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CLINICAL CODING SERVICES PTY LTD

Consultation and review of the AR-DRG and ICD-10-AM/ACHI/ACS Classification Systems

Independent Hospital Pricing Authority (IHPA)

18 February 2020

Final report

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Executive Summary

The Independent Hospital Pricing Authority (IHPA) undertakes reviews and updates of existing classifications used for Activity Based Funding (ABF) across Australia. The Australian Refined Diagnosis Related Groups (AR-DRG) classification provides the national standard for classifying activity in acute admitted patient care and the determination of pricing and funding arrangements for public hospitals in Australia. AR-DRGs are underpinned by the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) / Australian Classification of Health Interventions (ACHI) / Australian Coding Standards (ACS).

Drivers and scope of the Review

The last comprehensive review of the AR-DRG classification was conducted in 2009, and since then there have been significant changes in the healthcare environment, particularly since the introduction of the National Health Reform Agreement, which created the platform for implementation of a national ABF model to manage the federal government's funding contribution for public hospitals. Additionally, IHPA's recent decisions to bring the development of both AR-DRG and ICD-10-AM/ACHI/ACS classifications in-house provides an opportunity to re-examine the end-to-end development process, implementation arrangements and how best to meet user needs now and into the future.

IHPA engaged a consortium led by Paxton Partners to conduct a comprehensive stakeholder engagement process and review of the AR-DRG and ICD-10-AM/ACHI/ACS classification development processes. The Review focused on the development cycle, management arrangements and understanding the needs of end-users of the classifications.

Key findings

The Review highlighted that stakeholders believe a robust, high performing classification development process should be transparent, efficient, effective, take a 'system view' and balance the need for currency with overall stability of the classification.

The Review identified four key areas and 19 key opportunities to improve how the AR-DRG and ICD-10-AM/ACHI/ACS development processes operate to ensure they meet these requirements.

Development cycle timing and processes

Stakeholders provided a broad range of feedback when asked about their 'ideal' development cycle timeframe. While options emerged from consultations, there was no clear consensus about whether to change the development cycle duration and timing.

The appetite of stakeholders to change the development cycle was most pronounced in two areas:

1. Willingness to explore options for a longer development cycle that provides for major structural changes to be implemented over a longer period than at present
2. The need for a mechanism to incorporate changes to technology, new diseases, and new clinical practice in a more timely manner (even within the current two year cycle).

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The feedback identified the potential to enhance specific aspects of processes throughout the development cycle to improve their efficiency and effectiveness. Key process improvements identified by stakeholders relate to:

- reducing duplication in the channels available to submit requests for change
- improving the functionality of the Australian Classification Exchange (ACE) portal, which is used to make public submissions
- strengthening feedback provided to submitters throughout the change request process
- streamlining public consultation arrangements focused more towards the implementation, testing and education phase of the process
- taking steps to mitigate implementation impacts and administrative burden for end-users.

Embed a systematic, principles-based approach to work program prioritisation

Although a process currently exists to develop work programs to guide AR-DRG and ICD-10-AM/ACHI/ACS development, stakeholders considered that more rigorous forward planning and application of principles would reinforce the primacy of the work program as a mechanism to identify and plan for change.

Principles were considered to be fundamentally important in two key areas of the development cycle:

1) to guide changes to be made to the classification
2) the process to develop and prioritise the work program.

Although principles for classification development already exist, there are opportunities to embed them into the practical aspects of the development process more effectively. Principles for work program development and prioritisation would need to be developed and should ideally be designed to ensure a unified approach that considers inter-relationships between the AR-DRG and ICD-10AM/ACHI/ACS classifications.

Enhancing the role and structure of advisory groups

Adjustments to the current classification development advisory and governance structure could achieve efficiencies that would allow IHPA to re-focus resources on areas of highest value-add. Key opportunities to improve user engagement and perceived confidence in the process, include:

- **Streamlining advisory and governance processes**. Currently, much of IHPA's work effort involves administering the advisory and governance process, often represented by the same stakeholder groups across different forums, which adds time and duplication in the process
- **Advisory committees are representative (rather than skills-based)**
- **Advisory committees need more time to consider the information provided to them** to engage most effectively in the development process
- **Routine changes / updates could be dealt with by IHPA**, removing the need for advisory groups to consider them, allowing time for more detailed discussion on substantiative issues and change requests.

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Enhancing education and documentation to support implementation

A consistent theme was the desire to improve the depth and consistency of education, interpretation and supporting documentation to support adoption of changes. Stakeholders considered that doing so would support more efficient implementation of changes to the classifications.

Conclusion

The Review was considered by many stakeholders to be a valuable way to assess the effectiveness of current classification development processes undertaken by IHPA in relation to AR-DRG and ICD-10-AM/ACHI/ACS. The consultation process itself was also a valuable exercise to provide IHPA with a clearer perspective on the breadth of user needs.

While the Review highlighted no significant and material shortcomings in the current practices for managing and developing the acute classification processes, it identified opportunities to refine parts of the process, enhance the value stakeholders obtain from the classifications.

These opportunities aim to enhance the value and sustainability of acute care classifications into the future and promote Australia's ongoing leadership in casemix and classification development. The issues and opportunities identified in this report provide the basis for IHPA, as custodian of Australia's acute care classifications, to consider, consult on, plan for and implement measures to achieve these objectives.

Summary of opportunities for improvement

The specific opportunities for improvement identified in this Review are summarised below. Each opportunity is expressed in further detail within the body of the report.

Development cycle timing and processes (Section 5)

1. There may be value in IHPA considering a longer development cycle for assessing and adopting material changes to the classifications. This would provide greater stability for end users and system managers and allow greater considered analysis by IHPA and its advisory and technical groups as well as promote longer lead time for supporting implementation timeframes.
2. IHPA should consider approaches to incorporating new health technology in ACHI, such as the use of placeholder codes, similar to the use of emergency codes used in the ICD-10-AM classification, to allow for new interventions to be codified during the development cycle timeframe.
3. Consider focusing stakeholder input to the classification development process through submissions via the ACE portal only. With the Pricing Framework consultation process reflecting more strategic and less technical input and feedback to classification development.
4. The ACE portal should be reviewed and redesigned to enhance user functionality.
5. There may be value in considering whether the public consultation process currently employed during the analysis phase of the development cycle should be reduced and re-focused more towards the implementation, testing and education phase of the cycle.

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6. IHPA should consider enhancing documentation to improve users' preparedness for adopting changes. A longer development cycle timeframe would support the implementation of these and any further documentation enhancements.

Principles-based approach to work program prioritisation (Section 6)

7. Principles or decision criteria should be refined to guide the determination of classification changes.
8. IHPA should publicly promote and actively apply the classification development principles.
9. Establish a more structured, transparent and formalised process to the development of the ICD-10-AM/ACHI/ACS and AR-DRG classification work programs.

Role and structure of advisory groups (Section 7)

10. There would be benefit in IHPA exploring opportunities for additional technical expertise to provide advice as required and support classification development. IHPA should consider how to best incorporate and utilise dedicated clinical expertise within the technical groups, to have access to the required clinical expertise as well as avoiding duplication of roles.
11. As a way of improving the value and focus of the ITG and DTG committee members' time, consider a separate process for IHPA to internally manage minor/routine updates to the classifications and issue outcomes of any changes to ITG and DTG for information purposes only.

Education and documentation to support implementation (Section 8)

12. IHPA could enhance national education material to support implementation.
13. ITG could have a greater role in shaping the development of educational materials when changes to ICD-10-AM/ACHI/ACS occur.
14. All education material should be tested and quality assured before being released.
15. Develop and release the DRG Definitions Manual including reference tables in electronic format.
16. Enhance documentation to support implementation of classification changes.

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Part A: Project context

1 Project context

1.1 Drivers of the project

The last comprehensive review of the AR-DRG classification was conducted in 2009, and since then there have been significant changes in the healthcare environment.

The introduction of the National Health Reform Agreement in 2011 created the platform for implementation of a national Activity Based Funding (ABF) model and saw an increase in the Commonwealth's share of public hospital funding. It also served as the catalyst for the creation of the Independent Hospital Pricing Authority (IHPA).

IHPA's recent decisions to bring the development of both AR-DRG and ICD-10-AM/ACHI/ACS classifications in-house (refer to section 2.2) provides an opportunity to re-examine the end-to-end development process, implementation arrangements and how best to meet user needs now and into the future.

1.2 Project objectives

To address these drivers, IHPA engaged a consortium led by Paxton Partners to conduct a comprehensive stakeholder engagement process and review to examine key internal and external processes involved in the development, management and use of the Classification Systems ("the Review").

The key objectives of the project were to:

- Evaluate the end-to-end process to develop the classifications to identify strengths, weaknesses, areas for improvement
- Obtaining an understanding of stakeholder needs and impacts and the extent to which the current AR-DRG and ICD-10-AM/ACHI/ACS development process meets these needs
- Providing recommendations about a preferred model for future development and implementation of the classifications, including relevant supporting processes.

1.3 Project scope

This project scope focussed on three streams that are aligned to IHPA's role and responsibilities as manager of the AR-DRG and ICD-10-AM/ACHI/ACS classifications (Figure 1), which include:

1. **The Classification development cycle**, including process and procedures that are in place to develop the AR-DRG and ICD-10-AM/ACHI/ACS classification systems and strategic considerations for the future
2. **Management processes associated with the classifications**, including current processes and what will be required to manage the system into the future
3. **A review of the current users of the classifications**, to ensure strategies are in place to ensure their ongoing engagement in development of the classification, effective processes

are in place to capture users' feedback and that they are adequately supported when new versions of the classification are implemented.

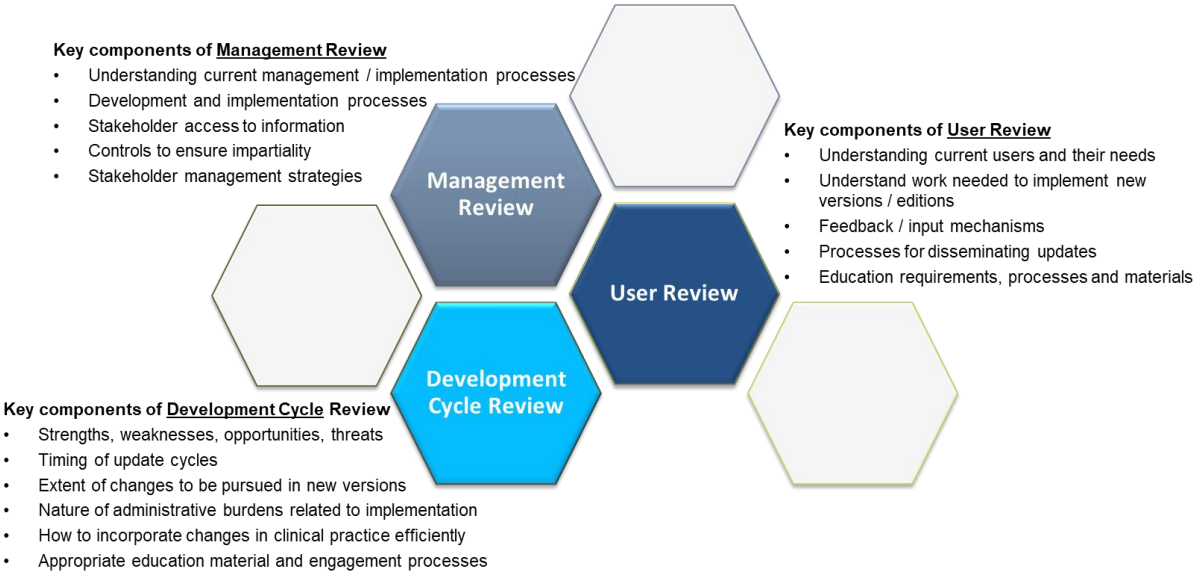

Figure 1: Key components of the Review and focus areas within each

The focus of the Review was not on technical aspects of the classification, but rather the practical and process-related aspects associated with IHPA's role in the Classification's development, implementation, ongoing management and usage. Its focus was to evaluate the processes within IHPA's remit, with the Review ultimately seeking to inform a preferred model for IHPA to develop the classifications into the future.

The Review considered the structure, processes and skills needed to manage the classifications, as well as how IHPA performs its stakeholder engagement, education and user support functions effectively.

In broad terms, the following issues were canvassed with stakeholders as part of the Review:

1. Processes and procedures currently in place to develop the classifications (end-to-end)
2. Preferred timing of the update and development cycle for new versions / editions
3. Processes to identify areas of the classifications that should be reviewed
4. Submission process for change requests
5. Mechanisms for providing feedback to stakeholders on proposed changes
6. Processes and structures required to manage the development process
7. Appropriate format and content of reference and supporting materials to support classification updates
8. Administrative burden to stakeholders of implementing new editions / versions
9. Impact of the release of ICD-11 on the Australian classifications.

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1.4 Project methodology

The Review was conducted over five phases, spanning approximately five months, beginning in August 2019 and concluding in December 2019 (Figure 2).

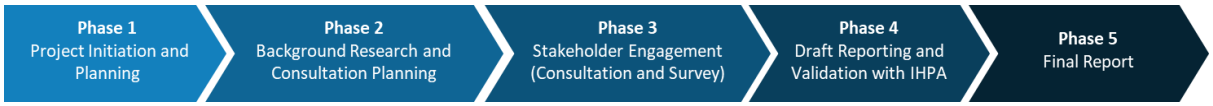

Figure 2: Project phases

The information to support the Review was gathered across three main activities, including:

1. review of relevant documentation
2. stakeholder consultations
3. an online survey.

These are described in the sections below.

1.4.1 Document review

During the initial stages of the Review, IHPA provided submissions to previous Australian Consortium for Classification Development (ACCD) / IHPA classification development processes, meeting documentation from advisory and governance bodies involved in the development process, work program documentation and technical documentation. These documents were reviewed to establish an understanding of relevant issues needed to consult effectively, and develop a survey of key stakeholders who use the classifications.

1.4.2 Consultations

A broad consultation process was conducted with stakeholders across Australia and internationally to obtain perspectives on usage of the classifications, feedback on the end-to-end development and management process and potential opportunities to improve the classifications. In total, nearly 150 individuals were involved in direct consultations.

Consultations were conducted face-to-face or via teleconference / videoconference. The key stakeholders consulted are identified in Table 1.

Table 1: Stakeholders consulted

Stakeholder type	Organisations consulted	
IHPA and IHPA Advisory Committees	• IHPA • Classifications Clinical Advisory Group (CCAG)	• ICD Technical Group (ITG) • DRG Technical Group (DTG)
Jurisdictions	• Commonwealth (Department of Health) • New South Wales (NSW Health) • Queensland (Queensland Health) • Australian Capital Territory (ACT Health)	• Victorian (Victorian DHHS) • South Australian (SA Health) • Tasmania (Tasmanian DHHS) • Northern Territory (NT Health)

Stakeholder type	Organisations consulted	
Other Australian organisations	• Australian Institute of Health and Welfare (AIHW) • National Centre for Classification in Health (NCCH) • Australian Commission on Safety and Quality in Health Care • Clinical Coders' Society of Australia Inc. (CCSA) • Health Information Management Association of Australia (HIMAA) • Catholic Health Alliance (CHA) • Australian Dental Association (ADA) • La Trobe University	• Australian Health Services Alliance (AHSA) • Australian Healthcare & Hospitals Association (AHHA) • Australian Private Hospitals Association (APHA) • Medical Technology Association of Australia (MTAA) • Private Healthcare Australia (PHA) • Department of Veterans' Affairs (DVA) • Australian Bureau of Statistics (ABS) • Western Sydney University • University of Tasmania
International experts	• New Zealand Ministry of Health • Canadian Institute for Health Information (CIHI)	• Nordic Casemix Centre

In addition to the stakeholders listed in Table 1, software vendors however did not participate / provide feedback into the process. Western Australia Health has been involved in the project through its representation on ITG and DTG but was not able to participate in a jurisdictional consultation session.

1.4.3 Survey

A key component of stakeholder engagement was the delivery of an online survey[1] to maximise consultation coverage and ensure the breadth of different users were able to provide feedback to the Review. End-users of the classifications in health departments, health services and the private sector were key target populations for the survey, which was also used to complement findings from stakeholder consultations.

The survey was distributed to nominated stakeholders (predominately provided by jurisdictional health departments and through IHPA's committee structure), including jurisdictional coding committee members, health services, staff from coding and hospital management and jurisdictional departmental staff. Results from 194 respondents were received.

Note: survey questions were not mandatory and therefore a different number of the total survey respondents answered each question. As such, references to "proportion of respondents" in the graphs and text throughout this report, relate to the proportion of respondents who answered the specific question being presented - not the total number of survey respondents. The number of respondents to each specific question is noted as an 'n' value on each graph for reference.

[1] The survey was implemented via the 'survey monkey' online collection modality: https://www.surveymonkey.com/

2 Background - Acute classification systems

2.1 Classification context

IHPA is responsible for ongoing refinement, maintenance and documentary support of admitted acute care patient classifications including:

- International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)
- Australian Classification of Health Interventions (ACHI)
- Australian Coding Standards (ACS)
- Australian Refined Diagnosis Related Groups (AR-DRG).

As part of its role, IHPA is required to undertake reviews and updates of existing classifications used for ABF across Australia.

The AR-DRG classification system provides the national standard for classifying activity in acute admitted patient care and the determination of pricing and funding arrangements for public hospitals in Australia.

The AR-DRG classification system was established in 1998 following an overhaul of the previous Australian National Diagnosis Related Groups (AN-DRG) system to:

- Adopt the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) as part of the classification
- Incorporate changes that included a revised logic, new numbering system, and the introduction of severity systems.

Collectively, these classifications support a range of instrumental roles across the Australian healthcare sector, ranging from underpinning the Australian ABF framework to evaluating hospital performance, supporting epidemiology, benchmarking and research studies.

While the classifications are all separate, ICD-10-AM, ACHI and ACS are developed and released as a collective classification system. The AR-DRG classification system is underpinned by the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification, the Australian Classification of Health Interventions and the Australian Coding Standards (ICD-10-AM/ACHI/ACS) (Figure 3).

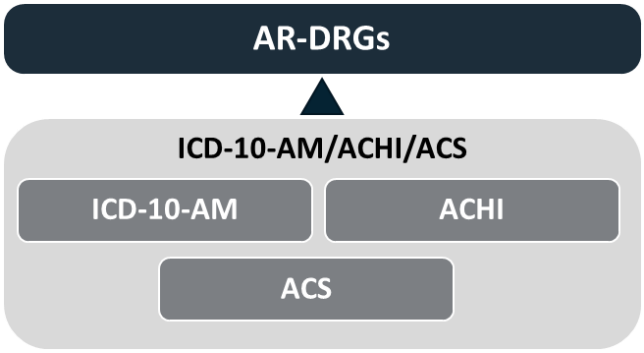

Figure 3: Relationship of ICD-10-AM/ACHI/ACS to AR-DRGs

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Background information on each of these components is provided below.

2.1.1 ICD-10-AM

ICD-10-AM is an expanded version of the World Health Organization's (WHO's) ICD-10, which provides an Australian-specific code list used by clinical coders and Health Information Managers (HIMs) in health services for the purpose of collecting data on morbidity. ICD-10-AM (in conjunction with ACHI and ACS) is used to classify episodes of admitted patient care in hospitals across Australia.

ICD-10-AM consists of a tabular list of diseases and an accompanying index. It uses an alphanumeric coding scheme for diseases and external causes of injury and is structured by body system and aetiology and comprises three, four and five character categories. It has been in use since 1998 and is updated on a regular basis, incorporating updates of the WHO's ICD-10 as part of this process.

2.1.2 ACHI

ACHI is based on the Medicare Benefits Schedule (MBS) and further expanded to cover interventions not part of the MBS and ADA updates and is used to classify procedures and interventions.

This classification is structured by body system, site and intervention type, and consists of a tabular list of interventions and an accompanying alphabetic index. ACHI was developed with assistance from specialist clinicians and clinical coders and has been in use since 1998.

2.1.3 ACS

ACS has been developed to support clinical coders and HIMs to apply sound coding conventions within ICD-10-AM and ACHI, by providing instructions and guidelines to ensure consistency in clinical coding nationally.

The coding standards apply to all public and private hospitals in Australia. The ongoing revision of the ACS ensures that they reflect changes in clinical practice, clinical classification amendments and various user requirements of admitted patient data collections.

2.1.4 AR-DRG

AR-DRG is a classification system which provides a clinically meaningful way to relate the number and type of patients treated in a hospital to the resources required by the hospital. AR-DRG groups patients with similar diagnoses requiring similar hospital services and are used to calculate public hospital funding on an activity basis.

Episodes of admitted acute care are assigned with disease and intervention codes by HIMs or clinical coders and are then assigned based on these codes and other routinely collected variables including age, sex, mode of separation, length of stay, newborn admission weight, and hours of mechanical ventilation. AR-DRG is carried out using software that contains the AR-DRG algorithms, referred to as a 'grouper'.

2.2 Classification development history and timeframe

Development of the classifications occur concurrently over a rolling, two-year cycle. New AR-DRG versions and ICD-10-AM/ACHI/ACS editions are released every two years.

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The rolling development cycles aim to ensure that the classifications are clinically relevant, maintain currency with clinical terminology and practice, and remains fit-for purpose for ABF and other uses. Both AR-DRG and ICD-10-AM/ACHI/ACS are updated in alternate years.

While the development of both classifications occurs concurrently, the ICD-10-AM/ACHI/ACS classification is generally implemented for data collection purposes in the financial year before a new version of AR-DRG is used for pricing nationally.

ACCD were contracted to manage the development and refinement of both AR-DRG and ICD-10-AM/ACHI/ACS between 2013 and 2017. In 2016, IHPA made a strategic decision to retain development of the AR-DRG classification within the Agency from Version 10.0, which was released in July 2019. IHPA continued to contract ICD-10-AM/ACHI/ACS development to ACCD for Eleventh Edition until July 2019. In 2018, IHPA made the decision to also bring ICD-10-AM/ACHI/ACS development within the agency for future editions beyond 2019. This is illustrated in Figure 4.

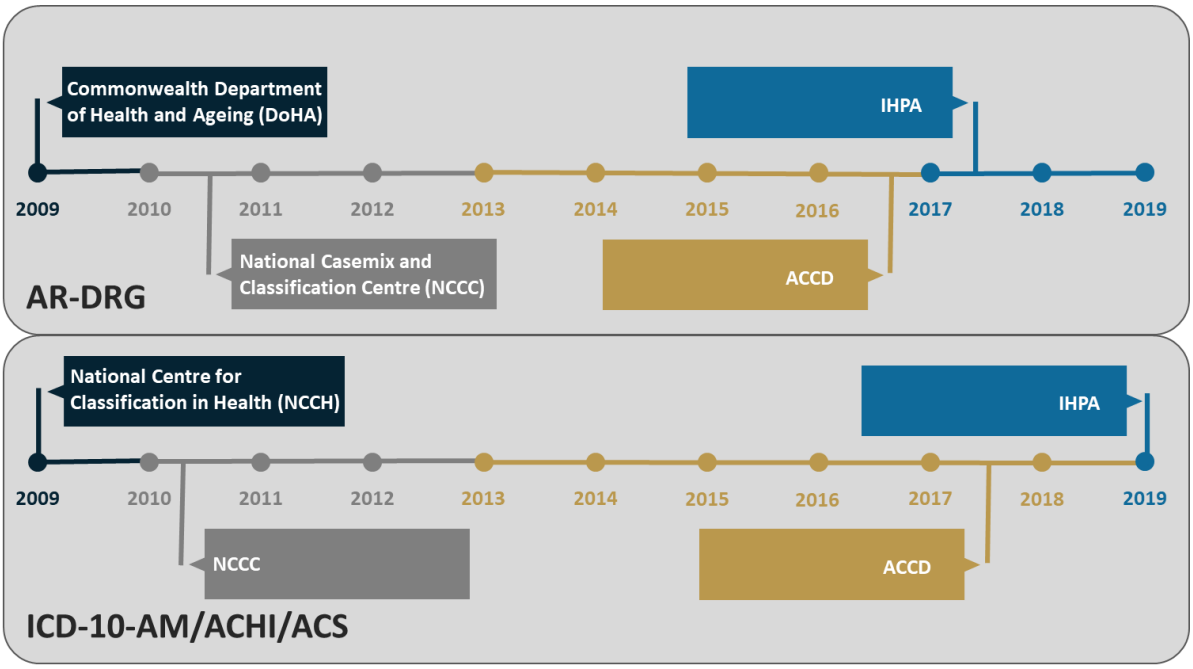

Figure 4: Classification development responsibility since the last review (2009)

The following versions / editions are the most current in use at the present time:

- **AR-DRG Version 9.0**[2] is the current version used for pricing in public hospitals Australia (and has been since 1 July 2018)
- **AR-DRG Version 10.0**[3] was approved by the Pricing Authority in April 2019 and is anticipated to be used to price episodes of admitted acute care from 1 July 2020
- **ICD-10-AM/ACHI/ACS Eleventh Edition**[4] was implemented on 1 July 2019.

[2] https://www.ihpa.gov.au/classifications/development-australian-refined-diagnosis-related-groups-previous-versions
[3] https://www.ihpa.gov.au/admitted-acute-care/australian-refined-diagnosis-related-groups-ar-drg-version-100
[4] https://www.ihpa.gov.au/what-we-do/icd-10-am-achi-acs-current-edition

2.3 Changes impacting classification development

Several historical and proposed future environmental changes (Figure 5), provide relevant context that has informed the approach to this Review, and the proposed approaches to enhance the classification development process going forward. These are described further in the sections below.

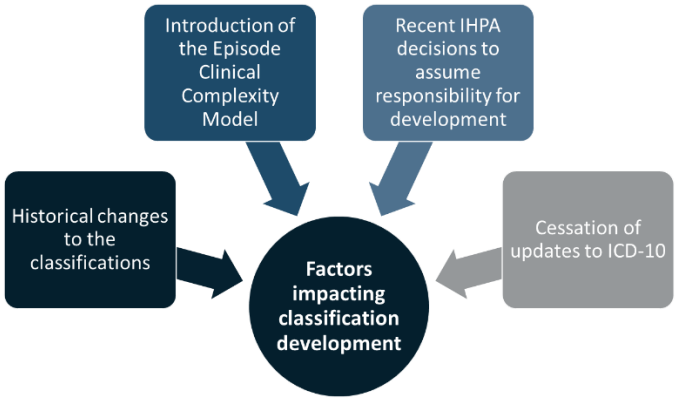

Figure 5: Environmental factors / changes impacting classification development

2.3.1 Historical change in the AR-DRG classification

Table 2 summarises how the AR-DRG classification has changed since IHPA was established, including development responsibility, implementation timeframes, ICD-10-AM/ACHI/ACS edition underpinning each change, core changes made in each version of the AR-DRG classification, the number of Adjacent Diagnosis Related Groups (ADRGs), Diagnosis Related Groups (DRGs) and the statistical performance of each version of the Classification with respect to cost (as measured by the Reduction in Deviance statistic[5]).

This highlights several issues that are relevant in the context of this Review:

- Each update to the AR-DRG classification has been a major version change since 2011.
    - Prior to implementation of AR-DRG Version 7.0, Versions 4.0 and 5.0 included minor updates, resulting in 'point versions' such as 4.1, 4.2, 5.1 and 5.2
- There have been several changes in responsibility for AR-DRG development over the past ten years, from the (then) Commonwealth Department of Health and Ageing (DoHA), National Casemix and Classification Centre (NCCC), ACCD and now IHPA (refer to Figure 4)
- The data used to develop each version of the classification is typically at least three years behind its release date (refer to Table 2 and depicted visually in Figure 6 on page 16)
- Although the number of ADRGs and DRGs have changed from one version to the next, there have been approximately 400 ADRGs and approximately 800 DRGs since Version 7.0
- The statistical performance of the classification has been relatively stable overall, at around 65%.

[5] RID measures how much of the variability in cost is explained by the AR-DRG classification and is expressed as a percentage. The higher the percentage value, the higher percentage of cost variation is explained by the system

Table 2: Overview of changes in the AR-DRG classifications since 2011

	Version 6.0x	Version 7.0	Version 8.0	Version 9.0	Version 10.0
Release date	2011	2013	2015	2017	2019
Pricing date	1 July 2012	1 July 2014	1 July 2016	1 July 2018	1 July 2020
Development responsibility	DoHA (Cwlth)	NCCC	ACCD	ACCD	IHPA
ICD Edition	ICD-10-AM (Sixth)	ICD-10-AM (Eighth)	ICD-10-AM (Ninth)	ICD-10-AM (Tenth)	ICD-10-AM (Eleventh)
Base data period	Not published	2008-09 and 2009-10	2009-10 to 2011-12	2011-12 to 2013-14	2013-14 to 2015-16
Core changes	1. Re-introduction of DRG splits from V5.2 following review recommendations to re-instate DRG splits that had been collapsed in the move from V5.2 to V6.0. 2. Major Diagnostic Categories (MDCs) changes in 09, 14, 19 and 20, and introduced splits in 9 ADRGs in V6.0.	1. Clinical focus on MDC 15 Newborns and Other Neonates 2. Clinical focus on MDC 10 Endocrine, Nutritional and Metabolic Diseases and Disorders 3. Introduction of four new DRGs in MDC 08 Musculoskeletal System and Connective Tissue, and two in MDC 20 Alcohol/Drug Use and Induced Organic Mental Disorder	1. Complete revision of the case complexity methodology for DRG assignment, through introduction of the Episode Clinical Complexity (ECC) Model, resulting in splits for all DRGs being revised 2. Change in hierarchy order of MDC 08 3. Replacement of major problem, other problem and complicating procedures lists from MDC 15 4. Using age to split two AR-DRGs only (A07 and A09) 5. Assignment of some OR procedures to the end of the surgical hierarchy within an MDC 6. Relocation of Restorative Proctectomy from ADRG G05 to ADRG G01 7. Relocation of some principal diagnoses to different MDCs	1. AR-DRGs using Pre MDC assignment logic 2. Removal of the 'Other' partition 3. AR-DRGs using administrative variables in their definition 4. AR-DRGs with a lack of clinical distinctiveness 5. Replacing 'OR Procedures' with 'General Interventions'	1. Refinements to diagnosis exclusions 2. Review of the ECC model and implementation of stability measures to ensure the robustness of the ECC model 3. Nephrolithiasis interventions (previous ADRGs L40, 41 and 42) 4. Removal of the rehabilitation ADRG 5. Inconsistency in the grouping of liver procurement from living donors 6. Discrepancy in the grouping of osseointegration procedures of the digits and limbs 7. Intervention hierarchy review 8. ADRG splitting criteria review
ADRGs	399	406	406	399	397
DRGs	708	771	807	803	795
RID	65.1%[6]	69.4%[7]	65.6%[8]	65.3%[9]	64.6%[10]

[6] NCCC, Overview of AR-DRG Version 7.0
[7] NCCC, Overview of AR-DRG Version 7.0
[8] ACCD, AR-DRG Version 8.0 Final Report
[9] ACCD, AR-DRG Version 9.0 Final Report
[10] IHPA, AR-DRG Version 10.0 Final Report

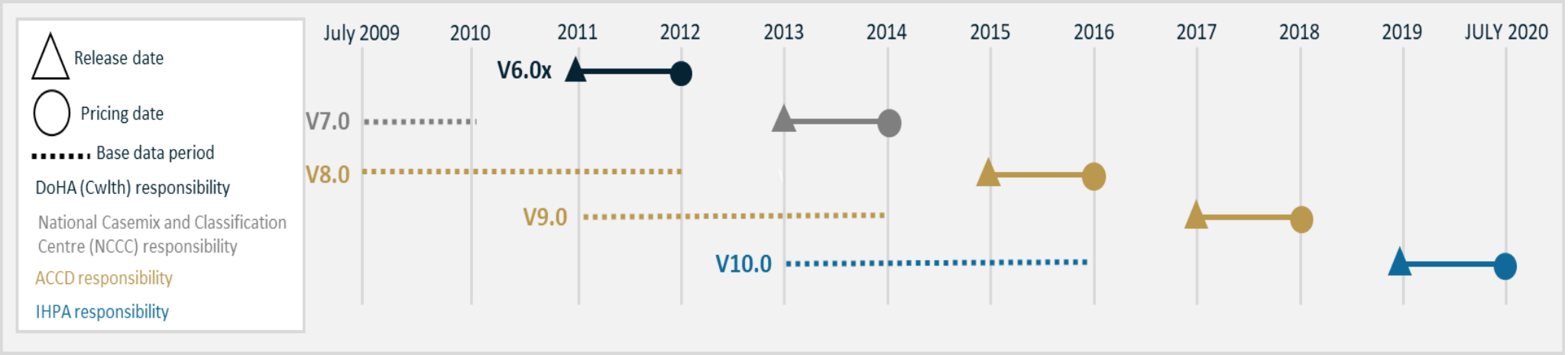

Figure 6: Timing of AR-DRG release and implementation versus data used to develop each version (since V7.0)

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2.3.2 Introduction of the Episode Clinical Complexity (ECC) Model

Introduction of the ECC Model in Version 8.0 represented a substantial shift in how changes in the AR-DRG classification occur, and the outcome of the AR-DRG development process.

In effect, introduction of the ECC model means that new DRGs may be created each time the ECC model is re-run, resulting in a new DRG version (rather than less extensive 'point changes' that have occurred in the past, such as the move from Version 4.1 to 4.2, or Version 5.1 to 5.2).

The impact of substantial changes resulting from the ECC model are still being discovered in both the public and private sectors. This may be impacting end user perceptions of the extent of change associated with implementation of new versions.

2.3.3 Transition of classification development

It is acknowledged that this Review is taking place relatively soon after IHPA has assumed development of ICD-10-AM/ACHI/ACS (and just over two years after assuming responsibility for development of AR-DRGs). It is acknowledged that some users may not be fully aware of procedural or management changes that have occurred since the transition to IHPA. As a result, the issues identified by various respondents in this Review may be a legacy of the previous contracted development process, or a by-product of recent transition processes that are still to be embedded into practice.

2.3.4 Cessation of WHO updates to ICD-10

Australia has been using of the Tenth Revision of ICD since 1998 and updating it every two years (ICD-10-AM). Some of the changes to ICD-10-AM have been informed by the annual release of WHO updates to ICD-10. However, the World Health Assembly approved the Eleventh Revision of ICD (ICD-11) in May 2019. Under the expectation that WHO Member States will move towards adopting ICD-11 at some stage in the future, the WHO will no longer provide updates for ICD-10.

Although other locally-driven updates to ICD-10-AM and ACHI are expected to continue (such as updates associated with changes in MBS codes for ACHI), the Twelfth Edition WHO updates will be the last expected updates released by WHO for ICD-10. This has the practical effect that one driver of change in the ICD development cycle will diminish once the Twelfth Edition updates are finalised.

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3 Classification development process

3.1 Overview

A summary of the end-to-end AR-DRG and ICD-10-AM/ACHI/ACS development process and current development timeframe is illustrated in Figure 7. Detailed process maps for each classification are provided in sections 3.3 and 3.4.

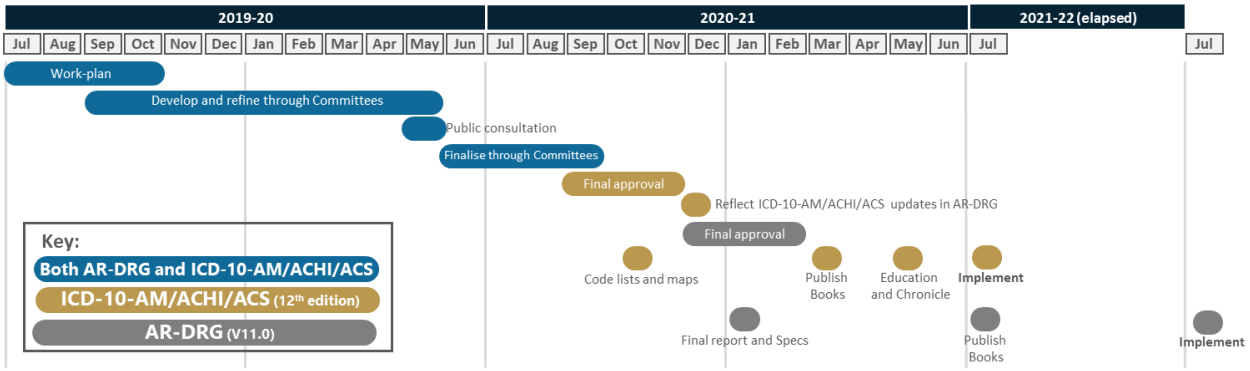

Figure 7: Existing classification update timeline

3.2 Key stakeholder roles

The high-level roles of key stakeholders involved in the development cycle of the classifications are described in Table 3.

Table 3: Key stakeholder roles in classification development cycle

Stakeholder	Role in classification development
Pricing Authority (PA)	To provide independent and transparent advice in relation to funding for public hospitals. The Pricing Authority is also responsible for approving classifications as well as approving recommendations to incorporate new technology into the classifications under IHPA's New Technology Framework.
IHPA	Undertakes reviews and updates of existing classifications and is also responsible for introducing new classifications for those service categories without an existing classification.
IHPA Advisory Committees	
Jurisdictional Advisory Committee (JAC)	Provides advice to the PA on matters relating to IHPA's work program. Membership consists of one representative in each state, territory and the Commonwealth Government.

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Stakeholder	Role in classification development
Technical Advisory Committee (TAC)	To oversee the technical options for the delivery of a robust system of clinical costing, clinical classification, data processing and modelling that underpins the development of ABF. The Commonwealth and each state and territory jurisdiction are represented on the committee.
Clinical Advisory Committee (CAC)	To ensure that clinicians have an input in the development of a national ABF system through the provision of timely and quality clinical advice to inform IHPA decision-making. Members are drawn from a range of clinical specialties and backgrounds to ensure the CAC represents a wide range of clinical expertise.
Stakeholder Advisory Committee (SAC)	To advise IHPA on developments and decisions within the health industry and act as a liaison point for peak national health advocacy bodies and IHPA. Membership comprises a range of public healthcare, private healthcare, pharmaceutical, medical, consumer and health technology organisations.
IHPA Technical Groups for Acute Care Classifications	
Classifications Clinical Advisory Group (CCAG)	Facilitates broad canvassing of clinicians to ensure that there is likely to be general acceptance of the developed classification proposals. CCAG includes clinicians from CAC and other clinicians with significant knowledge of classifications and casemix experience, along with representatives from relevant health associations.
DRG Technical Group (DTG)	To provide technical input and expert advice to IHPA with respect to the development and refinement of AR-DRG. Membership comprises a range of public and private healthcare organisations, peak bodies and jurisdictional representatives.
ICD Technical Group (ITG)	To act in an advisory capacity to IHPA; by providing technical input and expert advice with respect to the development and refinement of ICD-10-AM/ACHI/ACS. Membership comprises a range of jurisdictional representatives, Australian health sector organisations, public and private healthcare organisations and peak bodies.

There are a range of Australian and New Zealand users of the classifications who are also involved in the review and provide feedback into the development process. Their perspectives in relation to classification development are identified in Table 4. Many of the stakeholder groups are also represented in IHPA's advisory committees and technical groups identified above in Table 3.

Table 4: Stakeholder involvement in classification development

Stakeholder	Classification development perspectives
Commonwealth Health Department	National perspective and feedback on classification development, to ensure hospital activity is captured and recorded correctly and consistently, to inform national health policy research/coordination and ensuring that Commonwealth public hospital funding is provided and calculated on the most accurate, clinically relevant basis.

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Stakeholder	Classification development perspectives
State and territory Health Departments	Provide jurisdictional perspective and feedback on classification development based on their role as system managers of public hospitals in their respective jurisdiction. Health departments are also responsible for managing the integration of changes into health services within their jurisdiction, including over-arching responsibility for what versions and supporting software will be used, education, training and workforce development.
Health services (public and private)	Key end-users of the classifications through their role in coding and classifying patient episodes of care, and subsequently reporting on admitted services using the classifications. Based on their 'on-the-ground' exposure, health service and feedback on classification development and refinement may be directed to jurisdictional health departments or submitted directly via IHPA's public submission process. Health services are also responsible for coordinating implementation of changes to the classifications at the local level.
State/territory coding committees	Committees which exist in certain jurisdictions with a panel of experienced clinical coders representing respective jurisdictions, to deliberate and agree on submitted coding queries, with the view to inform the development and refinement of national classifications and resolve coding queries submitted by individuals or health services.
Other organisational users (e.g. peak bodies, representative / sector agencies, health insurers, researchers etc.)	Consider and provide feedback on classification development in their representative area of responsibility / interest and their experience using the classifications.
Health Information Workforce	Use classifications in their role as required, providing relevant perspectives and feedback on classification development and refinement.
Software developers	Create, update and provide to clients/users, grouping software that groups coded data into any relevant versions of the classification and in some instances, they also develop electronic coding tools.

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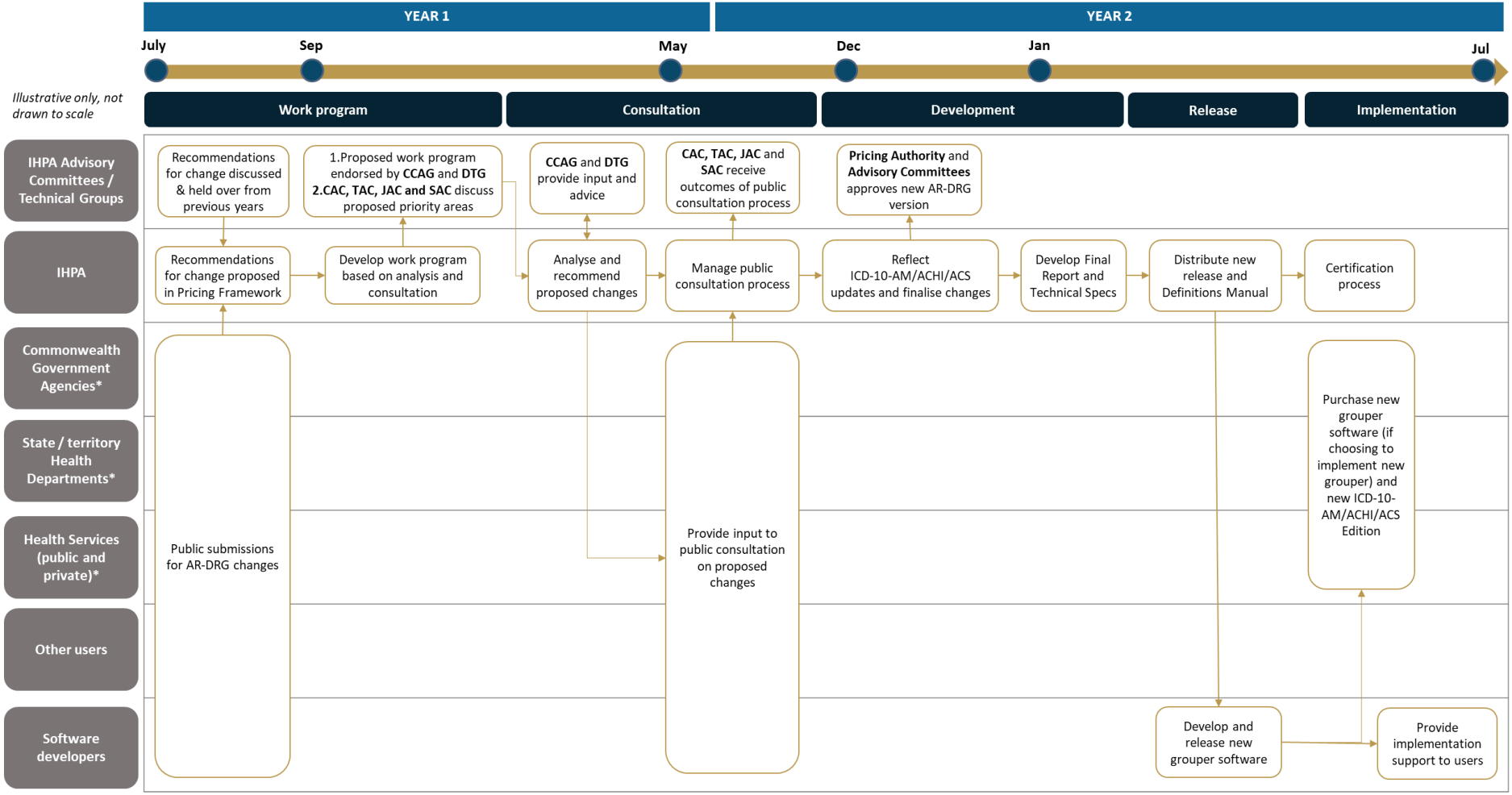
3.3 Mapping the AR-DRG process



** Not including role on IHPA Advisory Committees / Technical Groups*

Figure 8: End-to-end AR-DRG development process

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3.4 Mapping the ICD-10-AM/ACHI/ACS process

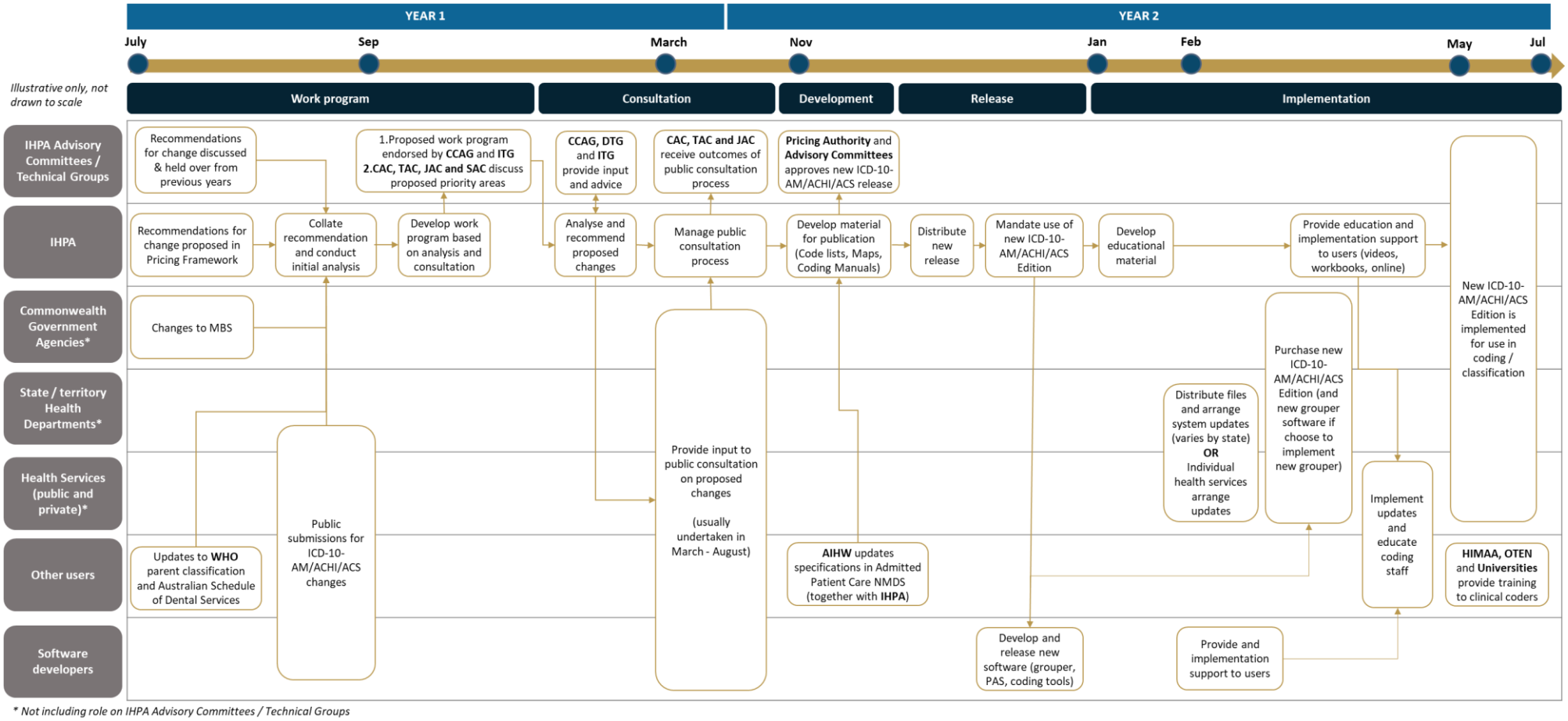

Figure 9: End-to-end ICD-10-AM/ACHI/ACS development process

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3.5 International approaches to classification development

This Review sought feedback from international experts to understand the arrangements for classification development that are in place overseas and assess their potential for application in the Australian context. Representatives from Nordic countries and Canada were consulted as part the Review, along with a high-level desktop review of publicly available information on development processes in Germany.

The sections below contrast arrangements in Australia and in these countries as the basis for understanding different approaches to classification development.

3.5.1 Nordic countries

The Nordic Casemix Centre is responsible for DRG development across seven national organisations who are members of the NordDRG Expert Group (Finland, Norway, Iceland, Estonia, Latvia, Denmark and Sweden).

Changes to DRGs in Nordic countries occur annually and are overseen by an expert reference group comprised of casemix experts who are nominated by their respective member countries. Although there is no restriction on the number of members included in the expert reference group, there is a clear skills requirement in clinical matters, economics and 'other relevant expertise'.

National organisations in participating countries collate proposals from within their jurisdiction and submit them to the Nordic Casemix Centre through the NordDRG online portal.

The yearly update process of the NordDRG system is based on the following principles[11]:

- New DRG groups and modified rules should only be accepted if they fulfil established clinical, statistical and economic criteria[12]
- Modifications are validated with clinical and financial data to ensure that both economic and medical (clinical) homogeneity is retained or improved
- The updating is sensitive to developments in medical practice as well as other changes to the health care system
- NordDRG is developed in a way to retain comparability over time whenever possible
- The development in other international DRG definitions is monitored for the future development of the NordDRG definitions.

National organisations in each participating country collect inputs from the local organisations, consult local experts about the proposed changes and have ultimate discretion to decide whether proposed changes will be implemented.

Targeted public consultation on proposed changes occurs through the NordDRG online forum, whereby announcement letters are sent to the members of the Board and Expert Group in each country, who communicate changes arising since the previous update to end users.

Manuals are developed by the Nordic Casemix Centre to support changes, but specific educational material is delivered by each participating country. Implementation of updates typically occurs in January; approximately eight months after the Board of the Nordic Casemix Centre approves changes.

[11] Nordic Casemix Centre (2013). 'Description of Nordic Casemix Work', accessed from http://www.nordcase.org/eng/about-us/
[12] Further information on these criteria were not available

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3.5.2 Canada

CIHI oversees the development of DRGs and changes to ICD over a synchronised, three-year development cycle. Implementation impacts were highlighted by Canada as a factor influencing its current timeframe. Historically, development was undertaken annually, however this was 'too much of a burden', so a three-year cycle was adopted.

Like Australia, change requests are received from a range of sources, including public submissions, internal queries and external queries. Advisory groups specific to each classification meet to discuss change proposals, which are informed by an impact analysis undertaken by CIHI.

For proposed changes to ICD, an 'Enhancement team' reviews changes against relevant criteria to assess whether to proceed or not, with management consulted to determine high priorities. A 'Development team' do a more in-depth development analysis with research, consultations with clinicians, end coders and other technical experts etc.

Although principles to guide DRG development in Canada were not identified, the following criteria are used to guide ICD development:

- Gap in the classifications related to a new disease
- Classification is outdated
- Ambiguity in classifications
- Assessing of whether it would assist in planning of care
- High priority in public interest, or
- Indicator development, funding development.

If a change is mandatory, an advisory committee is engaged, with representation from each Canadian province. However, the committee does not conduct a detailed analysis of every item and is not engaged for minor items, usually looking at controversial items.

DRG changes are considered by an advisory group specific to the DRG system, who meet twice a year. Representation of the advisory group is drawn from across Canada, including the Ministry of Health, system managers, hospitals (to provide 'on the ground' experience with data), researchers and clinicians. Small technical groups may be formed to investigate specific issues.

CIHI representatives identified that the high-level DRG structure has been mostly stable and has not changed significantly since 2007. On this basis, the associated implementation effort for changes to DRGs was identified to be low overall, reflecting the small scale of change. The status of proposed changes is published on a web portal.

CIHI's role in providing education and implementation support is similar in scope and approach to that conducted by IHPA. Although 'road show' education used to be undertaken in the past, all education is now undertaken online through webinars, guidebooks and a coding question service.

3.5.3 Germany

Information relating to the German system has been gathered from publicly-available sources and following a desktop review.

The German Institute for the Hospital Remuneration System (InEK) is responsible for the refinement of G-DRGs, which occurs on an annual basis. DRG application/suggestions for changes are submitted via the InEK data portal by various actors of the German health care system. The proposed amendments should be prepared and submitted primarily by organizations and institutions.

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Individuals, on the other hand, are asked to coordinate with the relevant advocacy groups. Submissions for change must be submitted within a defined timeframe – usually between December and March. Separate submission processes exist for DRG changes, ICD changes and for new examination and treatment methods that do not currently exist, or 'have no appropriate reimbursement'.

The InEK developed a proposal process whereby medical experts are asked to contribute their knowledge from clinical practice in order to refine certain DRGs. After collecting the suggestions from clinicians, the InEK carries out statistical analysis to prove the proposals empirically.[13]

Criteria exist for what changes will (and will not) be included for ICD updates in Germany. However, there is no clear equivalent for DRGs. Changes are considered under the following circumstances:

- Economic / funding purposes
- legally required external quality assurance
- the need for the coding of outpatient surgery
- situations where there is lack of illustration, lack of differentiation or lack of fulfilment of the three points above.

The decisions to decide which changes should be considered are largely determined internally by the InEK, including decisions whether to pursue submissions made to it. Other than the receipt of submission requests, the InEK conducts no public consultation engagement process during the development process.

[13] Geissler, A., Scheller-Kreinsen, D. et.al. (2011). 'Germany: understanding G-DRGs', accessed from https://www.researchgate.net/publication/284064230_Germany_understanding_G-DRGs

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Part B: Key findings and opportunities

4 Summary of key findings

4.1 General considerations

Throughout the Review there has been an acknowledgment by stakeholders that the processes associated with developing and refining the AR-DRG and ICD-10-AM/ACHI/ACS classifications are complex, particularly as they are required to serve a range of purposes and user needs. Stakeholder feedback also highlighted the intensive work that is undertaken by IHPA, jurisdictions, health services, the private sector and individuals to support all stages of the development cycle.

The complexity of the process often requires a challenging balance between meeting the diverse range of user expectations of the classifications, the magnitude of work required, the timeframes available to deliver this work and the resources at their disposal to support the required work effort (Figure 10).

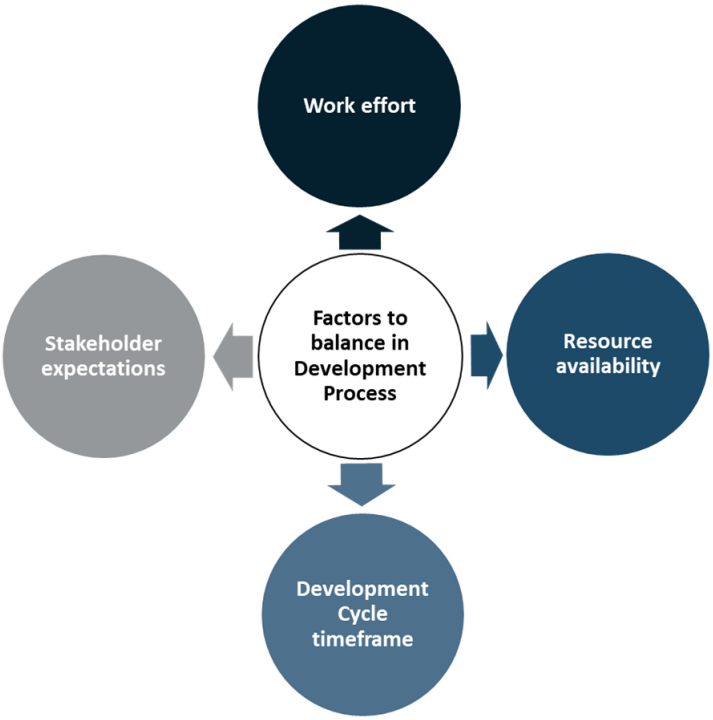

Figure 10: Stakeholder inputs that need to be balanced to participate in the development process for both classifications

The Review aimed to identify opportunities to improve the current development process to enhance the value of the AR-DRG and ICD-10-AM/ACHI/ACS classifications while striking an appropriate balance between the factors identified in Figure 10. These opportunities for improvement typically focus on one or more of these factors, by:

- considering changes to the development cycle timeframe
- enhancing some existing parts of the development process, or
- streamlining or removing processes that are perceived to add little value.

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The Review also highlighted varying levels of understanding about how the development process operates, and the role of key groups involved in development.

Generally, most feedback that identified opportunities for improvement related to ICD-10-AM/ACHI/ACS rather than the AR-DRG classification. This was particularly clear in the feedback received about the impacts of classification changes on the clinical coding and HIM workforce and related primarily to education and documentation required to support implementation of changes.

Furthermore, although outside of IHPA's remit, the role and operation of state/territory coding committees across Australia was highlighted as being influential through their role in coding interpretation and education. Numerous stakeholders highlighted differences in how each state/territory coding committee operate and potential impacts on classification development processes that can result from these differences.

We note that the opportunities for improvement presented in this Review have at this stage only been broadly expressed in order to test the appetite for change and may require further detailed work and impact assessment if a decision is made to pursue them.

4.2 Strategic principles

Over the course of stakeholder consultations conducted to inform the Review, several key themes in stakeholder views emerged about characteristics of a robust, high performing classification development process.

These key themes are reflected in Figure 11, and have been used as guiding principles to ensure that improvements support a more robust, high performing classification development process.

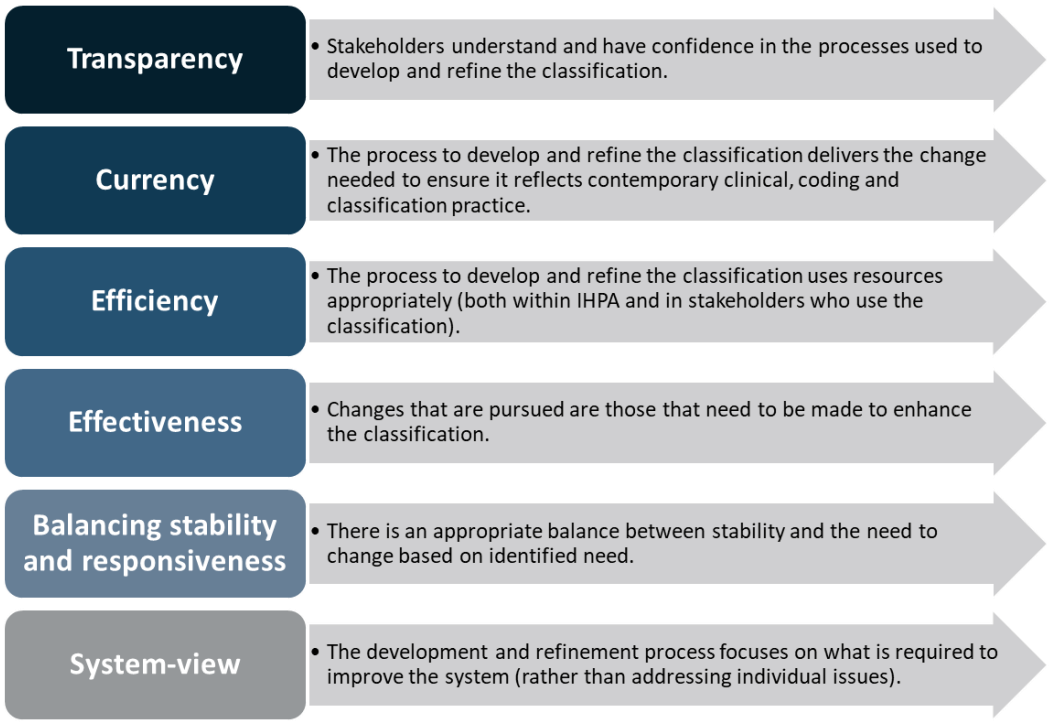

Figure 11: Strategic principles associated with a robust classification development process

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These themes have been used as a lens through which the adequacy of existing processes have been assessed, and for testing / developing potential opportunities for improvement where gaps are identified.

4.3 Key issues and opportunities

Figure 12 summarises the key areas of focus identified through the Review to enhance both the AR-DRG and ICD-10-AM/ACHI/ACS classification systems.

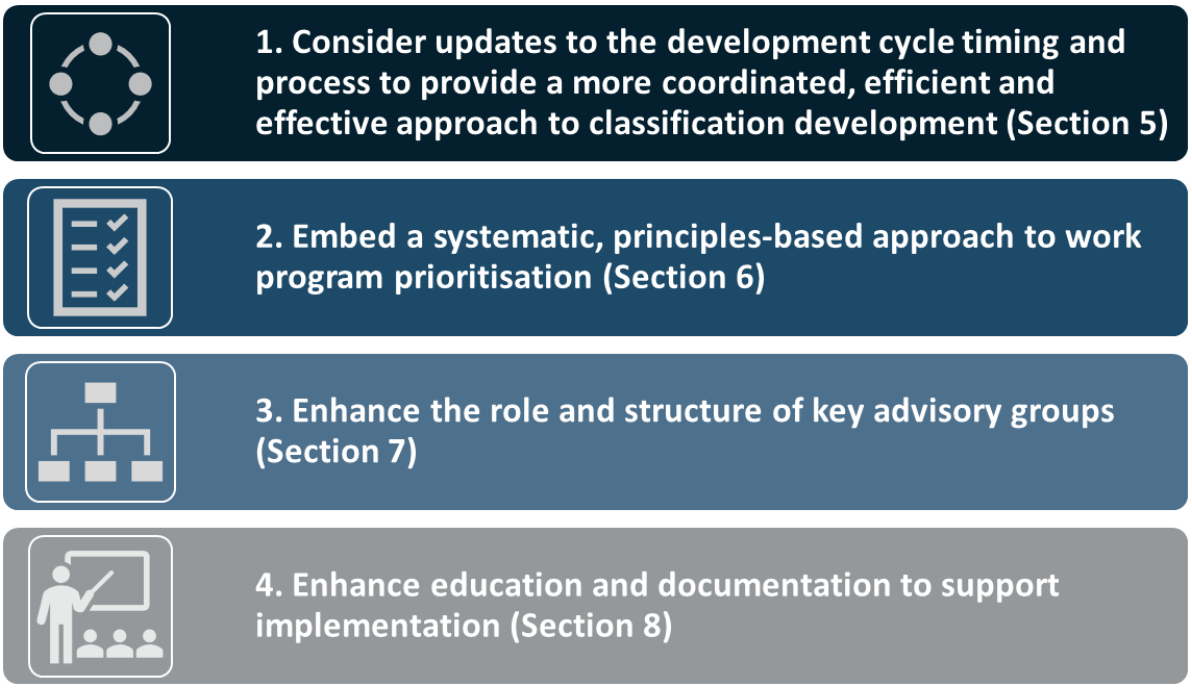

Figure 12: Key issues opportunities for improvement to enhance the AR-DRG and ICD-10-AM/ACHI/ACS development cycles

Underpinning the ideas presented in each of these components, is the need to more clearly position the role of the respective ICD-10-AM/ACHI/ACS and AR-DRG work programs. Greater objectivity, transparency and efficiency in the analysis of the classifications could be achieved by applying clear, consistent criteria to guide the areas of focus for classification work plans. The work programs would provide clearer focus on the nature of proposed analysis of material structural changes across the development cycle.

Sections 5 to 8 describe the issues driving the need for change in each area, and identify specific, prioritised opportunities for improvement to focus IHPA's effort and resources.

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5 Development Cycle timing and processes

The overall timing of the development cycle for each classification is a key factor influencing the resources and activities that need to be in place to support it. The timing of the development cycle therefore has implications for both IHPA (as developer of the classifications) and end-users.

Stakeholders provided a broad range of views and feedback when asked about their 'ideal' development cycle timeframe. While options emerged from the consultations, there were pros and cons associated with each option (summarised in Figure 13) as well as varied views about whether to change the development cycle duration and timing.

Shorter development cycle (1 year)

Advantages:
- Would provide for changes to be reflected sooner - improved 'currency' to reflect changes in models of care, technology and clinical practice

Disadvantages:
- More frequent change / implementation impacts
- Need for increased resources (for both IHPA and end users) to deliver development and implementation activities
- Would likely require that some current consultation processes are truncated or removed

Retain the status quo (2 years)

Advantages:
- No strong feeling that change is required either way – 50% of survey respondents indicated 2 years is preferred
- Current timeframe considered to provide appropriate time to implement change (71% of survey respondents)
- Provides scope for implementation of process improvements

Disadvantages:
- Some stakeholders feeling that implementation is 'rushed' – prefer longer timeframe
- Currently no process to reflect change in clinical practice / technology in a timely manner

Longer development cycle (3 years+)

Advantages:
- Would provide more time to understand, test and implement change
- Greater stability for end users
- Could be implemented in conjunction with more regular, smaller changes to mitigate 'currency lag'
- Could allow IHPA and users to focus on quality of development processes

Disadvantages:
- Risk that longer cycle would introduce a lag that would diminish the value of the classifications
- Less responsiveness to change

Figure 13: Stakeholder views regarding changes to the development cycle timing

5.1 Key user needs

The classification process is complex given the varying types of the changes that can occur (refer Figure 14), the roles the classifications fulfil and the large number of users they are expected to support. However a summary of the key needs identified throughout this project have been presented in Figure 15.

AR-DRGs
- Address any changes / updates or issues impacting performance of the classification or materially affect existing AR-DRG structures
- Re-run ECCS Model
- Incorporate ICD-10-AM/ACHI/ACS
- Exception based directions from New Technology Framework
- Implement major changes as proposed in work program
- Process requests for change as per public submissions

ICD-10-AM/ACHI/ACS
- Address any issues impacting performance of the classification
- Process updates from WHO, MBS, ADA
- Wording changes / updates
- Implement changes as proposed in work program
- Assess requests for change as per public submissions

Figure 14: Types of classification changes

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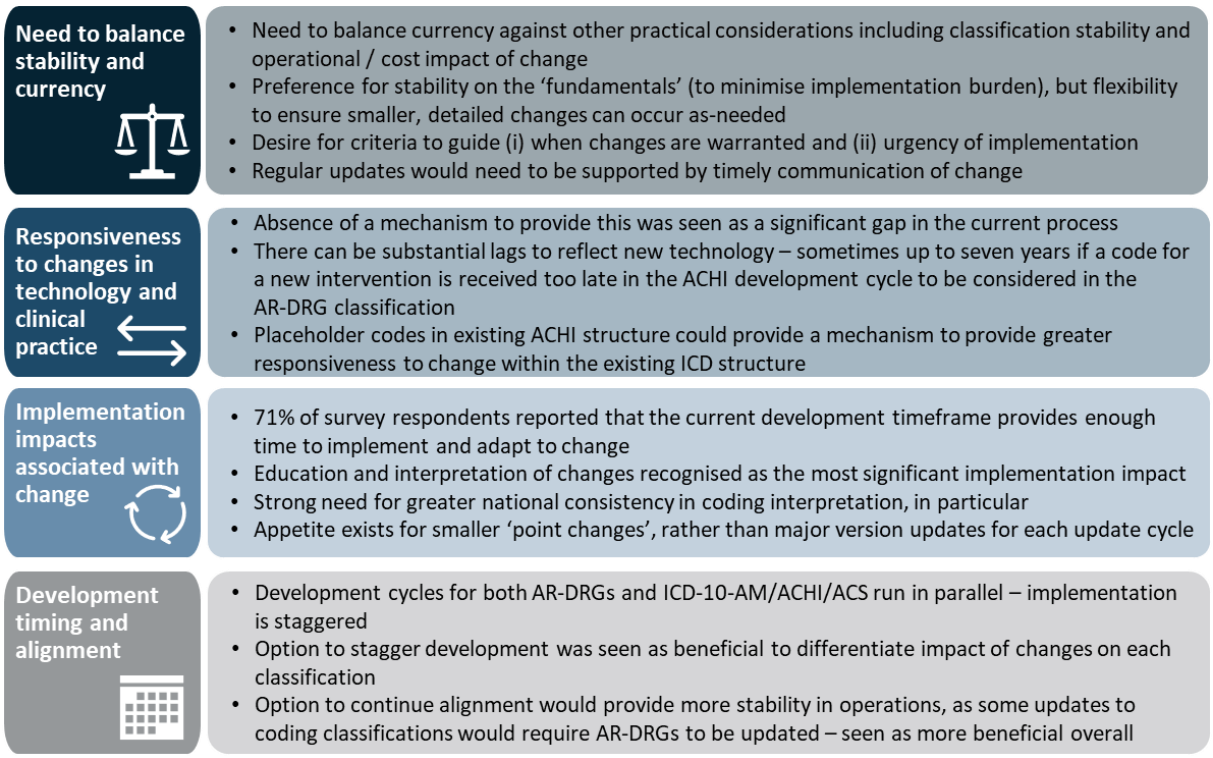

Figure 15: Key user needs in relation to the development cycle

5.2 Development cycle timing considerations

The feedback indicated a need to ensure greater stability in the classifications while at the same time, maintaining currency. Furthermore, there was a desire to extend the timeframes available to users following releases of the classification to test, interpret and educate users on the impact of changes.

Therefore, responses regarding whether to change the duration of the development cycle, particularly with regards to ICD-10-AM/ACHI/ACS, were mixed ranging from:

1. Openness to explore options for a longer development cycle to allow more stability and allow for more considered time to understand the impact of material changes
2. The need for the classifications to adopt material changes in health technology, new diseases and new clinical practice in a timelier manner.

5.2.1 Option for a longer development cycle

Some stakeholders suggested that a longer development cycle would be preferable to manage the effort required to implement new classifications.

The option of a longer development cycle was commonly raised by health services as a potential way to more effectively manage the implementation impacts of change and allow more rigorous testing of changes to occur 'in the field' before implementation. This was supported by university providers of HIM education who believed availability of educational materials several months before implementation would be beneficial from a teaching perspective. A longer development timeframe was also noted to be potentially beneficial to IHPA as manager of the classifications if it provides

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IHPA with the time to deliver its extensive stakeholder engagement, governance and analysis responsibilities more effectively within its existing resources.

> *"I suggest that the different parts of the classification have different development cycles. The ICD-10-AM and ACS should be 4-yearly (with annual updates from WHO changes); the ACHI (or my preferred replacement) on a 2-year cycle as this is where clinical practice is changing. AR-DRG would then have major updates on a four-year cycle, offset by a year, with biennial minor updates slotting the new intervention codes into the appropriate AR-DRGs"*
>
> *(Quote from survey respondent)*

Given stakeholder preferences to retain the synchronous development of AR-DRGs and ICD-10-AM/ACHI/ACS, the preferred alternative to the current development cycle was proposed as:

- A longer development cycle than the current timeframe for material changes to the classifications, to help manage any implementation impacts. A shorter development cycle was not supported by stakeholders.
- Establishing a framework for incorporating minor updates and required changes in new technology / clinical practice / diseases as needed throughout the cycle.

This alternative option was discussed as potentially reducing the work effort required to update the classifications and maintaining currency while still achieving the overall stability of the classifications. It would also ease the pace of change with respect to implementation of major structural changes to the classifications within jurisdictions, health services and other end users.

Opportunity for improvement:

1 There may be value in IHPA considering a longer development cycle for assessing and adopting material changes to the classifications. This would provide greater stability for end users and system managers and allow greater considered analysis by IHPA and its advisory and technical groups as well as promote longer lead time for supporting implementation timeframes.

5.2.2 Responsiveness to change in technology and clinical practice

Another key discussion point was the desire for the classifications to remain responsive to material changes in technology and clinical practice.

> *"The IHPA may wish to consider separate processes for changes relating to new health technology and procedures (which may require more frequent updates to the classifications) compared with all other changes to ICD-10-AM/ACS and AR-DRG, where less frequent changes are likely to be sufficient."*
>
> *"Clinical relevance is very difficult - medicine changes so quickly. There are always concepts no longer used clinically, but still in the classification, and then there are new concepts that are not reflected in the classification for years after they come into general clinical use."*
>
> *(Two separate quotes from survey respondents)*

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Even within a two year development cycle, there can be substantial lags incorporating changes in technology and new clinical practice into the classification due to data availability and issues in timing where updates occur close to approval of a new AR-DRG version. This is illustrated by the following example:

> The code for robotic assisted intervention was approved for introduction in ACHI for Tenth Edition. The approval of ACHI Tenth Edition occurred in November 2016 and was implemented from 1 July 2017.

Similarly, based on current National Hospital Cost Data Collection timeframes, IHPA received cost data for 2017-18 in March 2019. The earliest this intervention could be considered in the AR-DRG classification would be for AR-DRG V11.0 (released in July 2021). In most cases, one year of cost data does not provide sufficient volume of data to support a DRG change, which would delay any potential DRG change by another two years (to 2023), resulting in a total of seven years between the change in ACHI and its implementation in a new version of the AR-DRG classification.

While there are advantages to facilitating updates to the classification system in response to changes in technology and clinical practice, stakeholders recognised that this would need to be balanced against other practical considerations including classification stability and operational and cost impact of change. Principles to assess change relative to benefit were highlighted as a key requirement to support achievement of this balance.

IHPA has recently established the New Technology Framework (the Framework) for assessing the impact of new technology[14] that outlines the process by which IHPA, through the CAC, will monitor and review the impact of new health technologies on the existing classifications. This Framework includes a process for assessing and prioritising the impact of new health technologies through the CAC (Figure 16), and involvement by DTG and ITG where relevant, with the final approval of classification changes to be made by the Pricing Authority. The Framework would represent the foundation from which any changes to technology would be recommended for incorporation into the classifications.

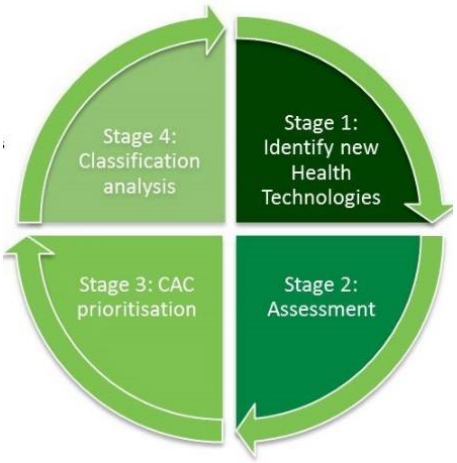

Figure 16: IHPA's New Technology Framework prioritisation process

A mechanism to effect changes in a timelier manner could be established by using placeholder codes in the ICD classification where new technology developments or changes in clinical practice are deemed important enough to be incorporated within the classifications.

5.2.3 Use of placeholder codes to provide a more timely response to changes in clinical practice or new technology

There is currently provision in the ICD classification to support the impact of changes in clinical practice through the use of emergency codes that are reserved for provisional and emergency use at the direction of the WHO. For example, following advice from WHO, IHPA recently informed users to use an emergency code in Chapter 22 of the ICD-10-AM (codes for special purposes) to identify episodes where there is clinical documentation of a condition related to vaping[15].

[14] Independent Hospital Pricing Authority (2018). 'Impact of New Health Technology Framework – Version 4.2', IHPA, Sydney.
[15] ICD-10AM code for vaping related disorders – October 2019, IHPA, Sydney.

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However, the emergency codes within the ICD-10-AM structure can only be effected at the direction of the WHO. A comparable code structure would need to be developed within ACHI to use where new technology or clinical practice necessitates an update to the ICD classification.

There may be value in IHPA introducing the use of placeholder codes within ACHI to facilitate the incorporation of new technology and clinical interventions on a more regular basis (within the broader development cycle timeframe). Decisions about whether new technologies accepted through the Framework should be reflected in the classifications would need to be guided by the principles for work plan development and prioritisation that are proposed in Section 6.1.

Opportunity for improvement:

2 IHPA should consider approaches to incorporating new health technology in ACHI, such as the use of placeholder codes, similar to the use of emergency codes used in the ICD-10-AM classification, to allow for new interventions to be codified during the development cycle timeframe.

5.3 Development cycle process considerations

Feedback provided to the Review identified the potential to enhance specific process-related aspects of the development cycle as a way to improve their efficiency and effectiveness by:

- Reducing duplication in the channels available to submit requests for change
- Improving the functionality of the ACE portal used to make public submissions
- Strengthening feedback provided to submitters throughout the change request process
- Streamlining public consultation arrangements
- Taking steps to mitigate implementation impacts and administrative burdens for end users.

5.3.1 Process for submitting classification change requests

There are at least four communication channels used by IHPA to canvass feedback from stakeholders on reviewing and refining the ICD-10-AM/ACHI/ACS and AR-DRG classifications:

- The ICD-10-AM/ACHI/ACS and AR-DRG Work Program Consultation Paper
- The annual Consultation Paper on IHPA's Pricing Framework
- Public submissions to IHPA through the ACE portal.
- Direct submissions through IHPA's Advisory Committees.

Although these channels provide opportunities for stakeholders to directly communicate their views to IHPA about proposed changes to the classifications, the multiple avenues to submit change requests can create duplication in the submission and review of change requests.

Furthermore, in response to the survey question "Does the existing submission process for making changes to the classification work well?", 52% of respondents answered in the negative and a further 16% answered "Sometimes only" (Figure 17), which suggests there is scope to improve the process.

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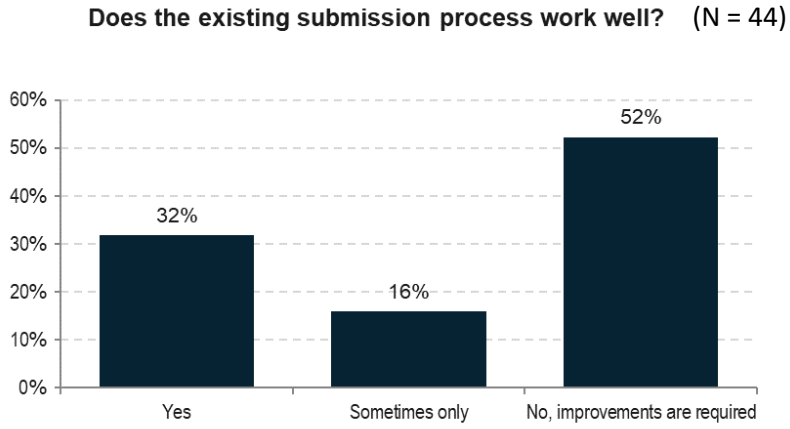

Figure 17: Does the existing submission process for making changes to the classification work well?

Stakeholders identified that opportunities exist to streamline the process to provide feedback and input through a more coordinated process which could involve fewer channels of communication. Stakeholders also identified that seeking feedback on classification development through the Pricing Framework could present a (perceived) conflict between IHPA's role in classification development and pricing.

Opportunity for improvement:

3 Consider focusing stakeholder input to the classification development process through submissions via the ACE portal only. With the Pricing Framework consultation process reflecting more strategic and less technical input and feedback to classification development.

5.3.2 Mechanism for making public submissions

Public submissions for change requests to the AR-DRG and ICD-10-AM/ACHI/ACS classifications are accepted on an ongoing basis through the ACE portal, which allows registered users to view and make change submissions for both classifications. Both IHPA and end-users identified a range of issues in the functionality and capability of the ACE portal that could improve experience and functionality for both groups.

User experience

The ACE portal provides only basic functionality and limited guidelines for submitters on the expectations required of users seeking change requests and the level of evidence / detail they should provide. As a result, many of the submissions received by IHPA contain limited information or evidence, often resulting in the submission being rejected. The portal also allows users to submit coding queries directly to IHPA, even though queries ordinarily need to be vetted and submitted through jurisdictional coding committees in the first instance (refer to Section 0 for more information)[16].

Although IHPA publishes submission guidelines and 'what to consider when making a submission' for ICD-10-AM/ACHI/ACS change requests on the ACE website, these are not co-located with the form

[16] Under the current agreed process, only state and territory health departments can submit coding queries to IHPA.

used to submit requests and need to be 'found' on a separate page before they can be understood and applied. No similar guidance is available for DRG change requests.

Although public submissions are visible to other users, the status of submissions is only visible for ICD-10-AM/ACHI/ACS (not for AR-DRG).

IHPA experience

Requests issued in the ACE portal have a direct impact on IHPA's workload in having to filter through and respond to submissions, many of which related to coding queries. This adds to the backlog and delays in responding to each submission.

IHPA reported that the interface used to process queries and change requests within ACE also involves substantial manual input and has limited functionality to support interrogation and manipulation of the data submitted by users.

Opportunity for improvement:

4 The ACE portal should be reviewed and redesigned to:

- Provide a single, stepped, logic-based process to filter submissions to the right area (AR-DRG change requests, ICD-10-AM/ACHI/ACS change requests or coding queries)
- Provide guidance on the criteria IHPA will use to assess submissions, and the evidence needed to support a submission (before the user provides any information)
- Lead submitters through the evidence needed to submit a robust proposal using a sequential, stepped process
- Provide for publication of the status and outcomes of each submission to be made visible to all registered users of the portal
- Provide a mechanism for IHPA (and potentially other registered ACE users) to provide feedback / comments on change proposals directly to users quickly and easily
- Provide enhanced functionality for IHPA to manipulate and interrogate data provided by users efficiently and effectively.

5.3.3 Feedback mechanisms in response to change requests

Although the ACE portal reports the status of change requests or queries submitted by registered users, there was a strong preference for more comprehensive feedback, particularly where submissions were rejected, regarding the rationale for the rejected proposals or why submissions were being held over to later years.

During consultation, stakeholders expressed a degree of dissatisfaction with the lack of feedback provided to submitters of change requests. This sentiment was consistent with the survey results in which respondents answered that they did not (37%) or only sometimes (41%) felt adequately informed regarding the status/progress of a submission (Figure 18).

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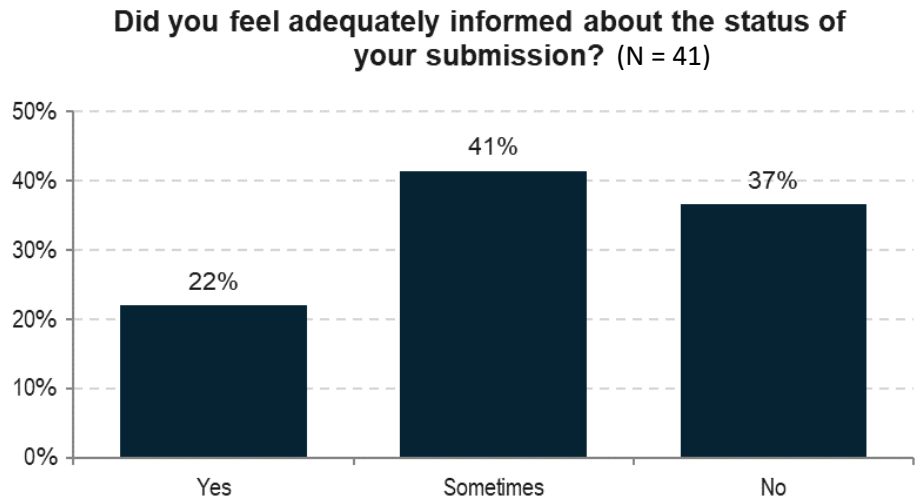

Figure 18: During the submission process, did you feel adequately informed regarding the status / progress of your submission?

We note that IHPA's capacity to provide dedicated feedback on the large number of change requests must be balanced against its ability to support other parts of the development cycle within its existing complement of resources. Ideally, enhancements to the ACE portal may help to provide clearer guidance for making change submissions, and in doing so improve the overall quality of submissions received by IHPA.

5.3.4 Public consultation arrangements

After changes to each classification have progressed through IHPA's committee structure, proposed changes are submitted to a separate public consultation processes for AR-DRGs and ICD-10-AM/ACHI/ACS where stakeholders can provide feedback.

The public consultation process typically remains open for one month (for each classification) and requires IHPA to undertake substantial work to develop consultation papers, manage the submission process and subsequently brief its governance committees on the outcomes of public consultation.

IHPA reported that managing this process consumes approximately two months of work, and that submissions are typically received from the same organisations that are represented on their advisory and governance groups. For instance:

- only two submissions have been made public for the recent ICD-10-AM/ACHI/ACS Eleventh Edition consultation process (it is not known how many other submissions were provided)
- five out of 15 submissions received from the AR-DRG Version 10.0 consultation process were jurisdictional health authorities (which are represented on ITG, DTG and JAC).

Opportunity for improvement:

5 There may be value in considering whether the public consultation process currently employed during the analysis phase of the development cycle should be reduced and re-focused more towards the implementation, testing and education phase of the cycle.

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5.3.5 Implementation of change and administrative burden

Respondents were asked to describe the range of internal implementation tasks they undertake to implement new versions/editions. These tasks varied according to the role and size of the organisation. For larger health services, the main tasks included:

- identification of changes and provision of mapping files
- testing and implementation of software upgrades to Patient Administration / Management Systems (PAS) and other systems
- review of education and information materials and delivery of education to coders and clinicians
- updating of forms/templates in patient records
- identification of all changes and circulation within the health service and to software vendors
- financial modelling and analysis
- updating of routine financial, activity and clinical reports
- update of audit program.

Survey respondents were unable to provide precise estimates of the resource implications of implementing new versions/edition of the classification. The feedback varied with some responding that the implementation process spanned several days, for others several weeks and some indicated up to six months. This variation is reflected in the following responses:

> *"The time spend varies depending on how significant the changes are. The implementation process could take up a month or 2 months."*
>
> *"Depending on volume of changes, few [hours] to multiple days."*
>
> *"Implementation takes around 4-8 weeks depending on the complexity of changes."*
>
> *"The equivalent of 3 months full-time spread over about 8 to 9 months (it's not all done yet)."*
>
> *(Four separate quotes from survey respondents)*

When asked to describe the main challenges to adopting new versions/editions, there were five main areas identified:

1. The short lead time between release of new versions / editions and the associated implementation requirements such as coder training and software upgrades
2. The challenge of providing training on new versions to coding staff – the previous experience of online training was not well received with many stakeholders expressing a preference for face-to-face training
3. The changes to the coding standards are perceived to be complex, unclear, difficult to interpret and subject to frequent amendments
4. The lack of clear, concise and timely advice on coding changes
5. The range of information sources that hospital coders are required to coordinate and synthesise, including information from IHPA, jurisdictional health authorities and local health district / network.

> *"There is an issue with ambiguity and information being open to interpretation, there should be enough consultation that by the time the version/edition is ready to implement everyone can read it and apply it consistently."*

> *"Adopting a new version is an enormous undertaking and imposes huge costs on the jurisdiction and all its health services. The scope and complexity of the changes amplify the extent to which the challenge imposes burdens of cost and time requirements on individuals and organisations."*
>
> *(Two separate quotes from survey respondents)*

The feedback from both consultations and survey recognised the significant impact on users of implementing changes to the classifications. To illustrate this burden, stakeholders identified the following suggestions to inform effective implementation:

- additional information that describes what changes have been made to codes, standards and DRGs and an explanation of why changes have been made
- more lead time to prepare for change including for coders and Information Technology (IT) systems
- different levels of detail regarding the changes ranging from summaries of the main changes as well as detailed outline of the totality of changes
- education sessions and materials to those who will be implementing change and education materials with real world examples
- education and information tailored to different audiences, such as coders, clinicians and managers / executives.

Opportunity for improvement:

6 IHPA should consider enhancing documentation to improve users' preparedness for adopting changes by:

- Developing documentation that provides greater clarity about the nature and rationale of impending classification changes
- Providing greater lead time to communicate changes in the lead up to implementation of software updates.

A longer development cycle timeframe would support the implementation of these and any further documentation enhancements.

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6 Embed a systematic, principles-based approach to work program prioritisation

Although a process currently exists to develop work programs to guide AR-DRG and ICD-10-AM/ACHI/ACS development, stakeholders considered that more rigorous forward planning and application of principles would reinforce the primacy of the work program as a mechanism to identify and plan for change. Elevating the primacy of the work program was considered a key avenue to instilling confidence in the development process and supporting end users to plan for proposed changes.

Stakeholders considered principles to be fundamentally important in two key phases of the development cycle (Figure 19):

1. Guiding overall development and approval of changes to the classifications
2. Work program development and prioritisation, so that proposed areas of review of the classifications are prioritised, clear and transparent and resources are appropriately allocated to support areas of importance.

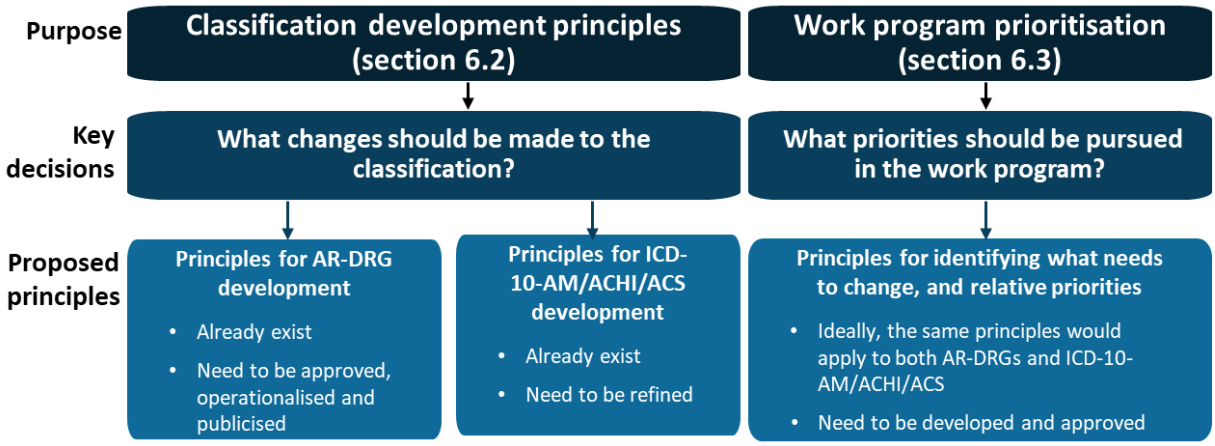

Figure 19: Key decision points in the development process where principles would be beneficial

Principles to guide development (i.e. point 1 above) already exist, but could be refined, operationalised and publicised more extensively to provide greater transparency into how and why changes to the classifications are made. Given the strong desire for an appropriate balance between classification system stability and clinical currency, stakeholders saw the existence and application of principles as being key to striking this balance.

Principles to guide work program development and prioritisation currently do not exist, and were considered as fundamental to:

- instil confidence that the development process provided a focus on key areas that need to change
- ensure that review areas were planned, purposeful with a clear intention in mind
- identify areas in the classification that are likely to be influenced by clinical developments or technological advances
- provide greater transparency in aspects of the classification that are being considered for review

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- give confidence that changes are not being considered to principally influence pricing outcomes.

This section considers opportunities to clarify existing principles and presents perspectives on a set of principles that can be used to guide work program development and prioritisation.

6.1 Current classification development principles

Although principles exist to guide overall development for both AR-DRG and ICD-10-AM/ACHI/ACS development, these principles have not been formally endorsed or made public.

Principles for ICD-10-AM/ACHI/ACS development may benefit from review to ensure they align to contemporary areas of need for change in the classification.

6.1.1 AR-DRG

From AR-DRG Version 8.0, the principles listed in Table 5 set out the basis on which changes to the classification were considered and applied.[17]

Table 5: Principles used in the construction of AR-DRG V8.0 and AR-DRG V9.0

Principles	Criteria
Clinically coherent	• Patient demographics • Diagnoses (principal and additional) • Interventions
Reasonably homogeneous in resource use	• Episodes within a DRG have relatively similar (not necessarily identical) level of resource utilisation • AR-DRGs, and DRGs within an ADRG, are as distinctive as possible from each other, reflecting genuine and material differences
Classification soundness	• Statistically robust • Reasonably balanced branches • Sufficient volume and cost variances in new splitting • Stable over time, with changes only made in response to significant clinical changes (often caused by technology advancement) or cost variations.
Operationally acceptable and robust	• Understandable by and acceptable to a wide range of users involved in the planning and delivery of care • Reasonably robust with respect to changes in management and organisational arrangements of the health system • Not encouraging inappropriate behaviours in patient treatment and management practices within the health system.

In 2017, IHPA developed a framework to identify refinement areas and assess proposals for change.[18] Specifically, the discussion paper stated:

[17] IHPA, AR-DRG – Developing a framework for identifying refinement areas and assessing proposals for change, Appendix A: IHPA's principles for classification development, September 2017
[18] ibid.

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> *"The purpose of the AR-DRG framework for identifying refinement areas and assessing proposals for change (the AR-DRG framework) is to provide a systematic approach to AR-DRG classification development that ensures refinements to the classification:*
>
> - *are evidence based;*
> - *deliver value to stakeholders;*
> - *are balanced throughout the classification;*
> - *are not overly focussed on particular 'high profile' areas; and*
> - *are in accordance with the principles of ABF classifications.*
>
> *Once the principles and measures are agreed to, the AR-DRG framework would be applied to the AR-DRG classification to identify those areas requiring review. The AR-DRG framework can also be applied to change proposals and requests for review submitted through the channels currently available to stakeholders, such as the AR-DRG public submission process, the Impact of New Health Technology Framework or the annual consultation paper on the Pricing Framework for Australian Public Hospital Services."*
>
> *(IHPA document provided to DTG in October 2017)*

While the AR-DRG framework described above has not yet been formally endorsed by IHPA, there is clearly a commitment to proceed in this direction. The current draft IHPA work program consultation paper[19] states that:

> *"IHPA has continued to explore a framework for identifying areas of the AR-DRG classification which require review to ensure a systematic approach to AR-DRG classification development that delivers value to stakeholders by improving its currency and robustness. This is achieved by identifying what constitutes a 'high performing' AR-DRG classification, and then identifying methods or indicators to flag areas which do not meet these standards through a combination of statistical and clinical indicators; also incorporating the existing principles used in the development of previous versions as a starting point.*
>
> *A systematic approach will identify priority areas for consideration in AR-DRG V11.0 and future work programs."*
>
> *(IHPA AR-DRG Version 11.0 Work Program)*

Formal endorsement of the AR-DRG development framework would provide a mandate for its usage throughout the development process. Application of the principles could be achieved by reporting against how proposed changes align to these principles in briefings to IHPA's advisory committees as part of the development process, and in public documents such as the AR-DRG Final Report.

Making these principles publicly accessible on IHPA's website and/or the ACE portal would be a enhance the transparency of the development process and may help to drive improvements in public submissions for AR-DRG change requests.

6.1.2 ICD-10-AM/ACHI/ACS

IHPA's ACE website lists the following evaluation criteria that are used to guide public submissions for change to the ICD-10-AM/ACHI/ACS work program:

- need to reflect updates to underpinning classifications, WHO ICD-10, MBS, ADA updates
- need to implement requests initiated by IHPA

[19] IHPA, AR-DRG Version 11.0 Work Program, Consultation Paper, September 2019

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- need to consider updates in the context of other public submissions and developments, especially within the specialty being considered
- need to review ACS for currency and relevance
- need to correct anomalies in the underpinning structure of the classification(s)
- need to be clinically current
- impact on National Health Priority Areas (NHPAs)
- impact on Safety & Quality in Health Care
- impact on clinical coder burden.[20]

Despite these principles being in the public domain, responses received through consultations and the survey highlighted some concerns in the development process in relation to ICD-10-AM/ACHI/ACS, including:

- a strong desire for greater consideration of clinical input to changes
- a desire for greater clarity about how decisions are ultimately made to provide focus on areas where change is needed most (rather than spending time on 'inconsequential changes')
- potential duplication in the existing principles – for example, impact on NHPAs and on safety and quality of health care could be considered within 'the need to be clinically current'.

Although these principles are published on IHPA's ACE portal, they do not seem to be actively considered by users of the portal, who often submit coding queries (rather than change requests). This suggests that there may be benefit in clarifying the principles to ensure that their focus on ICD-10-AM/ACHI/ACS development is understood.

While these criteria are used by IHPA to 'score' submissions received through the ACE portal, the lack of objectivity in many of the principles means that scores are not actively used in priority-setting.

The strong feedback received in relation to the principles for ICD-10-AM/ACHI/ACS development suggest that they should be refined to provide a sharper focus on clinical relevance, to reduce duplication and provide for a more objective way of assessing change in the classifications. In the same way as the principles proposed for AR-DRGs, the principles governing ICD-10-AM/ACHI/ACS development should be operationalised throughout the development process, and actively used as reference points in briefings to relevant governance groups, and publicly-available documents summarising why changes have occurred.

6.2 Principles to guide classification development changes

Although separate principles exist to guide overall development of (i) AR-DRGs and (ii) ICD-10-AM/ACHI/ACS, discussions with IHPA, DTG and ITG highlighted that a systematic, principles-based approach is not formally in place to guide prioritisation of change requests.

Some stakeholders consulted considered that recent ICD-10-AM/ACHI/ACS code changes introduced instability without significant value-add or clear rationale. Consistent with this sentiment, 41% of respondents to a survey question expressed that the work program was targeting the wrong issues and/or targeting insignificant issues (Figure 20).

[20] IHPA, ICD-10-AM/ACHI/ACS Submission Guidelines, https://ace.ihpa.gov.au/Submissions.aspx?page=2

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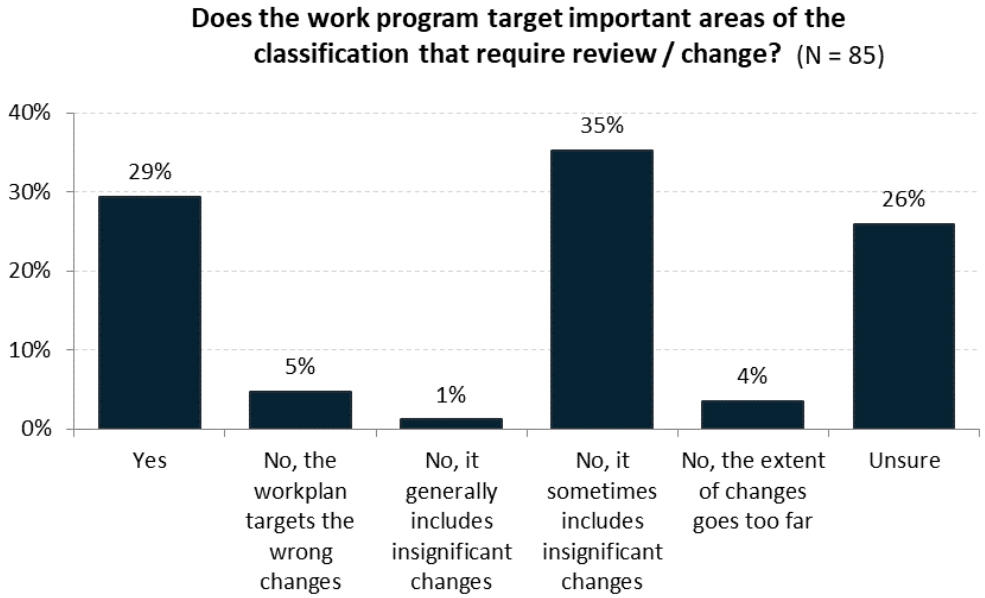

Figure 20: Do you believe that the work program generally targets the most important areas of the classification that require review / change?

Relevant responses received through the survey included:

> *"Changes should be made for a purpose that is supported by improved use of the data not just for the sake of change"*
>
> *"My concern is changes are made based on lobbying of a group / hospital and this is not always clear"*
>
> *"Please let us know why some submissions are prioritised over others. Is there a political reason? Is it based on volume, etc?"*
>
> *(Three separate quotes from survey respondents)*

IHPA has already commenced work to develop a 'dashboard' approach to assess where issues exist in the AR-DRG classification that may need to be addressed as part of the development process. This approach could be augmented with other decision criteria that reflect stakeholder preferences for a focus on transparency, objectivity and materiality of change, along with principles currently used overseas (see Section 3.5).

Ideally, a single, succinct set of principles should be developed to guide work program development and prioritisation across both AR-DRGs and ICD-10-AM/ACHI/ACS to provide a unified approach that considers inter-relationships between both classifications. On this basis, principles to guide where change is needed could include those identified in the box below.

Opportunities for improvement:

7 Principles or decision criteria should be refined to guide the determination of classification changes. The principles could focus on:

- Areas where there are known issues in performance of the classification that need to be addressed
- Number of cases affected by a proposed change, and associated costs

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- Gaps in classifications related to a new disease, clinical practice or new technology applications that should be included to maintain clinical currency. The significance of gaps could be assessed through consultation with clinicians and require any changes associated with new technology to have been approved under IHPA's New Technology Framework
- High priority public interest issues
- Availability of new or more robust data that could improve the relevance of the classification.

8 IHPA should publicly promote and actively apply the classification development principles, by:

- Ensuring they are endorsed by appropriate IHPA governance groups
- Reporting accordingly in briefings to CCAG, DTG and ITG (and other governance groups as relevant)
- Integrating them, where possible, within the submission process as a way of enforcing expectations of users wishing to make submissions

Ensuring that the principles are appropriately adhered to as a way of setting the standards of evidentiary data requirements for accepting changes to the classifications.

6.3 Reinforce the importance of the work program in the classification development process

The process to develop and agree work programs to change the classifications was highlighted as an opportunity for improvement due to stakeholders' perceived lack of awareness of the IHPA planned review areas in the classifications. Several respondents commented that they believe the current process for identifying areas of review lacks visibility and, in some cases, may be driven by vocal stakeholder groups influencing IHPA's development work effort. Suggestions to improve the work program development processes include:

- Adopting principles to objectively determine and prioritise the areas of proposed review.
- Providing time for advisory and governance groups to consider and support the proposed areas of analysis.
- Making the governance process for approving the work program clearer to stakeholders.
- Publishing the work program once approved.
- Under certain circumstances, providing some scope to allow exceptions to be included in the work program (e.g. material issues that may be clinically relevant etc.). Changes arising in these circumstances would also be submitted through the agreed governance processes to maintain objectivity and transparency.
- Communicating clear direction for changes that will be undertaken in the current cycle, and those that will be considered in future cycles. This would result in a process like that in place in Nordic countries, where a 'Target year' and 'Target version' are assigned to development tasks (Figure 21).

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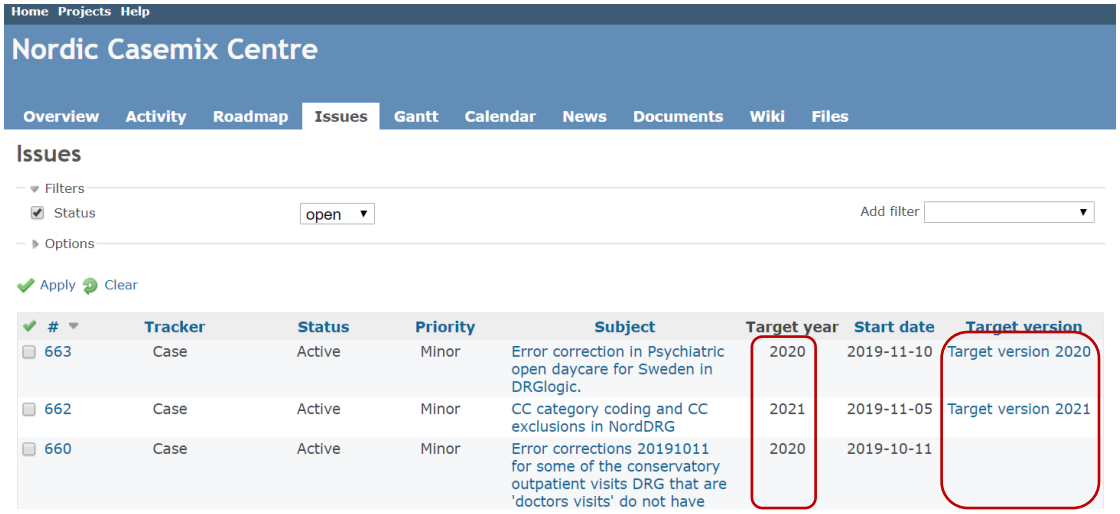

Figure 21: Extract from the NordDRG classification development portal showing target dates for tasks

- Development of a longer-term work program could incorporate consideration of change requests currently held over and provide both IHPA and end users with greater certainty regarding what changes will be pursued.

Opportunity for improvement:

9 Establish a more structured, transparent and formalised process to the development of the ICD-10-AM/ACHI/ACS and AR-DRG classification work programs by:

- Extending the work program timeframe
- Communicating the work program publicly in advance for public consultation in the lead up to the work program being approved
- Having the work program endorsed by an appropriate IHPA technical group

Still allowing for in-cycle changes to the work program to occur for some material exceptions which would be agreed through existing governance processes.

7 Role and structure of advisory groups

IHPA operates three representative technical advisory groups with respect to the classifications[21] which are used to provide technical input and expert advice on the development of all classification proposals being submitted to IHPA.

The members on these advisory groups are responsible for seeking input from their respective agencies in order to represent the interests of the organisation. The following classification technical groups meet quarterly (as a minimum):

- **ITG** – representatives from each state, territory and Commonwealth health departments, Australian Commission on Safety and Quality in Health Care, AIHW, APHA, Catholic Health Australia, HIMAA, PHA, NZ Ministry of Health and CCAG
- **DTG** – includes representation from each state, territory and Commonwealth health departments, APHA, CHA, HIMAA, PHA, NZ Ministry of Health and representatives from ITG and CCAG
- **CCAG** – includes medical, nursing and allied health practitioners to provide clinical advice related to classification development.

IHPA is responsible for managing the agenda and secretariat functions all groups. This includes the provision of all technical and evidentiary information required to support work program development and ad-hoc supplementary issues arising during the development cycle.

Many of the organisations represented on ITG and DTG are also represented on other IHPA governance groups. Sometimes, the same individual is involved in multiple groups. This means that the same organisations/individuals are often being asked to provide comment, endorse priorities and consider change proposals at different levels of the current governance process. Proceeding through this governance process adds time to the overall development timeframe and consumes resources that could otherwise be spent on activities that could improve the quality of the process such as analysis, providing feedback on submissions and education.

This Review identified several issues regarding the effectiveness with which these committees serve their roles, namely:

- a need for access to technical coding expertise as required
- access to a broader range of clinical speciality expertise as and when required
- insufficient time for technical groups to prepare for meetings
- the large volume of content that needs to be prepared by IHPA and covered in technical group meetings
- a need for a more transparent approach to prioritising the development cycle work programs (addressed in Section 6).

It is possible that adjustments to the current classification technical groups could achieve efficiencies that would allow IHPA to re-focus resources on areas of highest value-add.

[21] IHPA's overarching Advisory Committees – JAC, TAC and CAC are also directly involved, where relevant, to provide directional oversight to provide feedback on overarching issues arising from the technical groups.

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7.1 Increased expertise to support ITG and DTG

Currently, ITG and DTG are relatively large, representative bodies, drawn from health departments, user groups and sectoral interest groups across the public and private sectors, and overseas (New Zealand).

Members nominated to sit on ITG and DTG are not required to have any specific technical knowledge or experience (aside from clinical representatives), even though the Terms of Reference (ToR) for both groups establish them as technical advisory bodies. As a result, some stakeholders raised concern that the representative nature of ITG and DTG may result in changes being based more on consensus rather than the clinical, technical or statistical merits of proposals.

Although they provide advice to IHPA and receive detailed, technical briefings on proposed changes, ITG and DTG do not have authority to approve work program priorities or change proposals. ITG members reported that some recommendations have recently been changed by other IHPA governance groups with no consultation or feedback loop coming back to ITG.

The ToR also identify key responsibilities such as 'advising on education requirements as they relate to AR-DRG and ICD-10-AM/ACHI/ACS (as relevant)'. However, consultation with ITG members did not establish whether educational requirements have been discussed at ITG meetings, and some stakeholders commented that ITG should have a stronger role in developing nationally-consistent approaches to education.

It was acknowledged that ITG and DTG (and thereby IHPA) require access to specific expertise in ABF, health information management, coding and/or classification development to support a more technically robust process in evaluating the impact of change requests being proposed during the classification development process.

It may be possible to enhance and/or supplement the technical by the following options:

- **Introducing additional skills-based representatives** on the technical groups which would provide the required content knowledge within the group on an ongoing basis. This would however increase the size of the group and make the coordination and management of the technical groups more challenging.
- Establishing a **separate expert reference group** with the specific expertise and skills to consider the technical (coding and ABF) implications of changes which could feed into the current ITG and DTG committee structures. This group could be charged with undertaking the required level of detailed analysis, testing and advising on educational requirements arising from the proposed changes.

  While it would be logistically difficult to factor in another expert reference group process within the current two year development timeframe, if the development cycle were to be expanded beyond two years, the expert reference group approach could potentially be accommodated. The approach would have the added benefit of streamlining the agenda and focus of the technical groups by reflecting on the results arising from the expert reference group rather than requiring exhaustive feedback from the representative organisations of the technical group members which would then become supplementary in nature.
- An alternative could be to **reduce the composition of the technical groups to be more expert-based and less representative** which would enable a more robust and focused emphasis on the agenda, however this may be considered too great a change in the short-term. Over the longer term, it may be worthwhile considering moving towards a smaller expert technical group to fulfil

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these roles on the assumption that IHPA's other existing committee structures and public consultation process adequately supports representative level input into the development process.

7.1.1 Clinical expertise requirements to support ITG and DTG

Currently, some of the proposals for classification change must first proceed through CCAG before they are submitted to DTG and ITG. The ToR for both DTG and ITG require members of CCAG to sit on each group, so a formal linkage already exists.

The survey and consultations consistently identified a strong desire for more clinician involvement to improve the transparency and effectiveness of the classification development process, particularly where expertise is required within specific clinical specialties. The CCAG currently provides invaluable access to clinical expertise either through the members directly involved in the committee, or through their respective clinical contacts that would not otherwise be available. However, while there is value in including this level of expertise on ITG and DTG, we recognise that there would be significant challenges recruiting the desired level of clinical expertise on a voluntary basis. To overcome the issue of requiring on-hand access to the variety of clinical specialities, a more predictable work program over a longer development cycle period could provide the ability to draw from clinical specialist expertise in advance, either through clinical colleges or jurisdictional contacts.

There may also be value in integrating the clinical expertise and input directly into ITG and DTG to streamline the discussions in technical group meetings rather than through a separate CCAG process. This would provide for more cohesive discussion that considers both clinical and classification matters together, rather than separately.

Opportunity for improvement:

10 There would benefit in IHPA exploring opportunities for additional technical expertise to provide advice as required and support classification development. IHPA should consider how to best incorporate and utilise dedicated clinical expertise within the technical groups, to have access to the required clinical expertise as required as well as avoiding duplication of roles.

7.2 Provide more time for committees to read and consider papers

There was general consensus among ITG and DTG members that there is currently inadequate time to review papers and properly consider analysis and alternatives. This feedback also reflected insufficient time to allow members to disseminate information to their representative organisational colleagues to seek input and advice. Broader engagement and consideration of proposals would be possible if a longer lead time was available to read and consider papers in advance of meetings.

The issue further highlights the challenges faced by IHPA to support the advisory and governance arrangements of the development cycle, the resources available to meet requirements within the current development cycle timeframes and the potential impact on the overall quality of outcomes from the process. Streamlining other development cycle processes (and extending the overall timeframes for major changes) could free up time and resources to provide papers earlier, thereby enhancing meeting proceedings and outcomes.

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There was also a strong preference for face-to-face meetings, but it was recognised that this is difficult when ITG/DTG members have other substantive roles and are not paid to attend meetings, as well as the resourcing impact on IHPA of having a greater number of face-to-face meetings.

7.3 Address routine matters outside of the classification development governance structure

Currently, all proposed changes to the classifications proceed through ITG and DTG, including a standard set of updates that are needed to maintain comparability between other classifications such as indexing amendments, changes issued by WHO, MBS and ADA schedules and minor wording changes. These updates were considered to be largely uncontroversial and capable of being processed without consideration by ITG and DTG.

Processing these changes outside of ITG would allow time for more detailed discussion on substantiative issues and change requests.

Similarly, with regards to AR-DRG, the standard updates currently applied within the AR-DRG development cycle include updates and refinements to the Episode Clinical Complexity Score (ECCS) model. Given the technical complexity associated with this process and the potential for it to result in changes to the structure of the AR-DRG classification it is appropriate for DTG to review the outputs of this process.

However, other standard updates associated with AR-DRG development could be suitable for processing within IHPA, such as integration of new or deleted code changes from new editions of ICD-10-AM and ACHI, and changes in relation to Edit DRGs (to allow appropriate grouping of mismatched principal diagnosis and intervention). Once processed by IHPA, these changes could be presented to DTG for information or noting.

Opportunity for improvement:

11 As a way of improving the value and focus of the ITG and DTG committee members' time, consider a separate process for IHPA to internally manage minor/routine updates to the classifications and issue outcomes of any changes to ITG and DTG for information purposes only.

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8 Education and documentation to support implementation

A consistent theme to emerge from stakeholders was that opportunities exist to improve the provision of education to support implementation of changes to the classifications. Strong preferences were expressed for enhancements to education, supporting documentation and interpretation and adoption of changes, as identified in Figure 22.

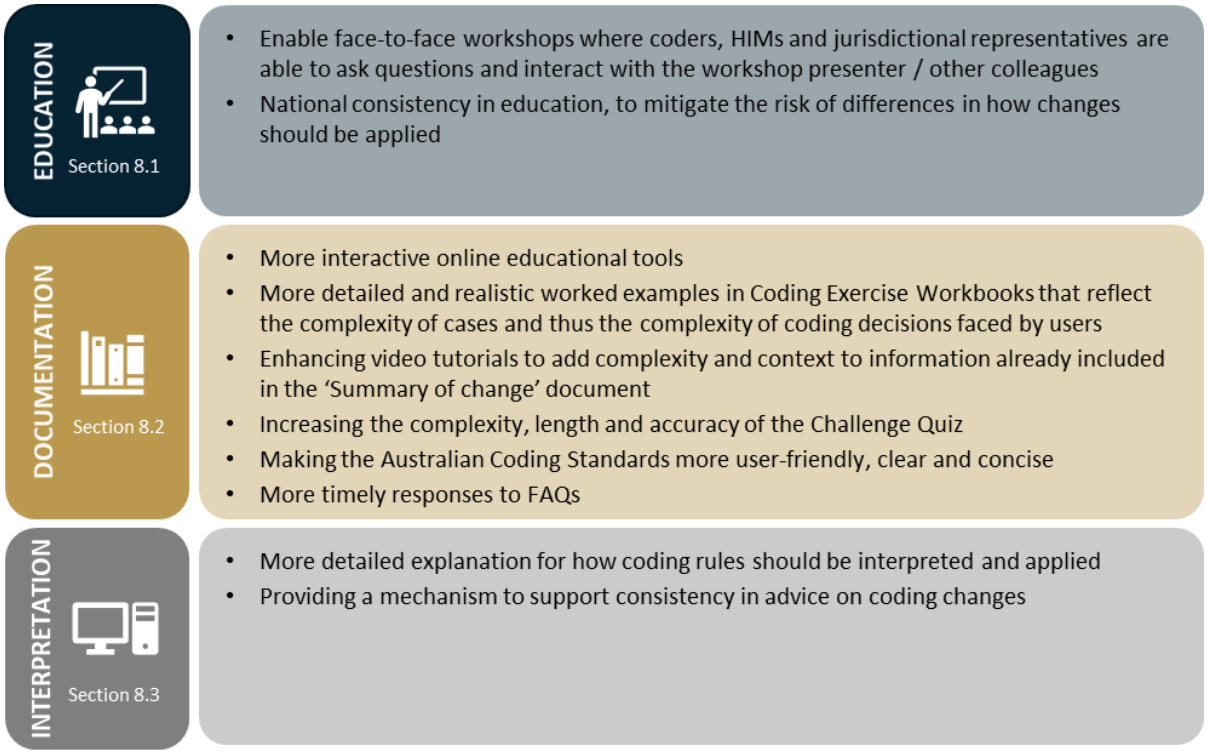

Figure 22: Education, documentation and interpretation summary preferences

With respect to AR-DRG changes, the education currently provided to support implementation of new AR-DRG versions is limited to education sessions at IHPA conferences and a 'Summary of Changes' document. Video tutorials were provided as educational tools to support Versions 8.0 and 9.0 but have not been provided in Version 10.0. Consultations did not identify a strong view that education to support implementation of new AR-DRG versions need to be improved significantly.

However, in relation to ICD-10-AM/ACHI/ACS, a common theme arising from stakeholders was that education to support adoption of new editions should be improved to provide greater clarity on how changes are to be interpreted once implemented. This would also have the benefit of easing the implementation burden for jurisdictions and health services, who often implement their own education to supplement gaps. This presents a risk that these different organisations may sometimes apply different interpretations when delivering their own education that will ultimately impact the quality and consistency of coded data and may result in otherwise avoidable coding queries being raised to IHPA for resolution.

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8.1 Provision of nationally consistent education to support implementation

The feedback provided to the Review strongly supported the demand for high-quality, nationally consistent education to support adoption of changes which would ideally be conducted face-to-face. Clinical coders and HIMs consistently highlighted that face-to-face education provides the best opportunity to:

- explore issues in detail
- raise questions in a dynamic environment
- discuss issues (and how to resolve them) with colleagues
- incur incidental learning
- help coder confidence after new editions/versions are released
- facilitate faster implementation adoption
- potentially improve the quality of coding information based on improved understanding.

This was contrasted to the video tutorials currently provided to support recent changes, which were viewed as static, lacking required detail to be effective, and monotonous.

Some health services and jurisdictions reported engaging external education providers to deliver face-to-face education at their own cost, with varying levels of satisfaction. This underscored the potential for variation in the quality and content of education by different providers to cause issues.

To meet the demand for face-to-face education, material should be developed on a national level and adapted or contextualised to the local level, potentially through a 'train-the-trainer' approach (refer to Figure 23).

Develop content

Given its national role as manager of the classifications, IHPA was viewed as best-placed to lead the development of detailed educational content to support a nationally consistent approach to new edition education.

Disseminate information

The education material should be disseminated to jurisdictions, key associations and state/territory coding committees. The biennial IHPA conferences (where education sessions are already provided) and recently held face-to-face new edition coding workshops were seen as opportunities to extend face-to-face forums on a national basis.

Train-the-trainer

To make sure local health services or end-users understand the classification system and apply the associated guidelines in a nationally consistent manner, a 'train-the-trainer' approach was seen as a viable option in the context of managing existing resources. To achieve this, IHPA would train key representatives from state/territory health departments. Jurisdictional health departments are a key enabler to realise the opportunities identified by stakeholders because of their primary role in workforce development.

Local application

The trained key jurisdictional health department staff would disseminate information and training to their jurisdiction's health services, contextualising any of the education material for local jurisdictional purposes if required. This approach ensures education about the classification systems are understood and applied consistently across Australia.

Figure 23: Translating national material to the local level

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Opportunity for improvement:

12 IHPA could enhance national education material to support implementation. Education materials could be delivered via a train-the-trainer approach in collaboration with jurisdictions and state/territory coding committees, who have the lead role in the delivery of education at a local level.

8.2 Enhance documentation provided to assist education and adoption

There are several educational tools provided to support new editions/versions and facilitate adoption of changes to the classification. Some of which are provided up to 18 months prior to implementation (refer to Figure 24).

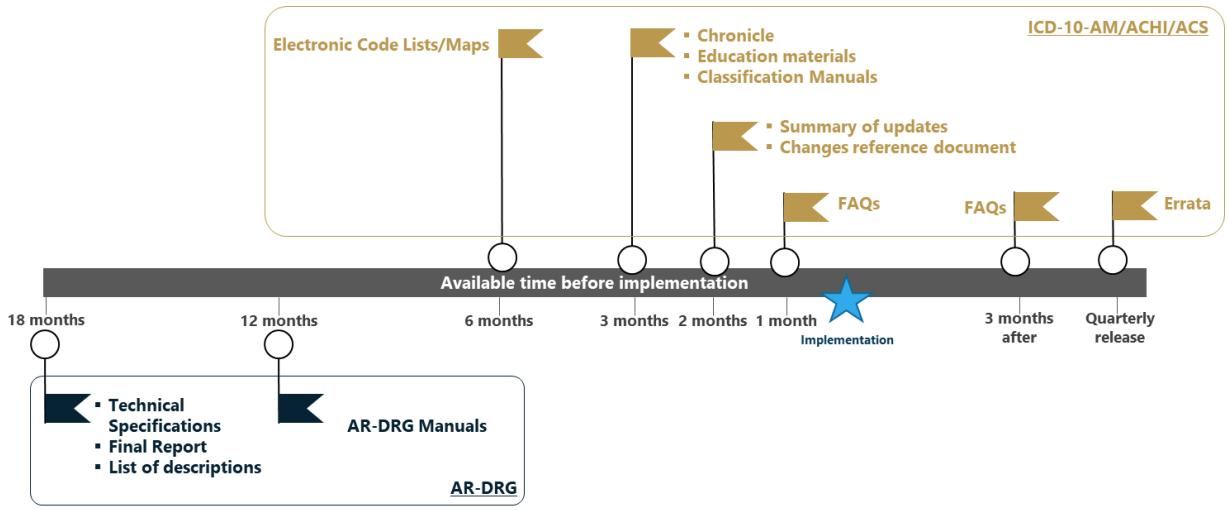

Figure 24: Documents used to support education and implementation - time between release and implementation

8.2.1 Documents to support education

Some of the existing educational tools were considered insufficient, which resulted in jurisdictional health departments or individual health services developing their own education and support mechanisms to assist in implementing and interpreting changes to the classification. Local work effort and differences in interpretation and application of new editions between jurisdictions could be avoided if greater emphasis on education materials was provided on a national basis.

Figure 25 presents the proportion of survey respondents who indicated that they use these materials, and whether there is potential to improve them. It also highlights the desire to improve video tutorials. Coding exercise workbooks are used extensively, but also have substantial scope to be improved.

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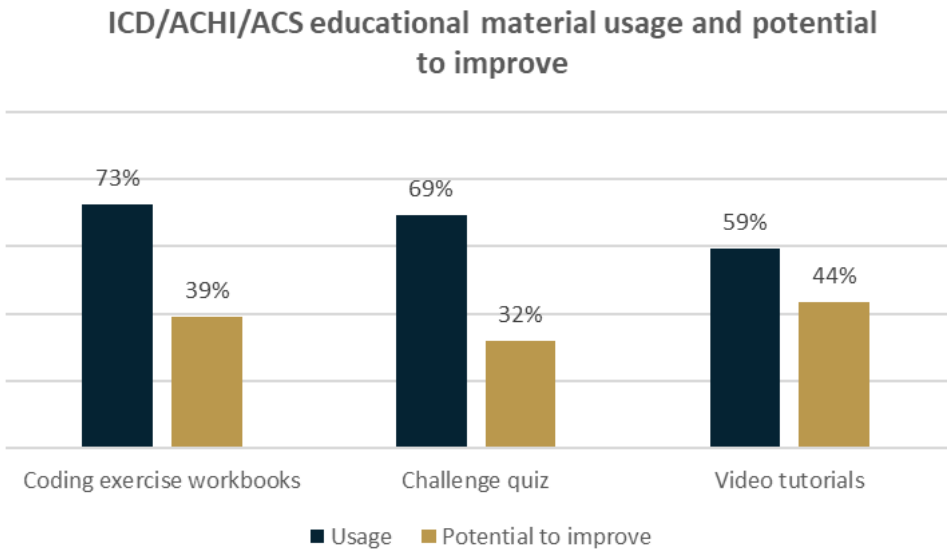
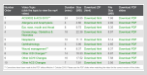


Figure 25: ICD-10-AM/ACHI/ACS educational material usage and potential to improve

Key issues in educational tools to support changes to ICD-10-AM/ACHI/ACS are summarised in Table 6.

Table 6: Key issues identified in educational tools to support implementation of changes to ICD-10-AM/ACHI/ACS

Material	Feedback
ICD-10-AM/ACHI/ACS educational documentation	
Video tutorials 	• Viewed as being monotonous, too simple, replicating the information in the 'summary of change' document and lacking the detail and interactivity required to make them useful in the context in which coders operate • Some felt that important changes were not always highlighted (e.g. stroke severity), however minor changes (changes to codes for stroke history) are emphasised
Coding exercise workbooks 	• Were seen to include some errors, leading to further confusion • If amendments are made, details of what has changed should be provided • Include more detailed, complicated examples • Avoid scenarios that are 'edge cases' or controversial • Coding exercises could be online and form part of the challenge to get a certificate of participation
Challenge Quiz 	• Was seen to be predominantly the only thing that most coders utilise to validate completion of education requirements, however the content needs to be more challenging to test acquired knowledge and proficiency • Too short and simple to be effective as a learning and development tool, with some questions being irrelevant to many coders • Repeats questions that are found in the coding exercise workbooks (answers are provided in the workbook) • Potential to replace the quiz with coding a set of discharge summaries that most clinical coders will come across daily

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Overall, education (including any face-to-face education developed in future) could be enhanced and/or coordinated by IHPA through the development of more detailed coding exercise workbooks, which were seen as valuable tools to support learning. The workbooks should be quality assured to make sure they are complete and correct before being issued. Likewise, there may be value in retaining the Challenge Quiz if it can be updated and extended to increase its level of complexity/difficulty.

Opportunities for improvement:

13 ITG could have a greater role in shaping the development of educational materials when changes to ICD-10-AM/ACHI/ACS occur, and in providing detailed feedback and approval of documents before they are released.

14 All education material should be tested and quality assured before being released, as well as enhanced by:

- Overhauling online video tutorials so they are more informative, comprehensive and engaging
- Expanding coding exercise workbooks to include more detail (including more examples)
- Retaining the challenge quiz but providing questions that are more challenging
- Enhancing online education by facilitating/supporting face-to-face education (refer to opportunity #12).

8.2.2 Documents to support implementation of change

Figure 26 presents the proportion of survey respondents who indicated that they use the materials currently available to support implementation of change, and whether there is potential to improve them. The feedback highlighted that:

- The most frequent documents used were the ACS, Summary of Change documents, Frequently Asked Questions (FAQs) and Errata
- Most respondents do not feel that significant changes are needed to make the documents more effective
- Key opportunities to improve implementation tools relate to:
    - FAQs
    - ACS
    - Summary of Change Documents

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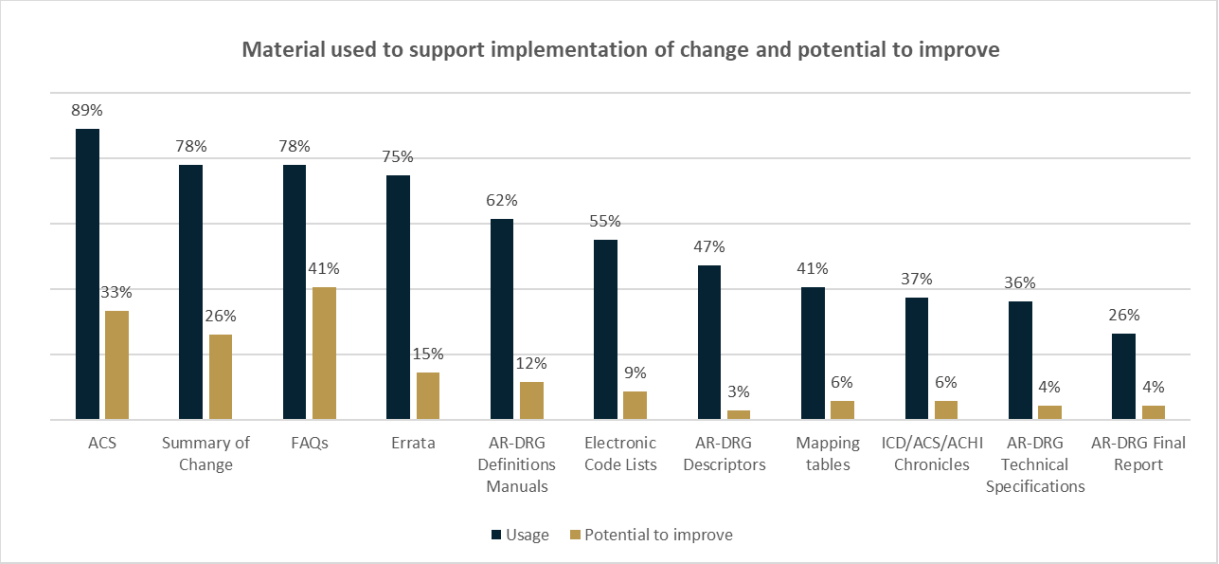

Figure 26: Material used to support implementation of change and potential to improve

Only 4% of survey respondents indicated that the AR-DRG Final Report and Technical Specifications could be improved. Instead, suggesting tweaks to the format of existing documents to make them more user-friendly, such as releasing AR-DRG reference tables in electronic soft copy format.

Opportunity for improvement:

15 Develop and release the DRG Definitions Manual including reference tables in electronic format.

The feedback also indicated that more timely provision of materials was an important consideration to support more effective implementation, including:

- **Timeliness of distribution:** final products should be provided at least four months before implementation, with clear timelines about when releases will occur (noting the release timeframes in Figure 24).
- **Alignment of when related materials are released:** for example, the ICD Electronic Code Lists are released in January, however the ICD books are not released until March, which means that Electronic Code Lists (ECLs) cannot be used until then. Some opportunity to deliver electronic versions of the books was also raised which would also provide the ability to quickly and efficiently respond to changes in the electronic version of the books.
- **Volume and release of additional material:** some stakeholders felt there were too many additional materials released throughout the year (mainly in response to the quarterly release of coding queries and errata). For some, the frequency of the updates meant their implementation was poorly supported locally and there was minimal time between getting familiar with an update and a new revision being released. Reduction in the number of releases would be useful which would be assisted if more time was available to resolve queries a part of the initial testing stage of the release of changes.
- **Confidence that the final versions of documents are in fact the 'final' version.** Some stakeholders flagged that changes have occurred in some documents after the penultimate version released for approval that were not communicated.

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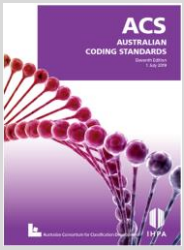
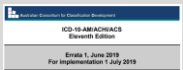
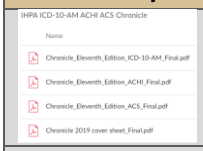
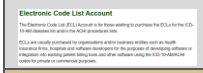
A targeted review of the ACS was seen as warranted given the negative feedback expressed by stakeholders on the suitability of the standards. Further, it is considered important that coding standards remain concise and unambiguous to maximise the level of consistency in coding within and across jurisdictions.

Other specific changes stakeholders identified in the survey and consultations to enhance implementation materials are provided in Table 7.

Table 7: Feedback on individual materials

Material	Feedback
ICD-10-AM/ACHI/ACS documentation	
ACS 	• Should be more consistent in format across standards and standardisation in how they are written, perhaps with an instruction at the top, with clinical information/rationale afterwards or as an appendix or separate document • Would benefit from better coding examples or how to apply the ACS • More precision in writing • Incorporate more of the 'advice', rather than retiring advice, leaving coders to rely on memory or retired advice for precedent • A guidebook on coding outlining how one code is used over another may be useful
Summary of change documents 	• PDF files of the edition changes were locked, which meant that a stakeholder was unable to copy/paste the relevant sections to enable them to develop the required further in-house training material. Provision in Word format would be useful. • Additional detail would be beneficial
FAQs 	• Scenarios are too general/simplified (with lengthy responses) to provide much value and generally do not address many of the issues raised and, in some instances, included errors • Should be answered before the implementation date - coders start doing the education and raising queries from about April/May, so many of these first queries should be answered in the 15 June release so coders are ready for 1 July implementation • Response timeframes could be improved • Some of the FAQs results in an errata to the classification instead of just being answered as a query
ICD Errata 	• Overwhelming number of errata • Implementing a publishing process which minimises the number of typos and therefore the need for errata required for correction of typos
ICD Chronicle	• Very useful tool but formatting improvements could be made

Material	Feedback
ICD-10-AM/ACHI/ACS documentation	
	
Electronic Code Lists 	• Cite only the code rubric, not inclusion terms - adding inclusion terms would make these lists much more useful to researchers
AR-DRG documentation	
AR-DRG Manuals	• Manuals are only produced in hard copy – provision of an electronic soft copy would be useful. Previously, a CD was included with the Manuals.
Technical Specifications 	• Would be beneficial if these are available earlier to allow proper testing

Opportunity for improvement:

19 Enhance documentation to support implementation of classification changes by:

- FAQs – providing more timely, succinct responses
- ACS – providing for standardised formatting, and for examples to be tested more rigorously to ensure relevance and clarity
- Summary of Change documents – providing more detailed versions and ensuring that changes between editions are more accessible to multiple users (e.g. coders, data analysts, clinicians, researchers etc.).

Other improvements to classification documentation may be considered in response to the feedback in Table 7 in accordance with the resources available to IHPA to implement them.

8.3 Provide national leadership and consistency on coding advice

IHPA's responsibility for classification development also involves responding to coding queries regarding the application of ICD-10-AM/ACHI/ACS. However, state/territory coding committees also have a role in coordinating and responding to coding queries. These coding committees consist of dedicated coding specialists and were reported to provide a great resource for coders in their jurisdiction. However, these parallel processes were reported to be a source of potential inconsistency and contrary advice in how queries are addressed in different jurisdictions across Australia due to differences in how queries are responded to by each coding committee.

The process for coding query submissions has, for many years, been that coders must submit queries to their state/territory coding committee; if the committee cannot answer the query, it is submitted to the national body. Query responses are then published quarterly by the national body and are also available on the ACE portal. Queries that highlight errors in the classification may lead to publication of Errata or implemented in a later ICD-10-AM/ACHI/ACS edition.

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Queries that are answered by a state/territory committee are published and/or circulated to coders in that state/territory. Victoria and Western Australia are currently the only states that make their coding query responses publicly available. There is no national agreement or review process for any state/territory committee query responses, and no national repository for this information. Consistency in national coded data will be impacted if there is differing advice between jurisdictions; this was raised as an issue in several consultations and the survey. Coded data from private hospital groups that operate in different states/territories will also be impacted because of conflicting advice or lack of advice in one state/territory.

Conflicting advice is dealt with through an agreement at ITG that where two states/territories arrive at different answers, the query must be escalated to the national body for a decision. A difficulty in this process is knowing when there are different answers given that not all state/territory answers are publicly published.

Previously, some state/territory queries sent to ACCD were also not published, with the response only sent back to the enquiring state/territory; potentially creating national inconsistency. State/territory committees have dealt with this in different ways, either publishing the response because the enquirer needed a response or not publishing because of concerns for national consistency. Stakeholder feedback obtained through the survey highlighted the challenges and frustration caused by the variation in how queries are dealt with:

> *"At present a coder needs to refer to the ACS, national coding rules, state-based information. The mode of access differs depending on the coder location and there is sometimes inconsistency. Due to the number of steps needed to access information coders will not refer to this material and therefore data is inaccurate/inconsistent."*
>
> *"The last two version upgrades were followed up with errata and amendments. There needs to be one managing party of ALL advice. We have too many places that can provide advice and can be conflicting. Remove any ambiguity or unclear statements"*
>
> *"Please look at ways to engage the coding community in the consultation. ….. Most states have a coding committee/authority, and rather than reduce their power, it would be good to utilise this existing structure to enhance and support the work of IHPA"*
>
> *(Three separate quotes from survey respondents)*

Although IHPA does not have a specific remit to direct state/territory coding committees, stakeholders saw its role as manager of ICD-10-AM/ACHI/ACS as being key to improving national awareness in how coding queries are addressed, and subsequently improving the overall national quality of coding performed. To that end, users saw some value in all state/territory coding committees publishing their coding query responses, to ensure collaboration, awareness and consistency of coding.

Several stakeholders, including those on existing state/territory coding committees, also saw value in establishing a national coding query database where all responses could be submitted for review and publication. This would mean there would be one source of advice for public and private sector coders to access, while still utilising state/territory committee expertise. However, this approach raised concerns regarding the potential cost to continually administer and maintain the database, as well as the potential inference that IHPA has endorsed the responses represented on the repository (assuming such a repository was managed by IHPA).

To support national awareness and consistency, establishing a national expert coding group (overseen by IHPA) with representation from across Australia could be formed to evaluate and

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respond to queries requiring national consideration. This group could also be used to enhance the efficiency of existing development cycle processes by reviewing and endorsing minor change requests such as indexing changes, and mandatory MBS and WHO updates.

9 Conclusion

The Review was considered by many stakeholders to be a valuable way to assess the effectiveness of current classification development processes undertaken by IHPA in relation to AR-DRG and ICD-10-AM/ACHI/ACS. The consultation process itself was also a valuable exercise to provide IHPA with a clearer perspective on the breadth of user needs.

While the Review highlighted no significant and material shortcomings in the current practices for managing and developing the acute classification processes, it provided insights and ideas that could be adopted to refine parts of the process, enhance the value stakeholders obtain from the classifications, to streamline processes currently undertaken by IHPA and improve the value and application of the classifications to the Australian health care sector.

While some of the opportunities could be implemented within the current development cycle timeframe, additional time may be required to implement other opportunities that need to be informed by broad consultation and impact assessment for both IHPA and its key stakeholders.

These opportunities aim to enhance the value and sustainability of acute care classifications into the future, and promote Australia's ongoing leadership in casemix and classification development. The issues and opportunities identified in this report provide the basis for IHPA, as custodian of Australia's acute care classifications, to consider, consult on, plan for and implement measures to achieve these objectives.

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Part C: Appendices

Appendix A – Abbreviations

Table 8: Abbreviations

Abbreviation	Meaning
ABF	Activity Based Funding
ACE	Australian Classification Exchange
ACHI	Australian Classification of Health Interventions
ACS	Australian Coding Standards
ADRG	Adjacent Diagnosis Related Groups
AR-DRG	Australian Refined Diagnosis Related Groups
CAC	Clinical Advisory Committee
CCAG	Classifications Clinical Advisory Group
CIHI	Canadian Institute for Health Information
DRG	Diagnosis Related Groups
DTG	DRG Technical Group
ECC	Episode Clinical Complexity
ECCS	Episode Clinical Complexity Score
HIM	Health information managers
ICD-10(-AM)	International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, (Australian Modification)
IT	Information Technology
ITG	ICD Technical Group
JAC	Jurisdictional Advisory Committee
MBS	Medicare Benefits Schedule
NCCC	National Casemix and Classification Centre
NCCH	National Centre for Classification in Health
PAS	Patient Administration / Management Systems
SAC	Stakeholder Advisory Committee
TAC	Technical Advisory Committee
ToR	Terms of Reference
WHO	World Health Organization

Appendix B - Survey structure and analytics

Refer to separate supplementary document (IHPA internal document only).

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