

Independent Hospital Pricing Authority

# Impact of New Health Technology Framework

May 2020



IHPA

## Impact of New Health Technology Framework – Version 4.4 May 2020

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# Acronyms and Abbreviations

<b>ABF</b>	Activity Based Funding
<b>ACHI</b>	Australian Classification of Health Interventions
<b>AR-DRGs</b>	Australian Refined Diagnosis Related Groups
<b>CAC</b>	Clinical Advisory Committee
<b>CATAG</b>	Council of Australian Therapeutic Advisory Groups
<b>DRG</b>	Diagnosis Related Group
<b>ICD</b>	International Classification of Diseases
<b>ICD-10-AM</b>	International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification
<b>IHPA</b>	Independent Hospital Pricing Authority
<b>MSAC</b>	Medical Services Advisory Committee
<b>NEC</b>	National Efficient Cost
<b>NEP</b>	National Efficient Price
<b>NHCDC</b>	National Hospital Cost Data Collection
<b>PA</b>	Pricing Authority
<b>PBAC</b>	Pharmaceutical Benefits Advisory Committee
<b>PLAC</b>	Prostheses List Advisory Committee
<b>TGA</b>	Therapeutic Goods Administration
<b>The Framework</b>	<i>The Impact of New Health Technology Framework</i>

# Definitions

<b>Activity based funding</b>	<p>Refers to an activity comprising in-scope public hospital services which will be funded by the Australian Government in the manner described in clause A32(c) of the National Health Reform Agreement.</p> <p>The activity may take the form of a separation, presentation or service event.</p>
<b>Clinical Advisory Committee</b>	<p>Established under the <i>National Health Reform Act 2011 (Cwlth)</i> to advise the Pricing Authority in relation to developing and specifying classification systems for health care and other services provided by public hospitals.</p> <p>IHPA, through this committee, monitors the potential impact of new health technology on models of care that have not yet been incorporated in the classification and costing of public hospital services.</p>
<b>Health Technology</b>	<p>A health technology is defined as an intervention that may be used to promote health, to prevent, diagnose or treat acute or chronic disease, or for rehabilitation. Health technologies include pharmaceuticals, devices, procedures and organizational systems used in health care.<sup>1</sup></p>
<b>Health Technology Assessment</b>	<p>Health technology assessment (HTA) is the systematic evaluation of the properties and effects of a health technology, addressing the direct and intended effects of this technology, as well as its indirect and unintended consequences, and aimed mainly at informing decision making regarding health technologies.</p>
<b>Pricing Authority</b>	<p>The governing body of IHPA established under <i>the National Health Reform Act 2011 (Cwlth)</i>.</p>
<b>Pricing Guidelines</b>	<p>In order to be transparent about how it makes decisions that involve policy choices, IHPA has developed a set of Pricing Guidelines.</p> <p>These Pricing Guidelines are used to explain the key decisions made by IHPA in the <i>Pricing Framework for Australian Public Hospital Services</i>. 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.<sup>2</sup></p>

<sup>1</sup> International Network of Agencies for Health Technology Assessment (2020). Welcome to INAHTA. Available at: <[www.inahta.org](http://www.inahta.org)>

<sup>2</sup> The Pricing Guidelines can be found within the Pricing Framework, which is available on IHPA's website at <<https://www.iHPA.gov.au/what-we-do/pricing-framework>>

# 1. Executive summary

## 1.1 Background

One of the principles adopted by the Independent Hospital Pricing Authority (IHPA) to guide its decision-making is fostering clinical innovation. IHPA's *Pricing Guidelines* state that the pricing of public hospital services should respond in a timely way to introduction of evidence-based, effective new health technology and innovations in models of care that improve patient outcomes. However, there are several factors that might work against this outcome, including:

- It may take time for new health technology and innovations in care to be adopted more broadly, and for their impact on costs to become routinely captured in national costing data. Similar issues apply to the updating of Activity Based Funding (ABF) classifications such as the Australian Refined Diagnosis Related Groups (AR-DRGs).
- The time lag in the National Hospital Cost Data Collection (NHCCD) meaning that the National Efficient Price (NEP) and the National Efficient Cost (NEC) will be set based on the technology and model of care that were in operation three years ago.

The NEP partially accounts for the continuous adoption of new health technology and processes. The cost of technology improvements is inherent in the indexation methodology used to project the three year old empirical data to the NEP year. The indexation rate includes a component reflecting the average increase in cost over the previous five years associated with introducing new health technology and improving quality. This is an average increase to all prices rather than attributing it to the specific hospital services that benefit from the new health technology.

IHPA recognises that there are parallel national and state or territory-based processes to evaluate new health technologies, including 'rapid review' type processes where clinical feedback on new health technology and changing models of care feed into updates to ABF models. IHPA expects that these existing technology evaluation and supplementary funding mechanisms will continue. For instance, jurisdictions may wish to fund new health technology outside existing ABF arrangements as part of piloting and evaluating the more widespread introduction of new health technology into their public hospitals.

IHPA's core function is pricing public hospital services and it was not established to take on a major technology evaluation role. IHPA's Clinical Advisory Committee (CAC) has an important 'watching brief' on new health technology. IHPA, via CAC, has access to clinical expertise and can consider the extent to which classifications are reflective of new health technology and changing models of care.

## 1.2 Purpose

The *Impact of New Health Technology Framework* (the Framework) outlines the process by which IHPA, via its CAC, will monitor and review the impact of new health technologies on the existing classifications in order to accurately account for them in the pricing of public hospital services.

In consultation with CAC, IHPA will:

- review monitoring reports on the emergence of new health technologies and submissions received from other stakeholders
- review the impact of new health technologies on the classification systems currently used by IHPA to determine the NEP

- determine whether and how the classification systems should be adjusted in response.

### **1.3 Review**

The CAC Chair, Pricing Authority and Chief Executive Officer of IHPA will review this Framework, including associated documentation, annually or as required.

The Framework was last reviewed in May 2020.

## 2. Overview

IHPA, in consultation with CAC, will monitor and review new health technologies on an annual basis, based on reports received from government advisory bodies and submissions received from other stakeholders.

Organisations that provide submissions to IHPA under the Framework should be mindful that accounting for new health technologies within the classification system is a lengthy process.

There are a series of distinct steps in recognising new health technologies in the classification system:

- Introduction of diagnosis or procedure codes in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) classification system, which allows identification of new technologies in the activity and cost data provided to IHPA
- IHPA to assess if an adjustment to the pricing process is warranted
- IHPA determines if the new technology is sufficiently different from existing approaches to warrant a new Diagnosis Related Group (DRG).

The development cycle is set out in Figure 1 in reference to the hypothetical introduction of a new procedure code for admitted patients.



Figure 1: Classification development cycle for AR-DRG

	Prioritised		Accounted for		Fully accounted for		
	One year	Two years	Three years		Five years	Seven years	
<b>2015</b>	<b>November 2016</b>	<b>July 2017</b>	<b>July 2018</b>	<b>November 2018</b>	<b>July 2020</b>	<b>November 2020</b>	<b>July 2022</b>
The Pricing Authority refers the prioritised new health technology for classification development. A procedure code for the new technology is then assigned.	ICD-10-AM/ACHI Tenth Edition and AR-DRG V9.0 are approved by the Pricing Authority and the procedure code is introduced into the classification.	ICD-10-AM/ACHI Tenth Edition is implemented in national data collections and data on the procedure code is collected.	AR-DRG V9.0 is implemented for pricing in NEP18. New technology procedure codes from ICD-10-AM/ACHI Tenth Edition are introduced into DRGs based on clinical advice (not cost data). ICD/ACHI based adjustments possible.	New AR-DRGs are developed using activity data (2015–16 to 2016–17) and cost data (2014–15 to 2015–16).  Note that the cost data does not include the new code.	AR-DRG V10.0 is implemented for pricing in NEP20.	New AR-DRGs are developed using activity data (2017–18 to 2018–19) and cost data (2016–17 to 2017–18).  Note that 2017–18 is the first year of cost data including the new code.	AR-DRG V11.0 is implemented for pricing for NEP22.  This is the first version of AR-DRGs developed based on cost data captured for the new procedure code.

ACHI: Australian Classification of Health Interventions.

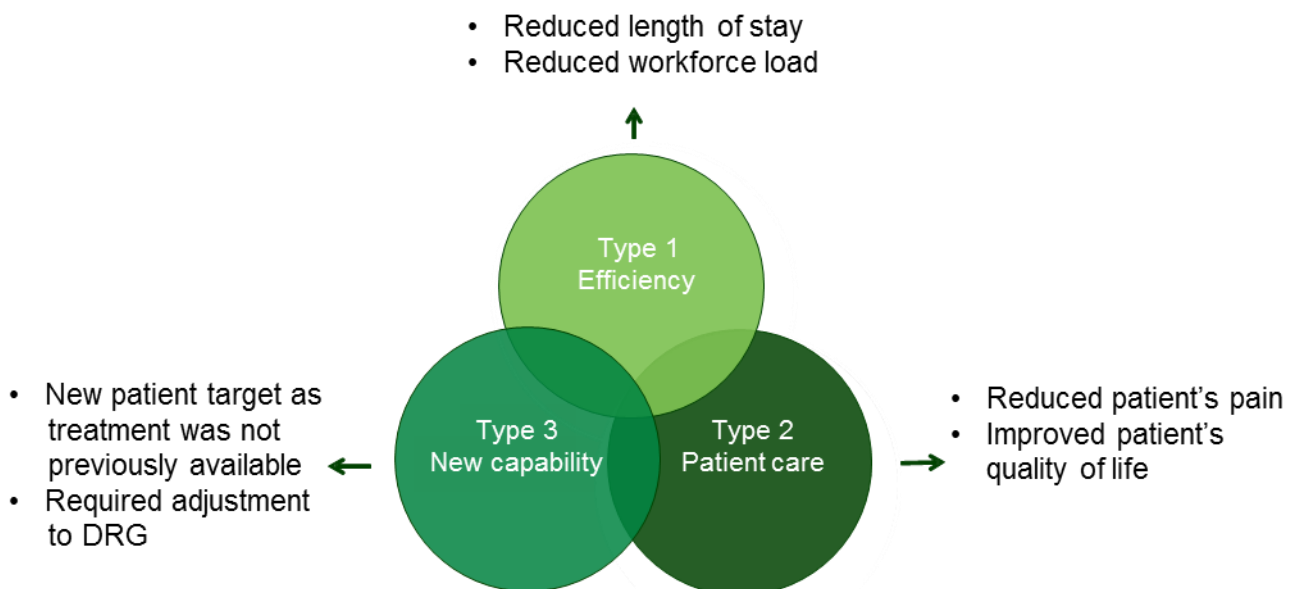
## 2.1 Scope and types of new health technologies considered by IHPA

A health technology is defined as an intervention that may be used to promote health, to prevent, diagnose or treat acute or chronic disease, or for rehabilitation. Health technologies include pharmaceuticals, devices, procedures and organizational systems used in health care.

As a result of the rapid spread of these technologies and associated service delivery models, changes may take place in the period between the collection of the costing data (e.g. 2016–17) and the period for which IHPA is pricing (e.g. 2019–20). These changes need to be identified and assessed by IHPA and accounted for in the national pricing model if necessary.

IHPA has identified three types of new health technologies that are expected to impact public hospital services to various degrees (Figure 2). Some of these impacts may already be captured in the NEP/NEC by the indexation methodology.

**Figure 2: Types of new health technologies and their expected impacts**



### Type 1 – impacting on the efficiency of hospital service delivery

This type of new health technology is incremental and continual, and impacts on the efficiency of hospital service delivery. Expected impacts may include but are not limited to:

- reduced patient length of stay
- reduced workforce load
- reduced re-admissions.

The expected impact of an improvement in efficiency is a reduction in the cost of delivering care for those hospitals using the new health technology. The net benefit from the introduction of these improvements is reflected in the indexation rates used to determine the NEP/NEC.

### Type 2 – impacting on the quality of patient care

This type of new health technology is incremental and continual, and impacts on the quality of outputs or outcomes. Expected impacts may include but are not limited to:

- reduced patient's pain

- improvement in patient's quality of life
- reduced re-admissions.

An improvement in the quality of patient care may result in higher costs for those hospitals using the new health technology. Therefore, type 1 and type 2 may have opposite impacts on the costs of providing public hospital services, but these are accounted for in average terms in determining the NEP/NEC. The net costs associated with their introductions are by and large taken account of in the indexation rates used to determine the NEP/NEC.

### **Type 3 – new capability**

This type of new health technology provides major advances in capability such as the introduction of new procedures that enable treatments not available previously. This could include the introduction of services using new gene technology, nanotechnology, robotic-assisted surgery, image-guided surgery, new stem cell technology or organ or cell xenotransplantation. Expected impacts may include but are not limited to:

- new patients receiving care
- existing DRG classification may not adequately reflect the new model of care
- changes to resource utilisation and costs associated with patient care.

This type of major new health technology may have a variety of impacts on the NEP/NEC, including significant cost impacts for services that may not fit appropriately into the underlying classification systems. Further study would be required to assess how best they could be accommodated within the current or modified classification systems.

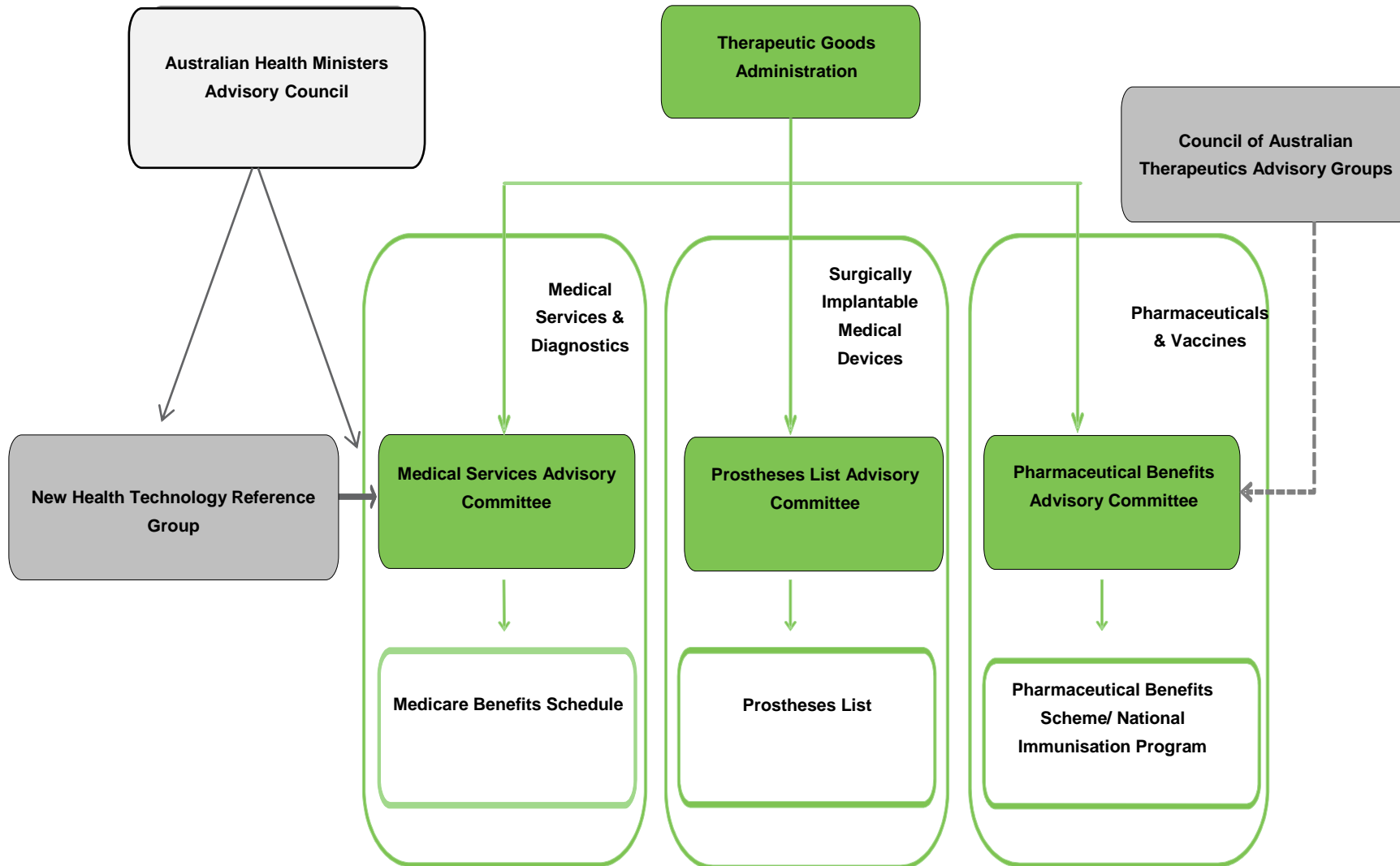
## **2.2 Government organisations involved in investigating the impact of new health technologies in Australia**

A number of jurisdictional agencies and advisory groups exist to investigate new health technologies, regulate the market, and manage reimbursement and post-implementation management. These include:

- Health Technology Reference Group
- Medical Services Advisory Committee (MSAC)
- Pharmaceutical Benefits Advisory Committee (PBAC)
- Protheses List Advisory Committee (PLAC)
- Therapeutic Goods Administration (TGA)
- Council of Australian Therapeutics Advisory Groups (CATAG).

Figure 3 describes how these bodies interact.

Figure 3: Organisations involved in investigating the impact of new health technologies in Australia



## 3. Process

The Pricing Authority will determine whether a new health technology should be referred to the appropriate body as a priority for classification development by May each year.

The key stages and dates regarding the identification, prioritisation and assessment of new health technologies are outlined below.

**Table 1. Overview of assessment process**

Stage	Process
<b>Stage 1: Identify new health technologies</b>	(1a) Annual submissions from government advisory committees and other stakeholders (1b) Advice from jurisdictions (1c) Initial review of submissions
<b>Stage 2: CAC prioritisation</b>	CAC prioritisation
<b>Stage 3: Assessment</b>	(3a) IHPA consults with jurisdictions on implementing new health technologies (3b) IHPA reviews written submissions
<b>Stage 4: Classification analysis</b>	(4a) Conduct additional work (4b) Pricing Authority approves the recommendations

### Stage 1: Identify new health technologies

#### (1a) Annual submissions from government advisory committees and other stakeholders

IHPA annually requests reports from the New Health Technology Reference Group and MSAC on new health technologies; in particular for medical procedures and devices that are unlikely to be adequately accounted for in the national pricing model and which will be used within the public hospital system. IHPA also considers submissions made under the Framework from other interested stakeholders, for example from the Medical Technology Association of Australia and manufacturers of medical devices.

The introduction of new pharmaceuticals in public hospitals can lower costs, improve the quality of patient care and lead to better overall health outcomes. For this reason, CATAG maintains a watching brief on new high cost drugs (not covered by the Pharmaceutical Benefits Scheme). However, the administration of pharmaceuticals is not routinely coded for admitted patients and the costs are not disaggregated within the NHCDC.

This complicates the assessment of whether the drugs are accounted for in the national pricing model and limits the ability of IHPA to better account for them through classification development. IHPA will only consider submissions for drugs where CATAG is confident that they will have a material impact on the public hospital system.

Where the detail is available, IHPA will request the following information:

- description of the technology
- uptake/implementation in Australia by state/territory and by year
- details of the TGA approval
- cost of the technology, average cost per episode of care
- studies completed/planned including impact on service delivery, patient's quality of life, other evaluation, cost-effectiveness and cost-benefit analyses
- international experience
- implementation schedule
- details of any alternative model(s) of care, costs, and impacts on patients.

Where there is no TGA approval for the new health technology<sup>3</sup>, IHPA will assume that it is research related and no further analysis will occur (unless it is used by patients under the TGA Special Access Scheme).

The new health technologies must not be already funded by any other Commonwealth programs or research funding sources.

### **(1b) Advice from jurisdictions**

States and territories are able to make submissions to assist IHPA in accounting for new health technologies prior to updated costing data being available. However, IHPA notes that jurisdictions have access to forums through which the incorporation of specific new health technologies into the classification system may be suggested and considered (such as the Diagnosis Related Group Technical Group and the International Classification of Diseases Technical Group).

Some states and territories already have existing technology assessment processes through which they may provide regular advice to IHPA if they wish.

### **(1c) Initial review of submissions**

IHPA determines an initial shortlist of new health technologies for further investigation by CAC based on the following considerations:

- uptake – whether the technology is in use or expected uptake in Australian public hospitals
- cost difference – the difference between the price weight for the most frequently mapped DRG and the technology's cost estimate
- materiality – the total cost of the mapped DRGs and the number of patients
- feasibility of classification development – diagnostic tests and pharmaceuticals will generally be excluded from consideration as they are not currently coded for admitted patients and cannot be accounted for without imposing an additional reporting burden on jurisdictions for uncertain benefit. IHPA also considers the maturity of the classification and whether classification development to account for the technology is possible. For example, the Tier 2 non-admitted classification is clinic-based and does not differentiate between different technologies used in the clinic to treat patients.

NOTE: Where the expected uptake and/or cost difference of technology is small, classification development is a low priority.

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<sup>3</sup> TGA approval is not required for new medical procedures, as they do not constitute therapeutic goods.

As part of the shortlist process, IHPA will also propose a decision around whether each technology listed should be progressed to the assessment phase based on the evidence available.

## **Stage 2: CAC prioritisation**

IHPA will seek advice from the CAC on the shortlisted technologies and will confirm the proposed course of action. CAC may draw on the expertise of relevant clinical stakeholders when considering the new health technology, such as seeking the advice of clinical colleges.

## **Stage 3: Assessment**

### **(3a) IHPA consults with jurisdictions on the new health technologies**

IHPA consults with jurisdictions through its Jurisdictional Advisory Committee to confirm whether the new health technology is used across the jurisdictions and whether it is adequately accounted for in the national pricing model. IHPA will provide jurisdictions (in writing):

- details of the new health technologies identified in Stage 2 and seek their written submission within 45 days
- take-up/implementation by hospital and by year
- cost of the technology (may also include costing data such as average cost per episode of care)
- studies completed/planned including impact on service delivery, patient's quality of life, other evaluation, cost effectiveness analyses, cost-benefit analyses
- details of changes to model(s) of care and associated impacts
- where applicable, IHPA will request jurisdictions provide supporting evidence to assist the assessment at the national level.

### **(3b) IHPA reviews written submissions**

Where required, IHPA may:

- request additional evidence (e.g. data, information, agreements, etc.) to clarify facts and ambiguities in the assessment process
- consult further
- seek expert input/advice.

To support the timeliness of the investigation, additional information will generally be requested to be provided within 45 days after receiving the written request.

## **Stage 4: Classification analysis**

### **(4a) Conduct additional work**

Based on the recommendations of CAC and advice from jurisdictions, IHPA will conduct additional analysis to assess the impact on classification systems.

Recommendations for AR-DRG change are subject to clinical review and data impact analysis which is managed by the DRG Technical Group. Specialty clinical reference groups will be called on as required to provide clinical advice on requests for changes to the AR-DRG.

IHPA is mindful not to expand the number of AR-DRGs unnecessarily and will seek to balance additions to the list of AR-DRGs with reductions in under-utilised DRGs.

### **(4b) Pricing Authority approves the recommendations**

Any proposed classification changes are presented to the Pricing Authority for approval.

Following approval, the prioritised new health technologies will be considered by IHPA for classification development by May each year.

IHPA has identified the admitted acute setting as the most relevant to the majority of the new health technologies IHPA will receive under the Framework. Referral of a technology for classification development does not constitute a recommendation for supplementary funding.

Following approval from the Pricing Authority, IHPA will advise those who made submissions of the outcome of the assessment process, including publishing on its website.



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