IHACPA

National Pricing Model Stability Policy

June 2024

National Pricing Model Stability Policy – Version 7.0
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Acronyms and abbreviations

ABF	Activity based funding
ALOS	Average length of stay
AR-DRG	Australian Refined Diagnosis Related Group
CAC	Clinical Advisory Committee
ICU	Intensive care unit
IHACPA	Independent Health and Aged Care Pricing Authority
JAC	Jurisdictional Advisory Committee
LHN	Local hospital network
NEC	National efficient cost
NEP	National efficient price
NHRA	National Health Reform Agreement
TAC	Technical Advisory Committee
The addendum	Addendum to the National Health Reform Agreement 2020–25
The NHR Act	*National Health Reform Act 2011*
This policy	National Pricing Model Stability Policy

Definitions

Activity based funding	Refers to a way of funding public hospitals whereby they get paid for the number and mix of patients they treat. Activity based funding is underpinned by national classification systems, data collections, costing standards, price weights and efficient costs developed by the Independent Health and Aged Care Pricing Authority (IHACPA), as outlined in the National Health Reform Agreement (NHRA). An activity based funding activity may take the form of a separation, phase, presentation or service event.
National pricing model	The national pricing model is produced annually by IHACPA and defines the national efficient price, price weights and adjustments based primarily on the latest cost and activity data reported by the states and territories. For more detail, refer to the National Pricing Model Technical Specifications.
Pricing Authority	The governing body of IHACPA established under the *National Health Reform Act 2011*.
Public hospital services	From 1 July 2013, the scope of public hospital services eligible for Commonwealth funding will be[1,2]: • all admitted programs, including hospital-in-the-home programs and forensic mental health inpatient services; • all emergency department services provided by a recognised emergency department service; and • non-admitted services and non-admitted mental health care services, including community and residential mental health care services, that meet the criteria for inclusion on the General List of In-Scope Public Hospital Services.

[1] In August 2011, Governments agreed to be jointly responsible for funding growth in 'public hospital services'. As there is no standard definition or listing of public hospital services, Governments gave IHACPA the task of deciding which services will be ruled 'in-scope' as public hospital services, and so eligible for Commonwealth funding under the Addendum to the NHRA 2020–25.

[2] With regards to IHACPA's role in defining the scope of public hospital services, refer to the addendum clauses A16–A32.

1. Executive summary

1.1 Background

The Independent Health and Aged Care Pricing Authority (IHACPA) was established under the *National Health Reform Act 2011* (NHR Act) as part of the National Health Reform Agreement (NHRA) to improve health outcomes for all Australians.

Section 131(3)(c)(iii) of the NHR Act and clause A46(d) of the Addendum to the NHRA 2020–25 require IHACPA and the Pricing Authority to have regard to the need for continuity and predictability in the cost of health care services in performing its functions.

IHACPA undertakes work to analyse and consider stabilisation of year-on-year variation and the impact of material issues with data quality or data completeness and national changes in the Australian health care system in the development of the national efficient price (NEP) and national efficient cost (NEC).

Variation in the data reported to IHACPA may occur due to changes or variation in the costing and activity data reporting (where changes are sustained over time), coding practices, technological changes and modifications to the classification systems used by IHACPA. This variation may in turn impact on the model parameters and outputs, including the reference cost, the NEP, the NEC and calculated indexation rates.

1.2 Purpose

The purpose of the National Pricing Model Stability Policy is to describe the principles and processes IHACPA is guided by in its analysis and consideration of year-on-year stability of price weights, adjustments and NEP and NEC model parameters, including consideration of data preparation to account for material issues with data quality or data completeness and national impacts on the Australian health care system.

As outlined in the Pricing Framework for Australian Public Hospital Services, IHACPA will be guided by the Pricing Guidelines in its decision-making where it is required to exercise policy judgement in undertaking its legislated functions. This policy supports the '**Stability**' Pricing Guideline, that is, 'the payment relativities for activity based funding (ABF) are consistent over time'.

This policy is to be applied in conjunction with the following IHACPA policies:

- Assessment of Adjustments to the National Pricing Model Policy
- Back-Casting Policy
- National Pricing Model Consultation Policy.

This policy does not apply to IHACPA's functions pertaining to the provision of advice to the Australian Government on aged care costing and pricing.

1.3 Review

The Pricing Authority and Chief Executive Officer of IHACPA will review this policy, including associated documentation, every 3 years or as required.

This policy was last reviewed in June 2024.

2. Stabilisation principles

There is inherent variability in the data sets that IHACPA uses for the purposes of determining pricing for public hospital services due to changes in the Australian health care system over time and the underlying variability of this large and complex system. Ensuring year-on-year stability in the NEP and NEC model parameters and outputs is necessary to ensure funding stability and predictability for local hospital networks (LHNs) and hospital managers.

In determining the NEP and NEC each year, IHACPA will adopt methods to stabilise the data from the previous year/s so that the impact of statistical variation or 'noise' on the national pricing model can be minimised, whilst ensuring that the national pricing model accurately reflects changes in practice in public hospitals. IHACPA will also consider and, where required, account for the impact of material issues with data quality or data completeness and national changes in the Australian health care system on developing the NEP and NEC determinations.

2.1 Policy statement

IHACPA will promote funding stability and predictability for LHNs and hospital managers through satisfying 3 key principles within the national pricing model:

1. Being sensitive to changes in activity, cost or data lags

   The stabilisation process is important to ensure that only observed changes related to sustained activity and/or cost variations in Australian public hospitals are reflected in the national pricing model.

2. Minimising statistical variation

   The national pricing model is empirically based. This can lead to unexplained statistical variation. In analysing data variance to calculate the NEP and NEC, IHACPA will default to a 95% level of confidence when determining statistical significance.

3. Representing trend growth and equivalence for pricing

   It is important for the national pricing model to be responsive to major events that occur within or across jurisdictions resulting in issues with data variation or completeness. This can lead to data that may not be representative of trends (where a return to trend is anticipated) or may not be equivalent in the year of pricing.

Application to the national pricing model

IHACPA's analysis may indicate a need for adjustments to the activity and cost data, thereby requiring IHACPA to undertake base data preparation to address the need for year-on-year stability. The methodologies and processes for routine base data preparation (to address principles 1 and 2) is outlined at Chapter 3 of this policy and the National Pricing Model Technical Specifications for the specified financial year.

Circumstances where other data preparation may be required will be considered by IHACPA in consultation with jurisdictions through IHACPA's Technical and Jurisdictional Advisory Committees

(TAC and JAC), on the basis of the latest cost and activity data reported by the states and territories.

Indications for other data preparation beyond routine base data preparation (to address principle 3) include, but are not limited to:

- material issues with data quality or data completeness, where the sampling of data available is not representative of historical or national trends
- national impacts on the Australian health care system, where the variation in activity and cost data will not or is unlikely to be equivalent in the year of pricing.

Examples of other data preparation applied for specific NEP determinations are provided at Appendix A of this policy.

2.2 Consultation

All proposed changes to the national pricing model will first undergo the assessment and jurisdictional consultation process as outlined in IHACPA's National Pricing Model Consultation Policy. These may include classification system changes, costing methodology changes, pricing methodology changes and funding cycle impacts.

Once a proposed change progresses to implementation, following assessment against the National Pricing Model Consultation Policy, changes that require back-casting will follow the processes outlined in IHACPA's Back-Casting Policy.

IHACPA's JAC and Clinical Advisory Committee (CAC) will be provided with the opportunity to review the stability interventions presented to IHACPA's TAC before these interventions are implemented.

3. Stabilisation process

3.1 NEP base data preparation

The steps IHACPA adopts annually to prepare the data for the NEP are outlined below and detailed in the National Pricing Model Technical Specifications, released in conjunction with the NEP determination each year.

4.1.1 Identification and classification of outlier data

In preparing the data, IHACPA identifies and removes extreme cost outliers. This process is detailed in the National Pricing Model Technical Specifications.

4.1.2 Low volume end-classes

Some end-classes, such as those within the Australian Refined Diagnosis Related Groups (AR-DRG) classification, have very low volumes of patients treated each year and as such are particularly vulnerable to volatility, as each patient cost record has a greater influence on the average cost and length of stay.

For end-classes with less than 100 separations in any given year, IHACPA will combine data from the current year and preceding year in order to increase the volume in the sample and thereby provide improved stability to the cost and length of stay parameters for that end-class. The preceding year's data will be inflated to ensure comparability between the 2 years' data.

4.1.3 Establishing inlier bounds

The inlier bounds are used to define the pool of separations within an admitted end-class that are considered to be representative of a typical separation and homogenous for the purposes of pricing. Those separations with a length of stay that falls outside the bounds are classified as outliers, where costs are not representative of the average cost of treating patients within the end-class.

Moving the inlier bounds leads to a recalculation of price weights and changes in the relativities between the price weights of different end-classes.

The impact of changing the bounds for any end-class is compounded if the National Hospital Cost Data Collection also reports changes in the average cost for that end-class relative to other end-classes.

In developing a robust, stable system of price weights, it is important that the relative values of price weights do not fluctuate with random variations in activity and/or cost data from year-to-year.

Therefore, changes to the inlier bounds should only be made when there is either a clinical or methodological reason, or a sustained trend in behaviour that is observed over time.

The inlier bounds for each end-class are determined by IHACPA based on the average length of stay (ALOS) profile.

The steps IHACPA adopts to calculate the inlier bounds are outlined in further detail in the annual National Pricing Model Technical Specifications.

4.1.4 Movements in inlier bounds

The inlier bounds for length of stay based cost models are subject to fluctuation year-to-year as the ALOS moves.

Changes to the lower and upper bounds are considered legitimate if the end-class has had a change in its status on:

- the same-day pricing list;
- the bundled list for intensive care unit (ICU) payments; or
- the list to move from L3H3[3] to L1.5H1.5[4] because of the distribution of long stay, high cost outliers.

Otherwise, inlier bounds will only be changed when there is:

- a statistically significant change in the bounds (at the 95% confidence level); or
- if a change in a bound affects more than 1% or more than 10 of the end-class episodes.

These 2 tests are applied in the first instance to the upper bounds and only when there is movement to the upper bound will the lower bounds be subjected to the same tests to see if there should be any movement in them as well.

In some rare instances, if inlier bounds are stabilised, the ALOS for an end-class may lie outside the inlier bounds. In those cases, the inlier bounds are not stabilised.

3.2 NEC base data preparation

The steps IHACPA adopts to prepare the data for the NEC are detailed in the National Pricing Model Technical Specifications, released in conjunction with the NEC determination each year.

3.3 Movements in cost parameters

Year-to-year movements in cost parameters may occur for many reasons, including changes in cost data or inlier bound movements. The net impact of large fluctuations can be an undesired instability in the model.

In the admitted cost models (acute care, mental health care and subacute and non-acute care) IHACPA will restrict the year-to-year movement in price weights to +/- 20% where:

- there are less than 1,000 inlier episodes;
- there is no change to inlier bounds;
- there is no change to the status on the same-day pricing list and bundled ICU list; and
- the change in the inlier cost parameter is outside +/- 20%.

[3] The L3H3 form refers to the common trimming method used in Australia in which the low trim point is a third of the ALOS, and the high trim point is 3 times the ALOS.
[4] The L1.5H1.5 form is applied for Major Diagnostic Categories 19 and 20, or if the AR-DRG has an unusual distribution of long stay, high cost outliers.

In the non-admitted care and emergency department cost models, IHACPA will restrict the year-to-year movement to +/- 20% for all price weights.

For services with high patient volumes and high aggregate expenditure (for example, chemotherapy and dialysis) IHACPA may consider lower thresholds than the +/- 20% movement, for applying stabilisation techniques.

Where price weights meet the above criteria, they may be exempt from stabilisation based on advice from IHACPA's TAC, JAC and CAC.

In some years where there are significant changes in price weights due to changes in the cost model arising from decisions in IHACPA's pricing framework, these rules will not be applied (for example, treatment of Australian Government pharmaceutical program payments or subacute and non-acute activity).

Where there are significant changes in price weights due to changes in the source data, IHACPA will consider not stabilising the price weights (for example, the Pricing Authority approved the exemption of non-admitted cost models even though the movement was +/- 20%, due to changes in source data). Consideration should be given to the comparative quality and representativeness of the data sources, for example in terms of sample size, breadth of coverage and temporal currency.

IHACPA's process for considering exemptions to the stabilisation rules is further explained in section 3.6 of this policy.

3.4 Movements in paediatric adjustments

Some movements in the paediatric adjustments[5] may be extreme. The instability in these adjustments is likely to be exacerbated by the significantly smaller pool of hospitals used in the calculation of these adjustments.

For end-classes with less than 500 episodes, movement between years will be stabilised by setting the adjustment to the average value across the two NEP models.

The adjustment will be set to 1.00 if:

- there are less than 30 paediatric episodes or less than 30 non-paediatric episodes; and
- the adjustment is between 0.96 and 1.04; or
- the adjustment moves from positive to negative (or vice versa) between years.

The paediatric adjustment in the admitted mental health care stream is uniform between end-classes, and so it is not dependent on end-class. Its stability is evaluated along with other adjustments as per section 3.5 of this policy.

3.5 Stability of adjustments

For adjustments to the NEP, IHACPA stabilises adjustments across years to minimise volatility in year-to-year changes.

[5] A paediatric adjustment is applied where an ABF activity is in respect of a person who is aged up to and including 17 years and is treated by a specialised children's hospital as an admitted acute, admitted mental health care or non-admitted patient.

Adjustments are determined on a rolling average using up to 3 years' historical data, where available, in order to maximise stability of these adjustments.

3.6 Exemptions to this policy

Exemptions to this policy may be considered where:

- legitimate and unavoidable changes in the cost of service delivery have been identified within the data or factors affecting the national pricing model, including consideration of circumstances where other data preparation is required (as outlined at chapter 2 and Appendix A);
- these changes are likely to result in a perverse incentive or unacceptable adverse outcomes in terms of national service delivery in the funding year; and
- this consideration is deemed to outweigh the need for funding stability and predictability.

For example, exemptions may be appropriate in the case of significant known clinical and service delivery changes that are highly likely to affect the funding year and where stabilisation would result in systematic under or overpricing of specific public hospital services. Exemptions may also be appropriate where there is strong information to indicate that more recent data is of higher quality or greater relevance than older data that may otherwise be used in stabilisation.

Potential exemptions to this policy will be considered based on the best-available evidence in consultation with IHACPA's TAC, JAC and CAC, with the expectation that exemptions will be rare. Assessments will be made on a case-by-case basis with regard to the specific circumstances affecting the potential requirement for the exemption as well as IHACPA's Pricing Guidelines and other relevant policies.

Appendix A: Examples of other data preparation

Material issues with data quality or data completeness

Over time, IHACPA has faced significant issues with data quality and completeness that could have a direct bearing on the stability of the NEP and NEC determinations. For the development of the NEC Determination 2023–24, for example, IHACPA identified significant changes in the year-to-year expenditure reporting by a jurisdiction for small rural hospitals. This was corroborated by advice and evidence from that jurisdiction.

These issues had significant impacts on the resulting NEC model parameters, as well as the NEC indexation and adjustment calculations.

IHACPA selectively excluded the problematic data so as to not distort the modelling outcomes. This included modifications to the NEC indexation and adjustment calculations.

Under some circumstances, issues around data quality and completeness may also affect growth calculations and thereby imply that back-casting calculations may also require modification.

National impacts on the Australian health care system

For a number of successive NEP determinations, IHACPA was required to address the impact of activity and cost data volatility arising from coronavirus disease 2019 (COVID-19). Some of the impacts of COVID-19 on hospital activity and costs were deemed to be transitory and others were enduring.

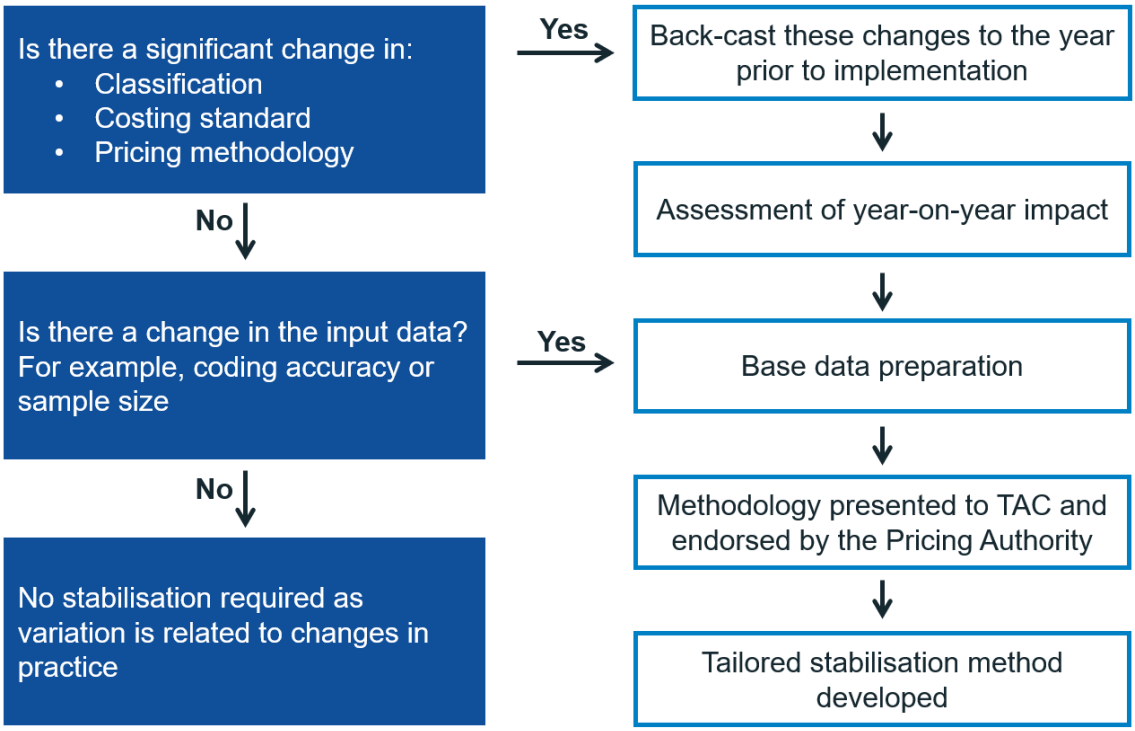
This policy is of relevance where such impacts are transitory, particularly in the context a forward-looking NEP model. For example, IHACPA's analysis indicated that in the 2020–21 financial year, during the lockdown period spanning August 2020 to October 2020 for a jurisdiction, there was a drop in admitted acute activity and an increase in costs in their public hospital system. Additionally, for at least part of the 2020–21 financial year, the increase in average costs was due to the presence of inflexible costs that were supported by the Australian Government through the minimum funding guarantee (MFG).

To account for this variation in activity and cost data and MFG, IHACPA normalised admitted acute activity in that jurisdiction in order to align the cost per national weighted activity unit during the affected periods in 2020–21 for the NEP Determination 2023–24. This approach also recognised the increased costs that the jurisdiction incurred outside of the lockdown period, to reflect increased hospital costs in the post-COVID-19 era.

Stabilisation process for other data preparation

The key stages in the NEP and NEC stabilisation process for other data preparation are outlined in **Figure 1**. IHACPA's JAC and CAC will be provided with the opportunity to review the stability interventions presented to IHACPA's TAC before these interventions are implemented.

Figure 1. Overview of the NEP and NEC stabilisation process for other data preparation



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