Independent Hospital Pricing Authority

National Hospital Cost Data Collection Report

Public Sector, Round 22 (Financial Year 2017-18)

February 2020

IHPA

National Hospital Cost Data Collection Report: Public Sector, Round 22 Financial Year 2017-18

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1. Purpose of the NHCDC Report

The purpose of this report is to provide an overview of the results from the Round 22 National Hospital Cost Data Collection (NHCDC). The report gives a clear picture of hospital cost data submitted by jurisdictions to the Independent Hospital Pricing Authority (IHPA) for the financial year 2017-18.

After each round of the NHCDC, IHPA publishes the NHCDC Report. The report allows benchmarking across hospitals and jurisdictions and, through reporting multiple years of cost data, identifies change over time.

Specifically, the NHCDC Round 22 Report answers the following questions:

- What is the NHCDC?
- How does IHPA use the NHCDC?
- How many hospitals participated?
- What was the level of hospital expenditure?
- How much cost data was provided (i.e. costed activity)?
- What was the average cost of hospital patient episodes?
- What was the average cost of patient episodes across the different hospital activity streams?

All data presented in the NHCDC Report are included in Appendix B. The complete list of tables included in this report is shown in Table 1.

Note to readers

The scope of the NHCDC Report includes costs related to public hospital activities. Due to differing methodologies and data sources used, the costs reported here may differ from cost data published by other organisations. Such differences apply to data presented in the following Australian Institute of Health and Welfare (AIHW) report series: *Health expenditure Australia; Costs of acute admitted patients in public hospitals;* and *Australian Hospital statistics*. The reader is advised to take care when comparing these data.

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2. What is the NHCDC?

The National Hospital Cost Data Collection (NHCDC) is an annual collection of public hospital cost data. This remarkable evidence base is used across the Australian health system.

The collection matches patient level activity data with the costs incurred by the patient's hospital. These data are submitted to IHPA by the health departments of Australia's states and territories and represent the key source of information about the cost of treating patients in Australian hospitals.

The NHCDC was established in 1996 with the primary objective of providing Australian governments and the health care industry with a nationally consistent method of costing all types of hospital activity related to the care of patients.

Under the National Health Reform Act 2011, IHPA was established and assumed responsibility for the governance of the NHCDC. Through the national health reform process, a range of developments to the NHCDC have been implemented, including data quality controls, the introduction of a submission portal and developments in the Australian Hospital Patient Costing Standards (AHPCS) [1]. These improvements have all provided increased confidence in the collection for the purpose of national reporting.

Each year, IHPA aims to produce a NHCDC dataset comprised of data that has been submitted according to nationally consistent methods of costing hospital activity.

A robust NHCDC dataset is an essential requirement for the funding of public hospital services. Once IHPA finalises the NHCDC dataset, it uses it to develop the National Efficient Price (NEP).

The Round 22 NHCDC contains hospital cost data for the 2017-18 financial year and IHPA will use it to inform the NEP 2020-21.

3. What is Activity Based Funding?

Activity Based Funding (ABF) is the process by which hospitals are paid for the number and complexity of patients they treat. ABF takes into account the fact that some patients are more complicated to treat than others. This type of funding model aims to improve the value of public investment in hospital care, improve transparency of funding, ensure a sustainable and efficient network of public hospital services, and provide a tool to benchmark the cost of public hospitals.

The annual National Efficient Price (NEP) and National Efficient Cost (NEC) determine the amount of funding the Commonwealth Government contributes to public hospitals. The funding is then distributed by the Administrator of the National Health Funding Pool.

The building blocks required for an ABF system are: classification systems, data collection, costing and pricing.

[1] https://www.ihpa.gov.au/publications/australian-hospital-patient-costing-standards-version-40

4. Scope of Round 22

The data in scope for the NHCDC includes all patient level activity for all public hospital facilities across Australia, and the costs incurred by the hospital in relation to this activity in financial year 2017-18 (Round 22). Admitted activity is required to have an end date before the end of the financial year.

Reporting requirements

To ensure consistency in the approach to costing nationally, NHCDC data is costed in accordance with the Australian Hospital Patient Costing Standards Version 4.0 (the Standards), available on IHPA's website.

Version 4.0 of the Standards was released in February 2018 and applied for the first time in Round 22 of the NHCDC. The Standards documentation comprises three parts:

- Part 1: Standards – provides the underlying costing principles.
- Part 2: Business Rules – provides practical guidance on how the Standards are translated into action.
- Part 3: Costing Guidelines – provides step-by-step guidance on how to cost particular services.

The Standards also prescribe the set of line items and cost centres used for mapping hospital costs in the costing process, to ensure that there is a consistent treatment of costs between hospitals. These costs are allocated to, and reported under, the NHCDC-defined 'cost buckets'[2]. Cost buckets represent different combinations of the NHCDC line items and costs centres and can be considered as cost pools within the hospital.

Please refer to the Standards for the reference tables of line items and cost centre groups. Costed results are produced at the episode level, per cost centre and per line item. These results are provided to IHPA and are collated and analysed to produce this report.

Classifications

IHPA uses classifications to categorise, cost and fund hospital activity.

Hospital activity refers to the resources used by the patient in relation to their treatment. Classification systems are used to describe activity related to the following types of patient care: Admitted acute care, sub-acute and non-acute care, non-admitted care, emergency care, mental health care.

Each classification system is comprised of codes that provide clinically meaningful ways of relating the types of patients treated by a hospital to the resources required.

Effective clinical classification systems ensure that hospital data is grouped into outputs reflective of their resource use. Table 2 describes the different types of activity streams (i.e. patient care types) and the associated classification applied by IHPA for funding purposes. The NHCDC Report uses these activity streams to present the cost data.

[2] Tab 12 of the Round 23 Data Request Specifications includes the cost bucket matrix for Round 23: https://www.ihpa.gov.au/sites/default/files/publications/national_hospital_cost_data_collection_-_data_request_specifications_round_23.xlsx

Table 2 IHPA classifications for key activity collections, Round 22 NHCDC

Activity Stream	Description	Classification
Admitted acute care	Admitted acute care is provided to patients who are formally admitted to hospital to receive active but short-term treatment with a goal to: • cure, treat or relieve symptoms of illness or injury • reduce severity of an illness or injury • perform surgery • perform diagnostic or therapeutic procedures • manage childbirth	Australian Refined Diagnosis Related Groups (AR-DRG) Version 10
Subacute and non-acute care	Specialised multidisciplinary care in which the primary need for care is optimisation of the patient's functioning and quality of life. Sub-acute care includes the following care types: • Rehabilitation care • Palliative care • Geriatric evaluation and management (GEM) care • Psychogeriatric care Non-acute care relates to maintenance care in which the treatment goal is to support a patient with impairment, activity limitation or participation restriction due to a health condition.	Australian National Subacute and Non-Acute Patient (AN-SNAP) classification Version 4
Non-admitted care	Services provided to patients who do not undergo a formal admission process and do not occupy a hospital bed. Includes: • Hospital outpatient clinics • Community based clinics • Patients' homes	Non-admitted Tier 2 Classification Version 4
Emergency care	Services provided to patients in a hospital's emergency department	Urgency Related Groups (URG) Version 1.45
Mental Health care	Mental Health services provided to patients. Includes services provided both in admitted and community settings.	Australian Mental Health Care Classification (AMHCC) v1.0
Teaching Training and Research	Teaching and training activities which occur in public hospital services.	Australian Teaching and Training Classification (released 1 July 2018)

Admitted activity reporting scope

Work in Progress patients

A Work in Progress (WIP) patient is defined as a patient that is not admitted and discharged within the reference financial year. For the Round 22 NHCDC, the only WIP patients that are in-scope are the ones admitted in the previous financial year (2016-17) and discharged in 2017-18. Patients who were not discharged in 2017-18 are 'out-of-scope'.

Admitted via emergency department patients

In past NHCDC Reports, the total reported cost of an acute or sub-acute patient who was admitted to hospital via the emergency department included all costs associated with the patient's emergency department (ED) treatment. This meant that an admitted acute patient's ED costs were reported twice: in the admitted acute activity stream[3] and the emergency department activity stream.

The purpose was to a) reflect in the admitted cost record the full cost of treatment for patients admitted to hospital following a presentation at ED, and b) address challenges faced by some jurisdictions in separately identifying hospital costs between ED and admitted areas.

For Round 22, IHPA has adjusted the method it uses to calculate the total cost of admitted patients. In this report, the ED cost of a patient who was subsequently admitted to hospital is reported on solely in the ED activity stream. The change reflects improvements in the quality of costing data. Jurisdictions and hospitals have developed costing processes to enable both activities to be counted and costed separately.

As a result of this change, the total admitted costs presented in this report for past years (i.e. figures for Rounds 20 and 21) do not reconcile to the figures presented in past reports. For example, the Round 21 NHCDC Report reported that the average cost for admitted acute patients in 2016-17 was $5,171 (including $379 of EDPro costs). This is now reported as $4,792.

Unqualified baby adjustment

IHPA includes the costs associated with unqualified babies (UQBs) on an adjusted basis. Unqualified babies are those without care interventions following birth, and are less than ten days old when they are discharged. Unqualified babies with lengths of stay over ten days incur 'qualified' days which need to be recorded for the activity data submission within the NB care type.

IHPA links costs associated with UQBs to the mother's separation. This results in UQB activity being removed from the newborn (NB) care type and the costs transferred from the newborn care to the mother's admitted care separation.

Independent Financial Review

The Independent Financial Review is a data review, performed by an independent consultancy, based on a sample selection of hospitals within each jurisdiction. Activity and financial data is reviewed from source systems within hospitals and followed through the costing and submission process, leading to its inclusion in the national cost data set. The Independent Financial Review report is published on IHPA's website each year alongside the NHCDC Report.

[3] Within the Emergency Department cost bucket

5. Key results in Round 22

In Round 22:

- The NHCDC sample comprised 453 public hospitals, an increase of two from Round 21.
- In total, $47.15 billion of hospital expenditure was submitted for the financial year 1 July 2017 – 30 June 2018.
- This expenditure was linked to 35,857,766 patient-level encounters across all hospital activity streams.

Table 3 Summary NHCDC results by activity stream, Round 22 summarises the Round 22 results at the national level for each activity stream.

Table 3 Summary NHCDC results by activity stream, Round 22

	Number of Hospitals	Number of Episodes	Total Expenditure	Average Cost per Episode	Percent Change in Average Cost Since Round 21
			($m)	($)	(%)
Admitted Acute	342	6,019,172	29,406	4,885	1.9
Emergency Department	274	7,877,053	5,554	705	5.9
Non-Admitted	315	21,529,952	6,820	317	2.6
Sub-Acute	333	218,482	2,927	13,397	-4.2
Mental Health					
Admitted Mental Health	*169*	*134,613*	*2,050*	*15,229*	*-5.7*
Community Mental Health	*80*	*58,545*	*335*	*5,725*	*n/a*[4]
Other activity	167	19,949	55	2,773	79.2

5.1 Participation

Between Round 21 and Round 22, the number of unique hospitals that submitted cost data to the NHCDC increased from 451 to 453. Despite the small overall increase, the group of submitting hospitals changed considerably– particularly from Queensland. Twenty-one of the 453 hospitals which participated in Round 22 did not participate in Round 21. Of these hospitals, 19 were located in Queensland. Similarly, Queensland's Round 22 submission did not include 17 of the hospitals included in their Round 21 submission. Between the rounds, the number of Public Community Mental Health facilities submitted by Queensland decreased from 79 to 65, and the number of Primary Health Centres increased from 6 to 22.

[4] Note that different counting rules led to a change in the denominator for Community mental health activity between Round 21 and 22. Round 21 included phases and service contacts, while Round 22 included only phases. As such, the results for this category are not directly comparable.

Table 4 Number of hospitals, by jurisdiction, Round 20-22

	Number of participating hospitals		
Jurisdiction	Round 20	Round 21	Round 22
NSW	98	95	95
Vic	73	79	79
Qld	111	195	196
SA	16	20	20
WA	34	33	33
Tas	4	22	23
NT	5	5	5
ACT	2	2	2
National	**343**	**451**	**453**

5.2 Costed activity

To report on the NHCDC's level of completeness, IHPA examines the linkage between the patient activity for which cost data were submitted via the NHCDC and records for which activity data were submitted to IHPA (using the Activity Based Funding Data Request Specifications[5]). IHPA receives the following types of episode level data:

1. Cost data, submitted annually via the NHCDC, which contains detailed information about the actual costs associated with a patient's episode.
2. Activity data, which is submitted quarterly in line with data set specifications unique to each activity stream[6]. From these data, patient episodes are categorised according to IHPA's classifications which represent each of the activity streams.

When both activity and cost data relating to a particular patient episode are submitted, IHPA links the data. 'Costed Activity' refers to this linkage. The 'percent of Costed Activity' represents the number of public sector episodes in the activity data with costs submitted via the NHCDC.

In Round 22, 96 percent of the admitted acute activity data had matching cost data. Table 5 shows the completeness of the NHCDC data for four activity streams. This is represented by the percentage of activity with costs over the past three rounds. The greater variation in the non-admitted stream reflects ongoing development of the definitions of the Tier 2 classes.

[5] https://www.ihpa.gov.au/what-we-do/abf-data-request-specifications-2017-18
[6] For more information about IHPA's hospital activity collection visit: https://www.ihpa.gov.au/what-we-do/data-collection

Table 5 Percentage of submitted activity data with matching cost data, Round 20-22

Activity stream	Round 20	Round 21	Round 22
	(%)	(%)	(%)
Acute admitted	93	96	96
Sub-acute	69	69	66
Emergency Department	90	92	90
Non-admitted	73	57	73

5.3 Total expenditure

In Round 22 of the NHCDC, $47.15 billion of hospital expenditure was submitted for the 2017-18 financial year. This represents a 7.7 percent increase over the total for Round 21 ($43.8 billion). Table 6 shows the change in expenditure by activity stream.

Table 6 Total national expenditure, by activity stream, Round 21-22

	Round 21		Round 22		Percent Change in Total Expenditure
	Number of Hospitals	Total Expenditure	Number of Hospitals	Total Expenditure	
		($m)		($m)	(%)
Admitted Acute	344	27,666	342	29,406	6.3
Emergency Department	265	5,100	274	5,554	8.9
Non-Admitted	273	5,742	315	6,820	18.8
Sub-Acute	331	2,796	333	2,927	4.7
Mental Health	242	2,436	234	2,385	-2.1
Admitted Mental Health	*163*	*2,116*	*169*	*2050*	*-3.1*
Community Mental Health	*99*	*320*	*80*	*335*	*4.7*
Other Expenditure	138	35	167	55	59.0
Total	**451**	**43,775**	**453**	**47,147**	**7.7**

Table 7 presents the total hospital expenditure submitted by jurisdictions across the past three NHCDC rounds. While the national reported expenditure increased by 17 percent since Round 20, the share of this expenditure at the jurisdictional level has remained consistent. In each round, NSW, Queensland and Victoria have collectively submitted around 75 percent of the national hospital expenditure.

Table 7 Total expenditure, by jurisdiction, Round 20-22

Jurisdiction	Round 20		Round 21		Round 22	
	Total Expenditure	% of Total Expenditure	Total Expenditure	% of Total Expenditure	Total Expenditure	% of Total Expenditure
	($m)	(%)	($m)	(%)	($m)	(%)
NSW	12,158	30	12,757	29	13,753	29
Vic	8,765	22	9,818	22	10,723	23
Qld	8,571	21	10,117	23	10,849	23
SA	3,255	8	3,345	8	3,752	8
WA	4,622	11	4,860	11	4,955	11
Tas	906	2	948	2	1,137	2
NT	834	2	919	2	965	2
ACT	1,182	3	1,011	2	1,013	2
Total	**40,292**		**43,775**		**47,147**	

5.4 Average cost

This report provides the average cost information for all hospital activity captured by the different IHPA classifications. Table 8 summarises these results by presenting the average cost at the activity stream level. While each activity stream is broad and represents a wide variety of different hospital procedures and services provided, the categories enable the reporting of useful summary statistics.

Between Round 21 and 22, the average cost per episode increased for each of the activity streams except for sub-acute, which fell by 4.2 percent (from $13,987 to $13,397). While the total national expenditure grew significantly for admitted acute episodes (6 percent), emergency department episodes (9 percent) and non-admitted episodes (19 percent), the growth in average cost for these episode types was much lower (1.9 percent, 5.9 percent and 2.6 percent respectively).

Table 8 Average cost per episode, by activity stream, Round 21-22

	Round 21		Round 22		
	Number of Episodes	Average Cost per Episode	Number of Episodes	Average Cost per Episode	Change in Average Cost Since Previous Round
		($)		($)	(%)
Admitted acute	5,773,102	4,792	6,019,172	4,885	1.9
Emergency department	7,662,322	666	7,877,053	705	5.9
Non-admitted	18,592,529	309	21,529,952	317	2.6
Sub-acute	199,911	13,987	218,482	13,397	-4.2
Mental health					
Admitted Mental Health	*131,083*	*16,141*	*134.613*	*15,229*	*-5.7*
Community Mental Health	*106,743*	*3,000*	*58,545*	*5,725*	*n/a**

*See footnote for Table 3.

In determining the final funding amount per service, various adjustments are applied based on patient characteristics that influence the cost of service delivery (such as indigenous status, age and remoteness). The appendix to this report includes an analysis of the cost data used to inform these adjustments.

5.5 Line items and cost buckets

Cost data submitted to the NHCDC is reported by line items and cost centres. Line items represent types of costs (e.g. salaries and wages or goods and services) incurred by hospitals. Cost centres represent departmental cost objects within a hospital that relate to a particular function of the hospital – for example, the hospital operating room. Further information relating to the Round 22 NHCDC line items and cost centres are available in costing standards.

IHPA combines the line items and cost centres to create cost buckets. Cost buckets can be considered as cost pools within the hospital.

Table 9 presents the total average cost (in dollars) for each line item by each activity stream.

In all streams, the line items linked to salaries and wages accounted for approximately two-thirds of all costs. Within the salary and wages categories, however, there is considerable variation in the costs assigned. For example, the nursing wages line item accounts for 32 percent of sub-acute patient costs but only 15 percent of non-admitted patient costs.

Similarly, the share of costs attributed to allied health salaries is higher for non-admitted patients (12 percent) and sub-acute patients (10 percent) compared with acute and Emergency Department patients (four percent and three percent respectively). This reflects the type of care provided.

Table 9 National average cost per line item, by activity stream, Round 22

Line Item	Acute	Sub-acute	Emergency Department	Non-admitted	Mental Health
	($)	($)	($)	($)	($)
Salary & Wages Nursing	1,340	4,338	156	47	4,479
Salary & Wages Medical (nonVMO)	719	1,412	168	52	1,619
Salary & Wages Medical (VMO)	201	224	24	11	256
Salary & Wages Allied Health	189	1,345	21	38	955
Salary & Wages Other	509	1,746	77	40	1,476
On-costs	372	1,287	56	24	1,119
Pathology	98	100	34	6	70
Imaging	26	32	21	2	11
Prostheses	156	8	0	1	2
Medical supplies	250	229	17	9	70
Goods and services	442	1,285	69	33	1,230
Pharmaceuticals PBS	54	34	3	25	14
Pharmaceuticals nonPBS	133	179	6	6	127
Blood	36	11	2	2	2
Depreciation building	102	288	16	7	309
Depreciation equipment	43	70	6	4	47
Hotel	150	619	15	4	449
Corporate	22	67	5	2	58
Lease	14	41	2	1	23
Patient Travel	32	82	9	1	32
Total ($)	**4,885**	**13,397**	**705**	**317**	**12,348**

At the cost bucket level, the Ward Nursing cost bucket accounted for the biggest share of the costs for the admitted acute (18 percent of costs), sub-acute (32 percent) and mental health (35 percent) activity streams. Similarly, the Ward Medical cost bucket accounted for a high share of costs in all activity streams except the emergency department.

Table 10 presents the total average cost (in dollars) for each cost bucket by each activity stream.

Table 10 National average cost per cost bucket, by activity stream, Round 22

Cost Bucket	Acute	Sub-acute	Emergency Department	Non-admitted
	($)	($)	($)	($)
Ward Medical	560	1,598	8	56
Ward Nursing	903	4,296	7	43
Allied Health	153	1,577	3	37
Non Clinical	320	1,511	7	31
On-costs	372	1,287	56	24
Pathology	176	148	45	14
Imaging	117	105	67	16
Prosthesis	156	8	0	1
Ward Supplies	362	1,382	9	32
Pharmacy	192	344	4	33
Critical Care	398	10	0	0
Operating Room	748	23	1	5
Patient Travel	32	82	9	1
Special Procedure Suite	59	6	0	5
Emergency Department	28	2	449	0
Hotel	150	619	15	4
Depreciation	159	400	24	13
Total ($)	**4,885**	**13,397**	**705**	**317**

6. Admitted acute care

Of the six activity streams, the admitted acute care stream accounts for the major share of all hospital costs: in Round 22, $29.4 billion of hospital costs were associated with admitted acute care separations. Admitted acute care has the most developed classification system[7], which in turn generates the most robust cost data results.

6.1 Average cost per weighted separation

The average cost per acute separation in Round 22 is $4,885. The average cost at the jurisdiction level varied from $3,697 (Northern Territory) to $6,032 (South Australia). The variation in average cost is caused by the admission policies of the jurisdictions and the complexity of the treatment required and other factors such as location and age.

To compare the average cost of admitted acute care separations between jurisdictions, the complexity of each jurisdiction's work profile should be considered.

To do this, IHPA creates *weighted separations*. A weighted separation considers the complexity of the acute activity each type of separation relative to the average of all activity for the year. The level of complexity is based on the resources required to treat that patient.

[7] Australian Revised –Diagnosis Related Groups Version 10.0

Admitted acute cost weight tables are included in the appendix of this report. These tables include the cost weights for all Diagnosis Related Groups (DRGs) in Round 22, which are used to compare resource utilisation based on the national level.

The average cost per separation is $4,885 has a weight of 1. In Round 22, a single heart transplant patient separation[8], for example, corresponds to 38.74 weighted separations[9]. In contrast, a single colonoscopy patient separation[10] corresponds to 0.45 of a weighted separation. The difference reflects the significantly greater complexity associated with a heart transplant operation.

By summing the weighted separations for each jurisdiction, we can compare the volume of jurisdictions' acute admitted activity.

Table 11 compares the average cost and average cost per weighted separation by jurisdiction. The *'average cost per weighted separation'* accounts for the relative complexity of each jurisdiction's work profile. If a jurisdiction's *average cost per weighted separation* is lower than its average cost, the jurisdiction's hospital activity comprised a higher proportion of complex Diagnosis Related Groups.

The Northern Territory has the biggest variance, with a low average cost ($3,697) and a high average cost per weighted separation ($6,231). This reflects that the complexity of separations is quite low relative to the national case-mix.

Table 11 Average cost per weighted separation (admitted acute), by jurisdiction, Round 22

Jurisdiction	Number of separations	Number of weighted separations	Complexity factor (1)	Average cost per separation	Average cost per weighted separation
				($)	($)
NSW	1,635,575	1,818,488	1.11	5,267	4,737
Vic	1,675,397	1,572,290	0.94	4,282	4,563
Qld	1,400,536	1,342,059	0.96	4,523	4,720
SA	379,772	405,894	1.07	6,032	5,644
WA	531,540	532,146	1.00	5,827	5,821
Tas	121,513	135,195	1.11	5,772	5,188
NT	165,704	98,297	0.59	3,697	6,231
ACT	109,135	114,802	1.05	5,319	5,057
National	**6,019,172**	**6,019,172**	**1.00**	**4,885**	**4,885**

(1) Determined by dividing the jurisdiction's number of weighted separations by number of separations.

Table 12 further highlights the varied case-mix complexity between the jurisdictions by showing the count of haemodialysis and chemotherapy separations. In Round 22, these were the two most common admitted acute separations and each had a relatively low complexity: haemodialysis had a cost weight of 0.12 and chemotherapy 0.36. The low complexity factor in the Northern Territory is driven largely by the high share of separations which were haemodialysis (50%).

[8] DRG: F23Z
[9] This figure is also referred to as the cost weight. Cost Weights are included for all acute admitted care separation types in the Appendix Tables.
[10] DRG: G48B

Table 12 Number of separations, haemodialysis and chemotherapy, by jurisdiction, Round 22

	Haemodialysis		Chemotherapy	
	Number of separations	Percentage of jurisdiction's total separations	Number of separations	Percentage of jurisdiction's total separations
NSW	353,945	22%	3,240	0%
Vic	289,605	17%	114,202	7%
Qld	196,334	14%	90,738	6%
SA	83,711	22%	11	0%
WA	125,083	24%	32,560	6%
Tas	17,648	15%	3,257	3%
NT	82,718	50%	3,091	2%
ACT	20,432	19%	643	1%
National	**1,169,476**	**19%**	**247,742**	**4%**

6.2 Patient length of stay

In Round 22, the national average length of stay (ALOS) for admitted acute patients is 2.40 days, continuing a downward trend from Round 21 (2.43 days) and Round 20 (2.56 days).

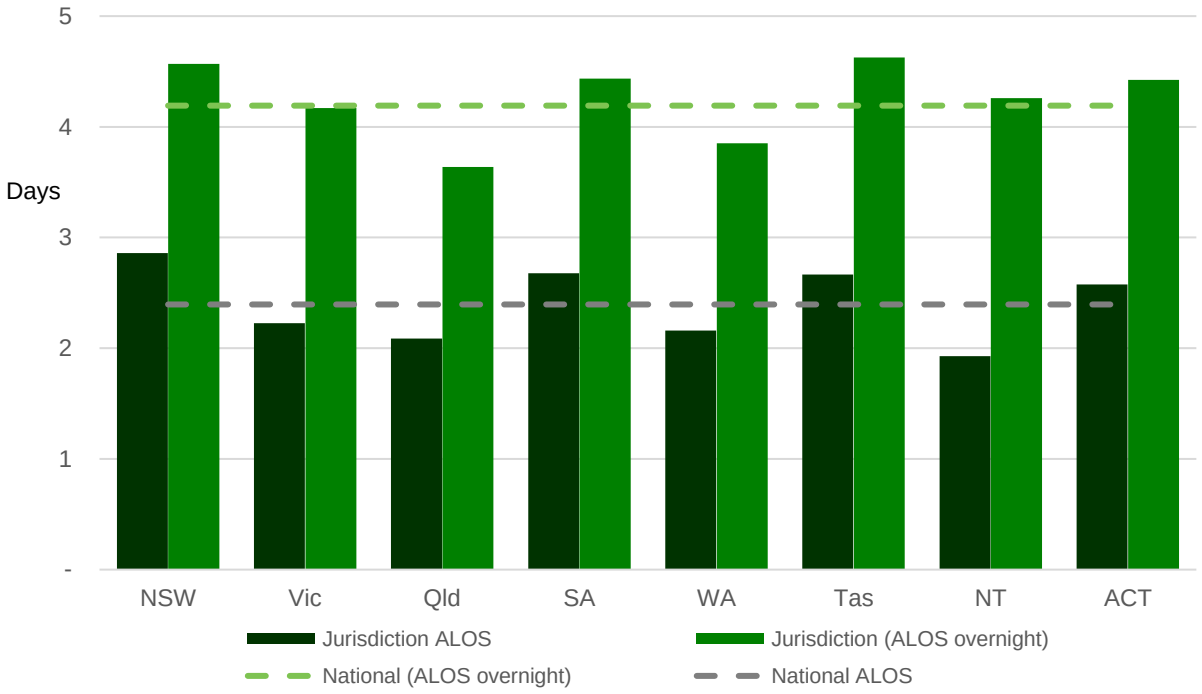
Two factors are contributing to this trend: an increased share of same-day patients, and shorter average stays for overnight patients.

An increasing share of admitted acute separations represents patients admitted and separated from the hospital on the same day. In Round 22, 56.3 percent of patients (3.4 million) were same-day separations, an increase from Round 21 (55.7 percent) and Round 20 (54.6 percent).

For patients who stayed overnight in hospital, the national average length of stay was 4.19 days, down from Round 21 (4.24 days) and Round 20 (4.45 days).

Figure 1 compares the average length of stay of all patients and overnight patients between jurisdictions.

Figure 1 Admitted acute average length of stay of all separations and all overnight separations, by jurisdiction, Round 22



The Northern Territory, which had the highest share of same-day patients (72 percent), had the lowest average length of stay (1.93 days). Conversely, New South Wales, which had the lowest share of same-day patients (48 percent), had the highest average length of stay (2.86 days).

7. Supplementary material

More information about the Round 22 NHCDC results is available in the following supplementary material:

- Round 22 NHCDC Report Appendix tables – Detailed multi-year NHCDC results by activity stream and jurisdiction.

8. Data Quality Statements

Each jurisdiction provides IHPA with a Data Quality Statement (Appendix A) to highlight key aspects that may impact on a jurisdiction's results. This may include variations with respect to costs, practices, participation and coverage of results that have occurred in the Round.

These Data Quality Statements should be considered when reading the NHCDC Report and when using data included in the report.

Appendix A. Data Quality Statements

ACT

ACT Government | ACT Health

Office of the Director-General

Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Dear Mr Downie

ROUND 22 National Hospital Cost Data Collection Data Quality Statement

Thank you for your letter of 31 May 2019 requesting that ACT Health provide a Data Quality Statement regarding data provided to the Independent Hospital Pricing Authority for the 2017-18 (Round 22) National Hospital Cost Data Collection (NHCDC).

As requested, please find attached ACT Health's Data Quality Statement. The response provides commentary on all areas as requested, and information on changes in process adopted between NHCDC rounds.

All data provided by ACT Health as part of Round 22 of the NHCDC has been prepared in accordance with the Australian Hospital Patient Costing Standards. We look forward to further validating our approach through the Independent Financial Review process.

We thank the IHPA for their ongoing work in the collation of the NHCDC. If you wish to discuss this statement further, please do not hesitate to contact Emily Harper, Executive Branch Manager, Performance Reporting and Data on (02) 512 49541, or Emily.Harper@act.gov.au.

Yours sincerely

Michael De'Ath
Director-General
24 June 2019

GPO Box 825 Canberra ACT 2601 | Ph: 6205 0823 | Email: DGACTHealth@act.gov.au I www.act.gov.au

ACT DATA QUALITY STATEMENT

ACT Government | ACT Health

ROUND 22 (2017-18) NATIONAL HOSPITAL COST DATA COLLECTION

The 2017-18 National Hospital Cost Data Collection (NHCDC) submission is produced by the ACT Health Directorate. The maintenance of the costing software and processing of the costing data is undertaken on advice from health service representatives with reference to the Australian Hospital Patient Costing Standards (AHPCS) Version 4.0.

To ensure accurate information is submitted to the NHCDC and subsequently available for the National Efficient Price determination, there are robust validation and quality assurance processes in place. All data provided by ACT Health to Round 22 (2017-18) of the NHCDC has been prepared in adherence with the AHPCS.

The following data quality statement describes the scope of the collection and costing allocation processes for the NHCDC R22 (2017-2018) data for the ACT.

Reporting hospitals and Coverage

ACT Health's submission to Round 22 (2017-18) of the NHCDC included Canberra Health Services (CHS) and Calvary Public Hospital Bruce (CPHB).

Only patient level data that is in-scope for Activity Based Funding is submitted. No aggregate non-admitted patient, teaching, training and research and Community Mental Health data was submitted for the 2017-18 NHCDC.

Work in Progress

Patients are allocated costs based on their consumption of resources during the reporting year (1 July 2017 - 30 June 2018). Patients admitted in the collection year but yet to be discharged were costed and will be included in the Round 23 submission.

Blood Products

National Blood Authority expenses are held within ACT Health's General Ledger. ACT Health then provides both public hospitals with that blood expenditure data to be allocated and reported to the NHCDC. The cost of blood products supplied to private hospitals is out of scope for NHCDC and is not reported.

Pharmacy and Diagnostic Data

Pathology, Imaging and Pharmacy datasets, including Highly Specialised Drugs are linked according to the data matching rules. Where records were not matched, these records have been costed but considered out of scope and excluded from the 2017-18 NHCDC submission.

ACT DATA QUALITY STATEMENT

ACT Government | ACT Health

Changes to costing between Round 21 and 22 NHCDC collections

CPHB continued to refine the cost allocation methodologies for the 2017-18 NHCDC and this has resulted in better allocation of costs towards non-admitted and teaching, training and research.

Exceptions to the 2017-18 NHCDC Submission

ACT did not include Depreciation costs in the 2017-18 NHCDC submission.

Assurance

Assurance is given that to the best of my knowledge the data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price and National Efficient Cost.

Michael De'Ath
Director-General
24 June 2019

New South Wales

NSW GOVERNMENT | Health

Mr James Downie
Chief Executive
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Your ref D19-6739
Our ref S19/231

Dear Mr James Downie

Thank you for your letter about the Round 22 National Hospital Cost Data Collection (NHCDC) Data Quality Statement (DQS).

Please find attached the NSW Health DQS for Round 22 (2017-18) of the NHCDC.

Data provided by NSW Health for Round 22 of the NHCDC has been prepared in adherence with the Australian Hospital Patient Costing Standards (AHPCS) (Version 3.1) and is complete and free of material errors. Adherence to the AHPCS is qualified by:

- Cost 3A.02 – allocation of medical costs for private and public patients. NSW included medical costs reported in the general ledger. Expenses that sit outside of the general ledger paid from private practice trust funds have not been included.

Assurance is given that to the best of my knowledge, data provided is suitable to be used for the primary purpose of the NHCDC, including development of the National Efficient Price and National Efficient Cost.

If you would like more information, please contact Neville Onley, Executive Director, Activity Based Management at neville.onley@health.nsw.gov.au or on 9391 9855.

Yours sincerely

14.6.19

Dr Nigel Lyons
Acting Secretary, NSW Health

NSW Ministry of Health
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Website. www.health.nsw.gov.au

NSW Health Data Quality Statement
National Hospital Cost Data Collection Round 22 (2017-18)

Overview
The NSW Health Round 22 (2017-18) National Hospital Cost Data Collection (NHCDC) is based on the NSW Health District and Network Return (DNR).

The DNR is prepared and submitted by each NSW Local Health District and Specialty Health Network (District/Network). In NSW, financial results are published and audited at District/Network level and not at hospital level.

NSW submitted patient level data for all hospitals considered in-scope for activity based funding for 2017-18. This was a total of 95 hospitals.

Data Quality
Guidelines for preparing and submitting the DNR are published in the NSW Cost Accounting Guidelines (CAG). The NSW CAG aligns to Version 3.1 of the Australian Hospital Patient Costing Standards (AHPCS). NSW is implementing Version 4.0 of the AHPCS for 2018-19.

NSW has in place a robust governance and data quality process to ensure that the NHCDC submission is fit for purpose.

A mandatory audit program was implemented for the 2017-18 DNR. Completion of this audit program is part of a robust governance framework. Audit reports are submitted to local Audit and Risk Board Subcommittees and District/Network Chief Executives.

Technical Detail
Work in Progress (WIP) encounters were included in Round 22 where the admission year was prior to 2017-18 and discharge in 2017-18. Other WIP encounters will be included in future submissions.

Only general fund expense is allocated at the patient level in the DNR. Restricted funds asset expenditure is included but not allocated at patient level in the DNR. Custodial fund expenditure is not included in the DNR.

Professional indemnity costs are held centrally by NSW Health, not distributed to Districts/Networks and not reported in the financial statements. To ensure compliance with AHPCS SCP 2.003 Expenditure in Scope, this expense is distributed to Districts/Networks and added to the general ledger loaded into PPM2. The adjustment is noted in each reconciliation schedule submitted as part of the DNR.

NSW submitted Australian Mental Health Care Classification (AMHCC) admitted phase of care costing for the first time in 2017-18. NSW will submit AMHCC non-admitted data in Round 23 (2018-19).

Many critical care services in NSW have critical care and step down beds in the one ward. Examples of this include ICU/HDU, CICU/CCU. Typically these services have one cost centre and one ward set up in the Patient Administration System (PAS) with two or more bed types to distinguish the ICU hours /bed days separately to the HDU hours/bed days. The bed type is used to calculate ICU hours.

The final cost allocation reflects appropriate nursing ratios such as 1:2 for ICU/HDU patients. In some instances where a patient only has HDU hours, the cost centre will map to critical care, but there will be no ICU hours. Additionally, only facilities with Level 3 ICUs will map their cost centre to critical care, even though locally they may use the ICU bed type.

Non-admitted oral health (dental) and renal dialysis home delivered services costs were submitted for the first time for Round 22 (2017-18) due to the availability of patient level data.

Organ retrieval costs have been submitted for 2017-18.

Teaching and training costs are not allocated at patient level and are excluded from the NHCDC.

Northern Territory

NORTHERN TERRITORY GOVERNMENT

DEPARTMENT OF HEALTH

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File Ref: EDOC2019/203706

James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Dear Mr Downie

Round 22 National Hospital Cost Data Collection Data Quality Statement

I am pleased to provide this Data Quality Statement to be published as part of the Round 22 (2017-18) National Hospital Data Cost Data Collection (NHCDC) Cost Report, as requested in correspondence dated 31 May 2019.

I confirm that data provided by the Northern Territory (NT) to Round 22 of the NHCDC has been prepared in adherence with Australian Hospital Patient Costing Standards (AHPCS) version 4.0, qualified by the following items:

- NT includes medical costs reported in the General Ledger (GL), however expenses in trust accounts that sit outside the GL have not been included, but further work is being undertaken to ensure expenses may be fully recognised where practicable and material.
- NT undertakes costing at the jurisdictional level and therefore undertakes review and reconciliation at this level.
- NT does not currently cost at the phase of care level (palliative care and mental health care) and costs are reflected at the episode level.
- NT does not follow the costing guideline set out for Teaching and Training, Research, Posthumous Organ Donation and Mental Health Services as these are not practicable to implement in the NT due to system and data limitations, noting that the principles in the Standards have been followed to allocate costs appropriately.

Assurance is given that to the best of my knowledge the data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price and National Efficient Cost.

Yours sincerely

Professor Catherine Stoddart
30 August 2019

Queensland

Queensland Government

Queensland Health

Enquiries to: Liz Lea
Director, Funding and Costing
Health Care Purchasing and Funding Branch
Telephone: 07 3708 5914
File Ref: C-ECTF-19/6905

Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Email: james.downie@ihpa.gov.au

Dear Mr Downie,

Thank you for your letter dated 31 May 2019, regarding the Round 22 National Hospital Cost Data Collection Data Quality Statement.

I am pleased to provide (enclosed) the Data Quality Statement for the Queensland submission to the Round 22 of the National Hospital Cost Data.

Should you require further information, the Department of Health's contact is Mr Colin McCrow, Manager Activity Costing, Healthcare Purchasing and Funding Branch, on telephone (07) 3708 5894.

Yours sincerely

Liz Lea
Acting Senior Director
Healthcare Purchasing and Funding Branch
12 / 08 / 2019

Queensland Health

NHCDC R22 Data Quality Statement

Healthcare Purchasing and Funding Branch

National Hospital Cost Data Collection Round 22

Data Quality Statement

The National Hospital Cost Data Collection (NHCDC) is the primary data collection used to develop the National Efficient Price (NEP). To ensure accurate information is submitted to the NHCDC and subsequently available for the NEP determination, there are validation and quality assurance processes conducted.

Guidelines for preparing cost data are published in the Queensland Clinical Costing Guidelines (QCCG). It is a supplementary document to the Australian Hospital Patient Costing Standards (AHPCS) and is a guide to the Hospital and Health Services' (HHS) costing teams in the application of the AHPCS within the technical environment of the costing systems used within Queensland Health.

HHSs provide health services to the community in admitted and non-admitted settings (acute, sub-acute, non-acute, emergency, facility-based outpatient ambulatory clinics and community-based heath intervention and support services).

Costing data are prepared for 16 HHSs and the Mater Public Hospitals (Brisbane). Once costing is finalised by the HHS a financial reconciliation is undertaken, and the data transformed into the NHCDC specification format. All data are validated by the Department of Health and the HHS prior to submission to the Independent Hospital Pricing Authority (IHPA).

The following data quality statement describes changes in the scope of the collection, costing processes and issues that have been identified in the NHCDC Round 22 (R22) (2017-2018) data for Queensland.

Data Submission

Of the 507 facilities which have been costed at patient or service level data in the 2017-2018 fiscal year (including several facilities that are out of scope for the NHCDC such as nursing homes for which cost data are held by the Department of Health), 196 were submitted as part of the NHCDC in R22. The excluded facilities accounted for 11.8 per cent of costs and are all out of scope for the NEP determination.

Changes in Reported Facilities

There were 196 facilities reported in R22, a net increase of one facility over Round 21. The table below shows the changes between Rounds by funding type and facility type. The ABF hospitals were consistent between Rounds, with changes occurring in the block funded facilities.

Queensland Government

Funding Type	Facility Type	Round 22	Round 21
ABF	LICENSED PRIVATE ACUTE HOSPITAL - PUBLICLY FUNDED ACTIVITY	2	2
ABF	RECOGNISED PUBLIC HOSPITAL	34	34
BLOCK	PUBLIC COMMUNITY MENTAL HEALTH FACILITY	65	79
BLOCK	PUBLIC PSYCHIATRIC HOSPITAL FACILITY	3	3
BLOCK	RECOGNISED PUBLIC HOSPITAL	70	71
BLOCK	PRIMARY HEALTH CENTRE	22	6
Total		196	195

Mental Health

Prior to R22 mental health expenditure was reported at the encounter level, with the mental health expenditure data submitted at the phase level for the first time in R22.

A matching process was undertaken to link the cost data to the activity data. A twostep process was used, firstly the cost data were matched to a package of care i.e. to records in the Mental Health Care Episode dataset, then to a phase of care i.e. to records in the Mental Health Care Phase level dataset, using the datetime stamp of the service record. Of the $829 million submitted mental health data, $629 million (76 per cent) was allocated to a phase. The $200 million difference is for encounter level records that have no phase level information. This can arise due to several reasons including no clinical outcomes data recorded or not complete, or a combination of data quality and matching rules in the source data. These records are submitted to IHPA at the encounter level.

Darling Downs Hospital and Health Service made the decision not to cost Community Mental Health services at the patient level this year. Last year they contributed data from 17 facilities with a total cost of approximately $28 million. This should be taken into consideration when interpreting and comparing results between Rounds.

Non-Admitted activity reporting and encounter costing

The counting rules for activity-based funding (ABF) purposes involving multiple health care providers stipulate that irrespective of whether the patient was seen jointly or separately by multiple providers, only one non-admitted patient service event may be counted for a patient at a clinic on a given calendar day. In the costing system, the data come through as separate service events. To be consistent with the ABF counting rules the costs of patients with multiple clinic records on the same day are rolled up into a single clinic visit.

This is the second year where the rollup of multiple non-admitted patient service events at a clinic on a given calendar day has been applied. This Round 139,133 outpatient records were rolled up comprising a total cost of $41 million. Overall, the total cost of non-admitted data submitted has increased by 14.3 per cent between the two Rounds.

Unlinked Diagnostic data

Pathology, Imaging and Pharmacy data that were not able to be matched or linked through the data matching process have been excluded from the NHCDC. For R22, there were approximately 320,000 unlinked utilisation records which account for $143 million of cost. There is no significant change from the previous Round.

For R22, the unlinked diagnostic data comprised approximately 5.0 per cent of total non-admitted encounters and 6.7 per cent of non-admitted costs, similar proportions to last year. The table below shows a breakdown of unlinked utilisation for ABF verses block funded facilities for R22.

ABF Facility	Number of Unlinked Diagnostics	Unlinked Diagnostics (%)	Unlinked Diagnostics Cost ($)	Unlinked Diagnostics Cost (%)
No	61,794	19.32	21,750,926	15.13
Yes	258,114	80.68	122,017,656	84.87
Total	**319,908**	**100.00**	**143,768,582**	**100.00**

This should be taken into consideration when comparing the costs of diagnostic clinics between rounds.

Patient Travel

Patient travel costs in Queensland are significant but are not fully reflected in the NHCDC submission. This is due to the absence of patient level feeder data in all hospitals and as such the costs are reported as virtual patients and therefore excluded from the NHCDC. The addition of the new NHCDC Item '*PatTrav*' in R22 means that for the first-time patient travel can be separately identified in the NHCDC submission.

Of the $208 million recorded as patient travel in the initial NHCDC extract, the majority ($102 million) are allocated to system-generated patients and excluded. The $95.5 million of patient transport costs included in the submission are where patient level patient transport data was available to the Hospital costing teams.

Several HHSs have started to include inter-hospital transfer/transport costs provided by the Queensland Ambulance Service to patients where previously these were not reported. This accounted for an additional $17.5 million of costs in the initial costing system extract.

Blood products

Blood product costs have been included at patient level in the NHCDC for R20, R21 and R22. There was approximately a 10 per cent increase this year over the previous round, with $44.3 million included in this submission, compared with $40.5 million last year.

New Feeder Systems for Clinical Costing

Queensland HHSs continually monitor the implementation of new clinical data collection systems to assess whether they can be utilised for clinical costing, and they also work collaboratively with data managers to improve existing systems to attain minimum requirements for costing.

Improvements have been made in the costing of the rural and remote HHSs using utilisation data from several new systems in R22:

- Endoscopy
- Patient Retrieval and Transport
- Oral Health
- Breast Screening

South Australia

Government of South Australia
SA Health

Commissioning & Performance

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Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Dear Mr Downie James

RE: ROUND 22 NATIONAL HOSPITAL COST DATA COLLECTION DATA QUALITY STATEMENT

Thank you for your letter of 31 May 2019 concerning the release of the 2017-18 NHCDC cost data so as to support the production of the Round 22 (2017-18) National Hospital Cost Data Collection Cost Report.

As requested, attached are South Australia's Data Quality Statement and Data Collection Sign Off Statement to be included in the report.

Should you require any further information, in the first instance your officers are welcome to contact Krystyna Parrott, Senior Manager, Funding Models on (08) 8226 7263.

Yours sincerely

LYNNE COWAN
Deputy Chief Executive
Commissioning and Performance, SA Health

11 / 7 / 2019

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Round 22 National Hospital Cost Data Collection Sign-Off Statement

All data provided by South Australia to Round 22 (2017 -18) of the National Hospital Cost Data Collection (NHCDC) has been prepared where possible to adhere with the Australian Hospital Patient Costing Standards (AHPCS) Version 4.0.

Data provided to this submission has been reviewed for adherence to the AHPCS Version 4.0 and is materially complete and free of material errors except where qualified by the following items:

1. Medical Rights of Private Practice are excluded as they are reported outside the hospital's operational accounts due to expenses not being legally controlled by the LHN entity and associated difficulties in matching to patients.
2. Private pathology costs are excluded and have not been able to be reliably identified.
3. Blood product expenses that do not form part of the NEP and NEC are excluded.

Assurance is given that to the best of my knowledge the data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price and National Efficient Cost.

Signed:

LYNNE COWAN
Deputy Chief Executive
Commissioning and Performance
11 / 7 / 2019

South Australia 2017-18 Data Quality Statement

Participation and Coverage

South Australia's 2017-18 cost data is produced by the Department for Health and Wellbeing (DHW) using one instance of the patient costing system. The maintenance of the patient costing system and the processing of data are undertaken centrally by staff within the DHW based on advice from Local Hospital Network (LHN) representatives and with reference to the Australian Hospital Patient Costing Standards v4.0 wherever possible given this standard was endorsed midway through 2017-18.

In Round 22, cost data was submitted for ten metropolitan hospitals and ten large country hospitals and this number was unchanged from Round 21. Stand-alone rehabilitation hospitals are not included in the South Australian cost data.

The data was extensively reviewed by the DHW staff, in conjunction with the LHNs and signed off by the LHNs, before submission to the National Hospital Cost Data Collection (NHCDC). The costing data was subjected to considerable scrutiny, with appropriate corrections and resubmissions as required to ensure that it was fit for purpose.

Teaching, Training and Research (TTR)

Teaching, Training and Research (TTR) direct costs are not reported at the patient level, however they are reported in the reconciliation of total costs. TTR costs have been treated in compliance with the Australian Hospital Patient Costing Standards v4.0.

Blood products

Consistent with prior years, blood product costs were not included in the cost data submitted.

Work in Progress

In the patient costing process, all work in progress is costed, however only work in progress for patients that were admitted prior to 1 July 2017 and discharged during 2017-18 were submitted. As directed by IHPA, the escalation factor was not applied to all work in progress records.

Changes to costing or admission policies between Round 21 and 22 NHCDC collections

SA's LHNs continued to refine their costing processes during 2017-18, however there were no material changes in the overall costing process.

As in previous years, SA has not been able to comply with the costing business rule *1.1A Medical expenses for private and public patients*. Only medical costs that are reported in the hospitals operational accounts have been included in the costing process. Non payover rights to private practice and private pathology are therefore

excluded from submitted costing data. Public and private patients are treated the same in the allocation of medical costs to patients.

There was no change to the admission policy between the two rounds.

Other

South Australia has a common chart of accounts and one general ledger from which each hospital's financial data is extracted for processing. Other data such as pharmacy, radiology and pathology are sourced from central data collections where possible and LHNs provide an extensive array of costing feeder files that support accurate cost attribution to patients.

In addition, there is extensive application of the costing business rule *1.2 Third Party Expenses* to ensure costs for centralised services such as ICT, procurement, finance, human resources etc are included in the costing process to provide a fuller representation of costs associated with patient services.

Pathology services are provided to the hospitals by SA Pathology and hospitals are charged for the services provided to public patients but this does not cover the full cost of the service. An additional loading is applied to the hospital's pathology cost in an attempt to reflect the full cost of the service. Different methodologies but with similar effects are applied for radiology and pharmacy costs.

The costing data submitted has been reconciled to the Public Hospital Expenditure (PHE) with work continuing to minimise the variation between the two data sources.

Tasmania

Department of Health

Tasmanian Government

GPO Box 125, HOBART TAS 7001, Australia
Web: www.health.tas.gov.au

Contact: Mohammed Huque
Phone: 03 6166 1096
E-mail: mohammed.huque@health.tas.gov.au
File:
WITS No.: 110450

James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
Level 6, 1 Oxford Street
SYDNEY NSW 2000

Dear Mr Downie,

Subject: Round 22 National Hospital Cost Data Collection Data Quality Statement

I refer to your letter dated 31 May 2019, requesting that Tasmania provide a 'Data Quality Statement' to be published as part of the Round 22 National Hospital Cost Data Collection (NHCDC) Cost Report.

As requested, attached is Tasmania's Data Quality Statement to be included in the NHCDC Cost Report.

Should you require any further information, please contact Mohammed Huque, Manager - Health Informatics, Information Governance and Clinical Costing on telephone (03) 6166 1096 or email mohammed.huque@health.tas.gov.au

Yours sincerely

Ross Smith
Deputy Secretary
24 June 2019

Enc: Attachment 1

NHCDC Data Quality Statement – Tasmania Attachment 1

Overview

Tasmania's 2017-2018 submission of the Round 22 National Hospital Data Collection (NHCDC) was produced by the Department of Health based on advice from appropriate Local Hospital Network (LHN) staff. Round 22 was undertaken using the Department's best efforts in accordance with the Australian Hospital Costing Standards Version 4.

Data submitted as part of the NHCDC covered 23 establishments, an increase by one from the previous round due to the inclusion of the Statewide Mental Health Service establishment.

Expenditure used in the costing process aligns with the 'Department of Health and Human Services Annual report 2017-2018'.

Data was extensively reviewed over the submission period by the department's Clinical Costing Unit, relevant LHN Business Managers and a newly formed Clinical Costing Working Group to ensure that data was accurate before submission. As well, an internal Data Quality Statement was prepared as part of all major data submissions.

Mental Health

Mental Health Community (MS) Residential Mental Health (MR) were included for the 2017-2018 submission. Admitted Mental Health (MC) was submitted but did not include phase of care.

Teacher Training and Research

Teacher Training and Research was not included as part of the Round 22 submission.

Work in Progress

Episodes that were admitted prior to the 30 June 2017 and discharged in 2017-2018 are included in the Round 22 submission. Episodes admitted in 2017-2018 but not discharged are costed and will be included in the Round 23 submission.

Intermediate Products

Imaging, Pathology and Pharmacy data are linked according to the data matching rules, utilisation that is not able to be matched is assigned to an unlinked episode and excluded from the data submission.

Blood Products

Tasmania reported the blood costs that could be matched to an episode of care. Blood supplied to private hospitals, blood wastage or unmatched utilisation was excluded from the data submission.

Changes to the costing process between Round 21 and Round 22

The major change between Round 21 and Round 22 was the inclusion of Mental Health Community and Residential Mental Health data.

Victoria

Department of Health and Human Services

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e5146811

HHSD/19/253380

Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Dear Mr Downie James

Victoria's submission to the 2017-18 Round 22 National Hospital Cost Data Collection (NHCDC) has been finalized.

Please find attached a copy of the 2017-18 Round 22 Victorian Data Quality Statement (DQS) at **Attachment 1** including the sign off statement. Consistent with advice provided in prior years, there are several key factors regarding Round 22 National Cost Data Collection cost data and activity data linked to the cost data.

Victoria supports the publication of the Round 22 National Cost Data Collection for the Australian Public Hospitals Cost Report 2017-18 by the Independent Hospital Pricing Authority.

If you have queries regarding this advice, please contact Richard Bolitho, Acting Assistant Director, Funding Policy and Systems Development on 03 9096 7132 or via email Richard.bolitho@dhhs.vic.gov.au.

Yours sincerely

Terry Symonds
Deputy Secretary
18 / 6 / 2019

Encl.

VICTORIA

VICTORIAN DATA QUALITY STATEMENT

ROUND 22 (2017-18) NATIONAL HOSPITAL COST DATA COLLECTION

All data provided by Victoria to Round 22 (2017-18) of the National Hospital Cost Data Collection (NHCDC) has been prepared in adherence with the Australian Hospital Patient Costing Standards (AHPCS) Version 4.0.

Data provided to this submission has been reviewed for adherence to the AHPCS Version 4.0 and is complete and free of material errors.

Adherence to the AHPCS Version 4.0 is qualified by the details below.

Overview

Victorian public hospitals are required to report costs for all activity and are expected to maintain patient level costing systems that monitor service provision to patients and determine accurate patient-level costs.

Victorian health services are required to adhere, where possible, to the Australian Hospital Patient Costing Standards (AHPCS) – version 4.0 (or the most recent version in the instance that a successor becomes available), the Victorian Cost Data Collection (VCDC) business rules and specifications and any other guidance provided by the department in the coming year.

Business Rules

Compliance to standards

The Victorian submission to the Round 22 (2017-18) National Hospital Cost Data Collection (NHCDC) is based on the Victorian Cost Data Collection 2017-18.

The business rules for the VCDC collection are published annually by the Department of Health and Human Services, Victoria and provides guidance to health services in the costing and reporting of patient level cost data to the VCDC (http://www.health.vic.gov.au/hdss/vcdc/index.htm).

Exceptions

Exceptions to the AHPCS standards include the following:

- **Capital and Depreciation** - Victoria does not include non-cash expenditures such as depreciation as it does not impact upon operational costs and comparisons should not be driven by an asset's estimated life.
- **Teaching and Training costs** - where the sole purpose of the activity is teaching, and training Victoria includes these costs as an overhead. Where teaching and training cannot be separated from routine work undertaken, it has been included as a salary and wages expense.
- **Research costs** - these activities and costs are excluded from Victoria's submission pending further developments in the Activity Based Funding work stream.
- **Posthumous organ donation** – the application of this standard is being considered within the Victorian cost group however extensive updates to the development of the specific guidance in V4.0 of the AHPCS is required to ensure full costing of Posthumous organ donations.

VICTORIA State Government | Health and Human Services

Transitioning to AHPCS standards for:

- **Allocation of Medical costs for private and public patients** - Victorian health services will allocate medical expenses only relating to private patients where these can be distinguished from medical expenses relating to public. Otherwise all medical expenses are allocated to patients regardless of funding source.
  - Victoria's department is currently working with health services to determine their capability to comply with this standard as outlined in V4.0. However, Victoria will be reliant on further development of the V4 to the AHPCS to provide clarification and specific guidance on this standards application.
- **Information requirements –** Victoria is partially compliant as we do not align to specifications in a related national data collection for Mental Health phase of care and Teaching, Training and Research. We are working towards aligning to these datasets in future submissions.
- **Data quality framework –** Victoria continuously strives to ensure that the costed activities are accurate and fit for purpose and regularly refines data quality frameworks.

Activity

There were no significant changes to admission policies from Round 21 to 22. For further details please refer to the Victorian Hospital Admission Policy 2017-18 at https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-hospital-admission-policy-2015-16.

The patient demographics that are linked to the cost data collection are collected based on the specifications outlined in the following manuals:

- Victorian Admitted Episodes Dataset (VAED) 27th Edition (Admitted)
- Victorian Emergency Minimum Dataset (VEMD) 22nd Edition (Emergency)
- Victorian Integrated Non-Admitted Health Minimum Dataset (VINAH) 13th version

These patient demographics are then converted to the relevant national minimum dataset or IHPA data set specification based on the Victorian department's interpretation of the specifications.

For further details please refer to Victoria's health data standards and systems link at https://www2.health.vic.gov.au/hospitals-and-health-services/data-reporting/health-data-standards-systems

Scope

Reporting hospitals

The number of health services submitting to the NHCDC can vary from year to year due to the timing of the submission date required by the IHPA.

For 2017-18 establishment ID: 210301022; NHCDC ID: 3BAC - Bendigo Health Care Group - Anne Caudle cost data have been reported through the main campus of Bendigo Health.

Activities reported costs

All costs in Victoria's NHCDC submission have accompanying activity that is recognised. Specific areas to note are outlined below.

Palliative Phase of Care

For the 2017-18 NHCDC collection, Victoria has submitted phase of care cost data for Palliative Care records.

Victoria is transitioning to report the cost data at a phase of care for Mental Health at both a bed based and community level.

Non-admitted

Victoria allocates a cost to all non-admitted activity however only those that report to a Tier2 and/or are used in the pricing model are submitted.

Emergency

All emergency department costs been allocated to emergency activity only.

Expenses

All expenses related to the treatment of patients have been allocated in accordance with the AHPCS v4.0.

All prior year costs relating to patients discharged within the submission year however admitted in prior years have been included and no escalation of costs have been applied.

Blood product costs have been included as a line item in the submission as has the separation of PBS and NPBS drugs.

Medical costs associated with private patients have been included in the submission. However Eastern Health is the only health service to exclude private patient medical costs for their non-admitted services only.

Ancillary costs for private patients

The majority of Victorian Health Services include ancillary costs for private patients in their NHCDC submission with the exception of:

- Northern Health (Private patient pathology and radiology costs are excluded from the VCDC)
- Barwon Health (Private patient pathology costs are excluded from the VCDC)
- Ballarat Health (Private patient pathology and radiology costs are excluded from the VCDC)
- Peninsula Health (Private patient pathology costs are excluded from the VCDC)
- Western Health (Private patient pathology costs are excluded from the VCDC)
- Alfred Health Caulfield Campus (Private patient radiology costs are excluded from the VCDC)

Reporting of ICU and mechanical ventilation hours

ICU hours – Where ICU and CCU coexist, Victoria is unable to distinguish the time spent in a CCU or ICU.

PICU hours and NICU hours – PICUs are located at Monash Medical Centre and the Royal Children's Hospital only. NICUs located within four Victorian hospitals - Mercy Hospital for Women, Monash Medical Centre, Royal Women's Hospital and the Royal Children's Hospital.

However, where a patient spends time in a PICU and NICU, Victoria is unable to distinguish PICU from NICU hours.

PsyICU hours – Victoria does not collect the amount of time measured in hours that a patient spends in a state of psychosis while in an ICU.

Mechanical ventilation hours – Victoria only collects the total duration of Mechanical Ventilation (MV) in hours provided in an approved ICU or NICU only. MV hours provided in a non-approved ICU are not collected.

Mental health legal status – Only patients in Approved Mental Health Service or Psychogeriatric Program in public hospitals whose care is funded by Mental Health Services can report the status. Patients in all other care types, report the 'not applicable' code.

Reconciliation

Victoria's reconciliation report is designed to assist the department to understand the completeness of a health service's final submission including the source data by which the VCDC is created and its reconciliation. The data entered into this report is to represent the data used for the final VCDC and NHCDC submissions for FY2017-18.

In accordance with local and national financial reviews it is recommended that a director's attestation will need to be signed when submitting the reconciliation report. This will acknowledge the validity and completeness of the data to be submitted and used through the local and national cost collections.

Data quality assurance

Victoria ensures the cost data is relevant, reliable and fit for purpose based on a set of validations and quality assurance checks performed. These enhance communication with health services by gaining knowledge of the reasons for some of the quality and completeness inconsistencies of the cost data across all service streams.

The continuous use of the quality assurance checks has led to improvements in the cost data. This in turn has increased the use of the cost data within health services by assisting in their decision making and understanding the implications that changes in practices/procedures/policies have on the resource consumptions of patients and/or services.

Assurance

Assurance is given that to the best of my knowledge the data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price and National Efficient Cost.

Signed:

Deputy Secretary

/ 2019

Western Australia

Government of **Western Australia**
Department of **Health**
Office of the Director General

Your Ref: D19-7544
Our Ref: F-AA-62246-291
Contact: Kevin Frost (9222 2260)

Mr James Downie
Chief Executive Officer
Independent Hospital Pricing Authority
PO Box 483
DARLINGHURST NSW 1300

Via email: James.Downie@ihpa.gov.au

Dear Mr Downie James

ROUND 22 NATIONAL HOSPITAL COST DATA COLLECTION DATA QUALITY STATEMENT

Thank you for your letter dated 31 May 2019 requesting a Data Quality Statement and Sign-Off Statement to be published in the Round 22 National Hospital Cost Data Collection Cost Report.

Please find the Data Quality and Sign-Off Statements attached.

Yours sincerely

Dr D J Russell-Weisz
DIRECTOR GENERAL

20 June 2019

Attachments
Att 1: WA Data Quality Statement
Att 2: WA Sign-Off Statement

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http://www.health.wa.gov.au

Department of Health – promoting a smoke free environment

Western Australia Round 22 Data Quality Statement

Participation and coverage

Western Australia (WA) contributed patient level data for thirty-three public hospital sites, from five Area Health Services (AHS), for Round 22 (2017-18) of the National Hospital Cost Data Collection (NHCDC). All hospitals that are considered in scope for Activity Based Funding are currently part of the NHCDC submission for WA.

The Round 22 submission had the same number of participating hospitals as the previous round, however, the costs submitted for the Child and Adolescent Health Service did not represent a full year. This was due to the closure of Princess Margaret Hospital in May of 2018. Activity at the new Perth Children's Hospital was costed but withheld from Round 22 as it had been operational for less than two months.

Data Quality

WA's Round 22 costing submission was based on individual submissions from the five AHS's. This cost data was completed in compliance with the Australian Hospital Patient Costing Standards Version 4.0 (AHPCS) and reconciles to each AHSs audited financial statements. Data submissions were extensively reviewed by the AHSs, prior to official sign off and submission to the Department of Health (the Department). Reconciliation statements were supplied for each site.

On submission to the Department, the AHS costs were further tested and reconciled, with AHSs making further refinements if required. The Department then made adjustments to the data including incorporating Work in Progress (WIP) from previous rounds, before the data was consolidated and formatted in accordance with the Independent Hospital Pricing Authority (IHPA) specifications. Data matching and validation also occurred to ensure the costed data sets aligned with the activity data submitted to IHPA for other patient collections.

WA has not had any major changes in the costing process however work has been ongoing in terms of enhancing data quality and standardisation.

Products costed

WA has provided its most extensive NHCDC submission with patient level coverage of Inpatient, Emergency and Non Admitted patients in accordance with the IHPA data specifications. WA's Outpatient activity was predominantly costed at a patient level however work is continuing on disaggregating and costing the small amount of activity that remains non patient costed and is excluded from the submission.

For Round 22, Teaching and Research costs were identified by site and allocated at a patient level for the purpose of local management use. In accordance with the relevant AHPCS these costs were removed from the costing submission but identified in the reconciliation process.

The costs of centralised services provided by Health Support Services (HSS), including payroll, human resources and information technology, are charged to the AHSs and included in the costing submission.

Blood product costs are managed by the Department and are not included in the Round 22 submission.

Costs of ancillary services including pathology, imaging and pharmacy, that have not been able to be linked to patient episodes have been costed but excluded from the submissions.

Only costs for those patients that were discharged in the reference year (2017-18) were included in the Round 22 submission. These included WIP costs incurred in previous years. End of year work in progress, that is, patients admitted during the reference year but not discharged during that year are fully costed and will form part of future submissions. No escalation has been applied to the prior year work in progress.

Western Australia

Round 22 National Hospital Cost Data Collection Sign-Off Statement

All data provided by Western Australia to Round 22 (2017 -18) of the National Hospital Cost Data Collection (NHCDC) has been prepared where possible to adhere with the Australian Hospital Patient Costing Standards (AHPCS) Version 4.0.

Data provided in this submission has been reviewed for adherence to the AHPCS Version 4.0 and in accordance the Data Quality Statement provided, and is complete and free of material errors.

Adherence to the AHPCS Version 4.0 is qualified by the following items:

1. Blood product costs were not included in the costing submission as required by Costing Guideline 6 – Blood Products.

Assurance is given that to the best of my knowledge the data provided are suitable to be used for the primary purpose of the NHCDC, which includes development of the National Efficient Price and National Efficient Cost

Signed:

Dr D J Russell-Weisz
DIRECTOR GENERAL

20 June 2019

Independent Hospital Pricing Authority

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