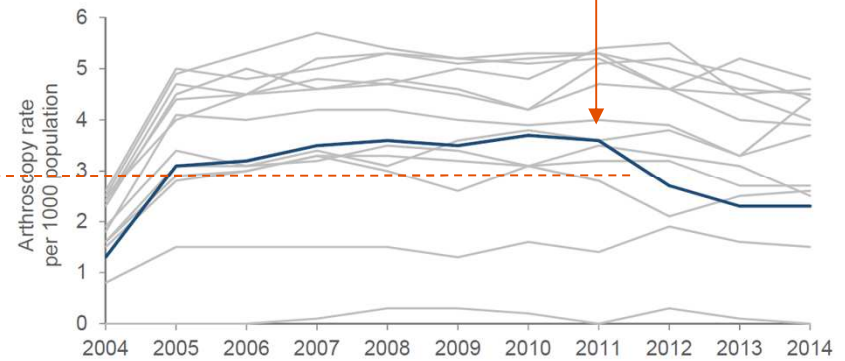
Private hospitals in the same district

Knee arthroscopy demand rate for age 50+ by districts, (a) public and (b) private, between 2004 and 2015

a Arthroscopy rate by district of residence, public hospital provision only, 2004–2015

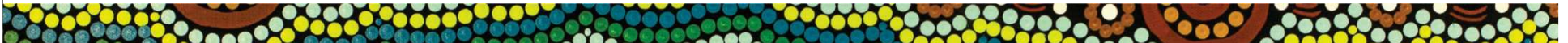


b Arthroscopy rate by district of residence, private hospital provision only, 2004–2014



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Poor outcomes: Healthcare-associated SAB infections

Healthcare-associated Staphylococcus aureus bloodstream infections in 2013-14

Published April 2015

This report presents rates of healthcare-associated bloodstream infections in Australia's biggest public hospitals caused by a bacterium called Staphylococcus aureus.

Although commonly found on the skin of healthy people, Staphylococcus aureus (S. aureus) can cause serious illness if it gets into the bloodstream. Evidence suggests 20% to 36% of people with this sort of infection die from it or a related cause.^{1,2} S. aureus bloodstream infections contracted while in hospital are considered potentially preventable and hospitals aim to have as few of these infections as possible.

In 2013-14, there were 1,621 cases of healthcare-associated S. aureus reported as being acquired while receiving care in a public hospital – around 100, nearly 6%, fewer cases than in 2012-13. Since 2012-13, there were 44 fewer cases in major hospitals with more vulnerable patients, 44 fewer cases in major hospitals with fewer vulnerable patients and 17 fewer cases in large hospitals with fewer vulnerable patients. The number of cases increased by 10 in large hospitals with more vulnerable patients.

The report highlights variation in infection rates across major and large hospitals. Among major hospitals with more vulnerable patients the rate of infection varied more than three-fold. At major hospitals with fewer vulnerable patients the rates showed a similar level of variation.

Healthcare-associated Staphylococcus aureus bloodstream infections reported in Australian public hospitals

Total cases in 2013-14: 1,621

- Major hospitals, more vulnerable patients
- Major hospitals, fewer vulnerable patients
- Large hospitals, more vulnerable patients
- Large hospitals, fewer vulnerable patients
- Other hospitals

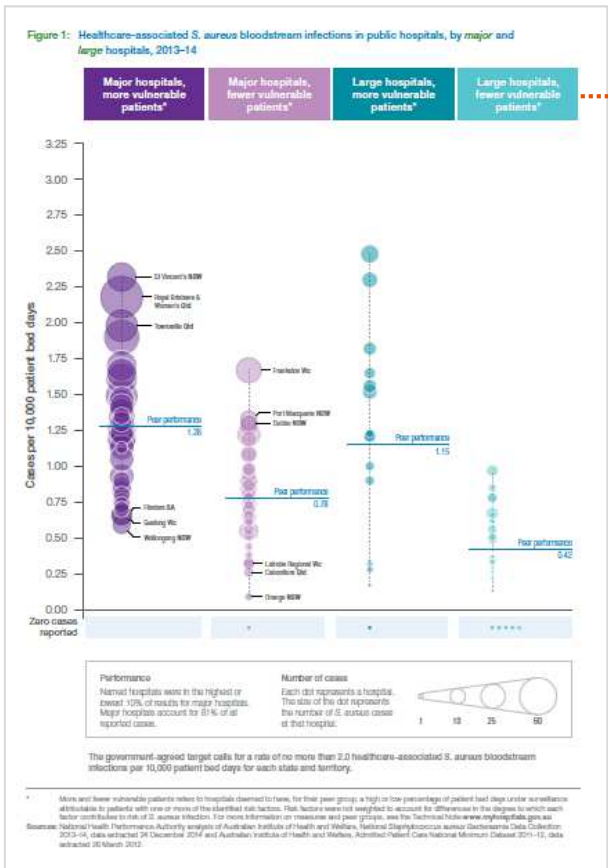
Number of reported cases of healthcare-associated Staphylococcus aureus bloodstream infections, by peer group, 2011-2014

Year	Major more vulnerable	Major fewer vulnerable	Large more vulnerable	Large fewer vulnerable
2011-12	1,045	291	214	174
2012-13	1,045	287	173	174
2013-14	972	338	173	174

Information on healthcare-associated S. aureus bloodstream infections for more than 130 private and 580 public hospitals is available at www.myhospitals.gov.au

Visit www.myhospitals.gov.au for more detailed results

150 less cases in 2 years



Peer groups based on risk of infection

Poor outcomes: Mortality within 30 days of admission

Dec 2015



June 2015



Aug 2015



May 2016

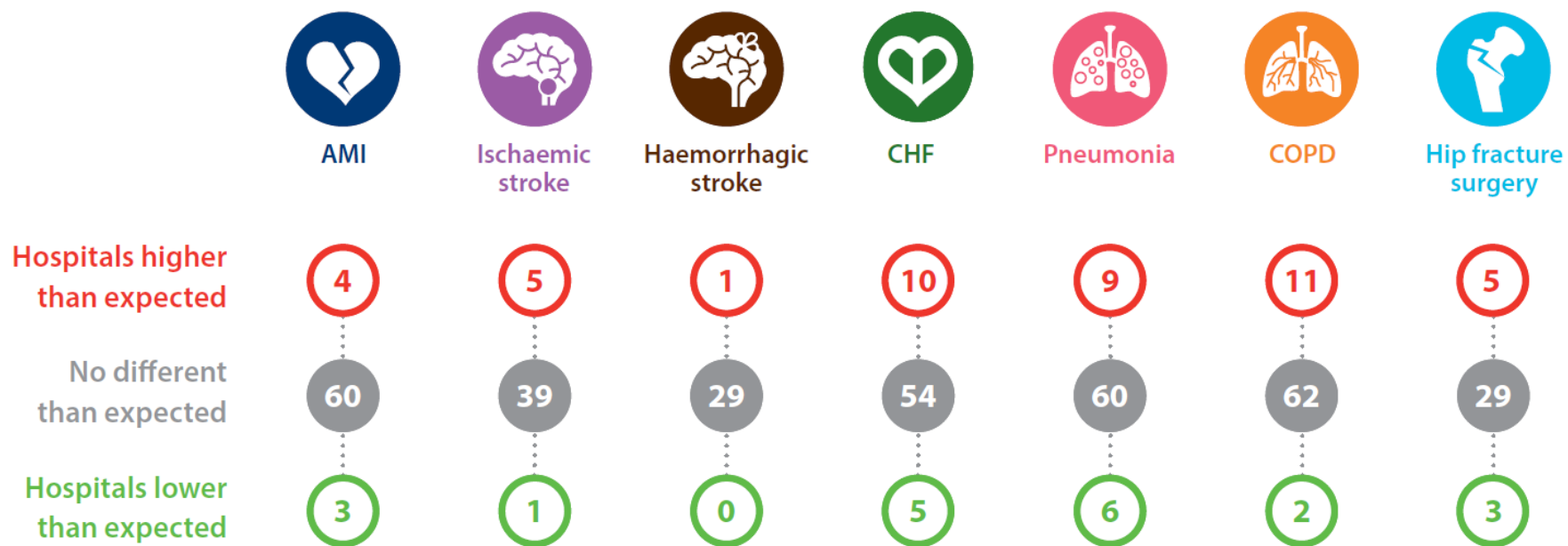


Apr 2017



Poor outcomes: Mortality within 30 days of admission

NSW public hospitals 30-day mortality results, by condition, NSW, July 2012 – June 2015



Poor outcomes: Mortality within 30 days of admission

30-day mortality, concentration of outlier results across hospitals, NSW, July 2012 – June 2015

Among 75 referral, major and district hospitals, between July 2012 and June 2015:

47 hospitals had no 'higher than expected' results



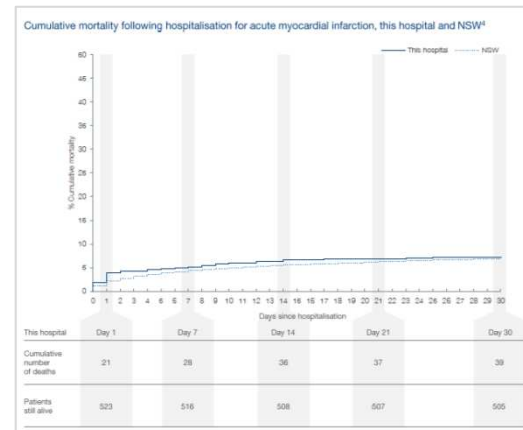
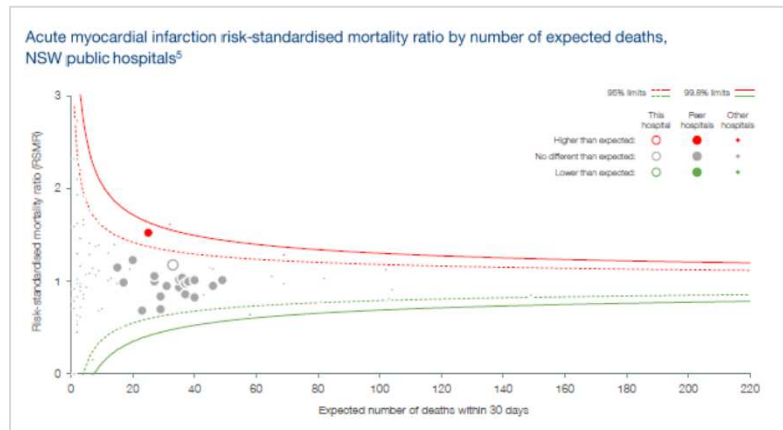
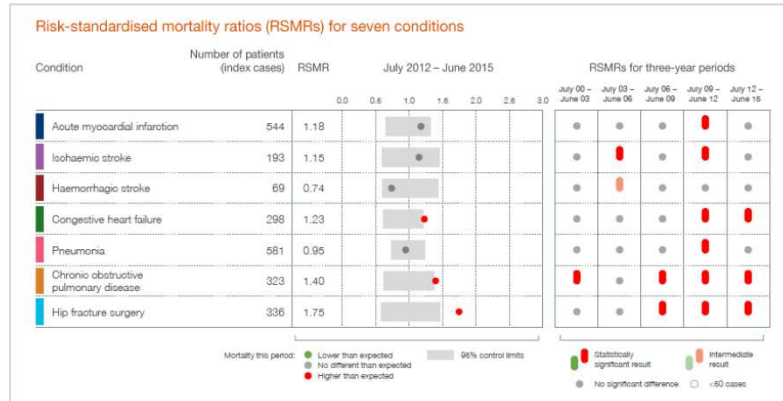
15 hospitals had higher than expected mortality for 1 condition

9 hospitals had higher than expected mortality for 2 conditions

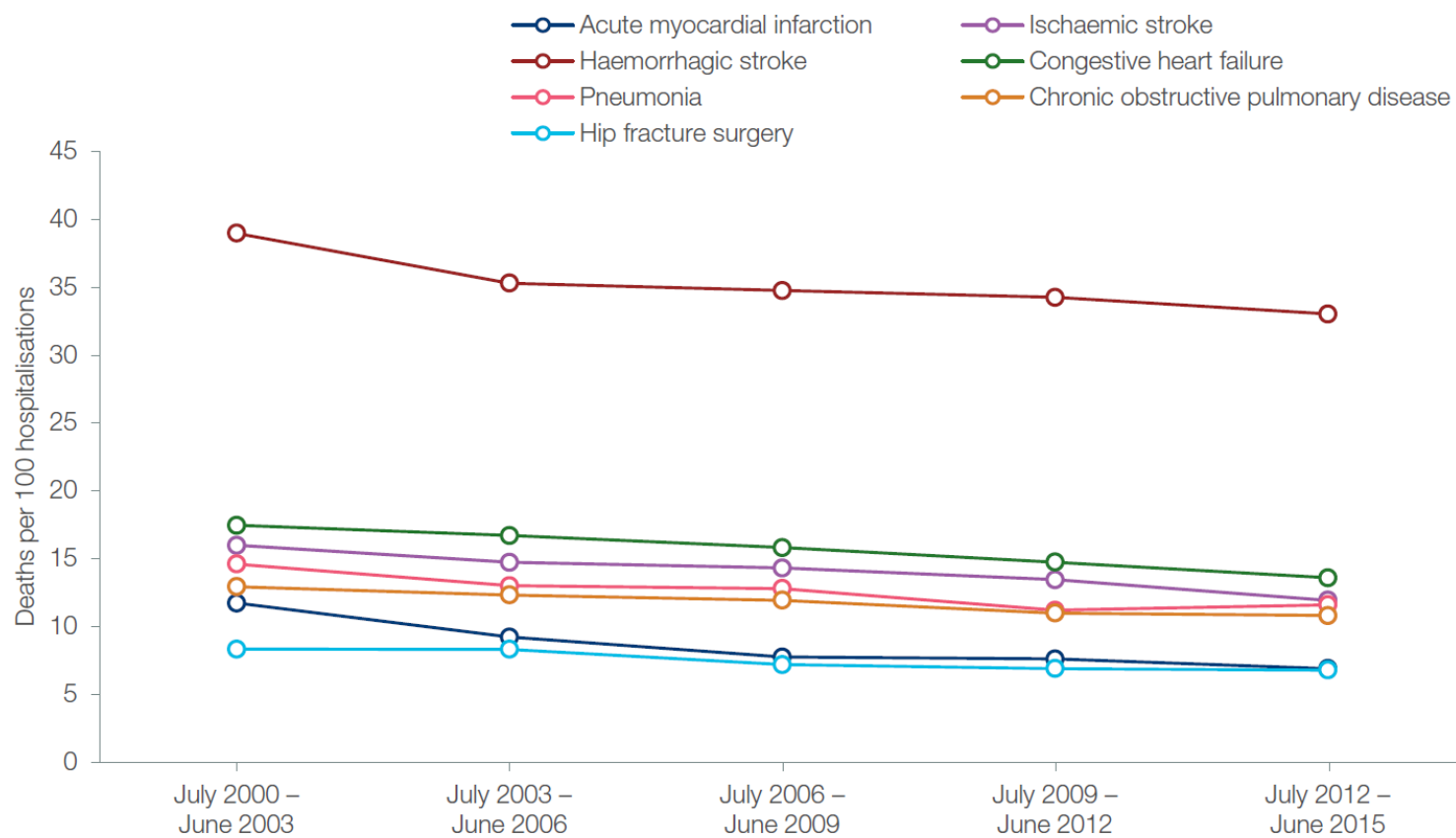
4 hospitals had higher than expected mortality for 3 conditions

Poor outcomes: Mortality within 30 days of admission

Example hospital profile



30-day mortality, age-sex standardised rate per 100 hospitalisations, NSW, July 2000 – June 2015



Thank you

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Providing the community, healthcare professionals and policy makers with information that enhances visibility of the performance of the health system in NSW, in order to inform actions to improve healthcare and strengthen accountability.