The Pricing Framework for Australian Public Hospital Services

February 2013
The Hon Michelle O‘Byrne  
Chair, Standing Council on Health  
GPO Box 1470  
HOBART TAS 7000

Dear Commonwealth, state and territory Ministers for Health

On behalf of the Independent Hospital Pricing Authority (IHPA), I am pleased to present the Pricing Framework for Australian Public Hospital Services 2013-14.

This is the second Pricing Framework issued by IHPA. It outlines the principles, scope and methodology adopted by IHPA to determine the national efficient price for public hospital services for the financial year 2013-14. The Pricing Framework emphasises the commitment by IHPA to transparency and accountability in our work. IHPA has determined a national efficient price that aims to enable Local Hospital Networks, clinicians and hospital staff to make choices about how best to deliver ‘the right care at the right time in the right setting’ for their local communities.

The national implementation of activity based funding for Australian public hospitals is one of the most significant reforms impacting on public hospitals in recent history. The implementation of activity based funding, including the national efficient price, creates new transparency and strengthened incentives for efficiency in the delivery of public hospital services.

Looking forward, IHPA is committed to continuing to improve the key foundations of activity based funding. IHPA is focused on making improvements to support the implementation of activity based funding, including the revision and development of classification systems; focusing on the quality, accuracy and timeliness of activity, cost and expenditure data from jurisdictions; and the consistency of cost allocation methods applied across the states and territories.

The role of states and territories as system managers of public hospitals is vitally important. IHPA also works in partnership with other national agencies, including the Australian Commission on Safety and Quality in Health Care and the National Health Performance Authority. These collaborations ensure that pricing, quality and performance measures for public hospitals are complementary and, together, create a strong national framework for the delivery of public hospital services.

Finally, I would like to affirm the commitment of IHPA to transparency and continuous improvement in how it undertakes its delegated functions, grounded in an open and consultative approach to working with the health sector in the implementation of funding reform for public hospitals.

Yours sincerely

Shane Solomon  
Chair  
Independent Hospital Pricing Authority
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<td>Activity Based Funding</td>
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<td>AHSA</td>
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<td>GEM</td>
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1. Introduction

In June 2012, the Independent Hospital Pricing Authority (IHPA) published the National Efficient Price Determination for 2012-13, and the Pricing Framework for Australian Public Hospital Services 2012-2013 that underpinned the determination.

In September 2012, IHPA released a consultation paper on key issues that IHPA was considering in the preparation of the Pricing Framework for Australian Public Hospital Services 2013-2014. Submissions were received from over 40 organisations, including all state and territory governments and the Commonwealth Department of Health and Ageing. The vast majority of these submissions are available on IHPA website (www.ihpa.gov.au).

These submissions have been carefully considered by the Pricing Authority, and incorporated into this document where appropriate.

Pricing Framework for Australian Public Hospital Services 2013-2014 builds on Pricing Framework for Australian Public Hospital Services 2012-2013. For simplicity, where IHPA has reaffirmed a previous principle, the supporting argument has not been restated in this year’s paper.

2. Context

The introduction of a national Activity Based Funding (ABF) system is intended to improve efficiency, as well as improving the transparency of funding contributions of the Commonwealth, state and territory governments for each Local Hospital Network across Australia. To achieve this, IHPA is required to determine the National Efficient Price (NEP) that will be used to calculate Commonwealth payments for in-scope public hospital services that are funded on an activity basis. The determination of the NEP for public hospital services that are funded on an activity basis is the primary function of IHPA.

In accordance with the National Health Reform Agreement (the Agreement), the national implementation of ABF will be staged as follows:

- In 2013-14 the quantum of Commonwealth funding for public hospital services for each state and territory will be fixed at the level specified in the National Healthcare Specific Purpose Payment. This means that in 2013-14:
  - Total Commonwealth funding for public hospital services will not vary according to the volume of services provided; but instead.
  - Commonwealth funding will be expressed as a share of the NEP.
  - The Commonwealth’s share of the NEP will vary across states and territories (it will not be a fixed share such as 40%) because there are different rates of, and expenditure on, utilisation of public hospital services across Australia.

- From 2014-15 onwards, the Commonwealth’s funding for public hospital services funded on an activity basis moves from a ‘capped’ basis (a known quantum of funding) to an ‘uncapped’ basis (funding will vary in response to changes in activity and the cost of public hospital services as represented through the NEP). The approach and formulae used to calculate Commonwealth funding from 2014-15 onwards are specified in the Agreement (Clauses A3, A5, A34-A40, and A67-A79). In simple terms:
  - In 2014-15 to 2016-17 the Commonwealth will pay 45% of the NEP for ‘growth’ in the volume of services relative to the previous year.
In 2014-15 to 2016-17 the Commonwealth will also recognise changes in the NEP. It will pay a price adjustment calculated by multiplying the previous year’s volume of services by the change in the NEP relative to the previous year multiplied by 45%.

From 2017-18 onwards, the growth in volume and price adjustments will use a rate of 50%, rather than 45%.

While the NEP determines Commonwealth funding for public hospital services, the Agreement does not require the states and territories to fund at the NEP. Under the Agreement (Clauses A59-A66), states and territories have autonomy as to the level of funding they choose to invest in public hospital services. States and territories “meet the balance of the cost of delivering public hospital services and functions over and above the Commonwealth contribution”. States and territories may choose to provide a higher or lower share of the NEP.

3. Pricing Guidelines

Understanding this element of the Pricing Framework

Governments agreed to establish IHPA to provide independent advice about the efficient cost of public hospital services. Much of this advice will be evidence-based, drawing on technical knowledge and expertise about the classification, costing and funding of public hospital services. Nonetheless, IHPA must also balance a range of national policy objectives including improving the efficiency and accessibility of public hospital services. This role requires IHPA to exercise judgement on the weight to be given to different policy objectives.

In order to be transparent about how it makes decisions that involve policy choices, IHPA has developed a set of Pricing Guidelines. These Pricing Guidelines will be used to explain the key decisions made by IHPA in this Pricing Framework. The Pricing Guidelines may also be used by governments and other stakeholders to evaluate whether IHPA is undertaking its work in accordance with the explicit policy objectives included in the Pricing Guidelines.

The Pricing Guidelines signal the commitment by IHPA to transparency and accountability in how it undertakes its work.

Feedback received

Submissions were generally supportive of the current set of Pricing Guidelines. Some submissions questioned the implementation of the Pricing Guidelines (for example, NSW suggested that the current private patient pricing arrangements are not consistent with the guideline of public-private neutrality). In this document, such issues are addressed in the specific part of the Pricing Framework that deals with the implementation of the pricing guideline.

Most submissions agreed that it was too early to discern what impacts the introduction of a national system of ABF may have had, though some submissions did report early signs of positive impacts.

IHPA’s decision

IHPA has developed, and will use, a set of Pricing Guidelines (specified in Box 1) to guide its decision-making, where it is required to exercise policy judgement in undertaking its legislated functions. These are unchanged from 2012-13.


**Next steps and future work**

IHPA will actively monitor the impact of the implementation of ABF. This will include monitoring changes in the mix, distribution and location of public hospital services, consistent with its responsibilities under Clause A25 of the Agreement. In 2013, IHPA will develop, in conjunction with the Clinical Advisory Committee, a monitoring framework for this purpose.

IHPA will also setup a long term evaluation program to monitor any impacts that the introduction of a national ABF system may have on the delivery of public hospital services. This will commence in 2013.
Box 1: Pricing Guidelines

The Pricing Guidelines comprise the following overarching, process and system design guidelines.

**Overarching Guidelines** that articulate the policy intent behind the introduction of funding reform for public hospital services comprising activity based funding (ABF) and block grant funding:

- **Timely-quality care**: Funding should support timely access to quality health services.
- **Efficiency**: ABF should improve the value of the public investment in hospital care and ensure a sustainable and efficient network of public hospital services.
- **Fairness**: ABF payments should be fair and equitable, including being based on the same price for the same service across public, private or not-for-profit providers of public hospital services.
- **Maintaining agreed roles and responsibilities of governments determined by the Agreement**: Funding design should recognise the complementary responsibilities of each level of government in funding health services.

**Process Guidelines** to guide the implementation of ABF and block grant funding arrangements:

- **Transparency**: all steps in the determination of ABF and block grant funding should be clear and transparent.
- **Administrative ease**: Funding arrangements should not unduly increase the administrative burden on hospitals.
- **Stability**: the payment relativities for ABF are consistent over time.
- **Evidence based**: Funding should be based on best available information.

**System Design Guidelines** to inform the options for design of ABF and block grant funding arrangements:

- **Fostering clinical innovation**: Pricing of public hospital services should respond in a timely way to introduction of evidence-based, effective new technology and innovations in the model of care that improve patient outcomes.
- **Price harmonisation**: Pricing should facilitate best practice provision of appropriate site of care.
- **Minimising undesirable and inadvertent consequences**: Funding design should minimise susceptibility to gaming, inappropriate rewards and perverse incentives.
- **ABF pre-eminence**: ABF should be used for funding public hospital services wherever practicable.
- **Single unit of measure and price equivalence**: ABF pricing should support dynamic efficiency and changes to models of care with the ready transferability of funding between different care types and service streams through a single unit of measure and relative weights.
- **Patient-based**: Adjustments to the standard price should be, as far as is practicable, based on patient-related rather than provider-related characteristics.
- **Public-private neutrality**: ABF pricing should not disrupt current incentives for a person to elect to be treated as a private or a public patient in a public hospital.
4. In-scope Public Hospital Services

Determining what is a “public hospital service”

Making decisions about what is, or is not, a public hospital service for the purpose of determining eligibility for Commonwealth funding is one of the important tasks of IHPA.

In August 2011 governments agreed to be jointly responsible for funding growth in ‘public hospital services’. But, as there is no standard definition or listing of public hospital services, governments gave IHPA the task of deciding which services will be ruled ‘in scope’ as public hospital services, and so eligible for Commonwealth Government funding.

The reformed funding arrangements agreed by governments apply to ‘public hospital services’, not public hospitals. Many public hospitals provide some services, such as residential aged care services, that are not generally regarded as public hospital services. In addition, organisations other than public hospitals may provide ‘public hospital services’. This happens, for example, if governments or public hospitals contract out the provision of some public hospital services to private hospitals and non-government organisations.

Policy drivers underpinning IHPA’s decision

The way in which public hospital services are delivered is evolving, with many services now being provided in different settings. For example, dialysis is now frequently provided in a person’s home or in satellite clinics located outside public hospitals. Hospital-in-the-home programs allow people to receive chemotherapy, intravenous antibiotics and antiviral therapy in their homes under the supervision of hospital outreach staff. In order to provide these new approaches to patient care, funding has to follow the patient outside the hospital.

Clause A23 of the Agreement guarantees that if services move outside hospitals in response to changes in clinical practice, these services will still be funded as if they were provided in hospitals. To do otherwise when funding is based on activity could create incentives to admit more patients into public hospitals, rather than treat them in the community when it is safe to do so.

The determination that a service is in-scope as a public hospital service has significant financial implications. It means that from 1 July 2012 the Commonwealth Government will pay a share of the NEP when these services are funded on an activity basis. From 1 July 2014 onwards, the Commonwealth Government will also contribute to growth in the NEP and volume of these services. This creates a strong financial incentive on states, territories and health services to have as broad a range of services classified as in-scope public hospital services by IHPA. In recognition of this financial incentive, the Agreement (Clause A24) requires that States “will not change the management, delivery and funding of health and related services for the dominant purpose of making that service eligible for Commonwealth funding”. IHPA is required to undertake analysis if it is suggested that services have been transferred from the community to public hospitals for the purposes of making these services eligible for Commonwealth funding. Following analysis and consultation, IHPA can then make a determination as to whether such services will or will not be eligible for Commonwealth funding.

The implementation of ABF of public hospital services does not change the existing responsibilities of governments for funding other health services. These ongoing responsibilities of each level of government are specified in the Agreement. One of IHPA’s Pricing Guidelines is that it will “recognise the complementary responsibilities of each level of government in funding health services”. This includes funding of General Practitioners (GPs), private medical specialist services, pharmaceuticals
and aged care by the Commonwealth Government, and the provision and funding of a range of public health, community health and other specialised services by the states and territories.

Similarly, IHPA’s responsibility for making decisions on the scope and pricing of public hospital services is intended to complement (not to replace) the ongoing autonomy of states and territories, Local Hospital Networks and clinicians to make decisions about desirable models of care to meet the needs of their local communities. IHPA will price public hospital services, recognising that they may be provided in different settings and be based on different models of care.

**Submissions received**

Many submissions highlighted the continuing trend to provide increasing numbers of public hospital services in the community, and strongly advocated that IHPA should ensure that the determination of the general list did not impede this process.

The submissions received did not highlight any significant changes in clinical practice that IHPA should consider in reviewing this scope of public hospital services for 2013-14.

**IHPA’s decision**

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<th>IHPA has determined that, from 1 July 2013, the scope of public hospital services eligible for Commonwealth funding will be:</th>
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<td>➢ All admitted programs, including hospital in the home programs</td>
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<td>➢ All emergency department services</td>
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<td>➢ Non-admitted services that meet the criteria for inclusion on the general list, with further specification in Box 2 at the end of this chapter.</td>
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**Next steps and future work**

IHPA has determined the general list for services that are eligible for Commonwealth funding under the NHRA, and published this as part of the National Efficient Price Determination for 2013-14.

The NHRA makes provision for the Standing Council on Health (SCOH) to direct IHPA to amend the General List up until 30 June 2013. After that time, SCOH may request IHPA to make changes.

Consistent with clause A17 of the NHRA, IHPA has also determined a list of services (the ‘A17 list’), which would not normally be considered a public hospital service, but which IHPA is satisfied were provided by a particular hospital in 2010. The services on this list are eligible for Commonwealth funding only at the LHN indicated in the list.
Box 2: Scope of Public Hospital Services and General List of Eligible Services

In accordance with Section 131(f) of the *National Health Reform Act 2011* (the Act) and Clauses A9–A17 of the Agreement, the scope of “Public Hospital Services” eligible for Commonwealth funding under the agreement are:

- All admitted programs, including hospital in the home programs. Forensic mental health inpatient services are included as recorded in the 2010 Public Hospitals Establishment Collection.
- All emergency department services.
- Non-admitted services as defined below.

**Non-admitted Services**

This listing of in-scope non-admitted services is independent of the service setting in which they are provided (e.g. at a hospital, in the community, in a person's home). This means that in scope services can be provided on an outreach basis.

To be included as an in scope non-admitted service, the service must meet the definition of a ‘service event’ which is:

- An interaction between one or more healthcare provider(s) with one non-admitted patient, which must contain therapeutic/clinical content and result in a dated entry in the patient’s medical record.

Consistent with Clause A25 of the agreement, the Independent Hospital Pricing Authority will conduct analysis to determine if services are transferred from the community to public hospitals for the dominant purpose of making those services eligible for Commonwealth funding.

There are two broad categories of in-scope, public hospital non-admitted services:

A. Specialist Outpatient Clinic Services

B. Other Non-admitted Patient Services
Box 2: Scope of Public Hospital Services and General List of Eligible Services (ctd)

Category A: Specialist outpatient clinic services – Tier 2 Non-admitted Services Classification – Classes 10, 20 and 30

This comprises all clinics in the Tier 2 Non-Admitted Services classification, classes 10, 20 and 30 that were reported as a public hospital service in the 2010 Public Hospital Establishments Collection in terms of their activity, expenditure or staffing, with the exception of the General Practice and Primary Care (20.06) clinic, which is considered by the Pricing Authority as not to be eligible for Commonwealth funding as a public hospital service.

Category B: Other non-admitted patient services and non-medical specialist outpatient clinics (Tier 2 Non-Admitted Services Class 40)

To be eligible for Commonwealth funding as an Other Non-admitted Patient Service or a Class 40 Tier 2 Non-Admitted Service, a service must be:

- directly related to an inpatient admission or an emergency department attendance; or
- intended to substitute directly for an inpatient admission or emergency department attendance; or
- expected to improve the health or better manage the symptoms of persons with physical or mental health conditions who have a history of frequent hospital attendance or admission; or
- reported as a public hospital service in the 2010 Public Hospital Establishments Collection.

Jurisdictions have been invited to propose services that will be included or excluded from Category B “Other Non-Admitted Patient Services”. Jurisdictions will be required to provide evidence to support the case for the inclusion or exclusion of services based on the four criteria above.

The following clinics are considered by the Pricing Authority as not to be eligible for Commonwealth funding as a public hospital service under this category:

- Commonwealth funded Aged Care Assessment (40.02);
- Family Planning (40.27);
- General Counselling (40.33);
- Primary Health Care (40.08).

Jurisdictions that consider that there are exceptions where the above services should be included as eligible for Commonwealth funding as a public hospital service have been asked to provide evidence to support their inclusion based on whether the clinic was reported as a public hospital service in the 2010 Public Hospital Establishments Collection.
Interpretive Guidelines for Use

In line with the criteria for Category B, community mental health, physical chronic disease management and community based allied health programs considered in-scope will have all or most of the following attributes:

- Be closely linked to the clinical services and clinical governance structures of a public hospital (for example integrated area mental health services, step-up/step-down mental health services and crisis assessment teams);
- Target patients with severe disease profiles;
- Demonstrate regular and intensive contact with the target group (an average of 8 or more service events per patient per annum);
- Demonstrate the operation of formal discharge protocols within the program;
- Demonstrate either regular enrolled patient admission to hospital or regular active interventions which have the primary purpose to prevent hospital admission.

Home Ventilation

- A number of jurisdictions have submitted home ventilations programs for inclusion on the general list. The Pricing Authority has included these services on the general list in recognition that they meet the criteria for inclusion, but will review this decision in the future once the full scope of the National Disability Insurance Scheme is known.

Out of scope services

The Pricing Authority has determined that the following non-admitted services are not in-scope for Commonwealth funding, on the basis that they do not align with interpretive guidelines for inclusion listed above:

Mental Health:

- Psychosocial rehabilitation programs (including long term supported accommodation, vocational training programs, community care units) where the primary purpose is to meet the social needs of consumers living in the community rather that hospital avoidance.

- Prevention and early intervention services which are in many cases funded by the Commonwealth Government.

Chronic Disease management

- Community based diabetes programs where the primary focus is on the ongoing management of stable diabetes patients.
5. The National Efficient Price for Activity Based Funded Public Hospital Services

5.1 Overview

Setting the National Efficient Price

The national introduction of ABF is intended to improve efficiency, as well as making transparent the funding contributions of the Commonwealth, state and territory governments for each Local Hospital Network across Australia. To achieve this, IHPA is required to determine the NEP that will be used to calculate Commonwealth payments for in-scope public hospital services that are funded on an activity basis.

Provisions of the Act and/or the Agreement

The Act (Clause 131(1)) identifies several functions of IHPA that are particularly relevant to determining the NEP including:

- “To develop and specify classification systems for health care and other services provided by public hospitals”;
- To determine data requirements and data standards to support uniform provision of data, including standards relating “to patient demographic characteristics and other information relevant to classifying, costing and paying for public hospital functions”; and
- “To determine adjustments to the NEP to reflect legitimate and unavoidable variations in the costs of delivering health care services”.

The Agreement provides further specifications on the approach to be used by IHPA in determining the NEP. In particular, the Agreement indicates that IHPA will:

- Undertake “empirical analysis of data on actual activity and costs in public hospitals, taking account of any time lag and the cost weights to be applied to specific types of services” (Clause B3(d));
- Have regard to “ensuring reasonable access to public hospital services, clinical safety and quality, efficiency and effectiveness and financial sustainability of the public hospital system” (Clause B12(a)) and “to the need for continuity and predictability in prices” (Clause B12(d));
- “Have regard to any input costs funded through other Commonwealth programs, such as pharmaceuticals supplied under arrangements pursuant to Section 100 of the National Health Act 1953 and magnetic resonance imaging services funded through Medicare Benefits Schedule (MBS) bulk-billing arrangements” (Clause B12(e));
- Determine “the national efficient price that will apply to eligible private patients receiving public hospital services (Clause B3(l)), with the methodology to be based on excluding or reducing the components of the service for private patients which are covered through other funding sources (Clause A41);
- Determine adjustments to the national efficient price that “have regard to legitimate and unavoidable variations in wage costs and other inputs which affect the costs of service delivery including: a) hospital type and size; b) hospital location, including regional and remote status; and c) patient complexity, including Indigenous status” (Clause B13); and
Develop “projections of the national efficient price for a four year period, updated on an annual basis and providing confidential reports on these projections to the Commonwealth and States” (Clause B3(h)).

5.2 Purpose and use of the national efficient price

IHPA re-affirms that the national efficient price (NEP) has two important purposes:

1. The NEP is one of the major determinants of the level of Commonwealth funding on public hospital services; the other factor determining Commonwealth expenditure is the volume of public hospital services provided.

2. The NEP provides a price signal or benchmark about the efficient cost of providing public hospital services. This price signal is an important driver of change:
   - It allows states and territories in their capacity as system managers to determine the level of state or territory funding provided and the approaches that will be implemented to support public hospitals in improving efficiency.
   - It encourages Local Hospital Networks and public hospitals to benchmark their cost structure against the efficient cost of providing public hospital services and so identify options for improvement.
   - It promotes transparency so that states and territories, Local Hospital Networks and public hospitals can make choices (within the context of state or territory health plans and service agreements) about the range of public hospital services they provide, the models of care and the settings in which care is provided that are consistent with accessible, equitable and high quality public hospital services provided on an efficient basis.

While the NEP determines Commonwealth funding for public hospital services, it does not require the states and territories to fund at the NEP. Under the Agreement (Clauses A59-A66), states and territories have autonomy as to the level of funding they choose to invest in public hospital services. States and territories “meet the balance of the cost of delivering public hospital services and functions over and above the Commonwealth contribution”. States and territories may choose to provide a higher or lower share of the NEP.

The outcome of these different funding approaches by the Commonwealth, state and territory governments is that Local Hospital Networks will not necessarily be paid at the NEP. The ‘price’ or payment that Local Hospital Networks receive will be the sum of:

- The Commonwealth share of the NEP (fixed in 2013-14, and varying in subsequent years depending upon whether activity is ‘baseline’ or ‘growth’ activity); and
- The state and territory contribution towards funding public hospital services.
**IHPA’s decision**

Within this context of the important role of the NEP as a price signal, IHPA has developed a definition of the NEP.

IHPA reaffirms the following definition that sets out its expectations about the operation of the NEP:

A public hospital service operating at the NEP will:

- be able to provide episodes of patient care (on average, across all types of care, as measured using agreed classifications) and other services (including teaching, training and research) at or below the national benchmark price;
- be able to respond to evidence based initiatives to improve patient care including new technologies;
- be able to provide services at a quality level consistent with national standards, and to minimise negative consequences that fall on patients (including those attributable to poor quality and safety) or on other parts of the service system; and
- be able to make choices about how best to deliver services to ensure that people receive the ‘right care at the right time in the right setting’.

In adopting this definition, IHPA is seeking to convey that:

- The NEP is a benchmark of efficiency. It is not the price at which public hospital services can be provided most cheaply or at the lowest price.
- The NEP is the price that allows for the provision of public hospital services at a quality level consistent with national standards. It is not the price at which public hospital services can be provided with no regard for the quality and safety with which those services are delivered.
- The NEP will move in response to changes in how care is delivered. The ‘value’ of the NEP will not be eroded over time; instead it will move in response to changes in the costs of delivering public hospital services.
- The NEP will provide a price signal that will allow choices to be made by governments, by Local Hospital Networks, and by public hospitals about how best to provide public hospital services.

**5.3 Classifications, counting and costing inputs**

In determining the NEP for activity based funded services, IHPA must first specify the classifications, counting rules, data and coding standards, and the methods and standards for costing data.

**Feedback received – classifications**

**Admitted Acute**

The issue of when to adopt the Australian Refined Diagnosis Related Groups (AR-DRG) V7.0 resulted in a diverse range of responses. All states and territories agreed that AR-DRG V6.x should be used for pricing in 2012-13, citing the lack of data available to support an earlier adoption. However, a number of medical technology manufacturers (Johnson and Johnson Medical, Medtronic Australasia and the Medical Technology Association of Australia) advocated the earliest possible adoption of the new version.

The National Casemix Classification Centre, University of Wollongong, accepted that IHPA would not be in a position to price services in AR-DRG V7.0, but proposed that there should be ‘a distinction
between “adoption” […] by IHPA for the purpose of pricing, and adoption by the system. Modelling and analysis in V7.0 will need to be undertaken in 2013 across the public hospital system and in IHPA, in preparation for the release of the NEP, in late 2013, for 2014-15. For this reason the new AR-DRG V7.0-DRG classification must be in place in 2013.”

Whilst IHPA understands the need to update the AR-DRG classification system in a timely and regular fashion, the timeframes mandated by the Agreement made it difficult to adopt AR-DRG V7.0 for pricing in 2013-14. Moreover, IHPA is mindful of the need to provide a stable and predictable pricing regime, especially in the early phases of implementation of the national ABF system.

**Non Admitted Patients**

A number of submissions raised specific technical issues with the Tier 2 Non Admitted Services classification, including additional clinics that could be added to improve the efficacy of the system. Many of these improvements have been incorporated into the classification for 2013-14.

Tasmania expressed concerns that the Tier 2 classification system is clinic based, and expressed concerns about the application of the bundling rules for ancillary services such as radiology and pathology.

IHPA is mindful of the limitations of the current non-admitted classification system and will continue to refine the Tier 2 system, based on data from 2011-12 that is expected to be of higher quality than previous submissions. Notwithstanding these expected improvements, IHPA considers that the Tier 2 classification is the best system currently available at this stage of implementation of the Agreement.

**Subacute Patients**

In our consultation paper, IHPA proposed to adopt the Australian National Subacute and Non-acute Patient classification (AN-SNAP) Version 2 for pricing. In the event that AN-SNAP data is not available at a jurisdiction or local hospital network level, IHPA had proposed to default to an AR-DRG pricing model.

Tasmania and South Australia do not support the use of AN-SNAP in 2013-14 – Tasmania preferring block funding or per diem payments, and South Australia advocating a per diem approach.

Only the ACT supported the use of an AR-DRG model in the event that AN-SNAP data is not available.

The Centre for Health Service Development (CHSD), the author of the AN-SNAP classification system, advocated IHPA adopting AN-SNAP Version 3, noting that it is the most up to date version.

Palliative Care NSW were concerned that adequate definitional work had not been done, and there was a risk that palliative care would be “corralled” into subacute settings.

IHPA will price subacute services in AN-SNAP version 3 in 2013-14, and where AN-SNAP data is not available, per diem payments, weighted by care type, will be the default approach.

The AN-SNAP classification was developed by the Centre for Health Service Development, University of Wollongong, in 1997. It classifies patients on the basis of care type (rehabilitation, palliative care, geriatric evaluation and management, psychogeriatric and maintenance care), functional assessments and other measures. The classification has been used by NSW and Queensland for a number of years.
The funding model for AN-SNAP that IHPA is implementing is a blended model, in that it consists of both an episodic payment (similar to a DRG payment) and a per diem payment, for all patients. The total episode can still be described in terms a single NWAU value, consistent with the broader National Pricing Model.

**Mental Health Services**

IHPA proposed that AR-DRGs would be used for admitted patients in 2013-14, but with modifications made to enhance the explanatory power of DRGs for these patients. IHPA has consulted with the Mental Health Working Group on this issue, and investigated a number of variables that can be used to improve the explanatory power of the AR-DRGs for mental health patients. These are detailed in the Technical Specifications for the 2013-14 National Pricing Model.

South Australia, the Australian Capital Territory, Western Australia, the Northern Territory, Tasmania and the Commonwealth expressed support for the proposal, whilst Victoria and New South Wales advocated block funding these services, until such time as a new classification system is established. The Royal Australian and New Zealand College of Psychiatrists expressed concerns that the proposed approach has not yet been field tested. Queensland and Queensland Metro South Hospital and Health Services both supported a weighted per diem pricing approach.

IHPA has conducted extensive analysis of possible improvements to the mental health DRGs. Patients who receive specialist psychiatric care (i.e. have specialised psychiatric care days recorded in the activity data set), have a significantly different cost distribution than those who don’t, regardless of the DRG they are grouped to. Patients with a mental health primary diagnosis, also have a significantly different cost profile to other patients. When these factors are taken into account in the national pricing model, the DRG level explanation of variance for these patients improves dramatically, and forms the basis of IHPA’s approach to pricing these services in 2013-14.

This is an interim refinement for acute mental health pricing, while a new classification is being developed which is likely to take account of other factors besides diagnosis, and incorporate mental health care across multiple settings so as to provide an incentive for the most appropriate care option.

A detailed explanation of this approach and improvements in statistical performance is at Appendix A.

**Counting unit (the National Weighted Activity Unit)**

Both Tasmania and the Australian Healthcare and Hospitals Association (AHHA) expressed concerns about the construction of the national weighted activity unit (NWAU). Their argument is that the combination of loadings and adjustments into the activity unit renders the NWAU not understandable as either a count of activity or as an estimate of financial effort.

There has, however, been broad support for the concept from most stakeholders.

IHPA does not agree with the argument put forward by Tasmania and AHHA and intends to retain the NWAU as the counting unit of the national pricing model in 2013-14. IHPA is of the view that this statistically robust approach has been developed over a number of years in various forms, and operationalises the system design principle of dynamic efficiency – that it allows for the smooth substitution of services across setting (for example, admitted to outpatients or community settings).
Costing data

There was a significant amount of feedback on costing data. The Australian Medical Association (AMA) advocated using more recent costing data to calculate the NEP.

Victoria raised concerns that the national pricing model is based on data that is not fit for purpose, and recommends a review of the current census based approach to costing, as well as a rationalisation of the NHCDC to collect data at a more aggregated level.

Tasmania and AHHA queried the quality and consistency of the NHCDC data, with AHHA stating they “believe the NHCDC is not yet robust enough to support a pricing framework and this demonstrates the risks of using a single source of data for policy development.”

IHPA has initiated a project to undertake a strategic review of all aspects of the NHCDC, including governance, data collection and reporting requirements, and quality assurance aspects. It is expected that this review will be an ideal opportunity to address many of the issues raised in these submissions.

IHPA believes that the data used in the calculation of the NEP is reliable, notwithstanding the opportunity to further improve the consistency of cost data methods nationally. IHPA is also mindful that less emphasis has traditionally been placed on the costing outside of acute admitted settings, and is working with jurisdictions to improve this situation.

IHPA engaged an independent consultant to conduct an independent financial review of both Round 14 and Round 15 of the NHCDC. Whilst these reviews highlighted room for significant improvements, it is also the case that the reviews were generally able to provide a reliable reconciliation between the data submitted to the NHCDC and the financial data in hospital financial management systems.
**IHPA's decision**

IHPA has determined that the following classifications, counting unit and costing data will be used in setting the NEP in 2013-14.

The classifications are:

- Emergency department services: Urgency Related Groups (URG) V1.3 (for recognised emergency departments at Levels 3B-6) and Urgency Disposition Groups (UDG) V1.3 (for recognised emergency departments at Levels 1-3A);
- Non-admitted patient services: Tier 2 non-admitted services V2.0;
- Subacute patients: AN-SNAP Version 3 (where AN-SNAP data is collected) and care type (where AN-SNAP data is not collected); and
- Specialist mental health patient services: AR-DRG Version 6.x (with modifications applied in the pricing model).


The counting unit (that is used to express the price weights) is the National Weighted Activity Unit (Version 2013-14), described as NWAU (13).

The costing data used in setting the 2013-14 NEP is the National Hospital Cost Data Collection (NHCDC) Round 15 (2010-11 data). Public Hospital Expenditure Data is also used to give additional confidence in the NHCDC data where possible.

The version of the Australian Hospital Patient Costing Standards to be used for costing of public hospital services that are delivered in 2013-14 (NHCDC Round 17) will be determined following the completion of the Strategic Review of the NHCDC in the first quarter of 2013.

**Next steps and future work**

IHPA has published a comprehensive Work Program for 2013 on its website (www.ihpa.gov.au). In 2013-14 IHPA will undertake further work on classifications as follows:

**Subacute services**

- IHPA has engaged the Australian Institute of Health and Welfare (AIHW) to establish common definitions of subacute care nationally. IHPA has also engaged the University of Sydney to investigate the available tools for inclusion in a long-term classification system, which address deficiencies in existing tools for each care type and options to address the lack of suitable instruments for children, ambulatory and Geriatric Evaluation and Management (GEM) patient groups and best explain resource use.
- IHPA is in discussions with CHSD, University of Wollongong, regarding options for further refining AN-SNAP beyond version 3.

**Mental health services**

- IHPA has commenced work on designing a new classification system for mental health services. The University of Queensland has been engaged to define the types of mental health services delivered by public hospitals (in both admitted and community settings), and to identify the cost drivers of such activity.
Following on from this work, IHPA expects to commence classification development and costing studies in the second half of 2013, with the expectation that the new classification system will be operational in 2014-15.

Teaching, training and research

- IHPA has created a Teaching, Training and Research (TTR) Working Group to advise IHPA on establishing the building blocks of a future pricing model. It is expected that during 2013 IHPA will make significant progress on identifying the types of teaching, training and research that need to be funded in public hospitals, the cost drivers of this activity, as well as identifying methods for counting and costing these items.

Emergency department services

- IHPA will undertake a costing study and a major review of the mapping of diagnosis codes to major diagnostic blocks, to improve the explanatory power of the URG classification system during 2013.

Non-admitted services

- IHPA will review the robustness of the Tier 2 non-admitted classification once better data is available, as well as utilising the patient level data available from the Non-Admitted Patient Data Set Specification.
- IHPA will publish a National Clinic Index, to assist jurisdictions and Local Hospital Networks to map their hospital clinics to Tier 2 in a more nationally consistent way.
- IHPA will also publish the Tier 2 Compendium, which clarifies the business rules for the application of the Tier 2 classification, and data set counting rules.
- In the short term, IHPA will conduct a major costing study to further improve both the classification system and price setting in 2014-15.

5.4 Setting the level of the national efficient price for public patients

Having determined the classifications, counting and costing data, the critical question is the approach to setting the level of the NEP. IHPA has considered and balanced three of the Pricing Guidelines, namely:

- **Timely-quality care**: Funding should support timely access to quality health services. In other words, the NEP should support public hospital services being widely accessible, in a manner that allows care to be provided at the right time and at a quality level that meets national standards.

- **Fairness**: ABF payments should be fair and equitable. The Agreement indicates that IHPA should “consider the actual cost of delivery of public hospital services in as wide a range of hospitals as practicable” (Clause B12(b)). A cost-based approach to pricing that recognises the actual costs incurred in the provision of public hospital services across a wide range of hospitals helps ensure fairness and equity of funding. However, there is considerable variation across hospitals in the cost of delivering public hospital services. Setting the NEP at about the middle of the distribution of costs (known as pricing at the ‘central tendency’) is fair: it values the efforts of hospitals that are able to provide public hospital services at lower than average costs and it creates an incentive for hospitals that are currently operating at higher than average costs.
Efficiency: ABF should improve the value of the public investment in hospital care and ensure a sustainable and efficient network of public hospital services. In setting the NEP, IHPA needs to balance short-term improvements in efficiency with the need to ensure the ongoing provision of a network of hospital services. It has to ‘set the pace’ of how fast or how slowly efficiency improvements can reasonably be expected. The Agreement requires that in setting the NEP, IHPA must consider “the financial sustainability of the public hospital system” and the “need for continuity and predictability in prices” (Clause B12). IHPA also acknowledges that while considerable effort has been invested in improving and validating the NHCDC costing data, the costing data may not fully reflect the actual cost experience of all public hospitals. These factors suggest that, in the first instance, a conservative approach to price-setting is warranted in order to monitor the impact of the national implementation of ABF.

The National Health Reform Agreement also requires IHPA to take into account funding provided to hospitals by other programs, such the Pharmaceutical Benefits Scheme. In 2013-14 IHPA has deducted the following amounts in the process of calculating the NEP:

- **Commonwealth Programs:**
  - Highly Specialised Drugs ($690.0 million in the 2010-2011 financial year);
  - Pharmaceutical Reform Agreements – Efficient Funding of Chemotherapy (Section 100 funding) ($96.9 million in the 2010-2011 financial year);
  - PBS – Herceptin: Early Stage Breast Cancer ($24.2 million in the 2010-2011 financial year); and
  - Pharmaceutical Reform Agreements – PBS Access Program ($102.2 million in the 2010-2011 financial year).

In addition, any costs reported by states in the NHCDC relating to blood products have been removed as Commonwealth funding for this program is provided directly to the National Blood Authority. In the 2010-11 year on which the NEP is based, $118.3 million was reported in the NHCDC for blood product use.

**IHPA’s decision**

IHPA has decided to set the NEP using a measure of central tendency in 2013-14.

IHPA has determined that the NEP for 2013-14 will be set on the basis of the average cost per weighted separation (arithmetic mean).

IHPA have removed a total of $1,032 million from the 2010-11 cost data for programs that are funded through other mechanisms.

IHPA has determined that the NEP of a NWAU(13) is $4,993.

IHPA will review the impact of pricing at the mean in 2013-14, with a view to refining the benchmark used to set the NEP from 2014-15.

Further technical information on the calculation of the NEP is available in The National Efficient Price Determination 2012-2013 on the IHPA website.

**Next steps and future work**

The decision to commence the national implementation of ABF with pricing at the central tendency is based on judgement about balancing several policy objectives outlined previously.
As foreshadowed previously, IHPA will review the setting of the NEP at the average in the lead up to determining the 2014-15 price. Some of the factors that IHPA will seek to address include:

- How the distribution and level of costs of public hospital services have changed following the national implementation of ABF;
- How states and territories have intervened to mitigate, heighten or otherwise influence the payments received by Local Hospital Networks through setting the level of the state or territory contribution for funding of public hospital services;
- Whether there have been, or are estimated to be, changes to the scope and volume of public hospital services funded on an activity basis; and
- Whether there is improved confidence in the robustness of the costing data that is used to set the NEP.

This review will need to consider how to factor in the existing 2.5 to 3 year time lag in accessing national cost data through the NHCDC, as well as options for evaluating each of the factors identified above. This review will incorporate consultations with governments, other stakeholders and the public.
5.5 Adjustments to the national efficient price

In 2013, IHPA will establish a framework to assist jurisdictions in making applications to have legitimate and unavoidable variations in wage costs and other inputs which affect the costs of service delivery recognised by IHPA.

Provisions of the Act and/or the Agreement

The Act gives IHPA the role of determining “adjustments to the NEP to reflect legitimate and unavoidable variations in the costs of delivering health care services” (Clause 131(1)(d)).

The Agreement provides an additional specification indicating that IHPA “must have regard to legitimate and unavoidable variations in wage costs and other inputs which affect the costs of service delivery including:

a. hospital type and size;
b. hospital location, including regional and remote status; and
c. patient complexity, including Indigenous status” (Clause B13).

Feedback received

The subject of adjustments drew the greatest interest in the submissions to the consultation paper.

Intensive Care Unit (ICU) Adjustment

The Australian and New Zealand Intensive Care Society (ANZICS) wrote that “broadening the eligibility of facilities to include the College of Intensive Care Medicine (CICM) Level 2 ICUs will minimise any potential negative impact on those intensive care units and certainly will be more reflective of current intensive care practice.”

A significant number of submissions advocated using mechanical ventilation data as the mechanism for adjusting for ICU expenses, rather than a location based payment. This would reflect the model already in use in Victoria and in some private health insurance funding models.

Unfortunately, IHPA has been unable to assess either of these options for 2013-14 as the data is not currently available at a national level. However, mechanical ventilation data will be collected nationally from July 2013, and will be analysed closely as an option for funding in 2014-15.

Adjustment for specialist paediatric hospitals

There was significant feedback regarding the application of the adjustment for specialist paediatric hospitals. Numerous submissions advocated extending the adjustment to all patients aged 16 and under, regardless of the hospital they were treated in. MP4 (a clinical network representing all level 4 paediatric units in general hospitals in metropolitan Sydney) wrote that not doing this “will produce a perverse incentive for General Hospitals to divert as many young patients as possible” to specialist paediatric hospitals.

IHPA has reviewed this issue in detail (see Appendix B), and can find no evidence to support the proposition. Patients aged less than 16, in non-specialist hospitals have both shorter lengths of stay and lower costs than patients in specialist paediatric hospitals (see Table 1).
Table 1: Cost and average length of stay for paediatric and adult patients

<table>
<thead>
<tr>
<th></th>
<th>Cost Ratio (Actual/Predicted)</th>
<th>Relative LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist paediatrics</td>
<td>1.05</td>
<td>0.92</td>
</tr>
<tr>
<td>Non-specialist paediatrics</td>
<td>0.95</td>
<td>0.89</td>
</tr>
<tr>
<td>Adults</td>
<td>1.00</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Source: IHPA Working Paper: Paediatric Adjustments

IHPA expects that future revisions to the AR-DRG classification system will include work to better measure and understand the impact of paediatric complexity.

Indigenous Patient Adjustment

The AHHA submission states “the existing cost adjustment of 5% is considered inadequate as it does not reflect the additional disease burden and associated complexity of medical, social and cultural care provided to Aboriginal and Torres Strait Islander clients” and recommends a 30% loading.

Western Australia notes the recent Productivity Commission 2012 Indigenous Expenditure Report which indicates that hospital expenditures per indigenous person are $2173 above non indigenous persons (which are $1786). The Productivity Commission attributes $1891 of the higher Indigenous expenditures to higher intensity, and $283 to higher costs, with the latter being 16% of non-Indigenous expenditures. On this basis a 16% weight is implied.

IHPA will undertake an in-depth review of the Indigenous adjustment in 2013, including a review of the Productivity Commission report, and further costing studies.

Locality Adjustment

Western Australia’s submission raises concerns with the shortcomings of the Australian Statistical Geographic Classification – Remote Areas (ASGC-RA) system that IHPA uses to determine adjustments for outer regional, remote and very remote patients. Western Australia illustrates their concerns with the following example:

“Patient A is transported for treatment from Eucla to Perth (1500km) attracting a loading of 8.7 per cent compared with Patient B transported from Mallacoota to Melbourne (500km) with a loading of 5.3 per cent.

Patient X from Kununurra to Perth (3000km) attracts the same loading as patient Y transported from Wyalkatchem to Perth (200km).”

Western Australia suggests IHPA should consider an alternative approach to the Australian Statistical Geography Standard (ASGC), suggesting the State Accessibility/Remoteness Index of Australia Plus (SARIA+) as an alternate.

IHPA notes these concerns. Whilst the ASGC has some clear shortcomings, IHPA believes it is still the most reasonable geographic classification available. The ABS has recently moved to the ASGC. IHPA will assess this new standard in 2013.
Additionally, IHPA engaged an independent consultant to undertake a review of the unavoidable costs associated with operating remote area ABF hospitals which found that some remote hospitals have higher salary and wages costs and are still marginally more costly after the application of the patient level adjustments. However, IHPA believes more analysis is needed to determine whether these costs are unavoidable. As such, at this time it was not possible to determine an appropriate adjustment for these hospitals on the data currently available.

**Low volume, high complexity services**

A number of submissions presented arguments for adjustments to be applied to support low volume, highly complex services. Many of these submissions advocate for block funding arrangements for some services – these are discussed further in Chapter 6.

Tasmania’s submission expresses a view that the issue is broader than just an economy of scale issue. “The concept of being a provider of last resort is critical – the scale arises in establishing the only service in the jurisdiction.”

In determining if an adjustment should be made to the NEP, IHPA needs to pay regard to legitimate and unavoidable variations in wage costs and other inputs which affect the costs of service delivery. This necessitates, as South Australia points out, that: “IHPA pricing should not support highly specialised services without authenticating the clinical appropriateness of the service and differentiating between costs relating to inefficiency and costs relating to providing a necessary service that is inherently inefficient”.

IHPA engaged an independent consultant to undertake a review of a selection of these services in Western Australia, Northern Territory, Queensland, the Australian Capital Territory and Tasmania. The report found that there was evidence of a diseconomy of scale at Royal Darwin Hospital’s Radiotherapy Service and potentially at Royal Perth Hospital’s Burns Unit, but the evidence is not conclusive enough to support an adjustment at this stage across such highly specialised services across these types of hospitals across Australia. IHPA will work with jurisdictions to further understand these issues in 2013.

**Outreach services**

Queensland’s submission proposes that IHPA should consider an outreach adjustment to take account of the potential additional costs providing outreach services. Costs may be incurred by both the hospital where the service is delivered, as well as the hospital from where the service provider travels from.

One of the basic principles of ABF is that activity reporting follows the patient – in the event that an outreach service is provided to a patient by one hospital, but involving staff from another hospital, the activity will be attributed to the hospital where the service is recorded (generally the location of the patient). IHPA also notes the relative immaturity of costing data (and in many cases activity data) in non-admitted services generally, and in the area of outreach services more so. The lack of data in these areas precludes IHPA from applying an adjustment in 2013-14. However, IHPA will undertake a series of detailed costing studies of non-admitted services in 2013.

**Hospital peer groups**

Queensland requested that IHPA reviews previous work that demonstrated that there was no empirical evidence to support an adjustment on the basis of peer groups. Queensland suggests that IHPA should consider a peer group made up of the largest and most complex hospitals which treat the most complex cases.
IHPA has carried out this analysis and found no statistically significant cost differential between principal referral hospital (using the AIHW peer groups) and other hospitals. IHPA believes that there are a number of reasons driving this outcome. Firstly, DRGs explain a significant amount of the differences in complexity between patients. This paired with an ICU adjustment, and separate block payments for teaching, training and research results in there being no statistically significant residual variation between this group of hospitals and the general hospital population.

Other services

Victoria suggests that an adjustment should be considered for patients who are admitted to hospital and also undergo renal dialysis or radiotherapy. For example, many patients who undergo radiotherapy, a relatively expensive treatment given to a relatively small proportion of patients, do not group to a DRG where radiotherapy is a normal procedure. Victoria suggests an adjustment for these patients should be considered.

IHPA will further review these issues, along with other issues relating to radiotherapy activity, during 2013.

IHPA’s decision

IHPA used the test of whether there are empirical differences in the cost of providing public hospital services as a measure of whether there are legitimate and unavoidable variations in the costs of service delivery that may warrant an adjustment to the NEP. Decisions are based on national data sources, but were informed by data held by states and territories.

IHPA first examined patient-based characteristics in the cost of providing public hospital services, before considering hospital or provider-based characteristics.

IHPA has determined that in 2013-14, there will be:

- An adjustment for patients who are treated in an Intensive Care Unit (ICU). This applies only to patients in DRGs that do not normally have ICU treatment AND are admitted to a level 3 ICU;
- A specialist paediatric services adjustment that will take the form of DRG-specific adjustments to the price weights in relevant hospitals, for acute admitted patients;
- A paediatric adjustment of 204% for patients admitted as a subacute patient in any hospital;
- An Indigenous patient adjustment will be applied. This will be +4% for admitted acute emergency department and non-admitted patients, and +17% for subacute patients;
- An adjustment of +8% for all admitted public hospital services provided to patients from outer regional locations, payable wherever these patients are treated;
- An adjustment of +15% for all admitted public hospital services provided to patients from remote locations, payable wherever these patients are treated;
- An adjustment of +24% for all admitted public hospital services provided to patients from very remote locations, payable wherever these patients are treated;
- An adjustment for patients with specialist psychiatric care days, aged 65-84 years (+4%) and older than 85 years (+9%);
- An adjustment for patients with specialist psychiatric care days aged 17 and under, who are admitted to a specialist paediatric hospital (+30%); and
- An adjustment for patients with specialist psychiatric care days aged 17 and under, who are not admitted to a specialist paediatric hospital (+37%).
Adjustments for 2013-14: These adjustments are cumulative so, for example, the provision of public hospital services to an Indigenous patient from an outer regional location results in two adjustments to the NEP. While detailed information on each of the 2013-14 adjustments is provided in the National Efficient Price Determination 2012-2013, some background on the operation of these adjustments is provided below:

- **The ICU adjustment** is an adjustment that applies to patients who are treated in a specified ICU. It only applies to patients who are within a DRG where most patients do not normally receive treatment in an ICU. In 2013-14, eligible ICUs are those listed as meeting the College of Intensive Care Medicine Level 3 definition, or are considered to meet that level by jurisdictions. In the event IHPA continues with an ICU adjustment in this form in future years (as opposed to using mechanical ventilation), from 2014-15, this loading will only be applicable to ICUs that are recognised as level 3 or equivalent by an independent external body (for example ANZICS).

- **The adjustment for specialist paediatric hospitals** is an adjustment that is calculated on a DRG-specific basis (the adjustment may be upwards or downwards) to recognise differences in the average cost of paediatric and non-paediatric patients. The adjustment is applied for public hospital services provided to patients up to and including the age of 16 years in specified hospitals. The specified hospitals are the seven specialist children’s hospitals and two general hospitals that have a Level 3 ICU or paediatric ICU and provide a minimum specified volume of mechanical ventilations on paediatric patients.

- **The adjustment for subacute paediatric patients** applies to patients who are aged 16 or less and admitted as a subacute patient in any hospital.

- **The Indigenous patient adjustment** applies to public hospital services provided to persons who identify as being of Aboriginal or Torres Strait Islander descent. IHPA recognises that there are challenges in identifying Indigenous patients in existing data sets, and also in accurately costing the services provided to these patients. In recognition of this, IHPA has applied an Indigenous adjustment to all admitted patients (acute, subacute and mental health) and to emergency department and non-admitted patients as well.

  Analysis carried out by IHPA shows that once location of patient residence is combined with Indigeneity, the average adjustment when both adjustments are applied for Indigenous patients is 13%. This is unchanged from 2012-13, indicating that the one percentage point drop in the indigenous adjustment from the 2012-13 Determination to the 2013-14 Determination is counteracted by an increase in the remote and very remote locality adjustment.

- **The outer regional, remote and very remote location** adjustments for all admitted patients apply based on the location of the patient’s residence. That is, there will be a price adjustment for patients who reside in outer regional, remote or very remote locations if they are treated in these locations, but there will also be a price adjustment when these patients receive public hospital services in other locations. This adjustment is based on the residential status of the patient (on their post code where available), not the location of the Local Hospital Network. IHPA was unable to find evidence to support the application of this adjustment to emergency department or non-admitted patients.

  Analysis of the costing data indicated patients from outer regional or remote locations incurred higher costs, irrespective of where they were treated. This confirmed anecdotal feedback from consultations and submissions that suggested higher costs for rural and remote patients treated in metropolitan hospitals.

  IHPA has constructed a post code to remoteness area mapping file. Where post codes straddle multiple remoteness areas, the post code is mapped to the remoteness area where
the majority of resident live. Where jurisdictions believe that an alternate approach should be taken, they will be able to submit a request for change to the mapping file to IHPA.

- The **specialist psychiatric care age adjustment**, for patients who were treated in specialist psychiatric units, applies to patient age groups that demonstrated a significant cost differential in the NHCDC data. These were adolescents (aged 17 and under), and patients aged between 65 and 84, and patients aged over 85. The adjustment for adolescents (aged 17 and under) differs according to whether the patient is in a specialist children’s hospital, due to the compounding effect of the specialist paediatric adjustment.

**Next steps and future work**

As identified in the decisions, IHPA is committed to a program of ongoing work to establish the factors resulting in legitimate and unavoidable variations in the costs of providing public hospital services. This work will be focused on the empirical demonstration of differences in the costs of public hospital services.

IHPA reassures all stakeholders that its review of price adjustments will include both existing adjustments and potential adjustments. That is, the adjustments to the NEP that have been approved in 2013-14 are not adjustments that will automatically be included on an ongoing basis at the same quantum. Instead, IHPA will undertake a program of ongoing validation, testing and refinement of any price adjustments that it introduces.

In addition, IHPA received advice during the consultations and submissions about other patient-based factors that may result in variations in the cost of providing public hospital services. IHPA is committed to examining the available data to test whether there are empirical cost differences for any patient-based factors.

Finally, IHPA is committed to undertaking further work to more accurately measure the real costs of providing public hospital services to Indigenous patients.
5.6 Indexation of cost data to determine the national efficient price

In setting the NEP, IHPA must deal with the inevitable delay in provision of the actual cost of public hospital services. Currently, the most recent available data on the actual costs of public hospital services are from the 2010-11 NHCDC. This means that to set the NEP, IHPA has to index the 2010-11 cost data to reflect expected 2013-14 prices.

Approach used by IHPA

In 2012-13, IHPA considered a number of possible approaches for indexation of lagged cost data:

- Previous approaches to cost indexation under the Australian Health Care Agreements were examined. This included reviewing independent reports, as well as reports produced by governments that compared different options for indexing the costs of public hospital services.
- Consultations were held with technical experts at the ABS on index construction and at the AIHW on hospital expenditure data. Independent advice was also commissioned on approaches to the development of indices that were specific to public hospital costs, given that published indices combine cost data for public hospitals and nursing homes.
- In association with independent advice, IHPA developed an index using cost data from the NHCDC. This was validated against a similar index able to be constructed from the AIHW’s health expenditure database and results were also compared against published indices including the Consumer Price Index.

Feedback received

Queensland, Northern Territory, South Australia and the Commonwealth supported the NHCDC index approach adopted in 2012-13, in the absence of a more robust alternative.

New South Wales expressed concerns that using a historic approach as IHPA had, risked overstating price growth in the significantly different economic conditions currently being experienced.

IHPA is working with states and territories to gain access to costing data sooner, however, the need for indexation will always remain.

IHPA has considered the issues raised by New South Wales and given consideration to factoring in the changes in the economic environment that are not picked up when a historical approach to indexation is adopted. However, IHPA has decided not to alter its approach in 2013-14 due to concerns about the necessary levels of subjectivity involved in estimating the impacts of changing economic conditions on unit costs. For example:

- Many of the costs increases that impact on unit costs are locked in for a period, regardless of economic conditions (for example, Enterprise Bargaining Agreements are usually struck on a 3 or 4 year cycle, and do not vary according to changes in economic variables in that time).
- Contractionary economic conditions will likely impact on both unit costs and volumes, depending on decisions taken by state and territory governments. The balance between cost and volume reductions is not something that IHPA can confidently predict.
- Any “over indexation” during periods of economic contraction will be offset in expansionary periods, thus equalling out over the economic cycle.
IHPA’s decision

IHPA has decided to use a hospital output cost index that is derived from the NHCDC to index 2010-11 costs to derive the 2013-14 NEP.

IHPA will construct the index to ensure that price movements are independent of changes in patient mix.

The cost index is based on a 4.7% annual growth in the cost/weighted separation of public hospital services.

There are two distinct steps that impact the change in the NEP from year-to-year.

Figure 1 illustrates the two distinct steps. In the first step, the actual average cost of an NWAU in 2010-11 is calculated. At $4,489, this is an increase of 5.4% from the actual average cost in 2009-10.

This amount is then reduced by 3.1% to account for programs identified in in section 5.4 to arrive at an amount of $4,350. This amount is then indexed at 4.7% over three years to determine the NEP.

As such, based on the current IHPA policy of pricing at the mean cost, the movements in NEP year-on-year are primarily a product of actual costs increases in the NHCDC between financial years, and the indexation rate applied. Note that due to the compounding effect of the indexation rate across the three years, small movements in the rate between years can result in significant differences in the year-on-year NEP changes.

IHPA will release a detailed paper to explain the indexation methodology in early 2013.
Figure 1 Illustration of the factors that determine the year-on-year growth in the NEP.

<table>
<thead>
<tr>
<th>Year</th>
<th>NEP13</th>
<th>2010-11</th>
<th>NEP12</th>
<th>2011-12</th>
<th>NEP13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>$4,260</td>
<td>$4,489</td>
<td>$4,260</td>
<td>$4,489</td>
<td>$4,489</td>
<td>$4,993</td>
</tr>
<tr>
<td>2010-11</td>
<td>$4,350</td>
<td>$4,350</td>
<td>$4,350</td>
<td>$4,350</td>
<td>$4,350</td>
<td>$4,769</td>
</tr>
<tr>
<td>2011-12</td>
<td>$4,554</td>
<td>$4,554</td>
<td>$4,554</td>
<td>$4,554</td>
<td>$4,554</td>
<td>$4,808</td>
</tr>
<tr>
<td>2012-13</td>
<td>$4,769</td>
<td>$4,769</td>
<td>$4,769</td>
<td>$4,769</td>
<td>$4,769</td>
<td>$4,993</td>
</tr>
<tr>
<td>2013-14</td>
<td>$4,993</td>
<td>$4,993</td>
<td>$4,993</td>
<td>$4,993</td>
<td>$4,993</td>
<td>$4,993</td>
</tr>
</tbody>
</table>

1. The actual average cost of the National Cost Model in 2009-10 ($4,260)
2. The actual average cost of the National Cost Model in 2010-11 ($4,489)
3. The amount removed from the actual average cost, representing Commonwealth program funding of included in the actual average cost in 2010/11.
4. The amount removed from the actual average cost, representing Commonwealth program funding of included in the actual average cost in 2009/10.
5. The average cost after the removal of Commonwealth program funding in 2009-10 ($4,141)
6. The average cost after the removal of Commonwealth program funding ($4,350)
7. The indexation rate in the 2013-14 Determination (4.7%)
8. The indexation rate used in the 2012-13 Determination (5.1%)
9. The 2013-14 NEP ($4,993)
10. The growth in the NEP from 2012-13 to 2013-14 (3.8%)
**Next steps and future work**

During 2013, IHPA will undertake a detailed review of indexation methods to ensure that the most robust approaches to this issue are adopted for future years.
5.7 Incorporating new technology in the national efficient price

One of the Pricing Guidelines adopted by IHPA specified that the “pricing of public hospital services should respond in a timely way to the introduction of evidence-based, effective new technology and innovations in the model of care that improve patient outcomes”. However, there are several factors that might work against this outcome including:

- The time lag in the NHCDC meaning that the NEP will be set based on the technology and model of care that were in operation two to three years ago.
- It may take some time for new technology and innovations in care delivery to be adopted more broadly, and for their costs to be routinely captured, in national costing data. Similar issues apply to the updating of ABF classifications such as AR-DRGs.

IHPA recognises that there are parallel national and state or territory-based processes for the evaluation of new technology. Some state and territory governments fund new technology outside existing ABF arrangements, as part of piloting and evaluating the more widespread introduction of new technology into their public hospitals. States and territories have also used ‘rapid review’ type processes, with clinical feedback on new technology and changing models of care feeding into updates to ABF models.

IHPA expects that these existing technology evaluation and supplementary funding mechanisms will continue. IHPA’s core function is the pricing of public hospital services and it was not established to take on a major technology evaluation role.

However, IHPA’s Clinical Advisory Committee has an important ‘watching brief’ on new technology. The Clinical Advisory Committee is established under the Act to “advise the Pricing Authority in relation to developing and specifying classification systems for health care and other services provided by public hospitals”. Hence, IHPA has access to clinical expertise and can consider the extent to which classifications and costing are reflective of new technology and changing models of care.

Feedback received

The Heart Foundation submission outlined a number of innovations in the treatment of cardiovascular disease, including improvements in technologies for the diagnosis and treatment of these diseases, such as the introduction of high sensitivity troponin test to determine heart attack severity. In the Heart Foundations view, these innovations should be closely considered when establishing the price weights.

Medtronic expressed “great concern that as a Federal Statutory agency with the responsibility in determining the NEP for a National ABF model IHPA is taking a ‘backseat approach’ in this important area”.

The Medical Technology Association of Australia (MTAA) supports the establishment of the Clinical Advisory Committee, but suggests building a more proactive and robust approach for evaluating and monitoring the usage of new innovative technologies.

IHPA agrees that it is critical that the NEP accurately reflects the actual cost of service delivery, as required under the Agreement, and that this includes making sure that the costs of new technology are included in the NEP, without waiting for the data to be present in the NHCDC data.
Under the Agreement, states and territories, as system managers lead the assessment of new technologies and their adoption, whilst IHPA prices public hospital services on the basis of cost data provided by states and territories. States and territories, and other stakeholders are able to make submissions to IHPA at any time to assist IHPA in accounting for new technologies prior to updated costing data being available.

**IHPA’s decision**

IHPA, through its Clinical Advisory Committee, will monitor the potential impact of new technology and innovations in the model of care that have not yet been incorporated in the costing of public hospital services. This will be informed by existing national, state and territory-based approaches for technology evaluation.

**Next steps and future work**

In 2013, IHPA will work with the Clinical Advisory Committee to review and prioritise which new technologies should be the subject of detailed costing studies to ensure that their costs are accurately incorporated in the NEP.
5.8 Setting the level of the national efficient price for private patients in public hospitals

The Agreement recognises that IHPA will set a separate price for private patients in public hospitals, in acknowledgement that some of the costs of these patients are funded through other sources including private health insurance and Commonwealth programs such as the MBS. The concept embodied in the Agreement is that of a ‘discounted’ NEP for private patients in public hospitals, based on adjusting the NEP for public patients to remove funding received via these other funding sources (Clause A41).

Approach used by IHPA

Admitted private patients

The calculation is based on the NHCDC. There are three major categories of private patient revenue that are factored into the calculation of the NEP for private patients in public hospitals:

- Prostheses, pathology and imaging costs: the actual costs of these services are removed.
- Medical costs: some of the costs of medical services are retained in the calculation of the NEP for private patients. This recognises that the costs of junior medical staff are not funded through the MBS and therefore need to be included in the ABF payments.
- Default accommodation benefits payable by private health insurers: the NEP is calculated through deducting state-specific default benefits. This recognises that there is considerable variation across states and territories in the level of default benefit payable by private health insurers. The deduction is undertaken on the basis of actual length of stay for each patient. A deduction based on the average length of stay would penalise Local Hospital Networks that had a lower than average length of stay.

The outcome of these steps is a set of private patient adjustments to the price weights that then determines the NEP for private patients in public hospitals.

Non-admitted private patients

After careful consideration of the Agreement, in particular clauses A6, A7 and A41, IHPA does not consider private non-admitted services (privately referred clinics) to be eligible for ABF as public hospital services, when there is a payment under the MBS, the PBS, private health insurance or any other Commonwealth program.

However, IHPA has decided that other services for these patients (that constitute separate service events such as allied health services) are public hospital services that will be funded under ABF as these services are not able to be funded privately.

Feedback received

Admitted private patients

All states and territories raised concerns about the pricing of private admitted patients. They pointed the Pricing Guidelines established by IHPA, particularly “public-private neutrality: ABF pricing should not disrupt current incentives for a person to elect to be treated as a private or a public patient in a public hospital”.

South Australia claims that IHPA’s decision to discount the full cost of radiology for private patients leads to a failure to recognise the full cost of providing these services to private patients. South
Australia also claims that this decision fails to recognise that any Medicare funds received for a service provided often have little or no offset against the costs incurred by the hospital. On the same theme, Queensland points out that on the latest Private Health Insurance Administration Council data, 79% of private health insurance policies have an excess or co-payment, however it is standard practice in many public hospitals to waive this amount.

The Australian Private Hospitals Association (APHA) and the Australian Health Service Alliance (AHSA) also raised concerns that the pricing parameters did not adequately account for non-government funding streams. AHSA particularly commented on IHPA’s decision to impose a “floor” on the discount applied to long length of stay patients, to prevent the calculation of negative NWAU values in the pricing model pointing out that this potentially leads to the payment under ABF being “lower than the default payment made by health funds.”

IHPA engaged an independent consultant to undertake a review of the methodology that IHPA had adopted for pricing admitted private patients in 2012-13. The report supports the approach adopted by IHPA in setting the price for private patients. However, the consultant made a number of recommendations to improve the accuracy of IHPA’s approach, primarily by utilising the Hospital Casemix Protocol (HCP) dataset to more accurately attribute private patient revenue, and better reflect the actual level of revenue available to hospitals for accommodation benefits.

IHPA will evaluate these options in 2013, as well as better ways to identify actual MBS revenue, with a view to adopting them for the 2014-15 NEP. If adopting these options results in material changes to the private patient adjustments, these will be backcast to 2013-14, in accordance with clause A40 of the NHRA.

**Non-admitted private patients**

Victoria and NSW raise the matter of pricing for non-admitted private patients. Victoria argues that the Agreement’s approach to non-admitted private patients is likely to generate significant boundary issues around the MBS. Victoria sights the specific example of radiotherapy funding, suggesting that there is likely to be an incentive for hospitals to shift non admitted patients into admitted modalities given the higher reimbursement rates available under the NEP.

NSW claims that the exclusion of non-admitted private patients could have “substantial impact on clinical practice, LHD business processes, and finances, by changing incentives that in turn influence how patients are treated; the locus of care; rights of private practice; LHD business models and finance”.

IHPA is awaiting advice from the Heads of Treasuries Working Group on this issue.
**IHPA’s decision**

IHPA’s approach to pricing private patients in 2013-14 is unchanged.

IHPA will calculate the NEP for private patients in public hospitals so that the total revenue (including ABF, MBS and private health insurance payments) available to a hospital is equivalent to the NEP for public patients.

IHPA has decided that the determination of the NEP for private patients in public hospitals will incorporate state or territory-specific default benefits.

IHPA does not consider private non-admitted services (privately referred clinics) to be eligible for ABF as public hospital services, when there is a payment under the MBS, the PBS, private health insurance or any other Commonwealth program. However, IHPA has decided that other services for these patients (that constitute separate service events such as allied health services) are public hospital services that will be funded under ABF as these services are not able to be funded privately.

IHPA will evaluate opportunities to better utilise HCP data in 2013.

**Next steps and future work**

IHPA will regularly review the utilisation of public hospitals by private patients in order to detect any emerging trends. This will form part of its evaluation of its price determination function for private patients in public hospitals.

**5.9 Pricing for safety and quality**

**Understanding this element of the Pricing Framework**

IHPA has adopted a definition of the NEP that states, in part, that a public hospital service operating at the NEP will “be able to provide services at a quality level consistent with national standards, and to minimise negative consequences that fall on patients (including those attributable to poor quality and safety) or on other parts of the service system”. Accordingly, this section begins to explore how IHPA will consider whether to incorporate quality considerations in its setting of the NEP in the future.

The Agreement says that in setting the NEP, IHPA must “consider the actual cost of delivery of public hospital services in as wide a range of hospitals as practicable” (Clause B12(b)). However, this does not preclude taking quality into account in price-setting.

In the same clause, the Agreement also requires IHPA, in setting the NEP, to “have regard to ensuring reasonable access to public hospital services, clinical safety and quality, efficiency and effectiveness and financial sustainability of the public hospital system” (Clause B12(a)). The Agreement does not specify, nor does it constrain, how IHPA might seek to give effect to this broad set of responsibilities. Clause B12(a) indicates that IHPA should not only be guided by the efficiency of the public hospital system, but it must also have regard to other important policy objectives such as quality and access as it undertakes its price-setting role.

**Feedback received**

Submissions were generally supportive of the approach proposed by IHPA, with the exception of the submissions from Tasmania and the Australian Capital Territory. The Commonwealth supports continual improvements in patient safety, clinical quality and patient outcomes however have reservations about the merits of incorporating safety and quality in the setting of the NEP. The
Commonwealth submission does however state that the Joint Working Party for Safety and Quality (JWPSQ) is the appropriate forum to consider any potential pricing methods.

Generally the other jurisdictions supported the approach and noted some key considerations for IHPA in undertaking this work, including ensuring that any adjustment of price for quality is supported by research, occurs at a manageable pace and does not compromise the states and territories in their role as system managers to make decisions related to the pricing of safety and quality. Queensland and Western Australia have provided details of the initiatives to incentivise safety and quality in their respective states which will be considered as part of the work of the JWPSQ. Although number of jurisdictions articulated that they should have representation on the JWPSQ, IHPA and the Commission have nominated these members based on their individual expertise, not due to any organisation or jurisdictional perspective.

The public submissions also provide some other important comments which will be considered by IHPA, the Australian Commission on Safety and Quality in Health Care (the Commission) and the JWPSQ in undertaking this work, including consideration of the following:

- pricing for quality mechanisms implemented internationally and in Australia, including whether these are based on evidence-based best practice or guidelines;
- drivers of clinical behaviour, including whether non-financial initiatives are more appropriate to drive quality and safety, if not, whether negative funding adjustments drive quality as compared to ‘rewards’ for good performance and the quantum necessary to impact behaviour; and
- assessing the risks of the proposed models and determining an appropriate pre-post evaluation of any pilot or implementation (including availability of data / indicators, baseline measurement, consideration of unintended consequences and perverse incentives, etc.).

The matters outlined in the submissions will be presented to the JWPSQ for their consideration.

**IHPA’s decision**

IHPA will not make any adjustments to the NEP for safety and quality for 2013-14.

**Next steps and future work**

IHPA will continue to work with the Commission to consider options on pricing for safety and quality. To support the Commission and IHPA in its work, the JWPSQ will provide advice on the options for the consideration of safety and quality in the pricing of public hospital services in Australia.

To support the JWPSQ in this role, IHPA and the Commission will undertake a systematic literature review on options for integrating quality and safety into the pricing or funding arrangements for health care. The literature review will also consider the potential impact of implementing these mechanisms on the current Australian health care system, and whether the mechanisms could be applied to pricing quality across the various health care delivery settings (such as acute inpatient, sub-acute, non-acute, emergency department, outpatients and block funded facilities, etc.). In addition to the literature review, the JWPSQ will also consider other further research and expert advice, including Queensland and Western Australia’s learning’s from the implementation of initiatives to incentivise safety and quality in the delivery of public hospital services.

Based on the guidance from the JWPSQ, a discussion paper identifying the most appropriate, applicable and/or acceptable potential mechanisms for integrating safety and quality into public hospital pricing systems in Australia will be presented to the Commission’s Board and the Pricing
Authority for endorsement. Prior to public consultation in 2013-14 this discussion paper will be provided to Health Ministers for comment.

In undertaking this work IHPA will consult with the IHPA Clinical Advisory Committee, the Australian Government, state and territory governments and other key stakeholders such as the National Health Performance Authority.
6. Block Funding of Public Hospital Services

Understanding this element of the Pricing Framework

The major element of public hospital funding reform is the implementation of ABF. However, it was always recognised by governments that ABF will not be practicable for all public hospitals, especially those hospitals which see a low volume of patients but must remain open to provide essential access. In addition, there are some public hospital services or functions that are not yet able to be described in terms of activity or ‘outputs’, including teaching, training and research. The intention is that these public hospitals and public hospital services will be eligible for funding on a block grant basis. Alternatively, some of these hospitals and services may operate with a mix of block grant and ABF.

Local Hospital Networks will still be required to ensure that block funded hospitals and services operate on an efficient basis. Local Hospital Networks will be accountable for the provision of services specified in service agreements with state and territory governments including hospitals and services funded on a block grant basis.

Provisions of the Act and/or the Agreement

The Act requires that IHPA “determines the efficient cost for health care services provided by public hospitals where the services are block funded” (Clause 131(1)(b)).

The Agreement requires that ABF be used wherever practicable. It sets out a detailed six-stage process that IHPA will use in determining block funding for 2013-14 and onwards as follows:

1. IHPA, in consultation with the Commonwealth, state and territory governments, will develop Block Funding Criteria and identify whether hospital services and functions are eligible for block funding only or mixed ABF and block funding.

2. During the consultation period, states and territories will assess their hospital functions and services against the Block Funding Criteria and, if necessary, provide advice to IHPA on the potential impact of the criteria.

3. IHPA will provide the Block Funding Criteria to the Council of Australian Governments (COAG) for endorsement.

4. COAG will consider the Block Funding Criteria proposed by IHPA and either:
   a. Endorse the recommendation; or
   b. Request IHPA to refine the Block Funding Criteria and bring it back to COAG.

5. States and territories provide annual advice to IHPA on how their hospital services and functions meet the Block Funding Criteria (this advice may be provided every six years for small rural and small regional hospitals, or more frequently at the discretion of the state or territory).

6. On the basis of this advice, IHPA will determine which hospital services and functions are eligible for Commonwealth funding on a block grant basis.

The Agreement also identifies how the Commonwealth funding contribution for block grant funded services will increase over time (Clauses A50-A51), in a similar manner to the Commonwealth’s funding of activity based funded services.

Finally, the Agreement indicates that IHPA will annually determine the efficient cost of block grant funded services “taking account of changes in utilisation, the scope of services provided and the cost
of those services to ensure the Local Hospital Network has the appropriate capacity to deliver the relevant block funded services and functions” (Clause A4).

**Draft block funding criteria**

Consistent with the six-stage process described above, in July 2012, IHPA wrote to COAG seeking endorsement of the draft block funding criteria in box 3 below. As at November 2012, COAG have yet to advise if they will endorse or seek to request IHPA to reconsider. The discussion that follows is based on an assumption that COAG will endorse the proposed criteria, but may require reworking in the event that COAG decides otherwise.

**Box 3: Draft Block Funding Criteria**

These Draft Block Funding Criteria are released for further development and consultation in 2013-14, prior to submission to the Council of Australian Governments for endorsement.

The Draft Block Funding Criteria are that public hospitals, or public hospital services, will be eligible for block grant funding if:

1. The technical requirements for applying ABF are not able to be satisfied.
2. There is an absence of economies of scale that mean some services would not be financially viable under ABF.

IHPA has also determined ‘low volume’ thresholds that form part of draft Block Funding Criteria for use in 2013-14. Under these thresholds, hospitals are eligible for block funding if:

- They are in a metropolitan area (defined as ‘major city’ in the Australian Standard Geographical Classification) and they provide ≤ 1,800 inpatient NWAU per annum; or
- They are in a rural area (defined as all remaining areas, including ‘inner regional’, ‘outer regional’, ‘remote’ and ‘very remote’ in the Australian Standard Geographical Classification) and they provide ≤ 3,500 inpatient NWAU per annum.

**Types of block funding in 2013-14**

IHPA has determined that there will be three broad areas of block funding required in 2013-14:

1. Teaching, Training and Research;
2. Non-admitted specialist mental health; and
3. Small hospitals where there is an absence of economy of scale.

These are discussed in turn below.

**Feedback received**

There were a range of submissions received on the subject of what services should be block funded. Queensland, Victoria and Dr Kathryn Antioch (from Health Economics and Funding Reforms) all contended that some services needed to be funded through a mix of ABF and block funding. They focussed on services such as transplants, percutaneous valve replacements and retrieval services.

Whilst it is true that in a single state funding model, these very low volume services experience large variations in cost, due in part to the small volumes, IHPA believes that in a national system, the
numbers of patients in these DRGs is sufficient to ensure that a stable price weight can be calculated. IHPA will further review these issues, in consultation with jurisdictions, during 2013.

Teaching, Training and Research (TTR)

At the present point in time there is no agreed definition, classification or counting rules for TTR. IHPA is required to provide advice to the Standing Council on Health on the feasibility of transitioning to an ABF model (or otherwise) by 30 June 2018.

In 2013-14, IHPA will seek advice from jurisdictions on their expected spend on direct TTR expenses, to determine the amount funding for each state and territory in this area. IHPA expects these amounts to be in line with amounts agreed bilaterally with the Commonwealth in 2012-13.

IHPA has established a TTR Working Group to provide advice on the future design of an ABF model for TTR, and expects to make substantial progress on this matter in 2013.

Non admitted specialist mental health

Non admitted specialist mental health services have not traditionally been the focus of hospital costing processes, and as such, there is little data available to IHPA to derive price weights. This is further compounded by the fact the scope of public hospital services eligible for Commonwealth funding under the Agreement has yet to be resolved, making it unclear which services need to be priced.

As a result, IHPA has determined that in 2013-14, these services will need to be block funded, with IHPA working with states and territories to determine the appropriate amounts.

Small hospitals where there is an absence of economy of scale

IHPA engaged two consultancies on this issue in 2012. Health Policy Solutions (HPS) developed a consultation paper on the policy aspects of block funding for small hospitals, carried out consultations with every Australian government and selected peak bodies, and developed a detailed discussion paper, with a series of recommendations to the Pricing Authority (Appendix C).

Health Policy Analysis (HPA) carried out extensive quantitative analysis that will form the basis for the determination of the national efficient cost for small, block funded hospitals.

Existing national data collections for small rural hospitals are less robust than for ABF hospitals. The National Public Hospital Establishment Database (NPHED) includes high level information on the expenditure of each facility, admitted activity, and emergency, outpatient and community occasions of service. However, this activity data is not as robust as for other collections, and there are significant counting inconsistencies across the states and territories. This limits the sophistication of the model that can be developed for these hospitals.

IHPA understands that the NPHED contains expenditure that is broader than in-scope activities for the Agreement. For example, it contains expenditure related to aged care, particularly for hospitals operating under the Multipurpose Services (MPS) program, which is out of scope for the Agreement. MPS funding has been removed from the expenditure data prior to being included in the model. Other Commonwealth programs, such as the Pharmaceutical Benefits Scheme (PBS), have been removed in accordance with the principle in the NHRA that the Commonwealth will not pay twice for a service.

There has been some concern that the small rural hospitals that have differing structures may be unfairly disadvantaged in any model. Figure 2 illustrates an example of two similar hospitals, one of which is setup as an MPS, the other a separate acute and aged care facilities. The MPS will have $5 million expenditure reported to the NPHED, whilst the hospital will only have $4 million. However,
IHPA has netted off the $1 million of MPS funding from the first hospital prior to inclusion in the model, and hence the two hospitals are equally treated in the model.

**Figure 2. Various funding sources reported for small rural hospitals in NPHED**

![Diagram of funding sources]

**Scale of the Issue**

There are around 434 hospitals in Australia that are likely to be block funded in 2013-14 (i.e. they meet the draft block funding criteria and states or territories have indicated they intend to block fund this service).

Table 2 shows that the vast majority of these hospitals are rural hospitals, and as such, this has been the focus of the work of HPS and HPA. In 2012-13, IHPA will determine an amount of block funding for the 22 metropolitan hospitals with states and territories.

**Table 2: Hospitals meeting the draft block funding criteria**

<table>
<thead>
<tr>
<th>Hospital type/Service mix</th>
<th>Rural hospitals (No)</th>
<th>Metropolitan hospitals (No)</th>
<th>Total hospitals (No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute &amp; mixed acute/subacute</td>
<td>410</td>
<td>3</td>
<td>413</td>
</tr>
<tr>
<td>Subacute</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Designated psychiatric</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Specialised Other</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mothercraft service</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>421</strong></td>
<td><strong>13</strong></td>
<td><strong>434</strong></td>
</tr>
</tbody>
</table>

Small rural hospitals are highly diverse across many parameters including:

- Service profile (types of services provided including surgery, birthing, dialysis, emergency stabilisation) and service capability (their role delineation levels);
- Size (volume of activity, number of beds);
- Location (AGSC categories, road/flight access, travelling time);
- Clinical staffing models (access to Visiting Medical Officer (VMOs), GP models, locum services);
- Presence/absence of co-located residential aged care services (including in multipurpose services or as separate acute and aged care services);
- Networking and governance arrangements (including standalone hospitals, facilities that form part of a multi-campus hospital, hospitals that are referral hospitals for other small rural hospitals, etc.); and
- Expenditure.

IHPCA considered a range of options in developing the proposed approach, ranging from a single payment to block funding every hospital nationwide, through to a highly sophisticated variable funding model, which is detailed in Appendix C.

IHPCA’s approach

IHPCA has grouped hospitals into like groups on the basis of size (volume of activity) and location (ASGC categories).

The approach to determining categories involved detailed examination of the distribution of hospitals arrayed by total NWAUs to establish a line of best fit gradient on a linear basis. This distribution was enhanced to examine particular sections of the distribution and identify how the line of best fit shifted. These shifts in the gradient of the line of best fit were used to establish the categories based on total NWAU.

Where IHPCA has used NWAU to determine size category boundaries and assign hospitals to categories, this has been done using the full NWAU approach, including the adjustments for private patients. That is it includes the NWAU for public patients plus the discounted NWAU for private patients. The NWAU used to determine the size of the hospital includes admitted and non-admitted service activity.

Based on this approach, seven activity categories have been defined on the basis of their total NWAU range. Table 3 identifies the seven categories and presents summary information on the activity and expenditure (including averages, minimums and maximums) for each of the categories.

Table 3: Overview data on the proposed categories of rural block funded hospitals

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Acute NWAU</th>
<th>Total NWAU</th>
<th>Total Expenditure</th>
<th>Minimum NWAU</th>
<th>Maximum NWAU</th>
<th>Minimum Expenditure</th>
<th>Maximum Expenditure</th>
<th>Average Expenditure</th>
<th>Average Expenditure Trimmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 0 – 199.9</td>
<td>58</td>
<td>4,538.5</td>
<td>7,776.8</td>
<td>97,322,765</td>
<td>55.22</td>
<td>199.65</td>
<td>108,271</td>
<td>5,287,850</td>
<td>1,677,979</td>
<td>1,544,985</td>
</tr>
<tr>
<td>B. 200 – 374.9</td>
<td>84</td>
<td>14,688.2</td>
<td>23,930.0</td>
<td>202,900,728</td>
<td>200.41</td>
<td>369.77</td>
<td>276,906</td>
<td>4,847,886</td>
<td>2,415,485</td>
<td>2,322,260</td>
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<tr>
<td>C. 375 – 674.9</td>
<td>75</td>
<td>24,385.0</td>
<td>38,245.4</td>
<td>262,675,562</td>
<td>376.27</td>
<td>660.55</td>
<td>1,175,489</td>
<td>9,919,770</td>
<td>3,502,341</td>
<td>3,366,962</td>
</tr>
<tr>
<td>D. 675 – 1049.9</td>
<td>52</td>
<td>28,529.3</td>
<td>44,352.4</td>
<td>243,040,309</td>
<td>689.29</td>
<td>1,024.47</td>
<td>2,072,828</td>
<td>8,852,564</td>
<td>4,673,852</td>
<td>4,673,852</td>
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<tr>
<td>E. 1050 – 1499.9</td>
<td>40</td>
<td>31,749.2</td>
<td>50,053.3</td>
<td>267,326,643</td>
<td>1,051.56</td>
<td>1,477.18</td>
<td>2,913,691</td>
<td>12,949,402</td>
<td>6,683,166</td>
<td>6,522,493</td>
</tr>
<tr>
<td>F. 1500 – 2649.9</td>
<td>42</td>
<td>53,501.8</td>
<td>87,420.0</td>
<td>424,426,715</td>
<td>1,521.90</td>
<td>2,646.51</td>
<td>2,861,066</td>
<td>41,137,190</td>
<td>10,105,398</td>
<td>9,075,771</td>
</tr>
<tr>
<td>G. 2650+</td>
<td>33</td>
<td>70,671.4</td>
<td>178,160.4</td>
<td>544,230,634</td>
<td>2,715.12</td>
<td>14,855.00</td>
<td>6,277,604</td>
<td>36,846,200</td>
<td>16,491,837</td>
<td>14,776,268</td>
</tr>
<tr>
<td>Grand Total</td>
<td>438</td>
<td>228,422.7</td>
<td>434,882.3</td>
<td>2,094,410,028</td>
<td>0.00</td>
<td>14,855.00</td>
<td>108,271</td>
<td>41,137,190</td>
<td>4,781,758</td>
<td>4,439,727</td>
</tr>
</tbody>
</table>

Source: Public Hospital Block Funding Consultation Outcomes Report, Health Policy Solutions

As noted previously, the location dimension will use the five ASGC categories (metropolitan, inner regional, outer regional, remote and very remote). Consultation participants were interested in whether it would be possible to use other supplementary factors to better explain variation in costs in block funded hospitals particularly within each of the location categories. Preliminary analysis indicates that alternate approaches such as SARIA+ are no more robust for this purpose than ASGC.
IHPA has adopted a relatively simple model for rural block funded hospitals, and as a result, there are some significant outlier hospitals in some categories. These can be due to a number of reasons, such as incorrect expenditure data reported to the NPHED, limitations in the ASGC classification, or genuine inefficiency. IHPA has defined outlier hospitals as those with a cost ratio (reported costs/efficient cost) of more than 1.8, or less than 0.3. IHPA has consulted with jurisdictions on these hospitals, with a view to understanding why these hospitals are significant outliers, and to determine an appropriate efficient cost for them. IHPA has identified 16 such hospitals in 2013-14.

**IHPA’s decision**

Pending COAG’s endorsement of the Block Funding Criteria above, IHPA has determined the following parameters for the funding of small hospitals where there is an absence of economy of scale.

IHPA will use a three-year rolling average of annual acute admitted NWAU as the basis of identifying whether hospitals are above or below the low volume thresholds for block funding. Where significant changes in service agreements are foreshadowed by states or territories, IHPA will consult with the relevant states and territories to determine the expected volume impact to ensure that the hospital is not disadvantaged.

In 2013-14, hospitals in metropolitan areas that meet the low volume threshold will have their block funding amounts determined by IHPA in conjunction with the relevant state or territory.

Hospitals in non-metropolitan areas will be subject to the national efficient cost, using the following parameters.

- Hospitals will be grouped according to size (total NWAU) and location (ASGC Remoteness Area). IHPA will use a three year rolling average to determine which size group a hospital will be assigned. The groups are illustrated in Table 4
- The mean cost for each group will be calculated using the most recent NPHED data available. As required by the Agreement, these costs will be adjusted to account for other Commonwealth funding programs, and out of scope services such as Commonwealth funded aged care
- For all but the largest groups of hospitals, these mean costs will represent the NEC for all hospitals in that group. For the largest 2 groups, an availability payment plus a service capability payment will be calculated, as outlined in the Technical Specifications document.
- The National Efficient Cost for Small Rural Hospitals in 2013-14 is $4.738 million. The service capability component is $498/NWAU for hospitals in groups F and G.
Table 4 Categorisation of Small Rural Hospitals by size and location, showing availability component of efficient cost ($ millions).

<table>
<thead>
<tr>
<th>ASGC Remoteness Classification</th>
<th>Service Volume Grouping (Total NWAU)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A 0-199.9</td>
</tr>
<tr>
<td></td>
<td>Group B 200-374.9</td>
</tr>
<tr>
<td></td>
<td>Group C 375-674.9</td>
</tr>
<tr>
<td></td>
<td>Group D 675-1049.9</td>
</tr>
<tr>
<td></td>
<td>Group E 1050-1499.9</td>
</tr>
<tr>
<td></td>
<td>Group F 1500-2649.9</td>
</tr>
<tr>
<td></td>
<td>Group G 2650+</td>
</tr>
<tr>
<td>Major Cities</td>
<td>N/A</td>
</tr>
<tr>
<td>Inner Regional</td>
<td>1.561</td>
</tr>
<tr>
<td>Outer Regional</td>
<td>1.640</td>
</tr>
<tr>
<td>Remote</td>
<td>1.184</td>
</tr>
<tr>
<td>Very Remote</td>
<td>1.126</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A – not applicable – there are no hospitals in this group

**Next steps and future work**

IHPA acknowledges that there is significant work required on block funding approaches in coming years. This includes:

- Better identification of in-scope expenditure at a facility level.
- Improvements in the reporting of activity data, whilst limiting the data burden on these small facilities.
- Reviewing the groupings of these hospitals, both in terms of location, volume groups and any other relevant factors that may better help explain the variance between hospitals.
Appendix A – Mental Health Services in the 2013-14 NEP

Background

1. The National Health Reform Agreement requires activity based funding to be introduced for mental health services from 1 July 2013.
2. A new classification system for mental health care is being developed by IHPA but an interim cost model for handling mental health care is required whilst this occurs.
3. An interim cost model was developed for only acute admitted patients. All sub-acute, Emergency Department and Non-admitted patients requiring mental health care would continue to be treated within the cost models for those respective streams.

Analytical Approach

4. The Psychiatric care days (PsycDays) variable was used to identify separations with a Mental Health Component in the most current APC data (2010-11).
5. Of all patient days in 2010-11, just over 2 million PsycDays were identified in the 2010-11 data.
   a. 74 per cent of these formed part acute presentations, with the remaining 511,012 forming part of sub-acute admissions.
6. Admissions that included PsycDays were most likely to be Mental Health specific. PyscDays have been used as an initial variable to:
   b. Determine the size and scope of Mental Health Services; and
   c. Identifying DRGs or MDCs that can be linked to Mental Health for the purpose of further analysis.

Activity Profile

7. Mental Health represents a relatively small stream within total hospital activity. Of the 5.29 million acute admitted separations reported, only 1.9 per cent included PsycDays.
8. Psychiatric care days made up a larger proportion of overall patients days, indicating that admissions related to Mental Health generally result in a longer length of stay.
9. Psychiatric care is not limited to a specific range of DRGs, separations grouped under any diagnosis code can include PsycDays. As such PsycDays are spread widely across a number of DRGs and MDCs.
   d. PsycDays were identified in 374 DRGs within acute separations.
   e. In most cases, PsycDays accounted for less than 1 per cent of total separation days.
   f. The field of DRGs with a substantial Mental Health component can be narrowed to 21 for acute admitted and 17 for sub-acute streams.
   g. The top MDC for the acute stream accounted for 82.6 per cent of all acute admitted PsycDays, while the top MDC in the subacute stream only accounted for 50.8 per cent of total days.
10. PsycDays were concentrated across 10 DRGs where over 50 per cent of the total stay was devoted to psychiatric care.
    h. The break-down of PsycDays across DRGs is provided at Figure 1.
11. When Mental Health is considered at the Major Diagnostic Category (MDC) level, psychiatric care days were most concentrated in the Mental Diseases and Disorders MDC.
    i. Figure 2 shows that 83 per cent of all separations with a mental health component fell under this MDC, accounting for 86.6 per cent of all PsycDays (Figure 4).
    j. Overall, 59.1 per cent of this MDC’s separations have psychiatric care days, accounting for 88.9 per cent of the total patient days.
i. It is foreseeable that the remaining 40.9 per cent of separations under this MDC would also be receiving services related to mental health. Patients without PsycDays under this MDC should also be considered by the model.

12. Beyond this, separations related to Mental Health were thinly spread across MDCs, with several MDCs recording a similarly low proportion of separations with a Mental Health component.
   k. The second highest concentration of psychiatric care days was centred in the Alcohol/Drug Use and Drug Induced Organic Mental Disorders MDC, with 7.3 per cent of separations accounting for 3.5 per cent of total PsycDays.

Cost Drivers

13. Costs for patients with PsycDays are significantly more costly than those undertaking other types of treatment.
   l. When costs from the above MDCs are considered, costs for patients with a Mental Health component were up to 65 per cent higher than those without.

14. This means that existing patient level adjustments provided in the NEP model are less likely to cover patient costs where Mental Health services have been included.
   m. Further Adjustments for Mental Health Product Categories where costs are not covered at the patient level should be considered.

15. The following variables were investigated for potential inclusion in NEP13.

   n. Homelessness
   o. Language
   p. Location of residence
   q. Type of unit (e.g. forensic, stand-alone)
   r. Age
   s. Legal status

Residency Variables

16. The impact of a patient’s residency status was examined by comparing cost ratios for patients who identified versus private and other residents were homelessness was identified using ICD-10-AM block: Z59 Problems related to housing and economic circumstances (e.g. Z59.0 Homelessness).

17. A 'cost ratio' above 1 indicates that the subgroup remains more costly than average, once the DRG identifier has been taken into account. Data at Figure 3 show that costs for patients identified as homeless were 19 per cent higher on average than those that weren’t.

18. By comparing cost and length of stay ratios, Figure 3 shows that the higher costs associated with homelessness were driven by the patient’s longer length of stay.
   t. Therefore the higher costs associated with homelessness will be absorbed under existing patient level adjustments (length of stay adjustment) and
   u. A further adjustment for homelessness was not able to calculated on the data currently available.

Age Variables

19. The impact of the patient’s age was examined by splitting eligible patients across 9 Age groupings. These are provided at Figure 4.

20. It was found that the <16 year group was 51 per cent in higher cost than those aged 16 to 45 years, but in particular it was observed that this difference was significantly greater in patients that were 5-11 years (54.1 per cent), followed by 12-17 years (39 per cent) and then 2-4 years (24.6 per cent).

21. By comparing cost and length of stay ratios, Figure 5 shows that the higher costs observed for patients under 16 years could not be explained by their length of stay.
v. This means that existing patient level adjustments will not cover the higher costs incurred for the under 16 years group; and
w. An adjustment for Mental Health patients aged under 16 years should be considered in the determination of NEP 13.

Legal Status

22. The impact of patients Legal Status was examined, where mental health legal status is defined as:

   Whether a person is treated on an involuntary basis under the relevant state or territory mental health legislation, at any time during an episode of admitted patient care, an episode of residential care or treatment of a patient/client by a community based service during a reporting period, as represented by a code.

23. Figure 6 shows that the legal status of a patient has an effect on cost, with involuntary patients remained 10 per cent higher in cost than voluntary patients.
24. While this would suggest that legal status could be used as a differentiating factor, the existing patient level adjustment for length of stay provides sufficient cost coverage for patients in this group.
   x. This means that an adjustment factor for legal status, beyond what is provided for in patient level adjustments is not required.

Establishment Type

25. The establishment type (forensic vs. non-forensic) was found to have a significant effect on costs.
26. Figure 7 shows that the cost of patients in forensic establishments once DRG and psychiatric days identifier has been taken into account was found to be 32.8 per cent higher than the cost of patients in non-forensic establishments.
27. In addition, patients in forensic establishments had a significantly lower mean length of stay.
   y. The lower average length of stay means that existing patient level adjustments have less of an effect when catering for the higher costs of this group.
   z. This suggests that an adjustment factor for establishment type should be considered to explain cost variance beyond what is accounted for in the existing patient level adjustments.

Interactivity between Elements

28. While patients age and establishment type attract significantly higher costs when considered in isolation, applying adjustments for both factors could overcompensate where patients have been included in both categories (i.e. under 16 and in a forensic facility).
29. The interactivity between variables that were found to have a significant impact on cost has been considered.
30. When interactivity between age and other significant cost drivers was considered, there were a high number of patients aged under 16 who were involuntary admissions.
   aa. Figure 8 shows that almost all patients aged under 11 years were involuntary, while 41 per cent of patients aged between 12 and 17 years were admitted involuntarily.
31. When interactivity between establishment type and legal status was considered, a large number of patients in forensic facilities were involuntary admissions.
32. Figure 9 shows that the higher costs associated with this group are not well catered for in existing patient level adjustments.
Modelling Approach

33. The population related to Mental Health was identified by
   bb. All separations with PsycDays; and
   cc. Acute separations under MDCs 19 and 20 without PsycDays;

34. The mental health model has catered for the longer lengths of stay and higher costs by:
   dd. Adjusting the parameters used to set the inlier bounds from the current L3H3 method.
       Extension of the higher bound (L1.5H1.5) would recognise the longer length of stay
       associated with mental health services; and/or
   ee. Adding adjustment factors for variables that attract higher costs.

35. The tighter bounds resulted in a lower proportion of inliers and higher proportions of short and
    long stay outliers, effectively shifting the cost model in the direction of a per diem payment model.
    This resulted in improving the explanatory power of the DRG model for this group to a level
    comparable with the rest of the acute admitted model (see Figure 10).

36. Empirical analysis within the acute cost model suggested that a specialist psychiatric age
    adjustment was justified for the following age categories:
       ff. less than or equal to 17:
           ➢ Patients under the age of 17 years were divided into those that received care in the
             9 specialist paediatric hospitals and those in the remaining hospitals.
       gg. 65 to 84 years; and
       hh. greater than or equal to 85 years.

37. Mental health patients also accrued other relevant adjustments that apply to acute admitted
    patient.
### Tables And Figures

**Figure 1: Break down of All Acute Separations With Psychiatric Care Days by DRG**

<table>
<thead>
<tr>
<th>Interval</th>
<th>DRG</th>
<th>Separations with psych care days</th>
<th>Percentage of DRG separations</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% -20%</td>
<td>U67Z</td>
<td>15397</td>
<td>15.87</td>
</tr>
<tr>
<td></td>
<td>U63B</td>
<td>14871</td>
<td>15.33</td>
</tr>
<tr>
<td></td>
<td>U61A</td>
<td>14858</td>
<td>15.32</td>
</tr>
<tr>
<td></td>
<td>U61B</td>
<td>10938</td>
<td>11.28</td>
</tr>
<tr>
<td>1%-10%</td>
<td>U64Z</td>
<td>5680</td>
<td>5.86</td>
</tr>
<tr>
<td></td>
<td>U60Z</td>
<td>5009</td>
<td>5.16</td>
</tr>
<tr>
<td></td>
<td>U40Z</td>
<td>4313</td>
<td>4.45</td>
</tr>
<tr>
<td></td>
<td>X62B</td>
<td>3277</td>
<td>3.38</td>
</tr>
<tr>
<td></td>
<td>V61Z</td>
<td>3073</td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td>U63A</td>
<td>2402</td>
<td>2.48</td>
</tr>
<tr>
<td></td>
<td>U62A</td>
<td>2300</td>
<td>2.37</td>
</tr>
<tr>
<td></td>
<td>U62B</td>
<td>1768</td>
<td>1.82</td>
</tr>
<tr>
<td></td>
<td>V62A</td>
<td>1405</td>
<td>1.45</td>
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<td></td>
<td>V60B</td>
<td>1240</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td>U65Z</td>
<td>1219</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>B63Z</td>
<td>1180</td>
<td>1.22</td>
</tr>
<tr>
<td>Below 1%</td>
<td>rest 358 DRGs</td>
<td>8707</td>
<td>7.99</td>
</tr>
</tbody>
</table>
Figure 2: Top MDCs by number of acute separations with psychiatric care days

- Mental diseases and disorders: 83%
- Alcohol/drug use and alcohol/drug induced organic mental disorders: 7%
- Injuries, poisoning and toxic effects of drugs: 5%
- Diseases and disorders of the nervous system: 2%
- Remaining MDCs: 3%

Figure 3: Cost and LOS ratios by Z59.0 homeless ICD-10-AM coding

<table>
<thead>
<tr>
<th></th>
<th>Homeless</th>
<th>Not Homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Ratio</td>
<td>1.185</td>
<td>0.994</td>
</tr>
<tr>
<td>LOS Ratio</td>
<td>1.164</td>
<td>0.994</td>
</tr>
</tbody>
</table>
Figure 4: Age Groupings used in cost analysis

<table>
<thead>
<tr>
<th>Age Grouping</th>
<th>0 - 1 years</th>
<th>2 - 4 years</th>
<th>5 - 11 years</th>
<th>12 - 17 years</th>
<th>18 - 24 years</th>
<th>25 - 44 years</th>
<th>45 - 64 years</th>
<th>65 - 84 years</th>
<th>&gt;85 years</th>
</tr>
</thead>
</table>

Figure 5: Cost and LOS ratio by age group

<table>
<thead>
<tr>
<th>Age Grouping</th>
<th>Cost Ratio</th>
<th>LOS Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 years</td>
<td>0.854</td>
<td>0.750</td>
</tr>
<tr>
<td>2-4 years</td>
<td>1.174</td>
<td>0.568</td>
</tr>
<tr>
<td>5-11 years</td>
<td>1.469</td>
<td>0.942</td>
</tr>
<tr>
<td>12-17 years</td>
<td>1.318</td>
<td>1.000</td>
</tr>
<tr>
<td>18-24 years</td>
<td>0.937</td>
<td>0.995</td>
</tr>
<tr>
<td>25-44 years</td>
<td>0.907</td>
<td>0.934</td>
</tr>
<tr>
<td>45-64 years</td>
<td>1.044</td>
<td>1.077</td>
</tr>
<tr>
<td>65-84 years</td>
<td>1.161</td>
<td>1.160</td>
</tr>
<tr>
<td>&gt;85 years</td>
<td>1.128</td>
<td>1.076</td>
</tr>
</tbody>
</table>
Figure 6: Cost and Length of Stay Ratios by Patients Legal Status

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Cost Ratio</th>
<th>LOS Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involuntary</td>
<td>1.045</td>
<td>1.044</td>
</tr>
<tr>
<td>Voluntary</td>
<td>0.946</td>
<td>0.946</td>
</tr>
</tbody>
</table>

Figure 7: Cost and Length of stay ratios by Establishment Type

<table>
<thead>
<tr>
<th>Establishment Type</th>
<th>Cost Ratio</th>
<th>LOS Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Forensic</td>
<td>0.987</td>
<td>1.002</td>
</tr>
<tr>
<td>Forensic</td>
<td>1.308</td>
<td>0.931</td>
</tr>
</tbody>
</table>
**Figure 8: Interactivity between Age and other identified cost Drivers**

<table>
<thead>
<tr>
<th>Age Of Patient</th>
<th>Involuntary</th>
<th>Voluntary</th>
<th>Homeless</th>
<th>Not Homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>#N/A</td>
<td>#N/A</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>2-4</td>
<td>91.7%</td>
<td>8.3%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>5-11</td>
<td>86.9%</td>
<td>13.1%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>12-17</td>
<td>41.8%</td>
<td>58.2%</td>
<td>1.1%</td>
<td>98.9%</td>
</tr>
<tr>
<td>18-24</td>
<td>50.5%</td>
<td>49.5%</td>
<td>2.8%</td>
<td>97.2%</td>
</tr>
<tr>
<td>25-44</td>
<td>48.8%</td>
<td>51.2%</td>
<td>3.9%</td>
<td>96.1%</td>
</tr>
<tr>
<td>45-64</td>
<td>44.3%</td>
<td>55.7%</td>
<td>3.0%</td>
<td>97.0%</td>
</tr>
<tr>
<td>65-84</td>
<td>25.9%</td>
<td>74.1%</td>
<td>0.6%</td>
<td>99.4%</td>
</tr>
<tr>
<td>85+</td>
<td>14.8%</td>
<td>85.2%</td>
<td>0.1%</td>
<td>99.9%</td>
</tr>
</tbody>
</table>

**Figure 9: Interactivity between Establishment Type and Legal Status**

<table>
<thead>
<tr>
<th>Establishment Type</th>
<th>Involuntary Non-Forensic</th>
<th>Voluntary Non-Forensic</th>
<th>Involuntary Forensic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Ratio</td>
<td>1.034</td>
<td>0.942</td>
<td>1.451</td>
</tr>
<tr>
<td>LOS Ratio</td>
<td>1.051</td>
<td>0.945</td>
<td>0.930</td>
</tr>
</tbody>
</table>
Figure 10: Comparison of $R^2$ in moving from L3H3 to L1.5H1.5
Attachment B - Reviewing the Paediatric Adjustment

September 2012

Background

1. The Paediatric Adjustment used in NEP12 was applied to only those episodes that:
   a. occur in one of the hospitals that have been identified as having a significant role as a
      specialised paediatric service, which are listed in the Determination (Glossary); and
   b. have an AR-DRG which is not within the Major Diagnostic Category 15 Newborns and
      other neonates; and
   c. the age of the patient at admission is 16 years or less.

2. Subsequently, there has been some questioning whether the paediatric adjustment should be
   applied at the patient level and not restricted to the defined group of hospitals.

Analysis

3. A detailed analysis of the various options in applying a paediatric adjustment was conducted
   using the 2009-10 ABF Cost Model with the NHCDC Round 14 cost data:

4. The statistical significance of the resulting cost adjustments of the different scenarios was tested
   using the R-squared value at the patient level and the MAPE (Mean Absolute Percentage Error)
   at the establishment level:
   - These are the same two statistical tests used to assess the adjustments that were developed
     in the 2009-10 ABF Cost Model.

5. The results of the statistical regression analyses of the various scenarios are reported in Table 1,
   which shows that the existing paediatric adjustment clearly delivers the best result for the
   specialised paediatric hospitals.

Table 1: Comparison of results for the weighted regression models

<table>
<thead>
<tr>
<th>Model</th>
<th>R2</th>
<th>R2 of all paediatrics separation</th>
<th>MAPE</th>
<th>MAPE of 9 specialised paediatric Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>No adjustments</td>
<td>66.81%</td>
<td>67.87%</td>
<td>12.48%</td>
<td>14.26%</td>
</tr>
<tr>
<td>Existing model</td>
<td>67.08%</td>
<td>70.34%</td>
<td>12.20%</td>
<td>10.81%</td>
</tr>
<tr>
<td>Adjustment for all under 16s in all hospitals</td>
<td>67.01%</td>
<td>69.87%</td>
<td>12.35%</td>
<td>12.37%</td>
</tr>
<tr>
<td>2 separate adjustments for specialist paediatric &amp;</td>
<td>67.01%</td>
<td>69.67%</td>
<td>12.23%</td>
<td>11.51%</td>
</tr>
</tbody>
</table>
6. The dynamics of shifting between the different scenarios can be better appreciated by reviewing the results in the format shown in Table 2.

- A value of greater than 1 means that the ABF Cost Model underpays that group or that the average cost of that group is greater than the national average e.g. in the base Model, the specialist paediatric separations are about 11% underpaid and non-specialist paediatric separations are 3% overpaid.
Comparing the impact on the 3 groups of specialised paediatric, non-specialised paediatric and adult separations (Table 2), it is seen that:

d. The existing paediatric adjustment delivers a model cost equal to the actual cost averaged over all specialised paediatric separations and all adult separations but higher for non-specialised paediatric separations:
  o This is because the average cost of non-specialised paediatric separations is less than the average cost of both the adult separations and the specialised paediatric separations.
  o This is corroborated by the fact that the average weighted LOS of the non-specialised paediatric separations is less than that for the specialised paediatric separations (see Table 3).
  o As may be expected, the average weighted LOS of the specialised paediatric separations is lower than that for adults, but the input costs of the former are so much higher.

e. The effect of applying a paediatric adjustment to all paediatric separations across all hospitals would be to redistribute $s from the specialised paediatric to the non-specialised paediatric separations making the latter even better off under the model.
Table 3: Comparing the results for the 3 groups across the 6 scenarios

<table>
<thead>
<tr>
<th>Category</th>
<th>Separations</th>
<th>Relative LOS</th>
<th>Separations</th>
<th>Relative LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age&lt;=16 in specialist paediatric hospitals.</td>
<td>166,567</td>
<td>0.92</td>
<td>87,631</td>
<td>0.90</td>
</tr>
<tr>
<td>2. Age&lt;=16 in other hospitals</td>
<td>337,822</td>
<td>0.89</td>
<td>229,275</td>
<td>0.85</td>
</tr>
<tr>
<td>3. Age&gt;=17 in all hospitals</td>
<td>4,411,941</td>
<td>1.01</td>
<td>2,050,586</td>
<td>1.02</td>
</tr>
</tbody>
</table>

8. The cost adjustment varies across individual DRGs and is both positive and negative suggesting that there are real cost differences at these levels.

Conclusion

9. This analysis concluded that there is no compelling reason to vary the determination of the Paediatric Adjustment from that which was used in NEP12.

Attachment C Block Funding Consultation Report

Other Relevant Document Links

National Efficient Price Determination 2013-2014

National Efficient Cost Determination 2013-2014

Pricing Framework for Australian Public Hospital Services 2012-13