

The NHCDC and price weight adjustments

Price weight adjustments are a key consideration in Independent Hospital Pricing Authority's (IHPA) annual determination of the National Efficient Price.

This paper:

- explains price weight adjustments;
- describes how IHPA applies the adjustments; and,
- presents the 2017–18 National Hospital Cost Data Collection (NHCDC) data related to three key price weight adjustments by jurisdiction.

The National Efficient Price

The Independent Hospital Pricing Authority's (IHPA) primary purpose is to determine the National Efficient Price (NEP) and National Efficient Cost (NEC) annually for Australian public hospital services.

The NEP underpins Activity Based Funding (ABF) across Australia for public hospital services. Under the ABF system, hospitals are funded for the number and mix of patients they treat. If a hospital treats more patients, it receives more funding. ABF also takes into account the fact that some patients are more complicated to treat than others.

The NEP has two key purposes. The first is to determine the amount of Commonwealth Government funding for public hospital services, and the second is to provide a price signal or benchmark about the efficient cost of providing public hospital services.

The NHCDC is the primary source of data used to inform the development of the NEP. IHPA collects the NHCDC data from jurisdictions and combines it with collected hospital activity data (submitted by jurisdictions for funding) to determine the costs of different public hospital services. The hospital activity data used to inform the NEP is drawn from a number of National Minimum Data Sets (NMDS) and National Best Endeavours Data Set, (NBEDS)¹.

For each financial year, IHPA calculates the NEP using the average cost of public hospital activity per National Weighted Activity Unit (NWAU)². The NWAU is the national unit for counting hospital service activity, based on the complexity of patients and legitimate variations in costs.

Data collected via the 2017–18 NHCDC will inform the 2020–21 NEP.

Price adjustments

IHPA adjusts the NEP to reflect legitimate and unavoidable variations in the costs associated with delivering a health care service.

The price adjustments are based on certain patient characteristics which influence clinical complexity and treatment. The adjustments reflect IHPA's consideration that the standard price per NWAU should be increased due to these patient characteristics. The adjustments impact the price weight applied to the episodes for activity based payment purposes.

The amount and type of price adjustments can vary between years based on the underlying hospital cost and activity data. The details of each adjustment are outlined in IHPA's annual NEP Determination document. The 2019–20 NEP Determination is [available here](#).

These include: Admitted Patient Care NMDS; Admitted Subacute and Non-Acute Hospital Care NBEDS; Non-Admitted Patient Emergency Department Care NBEDS; Activity based funding: Emergency Service Care NBEDS; Non-Admitted Patient Care Aggregate NBEDS; Non-Admitted Patient NBEDS.

1. The 'average' hospital service is equivalent to one NWAU. More intensive and expensive activities are funded by multiples of NWAUs, and simpler and less expensive activities are funded by fractions of an NWAU.

For the NEP 2019–20, there were 13 price weight adjustments³. This paper uses NHCDC cost data to examine three of the longer standing, and more commonly applied adjustments. Specifically, it focuses on costs relating to:

- the residential remoteness of patients;
- Indigenous patients; and
- paediatric patients in Specialised Children’s Hospitals, as defined in the NEP Determination.

A clearer picture of the impact of remoteness is by examining the cost of individual Diagnosis Related Groups (DRGs). For example, in 2017–18, the average cost per day of a colonoscopy⁴ increased with remoteness from \$2,025 for patients residing in metropolitan areas to \$2,155 (outer regional) and \$3,352 (very remote).

Table 1: Average cost per day of admitted acute separations (excluding same-day separations), by patient location, Round 22

	Metro	Inner Regional	Outer Regional	Remote	Very Remote
	\$	\$	\$	\$	\$
NSW	1,941	2,009	2,202	2,422	2,277
Vic	2,121	2,248	2,306	4,152	3,894
Qld	2,578	2,469	2,388	2,548	3,061
SA	2,411	2,458	2,523	2,755	2,993
WA	3,185	2,878	2,796	3,097	3,199
Tas	2,428	2,322	2,212	2,273	2,348
NT	2,972	2,833	2,526	2,450	2,596
ACT	2,202	2,708	2,735	2,171	3,330
National	2,231	2,258	2,388	2,694	2,841

Remoteness adjustment

IHPA uses patients’ residential location to classify each separation into a geographical locality. There are five levels of remoteness: Metropolitan, Inner Regional, Outer regional, Remote, and Very Remote.

For the 2019–20 NEP, IHPA applied a price weight adjustment of 8% to patients whose residential address was ‘outer regional’. For patients whose residential address was ‘remote’ or ‘very remote’, adjustments of 27% and 29% were applied respectively. The adjustments are applied in the manner and in the order indicated by the formula (as specified in the **Determination**).

At the national level, the average cost per day of separations for patients living in metropolitan areas was lower than for those living in more remote areas. Table 1 presents the average daily cost per separation by jurisdiction (for separations lasting longer than one day). It shows that in 2017–18 the national average cost per separation increased with patient remoteness.

It should be noted that the average cost per separation includes all admitted acute hospital services undertaken and there may be considerable variation in the hospital services provided by patient location.

Indigenous adjustment

The Indigenous price weight adjustment is based on a patient’s Indigenous status. Indigenous persons are those who identify as being of Aboriginal or Torres Strait Islander origin⁵.

For Indigenous patients who had an admitted acute separation, a price weight adjustment of 4% was applied when calculating the 2019–20 NEP⁶.

3. The complete list of adjustments are: Paediatric Adjustment; Specialist Psychiatric Age Adjustment; Patient Residential Remoteness Area Adjustment; Indigenous Adjustment; Radiotherapy Adjustment; Dialysis Adjustment; Patient Treatment Remoteness Area Adjustment; Intensive Care Unit (ICU) Adjustment; Private Patient Service Adjustment; Private Patient Accommodation Adjustment; Multidisciplinary Clinic Adjustment; Emergency Care Age Adjustment; Hospital Acquired Complications Adjustment. More details [available here](#).
4. DRG: G48B
5. Australian Institute of Health and Welfare (AIHW) Metadata Online Registry (METeOR).
6. The method for applying the adjustment is described in the 2019–20 NEP determination document.

In 2017–18, the average cost of an admitted acute separation was lower for Indigenous patients than for non-Indigenous patients (\$3,966 compared with \$4,945), Table 2.

Haemodialysis, a procedure which is typically undertaken on a same-day hospital visit, accounts for almost half of all Indigenous separations. Given the relatively low average cost for haemodialysis, in Round 22, Indigenous same-day separations cost on average 36 per cent less than non-indigenous same-day separations (\$971 compared with \$1,321).

However, in terms of overnight separations, Indigenous separations cost 3.5 per cent more than non-Indigenous overnight separations (\$9,797 to \$9,466). Table 3 presents admitted acute separations for only those patients who stayed in hospital overnight.



Paediatric adjustment

The paediatric price weight adjustment is applied in respect of persons who are aged up to and including 17 years; and, are admitted to a Specialised Children’s Hospital.

The size of the adjustment depends on the separation’s DRG – these are specified in the NEP **Determination**.

Five jurisdictions have qualified paediatric hospitals: New South Wales, Victoria, Queensland, South Australia and Western Australia.

Table 2: Admitted acute separations, average length of stay (ALOS) and average cost, by patient Indigenous status and jurisdiction, Round 22

Jurisdiction	Indigenous			Non-Indigenous		
	Separations no.	ALOS days	Average (\$)	Separations no.	ALOS days	Average (\$)
NSW	84,466	2.4	4,556	1,547,592	2.9	5,300
Vic	24,538	2.2	4,501	1,634,397	2.2	4,266
Qld	123,857	1.9	4,081	1,272,954	2.1	4,551
SA	24,599	2.2	4,423	341,507	2.7	6,073
WA	73,743	1.8	4,027	457,797	2.2	6,117
Tas	5,404	2.5	5,781	114,738	2.7	5,751
NT	115,872	1.8	3,028	49,768	2.3	5,255
ACT	3,308	2.6	5,789	104,790	2.5	5,236
National	455,787	2.0	3,966	5,523,543	2.4	4,945

Table 3: Admitted acute separations, average length of stay (ALOS) and average cost (excluding same-day separations), by patient Indigenous status and jurisdiction, Round 22

Jurisdiction	Indigenous			Non-Indigenous		
	Separations no.	ALOS days	Average (\$)	Separations no.	ALOS days	Average (\$)
NSW	39,428	4.1	8,520	810,117	4.6	9,021
Vic	9,867	4.0	9,459	631,598	4.2	8,986
Qld	44,734	3.6	9,386	530,226	3.6	9,152
SA	8,378	4.4	11,255	169,588	4.4	10,736
WA	22,065	3.7	10,988	194,404	3.9	12,054
Tas	2,662	4.1	9,676	52,430	4.6	10,570
NT	26,070	4.4	11,004	21,074	4.1	10,579
ACT	1,483	4.6	11,502	47,984	4.4	10,086
National	154,687	4.0	9,797	2,457,421	4.2	9,466

The average cost for paediatric separations was 48 per cent higher than non-paediatric separations (\$7,126 compared with \$4,804), Table 4.

However, the ALOS for these separations was very similar (2.3 compared with 2.4), identifying the high resource utilisation of patients in paediatric hospitals.

Of the jurisdictions, South Australia reported the lowest average cost for in-scope paediatric separations (\$5,682 per separation). It was the only jurisdiction where paediatric separations cost less than non-paediatric separations. At the other end of the spectrum, paediatric separations in Queensland cost twice as much as non-paediatric separations – the highest ratio of all jurisdiction.

Table 4: Admitted acute separations, average length of stay (ALOS) and average cost by paediatric hospital status, jurisdiction, Round 22

Jurisdiction	Paediatric hospital			Non-Paediatric hospital		
	Separations no.	ALOS days	Average (\$)	Separations no.	ALOS days	Average (\$)
NSW	55,975	2.6	7,055	1,579,600	2.9	5,203
Vic	66,861	2.2	6,278	1,608,536	2.2	4,199
Qld	43,295	2.3	8,709	1,357,241	2.1	4,390
SA	21,227	2.1	5,682	358,545	2.7	6,053
WA	23,408	2.3	8,095	508,132	2.2	5,723
Tas	-	-	-	121,513	2.7	5,772
NT	-	-	-	165,704	1.9	3,697
ACT	-	-	-	109,135	2.6	5,319
National	210,766	2.3	7,126	5,808,406	2.4	4,804