Data Quality Framework

October 2025

IHACPA

IHACPA Data Quality Framework — October 2025

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Abbreviations and definitions

Term	Definition
ABF	Activity based funding
ABS	Australian Bureau of Statistics
ACSQHC	Australian Commission on Safety and Quality in Health Care
AHPCS	Australian Hospital Patient Costing Standards
AHR	Avoidable Hospital Readmission
AI	Artificial Intelligence
AIHW	Australian Institute of Health and Welfare
CEO	Chief Executive Officer
DAMA	Data Management Association
Data lifecycle	Data specification, acquisition, management and assurance
Data providers	Providers of data in the data lifecycle
DATA Scheme	Data Availability and Transparency Act Scheme
Data users	Users of data in the data lifecycle
DRS	Data Request Specifications
HAC	Hospital Acquired Complications
IHACPA	Independent Health and Aged Care Pricing Authority
JAC	Jurisdictional Advisory Committee
Jurisdictions	States, territories and the Commonwealth Governments
NAC	NHCDC Advisory Committee
NEC	National efficient cost
NEP	National efficient price
NHCDC	National Hospital Cost Data Collection
NHDISC	National Health Data and Information Standards Committee

Term	Definition
NHFB	National Health Funding Body
NHIA	National Health Information Agreement
NWAU	National weighted activity unit
PHDB	Private Hospital Data Bureau
QA	Quality Assurance
SDMS	Secure Data Management System
TAC	Technical Advisory Committee
The NHR Act	*National Health Reform Act 2011*
The addendum	Addendum to the National Health Reform Agreement 2020-26[1]
The Bill	Aged Care and Other Legislation Amendment (Royal Commission Response) Bill 2022
The Pricing Authority	Governing body of the Independent Health and Aged Care Pricing Authority

[1] The Addendum to the National Health Reform Agreement (NHR Act) 2020–25 was extended for 12 months to enable the continued negotiation of the Addendum to the NHR Act 2025–30.

Foreword

Focus

The Independent Health and Aged Care Pricing Authority (IHACPA, or 'the agency') is a data-driven, independent government agency that collects and analyses health and aged care data from across Australia to provide evidence-based outcomes, as described in the agency's enabling legislation.

Understanding the robustness and accuracy of these datasets, as well as any limitations or gaps, means that IHACPA can effectively contribute to a system of funding that supports better health and aged care outcomes for Australians.

Environment

IHACPA was established under the *National Health Reform Act 2011* (the NHR Act) to promote efficiency and increase transparency of the delivery and funding of health and aged care services across Australia. IHACPA balances a range of policy objectives identified in the NHR Act, as well as the 2020-25 addendum to National Health Reform Agreement (the addendum).

IHACPA's data assets are managed in line with the legislation and policy that apply to all Australian Government information, including privacy, security and retention requirements. Data quality activities are documented in IHACPA's Three Year Data Plan and Work Program and Corporate Plan, each of which are released annually.

As a national health reform body, IHACPA works closely with other government agencies and key stakeholders to ensure data requirements and standards are consistent and fit-for-purpose.

Functions

IHACPA's main functions are to:

- determine the national efficient price for health care services provided by public hospitals where the services are funded on an activity basis
- determine the national efficient cost for health care services provided by public hospitals where the services are block funded
- publish the Annual Report, and other information, for the purpose of informing decision makers in relation to the funding of public hospitals
- advise the Commonwealth in relation to certain health care pricing and costing matters if requested by the Minister or the Secretary
- provide advice about certain aged care pricing and costing matters to each relevant Commonwealth Minister, and
- perform such functions as are conferred on the agency by the *Aged Care Act 1997*.

1. Introduction

1.1 Purpose

This Data Quality Framework ('the framework') has been created to enable the quality of data to be assessed, understood, communicated and managed consistently. It provides systematic and methodological rigour to IHACPA's data quality processes at each stage of data specification, acquisition, management and assurance, known as the data lifecycle.

Data is a core enabler of IHACPA's purpose and operations, with access to data of sufficient quality and scope being fundamental for the agency to perform its functions. Therefore, understanding and managing data quality is a cornerstone of the agency's work.

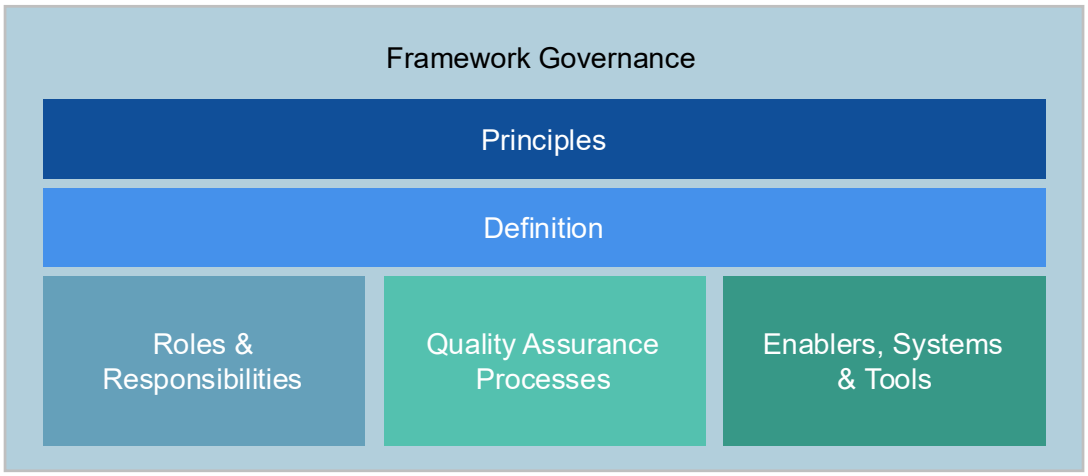
1.2 Objectives

The objectives of the framework are to:

- document shared foundational principles for data quality
- provide clear definitions and approaches to determine the quality of data
- document the stakeholders and their responsibilities for data quality
- enable consistency in data quality related processes, and
- understand what tools and systems are in place to support data quality outcomes.

These objectives are reflected in the framework structure.

Figure 1: Framework structure



1.3 Scope

This framework applies to all datasets within IHACPA's portfolio of work. This includes datasets that have been well developed over time for public hospitals, as well as private hospitals and aged care datasets which will continue to be developed. The scope of datasets may expand in the future through new functions and priorities, and innovative collection methods.

2. Data quality principles

This set of principles are the foundation for IHACPA's and its data provider's approach to data quality. They provide direction on decisions and activities relating to data quality based on IHACPA's strategic objectives, as defined in the Work Program and Corporate Plan.

The principles are to be used to guide the application and maintenance of this framework, outlining the expected practices, procedures and attitudes to promote appropriate data quality maturity across the data lifecycle. The five principles are trusted, attainable, efficient, innovative and transparent. They recognise that there are costs and benefits to increasing data quality that must be managed in complex systems of data capture.

2.1 Principle 1: Trusted

Data that is clearly defined and well-understood is collected, analysed and managed effectively, providing reliable and defensible evidence-based outputs.

Key features

Defensible

Data quality activities are designed to be repeatable and defensible, employing robust and sound methodologies for defining, cleansing and analysis. Standards and specifications used to maintain data integrity are documented and maintained through established governance processes and can withstand scrutiny. Additionally, information on data quality is regularly exchanged between data providers and data users for review and action. This collaborative approach facilitates continuous improvement and ensures that any issues related to data quality are promptly addressed.

Data providers apply clinical coherence, where applicable, as a guiding principle to ensure that healthcare classifications are clinically relevant, comprehensible, homogeneous and consistent from the perspective of clinicians. This includes maintaining classifications that are up-to-date, and sufficiently granular to distinguish meaningful differences in the services provided to various patient and consumer groups. This supports the defensibility and relevance of data used in funding and policy decisions.

Impartiality

Data users ensure methodologies to collect, analyse and manage data are objective, impartial and available to stakeholders. Findings using datasets created as part of the data lifecycle can be independently verified.

Responsible

Data users and data providers define, collect, process, store and analyse data in accordance with relevant specifications, legislation, ethical guidelines, and best practice. Data across the lifecycle is collected, processed, stored, and analysed in secure systems that comply with relevant government

standards for managing sensitive personal information to maintain the consistency and integrity of data.

Stakeholders will endeavour to provide sufficient data to enable IHACPA to achieve its strategic objectives and policy goals, while aligning with other data collections to manage the scope of collection activities.

Benefits

The benefits of data and related activities which are trusted include:

- enabling evidence-based research, analysis and production of required outputs under organisational or legislative requirements
- leveraging existing data collections and governance processes, minimising efforts by both data providers and data users,
- developing high-value datasets for own use and that have greater potential to be used by researchers and relevant government agencies.

2.2 Principle 2: Attainable

Data collection requirements are standardised, predictable and can be largely achieved using current and available data sources and structures.

Key features

Standardised

Collection requests from IHACPA follow standard, well-established, and communicated policies and procedures. Wherever possible, data providers and data users adhere to agreed national data standards for preparing and managing their data holdings.

Timely

Timeframes for IHACPA and data providers for collection and analysis are realistic given the quality expectations and communicated in advance in the Three Year Data Plan. The effort required for data collection is monitored, with the aim of being proportionate to the benefit received by IHACPA and other data users. The impact of any changes to collection requests are considered and incorporated in the final decision. Depending on the scope of the requests, targets for effort reduction over time may be introduced, potentially through changes in collection methodology, in alignment with international leading practice.

Available

Existing datasets or collection mechanisms are used wherever possible. The effort to provide data to IHACPA can be largely met with current data provider systems and tools. IHACPA and other data users as per national agreements develop their methodologies based on the data that can be accessed.

Benefits

The benefits of taking an attainable approach to acquiring quality data include:

- supporting data collections that are timely, realistic, consistent and reliable, to the greatest extent possible given the collection and request contexts
- promote a sustainable approach to data collection activities, aligning with better practice approaches such as the NHR Act's principle of data rationalisation – 'single provision, multiple use', and
- enabling data users to access common datasets for more aligned analysis and outputs, such as national health reform bodies using cost and expenditure data through the same key collections, as per national agreements.

2.3 Principle 3: Efficient

Data quality objectives and measures are determined in consideration of the resources required to achieve these outcomes and the materiality of the benefits.

Key features

Reasonable

IHACPA's goals and expectations for data quality are considered reasonable, where 'reasonable' is defined as proportionate to the capability, resources, financial constraints, and change management impacts of each data provider. The definition acknowledges the range of capabilities across data providers. As much as possible, IHACPA's specifications are developed so that the effort to provide data to IHACPA is proportionate to provider capability and resources across the specific sector. Non-conformance with specifications and standards is managed by IHACPA and data providers in a cost-effective and efficient manner. Methodologies employed by data users including IHACPA are flexible on the level of quality of the data provided or available.

Consultative

Collection requests by IHACPA are made in consultation with stakeholders to understand the primary use and availability of relevant data. Data providers respond to requests and queries regarding data submissions promptly, given the reliance on timely outputs for funding decisions and allocations. All stakeholders involved identify, document, manage and communicate any limitations and risks of data quality and their potential impact on outcomes as known. However, if IHACPA's quality requirements are not fulfilled, it is reported that data quality expectations have not been met.

Resource Effective

The resources of both data providers and IHACPA are considered as part of data quality activities across the lifecycle. Data requests are minimised wherever possible. Potential new data requirements and requests from IHACPA are assessed against the impact of providing that data. To make both data collection and data quality management activities more efficient and robust, automation and standardisation are prioritised for data collection wherever possible.

Benefits

The benefits of an efficient approach to data quality include:

- enabling all data users in the lifecycle including IHACPA to better complete their required functions with risks and potential for errors understood and managed, with the understanding that data quality will be affected by the resources required for data collection and management
- enhancing the reputation of all stakeholders as supporting the considered use of government and data provider resources, and
- opening opportunities to explore alternate methods of data collection and analysis in response to new technologies, updated legislation and changes to data user responsibilities.

2.4 Principle 4: Innovative

IHACPA implements new or improved approaches to data quality management to continuously improve outcomes.

Key features

Continuous Improvement

Data users and data providers put in place proactive measures to improve the quality of data collection, submissions and analysis over time. This is supported by established communication channels across IHACPA teams and external stakeholders to share findings and solutions on data quality issues and activities.

Collaboration

Data users explore opportunities to increase data sharing, such as the DATA (*Data Availability and Transparency Act 2020*) Scheme, making the outputs of IHACPA, jurisdictions and other stakeholder efforts more accessible where appropriate. Stakeholders set up co-operative agreements to support the development of innovative methodologies with public institutions, academic and research institutions, government bodies and other technology innovators as appropriate.

New Technologies and Data Sources

Data users and data providers establish initiatives and participate in the development of innovative methods for collecting and processing data including the integration of new and/or alternative data sources. Data scouting procedures are in place and resources available to identify possible new data sources. Emerging technologies are tracked and investigated for better data collection and analysis opportunities.

Benefits

The benefits of an innovative approach to attaining data quality include:

- supporting IHACPA, data providers and other stakeholders to solve existing and emerging problems through collaboration and partnership
- promoting cross jurisdictional or cross entity collaboration to achieve better practice. For example, it aligns with the addendum commitment for IHACPA to work with the Commonwealth and state and territory governments to explore and trial new and innovative approaches to public hospital funding to improve health outcomes, and
- supporting the Australian Government's objective to make data more accessible to people, business and academia, thereby enabling greater innovation and effective work throughout Australia.

2.5 Principle 5: Transparent

Clear consultation, expectations and communication between IHACPA, data providers and other stakeholders on what data is needed and available, in what form, for what purposes, and how it is validated, analysed and managed.

Key features

Communication

Data quality issues are communicated with relevant data users or providers as they are found, with information on the anticipated impact on outcomes if known. Confirmation of the accuracy of data, along with the associated checks and assurances, including Data Quality Statements are submitted to IHACPA by data providers. Data standards, requirements and expectations for data providers are clearly and openly communicated in appropriate timeframes through the Three Year Data Plan.

Documented

Data users and providers will keep records of data quality issues and any communication, assessments or remediations made to the data regarding the issue. Compliance of data providers and data users to legislation, ethical guidelines and best practice is publicly available where appropriate to provide assurance to all stakeholders on the appropriate management of sensitive data.

New Technologies

New technologies, such as artificial intelligence (AI), may be used to analyse and manage the quality of data, as well as the further processing and treatment of data to produce IHACPA's outcomes. A safe, ethical and transparent approach is adopted for the implementation and use of these technologies, in alignment with Australian Government policy. They are developed and used in a manner that prioritises safety, adheres to ethical standards and considers the broader implications for society, thereby mitigating potential risks and maintaining public trust.

Benefits

The benefits of increasing transparency on data quality activities include:

- allowing data users including IHACPA to identify potential risks and issues with outputs required under the legislation made with available datasets
- supporting the validity and accuracy of data users' key outputs, while identifying any potential limitations with the results, and
- supporting open communication between all stakeholders on data quality issues or other factors that may impact analysis and outputs.

3. Data quality definition

3.1 Vision

To better understand and improve the quality of data used by IHACPA to develop key deliverables.

3.2 Definition

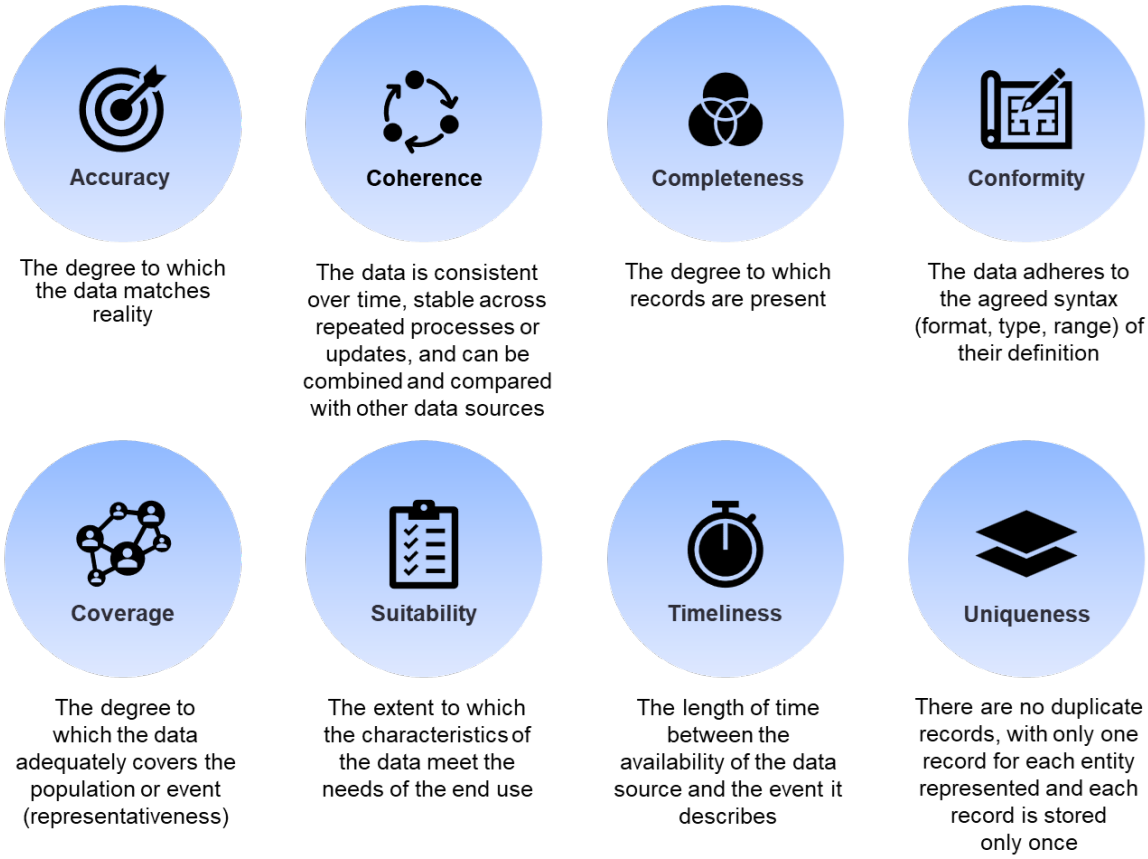
Data quality is defined as the degree to which data is 'fit-for-purpose' for the intent under which it is provided or collected.

Understanding and managing data quality for IHACPA means ensuring that data is of sufficient quality at each stage of the data lifecycle, with any gaps or limitations known and documented, working with data providers to improve quality, supported by a culture of continuous improvement.

Data that is high quality can be reliably used by IHACPA for analysis and decision-making, enabling the agency to perform its functions. Data that is low quality may be inaccurate, inconsistent or incomplete, affecting the efficiency and effectiveness of IHACPA's activities and outputs.

IHACPA defines, measures, manages and improves data quality through eight dimensions: accuracy, coherence, completeness, conformity, coverage, suitability, timeliness and uniqueness. These dimensions are used to evaluate how informative and useful the data is for a given purpose.

Figure 2: Data quality dimensions



The data quality dimensions also facilitate better communication among data users in IHACPA and external stakeholders about data quality objectives, measures, approaches and challenges.

These definitions and dimensions align with those used by the Australian Bureau of Statistics (ABS)[2], the Australian Institute of Health and Welfare (AIHW)[3] and the Data Management Association (DAMA)[4], which has broad adoption by Australian Government agencies.

3.3 Collection context

Data providers, including hospitals, aged care providers and local hospital networks, create or collect data to meet their operational and regulatory requirements. They define their own acceptable levels of data quality according to these primary purposes.

While anticipating or relying on perfect data quality is impracticable, data quality can continue to improve, with the maturity of data quality activities increasing over time. IHACPA works with data providers to continuously improve data quality over time – these improvements can also benefit primary users of data in its operational or clinical setting.

3.4 Benefits of good quality data

The impact of good quality data is broader than only IHACPA. Multiple stakeholders across the sectors that IHACPA work with use the data for analysis and reporting. Good quality data is understood through combining the different dimensions of data quality, while acknowledging there are also trade-offs – data collected in operational or clinical environments cannot meet all the ideal requirements for secondary purposes. The benefits and beneficiaries of good data quality are listed in the table.

Table 1: Benefits and beneficiaries of good quality data

Stakeholder	Benefits of good quality data
IHACPA	Good quality data strengthens the quality of IHACPA's various outputs and advice. In recognition of the complexities of collecting data in the sectors IHACPA advise, the agency is flexible in its approach to both improving data quality over time by working with data providers and working with data that may be impacted by the conditions it was created or collected. IHACPA's checks and profiling activities identify data quality concerns, and the associated limitations and potential impact on the advice it provides.
Australian Government	The Australian Government benefits from high-quality outputs and advice from IHACPA through improved efficiency and financial sustainability of the health system for all Australians.

[2] The ABS Data Quality Framework (2009)
[3] An AIHW Framework for Assessing Health Data Sources for Population Health Monitoring – Working Paper (2014); AIHW Data Governance Framework (2022)
[4] Data Management Body of Knowledge 2 (DAMA-DMBOK2) (2018)

Stakeholder	Benefits of good quality data
States and territories	States and territories can use insights derived from their data as well as IHACPA's analyses for local health care planning, policy making and improving service delivery within their regions. The jurisdictions benefit from the data quality checks that both they and users of their data (such as IHACPA) perform. This cycle of feedback can assist to improve data quality over time, improving the insights drawn from associated analyses and ultimately better informing regulatory, strategic and operational requirements.
Other national health reform bodies (Commonwealth)	Other national health reform bodies access the datasets collected and managed by IHACPA to fulfill some of their functions, where practical and appropriate, thereby maximising the efficiency of data provision and validation. The timely supply of data is a key measure for these bodies, with annual funding decisions reliant on the outcomes.
Other government agencies (Commonwealth)	Other government agencies may be able to access de-identified datasets developed by IHACPA and other data users for the purposes of policy analysis and planning, dependent on the specific collection arrangements and agreements, as identified in the National Health Reform Agreement. Access to good quality datasets may also support agencies to perform their functions or meet their legislative, statutory and contractual reporting requirements. Other government agencies particularly benefit from data that is coherent, meaning that data can more easily be compared across other data holders and different datasets. Consistencies across datasets make comparison and subsequent analysis less complex, reducing the time required to gain insights.
Other data providers	Other data providers, such as aged care providers, local health networks and private hospital groups, benefit from better data quality that is used to inform their regulatory, strategic or operational requirements. They also can benefit from feedback on data quality from the users of their data (like IHACPA) as well as their output and advice (for example benchmarking).
Academics and researchers	Academics and researchers benefit from the datasets produced by data providers and IHACPA (with support from data providers). IHACPA may provide access to data, with strict privacy protections, for research to improve Australian healthy policy on a case-by-case basis, as described in relevant data access and release policies. Researchers are often reliant on data that was created or collected for other primary purposes, such as clinical care or daily operations. The checks performed by IHACPA and data providers to better understand limitations of these datasets, assists data users in assessing suitability for secondary research purposes.

4. Roles and responsibilities

There are numerous stakeholders involved in contributing to and benefitting from robust, fit-for-purpose data used in developing IHACPA's outputs. Efforts invested in maturing the quality of data along the lifecycle may have numerous benefits for stakeholders, in addition to improving IHACPA's deliverables.

Stakeholders of IHACPA's data lifecycle belong to the sectors IHACPA works in, including multiple levels of government, private and public bodies, and broader beneficiaries of the data collected and produced as part of these processes. Stakeholders across the lifecycle may be both data providers and data users.

These stakeholders change over time, in line with evolving priorities, updated legislation, machinery of government changes, new collection and analysis methodologies, and new portfolios of work.

4.1 IHACPA

IHACPA guides the Australian Government in funding in-scope services (as described in the enabling legislation or other agreements) efficiently through evidence-based outputs as required under the legislation. IHACPA utilises data to make sure their advice is fair and clear. In addition, IHACPA collaborates with government entities, advisory committees, and the public, focusing on being independent, transparent and accountable.

With respect to data quality, IHACPA are responsible for:

- metadata management as part of setting data quality requirements and specifications for submissions
- data cleansing and profiling activities of data submissions
- assessing data quality and identifying any gaps or limitations, and
- securely storing and managing data so its integrity and confidentiality is maintained.

Within IHACPA, there are teams and positions that have a specific responsibility for managing data quality – these responsibilities are identified in other IHACPA policy documents.

4.2 Pricing Authority

The Pricing Authority (IHACPA's board) provides independent and transparent advice to the Australian Government in relation to its functions as described in the addendum and relevant legislation.

The Pricing Authority provides leadership and oversight of IHACPA's data quality activities, providing assurance that data is fit-for-purpose for use in developing evidence-based outputs for the Australian Government.

4.3 Committees and Working Groups

The IHACPA committee framework assists in providing advice to the Pricing Authority and to ensure the transparency and integrity of the agency.

The committees and working groups advise on IHACPA's portfolio of work. In relation to data quality, committees and working groups:

- advise IHACPA and the Pricing Authority on data quality issues, and
- identify sources and approaches to data quality issues.

4.4 Data providers

Data providers are suppliers of data for the purposes of producing evidence-based outcomes required of IHACPA under the legislation. Data supplied aligns with one of the following groups:

- data described in IHACPA's specifications and/or the Three Year Data Plan
- data collected by other agencies or organisations that meet IHACPA's specifications, such as the Department of Health, Disability and Ageing,
- external reference datasets created for other purposes, such as the Australian Government Medicare Benefits Schedule (MBS),
- other ad-hoc data sources which are collected to inform specific projects.

With respect to data quality, data providers are responsible for:

- ensuring data integrity within their systems
- developing a consistent approach to data collections
- providing accurate data that meets the specifications set by IHACPA
- validating data submissions through established assurance processes (including preparing statements of assurance)
- identifying any data quality issues within data submissions and notifying IHACPA, and
- undertaking all compliance activities associated with these datasets.

Data providers benefit from IHACPA's data collection and analysis, through obtaining feedback on IHACPA's observations of data quality and through the outputs and advice IHACPA provide.

5. Quality assurance processes

IHACPA's outputs are required to be auditable and trusted. To build trust, quality assurance needs to be built into each stage of the data lifecycle, as well as the end-to-end lifecycle more broadly.

Figure 3: Data lifecycle

At each stage of the data lifecycle, the data quality dimensions must be addressed to enable quality to be achieved. The quality assurance processes for each stage of the data lifecycle are listed below, dependent on the specific dataset.

IHACPA may apply AI and machine learning techniques to enhance data validation, anomaly detection, and pattern recognition across large datasets.

Table 2: Quality assurance processes for each stage of the data lifecycle

Stage 1: Data requirements		
Description		
Establishing the data request specifications or guidelines, dependent on the decided collection approach, based on the purpose of the dataset the existing data landscape.		
Quality assurance processes		**Dimensions**
Data quality rules	Describe the rules that the required data will need to conform to in order to be adequate for the business need.	Conformity
Data quality metrics	Describe the measures that the required data will be assessed by to be adequate for the business need.	Accuracy
Stage 2: Data collection		
Description		
Data is collected from providers, as requested by IHACPA or another data user in the lifecycle, with appropriate assurances provided or checks conducted by the provider, depending on the submission.		
Quality assurance processes		**Dimensions**
Validation	Test datasets prior to formal submission using the File Transfer Portal (FTP) functionalities provided – can be tested	Conformity

	multiple times for conformance to specifications. Validations are performed manually or automatically depending on the dataset.	
Data quality assurance assessments	Describes the steps taken by data providers to ensure data quality objectives and expectations are met.	Completeness

Stage 3: Data ingestion		
Description		
Initial checks are performed on the data against the specifications – for data submitted to IHACPA, this is completed through the secure portal or via SDMS.		
Quality assurance processes		**Dimensions**
Security scans	Assesses whether the data submitted contains any viruses.	Suitability
Structural conformance checks	Tests whether the data submitted accords with IHACPA's expectations for the structure, as set out in the planning stage or documented in the request specifications, such as the expected number of columns.	Conformity
Content conformance checks	Tests whether the data submitted accords with IHACPA's expectations for the contents, as set out in the planning stage or documented in the request specifications, as applicable, such as blank fields, unique identifiers, values within a permissible range and matches in reference lists.	Completeness/ Conformity
Linkage checks	Compare linkage keys within each dataset submitted to ensure files can be linked (where applicable).	Coherence

Stage 4: Data validation		
Description		
IHACPA analyses the initial checks and further validates the data submission, supported by a feedback mechanism between providers and IHACPA.		
Quality assurance processes		**Dimensions**
Manual assessments	Reports produced in the data ingestion stage are manually analysed by IHACPA to ensure that the data meets the required validation and integrity standards.	Accuracy

Stage 5: Data preparation
Description

IHACPA analyses the data, takes remediation actions and documents any data quality issues in order to create the finalised dataset for use. Analytical code used during data preparation is subject to internal validation, version control, and documented to ensure transparency, reproducibility and alignment with data quality principles.

Quality assurance processes		Dimension
Summary checks	Create a high-level summary of current year's data – total number of records for different factors.	Completeness
Distribution checks	Analyse key distributions to see if match expectations, such as key demographic variables and derived classification codes.	Accuracy/Coherence
Comparison to historical data	Compare between current and previous year by data provider, collection site and product level for number of events, averages, lowest/highest values, percentage change and any other measures that may apply.	Accuracy/Coherence/ Completeness/ Timeliness
Comparison to external data	Compare with relevant datasets (where applicable) for alignment or issues.	Accuracy/Conformity
Ad-hoc checks	Investigations and analysis of data or results that appear non-standard (as needed).	Suitability/Uniqueness
Data provider consultation	Provides an opportunity for IHACPA and data providers to discuss any anomalies or errors and how they will be addressed.	Accuracy/Conformity

Stage 6: Data uses

Description

Data users assess the data for its fitness for the specific use case, documenting gaps or limitations in the dataset and discussing with data providers (when necessary) how these may impact outcomes.

Quality assurance processes		Dimensions
Comparison to historical model	Run last year's model using current or updated data, performing a year-on-year comparison of outputs and identifying changes and whether they are significant.	Completeness/ Coverage/Timeliness
Trimming procedures	Remove outliers as per procedures or data provider advice.	Accuracy/Suitability
Assessment and adjustment of potential biases	Statistical and mathematical techniques are used where appropriate to identify and control for differences in patient or establishment characteristics.	Accuracy/representativeness

Missing variable and value checks	Identify missing or incorrect values and variables.	Accuracy/Completeness
Value checks	Identify any invalid characters or values that are not logical, such as admitted date is prior to separation date.	Accuracy/Conformity
Investigations on selected areas	Conduct through investigations on selected aspects of the data collection and analysis process and methodology, to facilitate a shared understanding of variations more broadly.	Accuracy/Coherence

End-to-end data lifecycle		
Description		
IHACPA analyses broader trends or issues in the data ecosystem that may impact outcomes, conducting detailed analysis or reviewing submissions if determined to be necessary.		
Quality assurance processes		**Dimensions**
Assessment	A formal review that validates and interprets data objectively and independently, providing the appropriate level of challenge.	Accuracy/Coherence
Comprehensive analysis	A focused, detailed analysis of a particular topic or question relating to a data quality issue or concern, such as linkages between datasets or transformation rules.	Coherence/ Completeness

6. Enablers, systems and tools

IHACPA has developed and implemented practical, fit-for-purpose enablers, systems and tools to enable the delivery of its legislative functions, and to support consistency across data submissions and internal IHACPA data cleansing and analysis processes. Data providers and external data users also need to ensure systems and tools used to manage and store in-scope data align with the requirements set by this framework.

Analytical code is a critical enabler of data quality across the lifecycle – from collection and ingestion to validation, preparation and use. To ensure integrity, reproducibility and transparency, IHACPA adheres to best practice principles for code management and acknowledges that implementation varies across teams. These principles include:

- Version control
- Documentation of codes and processes
- Peer review of scripts
- Reproducibility
- Secure handling of data

These practices are informed by guidance from the Data Management Association (DAMA), Australian Government Digital Service Standards, and internal IHACPA policy documents. They align with IHACPA's data quality principles and support the robustness of evidence-based outputs.

IHACPA depends on the strength and robustness of these enablers, systems and tools to ensure data quality is understood and documented. While higher quality data is preferable for the accuracy of evidence-based outputs, IHACPA at times needs to work with data that has acknowledged limitations and gaps. The systems and tools in place help manage and document these issues, ensuring there is a sufficient level of quality in the data inputs and the produced outcomes.

These systems and tools that manage data quality continue to be refined, updated or decommissioned in response to changes in IHACPA's portfolio of work, national agreements, priorities and available technologies.

The types of systems and tools required are listed below by stage in the data lifecycle, dependent on the specific dataset.

6.1 Stage 1: Data requirements

For its various portfolios of work, **legislation and national agreements (articles of authority)** are in place that enable IHACPA to collect data as required to fulfill its functions. These documents provide impetus and authority for data providers, IHACPA and other stakeholders to undertake the associated data collection and analysis activities. The documents also provide policy direction and guidance on the specific activities to be undertaken.

Key examples of these articles of authority for IHACPA include:

- The *National Health Reform Act 2011* (the NHR Act) establishes IHACPA's key functions.
- The National Health Reform Agreement, updated every 5 years, is an agreement between the Australian Government and all state and territory governments that commits to improving health outcomes for Australians.

IHACPA consults on and communicates its data requirements to data providers in advance through a forward data plan – the Three Year Data Plan. The plan identifies current and future data collection needs. IHACPA collaborates with stakeholders including data providers to develop the plan. The Three Year Data Plan notifies data providers of details of upcoming collection requests, including the mechanisms and timelines for collection.

IHACPA also publishes a **work program** annually, as required in the NHR Act, which identifies IHACPA's strategic objectives and key activities. Data quality activities align with this document.

IHACPA identifies the **specifications** for data collections, including scope, timeframes and format. Again, these specifications are developed in collaboration with data providers to ensure that the specifications are attainable and efficient in the operating environment. IHACPA notifies and consults on the requests and timeframes via the committee framework and the forward data plan.

It is expected that as IHACPA's portfolio of work continues to evolve there will be additional data requirements issued to providers.

6.2 Stage 2: Data collection

Data providers are responsible for the systems and tools for maintaining data quality as part of data collection processes.

Depending on the circumstances, these may include:

- **audit reports**
- **reconciliation reports**
- **outlier reports**
- **user groups**
- **training programs,** and
- **system configuration guidelines.**

Dependent on the specific dataset, data providers may be required to submit **quality assurance statements** along with the data that outline the checks and processes in place. Working with data providers, IHACPA continues to mature the quality assurance statements to include more details on the checks and processes used to ensure the data is fit-for-purpose. The expanded statements will provide additional standardised information to IHACPA, aiming to reduce the number of clarifications requests sent to data providers.

Responsibilities for data collection may shift with an expanded portfolio of work for IHACPA and/or innovations to the collection approach for different datasets.

6.3 Stage 3: Data ingestion

IHACPA has in place a **data submission portal** which provides a secure and standardised method for data providers to submit data. Depending on the dataset submitted, some processes may not undergo automatic checks and may instead be subject to manual quality checks. The reports generated by these quality checks are available to data providers, giving them an opportunity to review the extent to which their data meets the required quality and integrity standards, as identified in the specifications.

6.4 Stage 4: Data validation

The reports from the quality checks are reviewed by IHACPA teams to assess the extent to which the data meets the required quality and integrity standards.

Artificial intelligence (AI) techniques may be applied during data validation to automatically detect anomalies, inconsistencies, and potential data quality issues, enabling more timely and accurate feedback to data providers.

6.5 Stage 5: Data preparation

After the data has been ingested into the IHACPA environment and validated, IHACPA teams commence preparing data for use. Assessing the quality of the data and documenting identified issues is a key step in the process, and a contributor to the overall robustness and strength of IHACPA's outputs.

Data is stored and managed in IHACPA's **Secure Data Management System (SDMS)** which meets legislative requirements for privacy and security. **Profiling and cleansing tools** are in place to complete the appropriate processes for understanding and managing data quality.

Changes to the data, as part of both cleansing and preparation, are documented for current and future users using a shared **data quality issues register** that can be accessed by all IHACPA data users. Gaps and limitations start to be documented in the issues register at this stage, which are incorporated by both internal and external data users into their methodologies and practices.

IHACPA provides **reporting on data quality** of submissions to data providers, aiming to support providers to improve the quality of submissions over time. Depending on the specific portfolio of work and supporting legislation and national agreements, these reports may be made public.

At the end of the data preparation stage, a **finalised or national dataset** is produced which will then be analysed in the SDMS by various IHACPA teams. This single finalised dataset as a source of truth supports consistency of analysis and outcomes.

IHACPA undertakes quality assurance activities on **grouper logic**, **data request specifications**, and **analytical validation code** to ensure that coding processes accurately represent the underlying data collections and intended analytical outcomes. Analytical code used in the development of key outputs, such as the NEP, NEC, and Residential Aged Care Pricing (RACP), is reviewed annually to ensure its reliability and accuracy.

Code used in the National Benchmarking Portal is reviewed and developed each year in response to changes in data structures, classifications or policy requirements. IHACPA also plans to undertake formal reviews of analytical code used in the NHCDC and private sector datasets to further strengthen the quality and consistency of its outputs.

Artificial intelligence (AI) tools may be used during data preparation to support automated profiling, anomaly detection, and validation of datasets, enhancing the efficiency and accuracy of quality assurance processes. When AI tools are used for data validation, IHACPA will specify the tool and its purpose to data providers.

6.6 Stage 6: Data uses

IHACPA's internal systems and tools ensure that the integrity of data is maintained through the different data products (including intermediate steps) that are used in the production of the various outputs and advice required of IHACPA under the legislation or as requested by the Australian Government.

Teams within IHACPA use the cleansed data within the SDMS to perform analysis and calculations. Further gaps and limitations in the data will also be documented and included in the data quality issues register, as well as relevant stream-specific reports.

Datasets created by IHACPA can be made available for data users such as researchers, government agencies and other interested parties, with appropriate controls in place. Requests are managed through policies and schemes that align with Australian Government regulations.

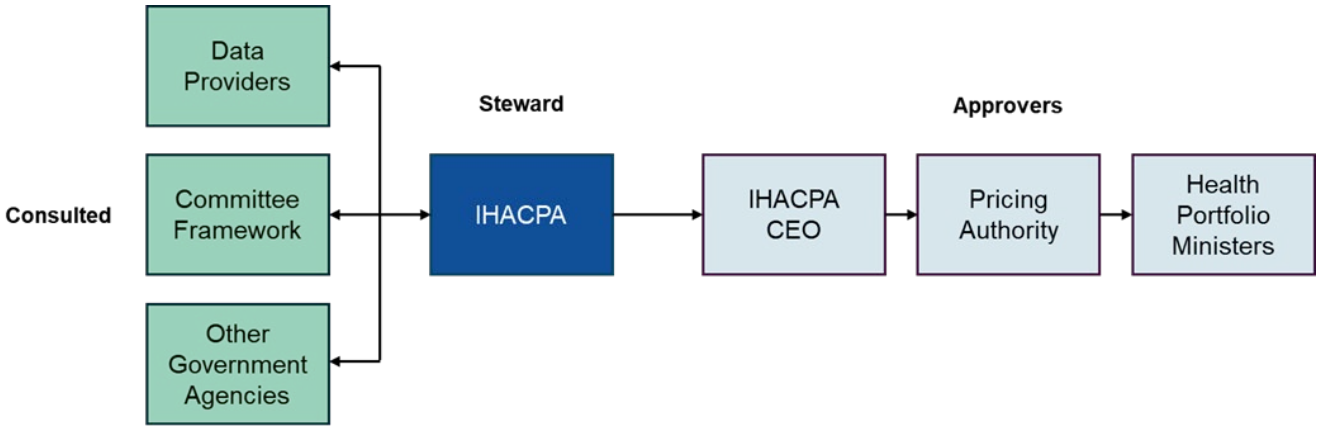
The integrity of data is also managed through data users having in place a suite of **internal policies and frameworks** for data management, governance and security. These policies contribute to the ability to ensure data is handled and used in alignment with legislative requirements and community expectations.

7. Framework governance

7.1 Approval

The framework is approved by the Pricing Authority, followed by a 45 day consultation period with the health portfolio ministers.

Figure 4: Framework governance structure



7.2 Monitoring and oversight

IHACPA is responsible for the overall stewardship of the framework and its components. The implementation of AI tools in data quality processes will be subject to regular review to ensure alignment with ethical standards, data governance policies, and stakeholder expectations.

The framework will be monitored for its ongoing suitability and effectiveness by IHACPA and stakeholders.

Feedback on the suitability and effectiveness of the framework will be sought and addressed through the committee framework.

7.3 Review

The framework is a living document that is reviewed and refined regularly to reflect IHACPA's strategic priorities and portfolio of work.

The framework will be reviewed at least every 12 months, or earlier if affected by legislative or policy changes.

7.4 Communications

Proposed changes to the framework will be circulated and discussed through the committee framework.

Appendix A: Public Hospital Datasets

Public hospital data quality stakeholders

The current key stakeholders for data quality in the public hospital data lifecycle include:

- **States and territories**

  States and territories play a crucial role in providing IHACPA with comprehensive public hospital data, ensuring adherence to data standards and protocols set by IHACPA.

- **Australian Institute of Health and Welfare (AIHW)**

  IHACPA uses data collected by AIHW for determining the national efficient cost (NEC) for block funded services. IHACPA also work closely with AIHW to ensure that IHACPA conforms with existing data development processes and structures as much as possible.

- **Services Australia**

  Services Australia provides IHACPA de-identified Medicare data to better understand patient care delivered across care sites.

- **National Health Funding Body (NHFB)**

  The NHFB uses IHACPA's outcomes as a major determinant of the level of Commonwealth funding for public hospital services and a benchmark for the efficient cost of providing public hospital services.

- **Australian Commission on Safety and Quality in Health Care (ACSQHC)**

  The Australian Commission on Safety and Quality in Health Care maintains the data specifications for nationally consistent reporting of sentinel events, and Hospital Acquired Complications (HACs) and Avoidable Hospital Readmissions (AHRs).

- **National Health Data and Information Standards Committee (NHDISC)**

  IHACPA works with NHDISC to incorporate activity based funding specific data items into existing dataset specifications where possible.

Public hospital data quality processes

IHACPA's specific data checking and quality assurances processes relating to public hospital data are outlined in the tables below, commencing from the data ingestion stage. These tables extend upon information provided in Section 5.

Table 3: Activity Based Funding (ABF) data checks and quality assurance processes

ABF Procedures	Description
Stage 3: Data ingestion and Stage 4: Data validation	
Portal	
ABF Portal and Validation reports	The ABF portal performs ingestion checks and validation checks to ensure that the data being used by IHACPA fulfils expectations set out by the Data Request Specifications (DRS), and to identify records that may cause issues in their data preparation. The ingestion checks and validation checks occur automatically during jurisdiction data submission. The results of the checks are visible to IHACPA and jurisdictions as either: • **Fatal errors**: do not allow the jurisdiction to submit their data due to severe issue with either the structure or content of the data • **Critical errors**: allow for submissions but indicate an important issue with content of the data being submitted • **Warning flags**: allow for submissions but indicate a less severe issue with either the structure or content of data being submitted.
Stage 5: Data preparation	
IHACPA Team	
Review validation reports from ingestion checks	The data ingestion process produces validation reports that the IHACPA team reviews to ensure that data used by IHACPA meets the requirements set out in the DRS and identifies any discrepancies or issues that need to be clarified by the jurisdiction.
Check error classifications	The grouper function is applied to classify activity data into relevant classification codes, such as the AR-DRG. Some records may cause an error and not be assigned a classification ('ungroupable' category). The IHACPA team reviews these ungroupable records and verify their status.
Check NWAU growth	Similarly, the calculation of National Weighted Activity Units (NWAU) is applied to the activity data and compared against the previous year to ensure that growth in NWAU aligns with expectations.
Assess Statement of Assurance against jurisdiction data submission	The information provided by jurisdictions in the Statement of Assurance are validated by the IHACPA team to ensure they are accurately reflected. For example, the IHACPA team would verify explanations on any significant changes in activity and NWAU from the prior financial year.
Stage 6: Data uses	
IHACPA Team	
Sense checks	Sense checks are performed to validate the data and ensure its logical consistency. Examples of these sense checks include checking for negative ages or inconsistent admission, date of birth, and separation dates.

Business rules	Business rules are applied to truncate or remove out-of-scope data to ensure that the data used for analysis is in-scope and suitable for use.
Remove out of scope records	The IHACPA team determine and remove records that are not in-scope for the quarterly activity report, in line with the requirements set out by the NHR Act.
Reconciliation to NHFB	Records are compared to the National Health Funding Body (NHFB) to identify potential data quality issues. However, because NHFB and IHACPA both use separate business rules, a direct comparison is not performed.
Quarterly activity report to TAC, JAC and Pricing Authority	The IHACPA team submit the quarterly activity report to Technical Advisory Committee (TAC), Jurisdictional Advisory Committee (JAC), and Pricing Authority for their review and approval.

Table 4: National Hospital Cost Data Collection (NHCDC) data checks and quality assurance processes

NHCDC Procedures	Description
Stage 3: Data ingestion and Stage 4: Data validation	
Portal	
NHCDC Portal and Validation report	The NHCDC portal performs ingestion checks and validation checks to ensure that the data being used by IHACPA fulfils expectations set out by the Data Request Specifications (DRS), and to identify records that may cause issues in their data preparation. The ingestion checks and validation checks occur automatically during jurisdiction data submission. The results of the checks are also visible to IHACPA or jurisdiction users as either: • **Critical errors**: do not allow the jurisdictions to submit data due to an important issue with either the structure or content of the data • **Warning flags**: allow for submissions but indicate a less severe issue with either the structure or content of data being submitted.
Stage 5: Data preparation	
IHACPA Team	
Review validation reports from ingestion checks	The data ingestion process produces validation reports that the IHACPA team reviews to ensure that data used by IHACPA meets the requirements set out in the DRS and identifies any discrepancies or issues that need to be clarified by the jurisdiction.
Review cost duplication	By identifying and verifying costs that appear duplicated, the IHACPA team identifies potential records that may affect data quality.
Create and verify data reconciliation	Reconciliation checks are performed on linked cost and activity data to ensure coherence between cost and activity data sources and verify that potential reasons for unlinked records are in line with their expectations.

Dashboard	
NHCDC Dashboard	The NHCDC Dashboard provides visual summaries of submissions to the NHCDC for the purpose of supporting users' review and reconciliation of the results presented. The user guide that accompanies the dashboard is intended to explain the presented data and support jurisdictions in navigating the dashboard and verifying the quality of their data.
IHACPA Team	
Review Quality Assurance (QA) reports	The IHACPA team conducts a thorough review of the QA reports. The purpose of this review is to identify and document any discrepancies or issues in the data that require further clarification from jurisdictions. Following the implementation of the NHCDC Dashboard in 2025, the QA reports are presented on the Dashboard, replacing the spreadsheet format of the QA reports previously prepared and provided to jurisdictions.
Assess Data Quality Statements against jurisdiction data submissions	The information provided by jurisdictions in the Data Quality Statements are validated by the IHACPA team to ensure they are accurately reflected. For example, the IHACPA team would verify the limitations or inclusions specified in the Data Quality Statement.
Stage 6: Data uses	
IHACPA Teams	
Business rules	Business rules are applied to truncate or remove out-of-scope data to ensure that the data used for analysis is in-scope and suitable for use. Note that different teams may apply different business rules to ensure the data is fit for their purposes.
Sense checks	Sense checks are performed to validate the data and ensure its logical consistency. Examples of these sense checks include checking for inconsistent admission, date of birth, and separation dates.
Remove out-of-scope records	The team determine and remove records that are not in-scope in line with the requirements set out by the NHR Act.
Quality Assurance (QA) of inputs	The team ensures the cost weight reports received are accurately reflected in the NHCDC Public Sector Report.

Public hospital data quality enablers, systems and tools

Enablers, systems and tools (highlighted in **bold**) used as part of IHACPA's public hospital data collections as currently documented are listed below by stage of the data lifecycle, in addition to those listed in Section 6.

Stage 1: Data requirements

Current legislation and national agreements relating to public hospital data collection by IHACPA include the following:

- The ***National Health Reform Act 2011*** (the NHR Act) establishes IHACPA's key functions for public hospital pricing. The Act states that IHACPA's functions include determining data requirements and data standards to apply in relation to public hospital and health care data to be provided by states and territories.
- The **addendum to the NHR Act 2020-2025** (the addendum) is the current iteration of the agreement between the Australian Government and all state and territory governments as the key mechanism for the transparency, governance and financing of Australia's public hospital system. The addendum outlines the arrangements for sharing information between jurisdictions and national bodies and commits all parties to work towards best practice approaches to data quality and integrity.
- IHACPA is also a signatory to the **National Health Information Agreement**, committing it to working towards developing and using nationally consistent health information.

In addition to those, public hospital data requirements are communicated in the following documents:

- IHACPA's forward data plan, the **Three Year Data Plan,** is a key document for identifying and issuing data requirements for public hospital datasets.
- The **Data Compliance Policy** is a supplement to the Three Year Data Plan, also updated annually. It details the process by which IHACPA publicly reports on compliance by data providers with the public hospital data requirements and data submissions dates issued in the Three Year Data Plan.
- Details on the requirements for public hospital activity data are provided in the **Data Request Specifications** (DRS), which are available on the IHACPA website.

Stage 2: Data collection

Data providers have established their own internal enablers, systems and tool for quality assurance of public hospital data submissions. While data providers are responsible for ensuring data integrity, the mechanisms for undertaking these activities are not standardised.

As part of current data submission processes, public hospital data providers provide the following specific quality assurance statements to IHACPA:

- The **Statement of Assurance** is provided by jurisdictions (states, territories and the Commonwealth Governments) for public hospital data submissions, as required in the addendum. The statement includes commentary on the completeness and accuracy of data. The content and level of the commentary and assurance provided in the statement varies across jurisdictions, given the differing levels of maturity. The statement is not published publicly.
- The **NHCDC Data Quality Statement** is submitted by states and territories with the final NHCDC data submission for each financial year. The statement outlines conformance with the AHPCS and relevant changes. This is published publicly.

Stage 3: Data ingestion

Public hospital data is submitted by data providers (states and territories) through the **NHCDC Portal,** which has automated checks in place, conducts a security scan, checks the data structure and performs validations.

Providers can validate their data prior to submission multiple times in accordance with the DRS for public hospital data. Data providers can formally submit the data once they are satisfied with the data quality.

The data handling process varies with the type of data and data stream: hospital cost data files are checked during uploading then processed as a single batch, while hospital activity data is checked and processed immediately after the single required file is uploaded.

Jurisdictions can make change to data source files during or after the processing, regardless of whether the data stream has been submitted or not.

The NHCDC portal generates **validation reports** for IHACPA and data providers to review:

- structural checks
- validation checks
- logic checks
- data preparation checks
- duplicate checks
- submission validation checks, and
- consolidated cost checks.

Stage 4: Data validation

The **validation reports** from the automated quality checks in the NHCDC Portal are available for jurisdictions to see the extent to which their data meets the required quality and integrity standards identified in the DRS. At this stage, jurisdictions are able to resubmit their data if they identify any potential issues with data quality.

Stage 5: Data preparation

The IHACPA team review the **full suite of quality assurance reports** for public hospital data (including the validation reports produced by the NHCDC Portal, and other reports such as NWAU and classification grouper summary reports) to identify potential issues to data quality.

Where appropriate, IHACPA assesses the clinical coherence of classification systems and cost allocations, using tools such as the Independent Financial Review and NHCDC Public Sector Report to ensure that resource use aligns with clinically meaningful categories.

The NHCDC Public Sector Report is an annual publication which presents detailed cost data from public hospitals across Australian jurisdictions, which is used to inform the development of the National Efficient Price (NEP).

The Independent Financial Review (IFR) is an independent assessment designed to ensure the robustness and fitness-for-purpose of the NHCDC for the development of the NEP. This assessment involves reviewing the accuracy and completeness of jurisdiction-submitted reconciliations through analysis of NHCDC data and Data Quality Statements (DQS), evaluating the consistency in the application of the Australian Hospital Patient Costing Standards (AHPCS) and consultations, and examining data flow, cost reconciliations, and costing processes within a sample of hospitals and health services.

During the data preparation process, public hospital data is stored and managed in the **SDMS**, where profiling and cleansing activities are undertaken using **data processing tools** (e.g. SAS and Python scripts and processes).

Current data quality reporting includes the following:

- For public hospital data, IHACPA issues **Data Quality Reports** to jurisdictions.
- Similarly, the **Data Compliance Report** is produced by IHACPA to detail the jurisdictions compliance with the public hospital data submission process.

Stage 6: Data uses

Current external use of public hospital datasets created by IHACPA include the **National Benchmarking Portal** was designed to provide access to insights on public hospital cost and activity data collected by IHACPA. The website-based application allows users to compare cost and activity data at jurisdiction, local hospital network and hospital level.

Appendix B: Private Hospital Datasets

Private hospital data quality stakeholders

The current key stakeholders for data quality in the private hospital data lifecycle include:

- **Private hospital groups**

  Participating private hospital groups play a crucial role in providing IHACPA with comprehensive private hospital data, ensuring adherence to data standards and protocols set by IHACPA.

- **Australian Department of Health, Disability and Ageing (DoHDA)**

  IHACPA uses the annual Private Hospital Data Bureau (PHDB) data provided by DoHDA to compare and calculate private hospital market share to the data submitted by private hospital groups.

Private hospital data quality processes

IHACPA's specific data checking and quality assurances processes relating to private hospital data are outlined in the tables below, commencing from the data ingestion stage. These tables extend upon information provided in Section 5.

Table 5: National Hospital Cost Data Collection (NHCDC) data checks and quality assurance processes

NHCDC Procedures	Description
Stage 2: Data collection	
Hospital Groups	
NHCDC Collection	Participating private hospital groups upload their data via the File Transfer Portal (FTP). IHACPA perform structure checks to ensure all required data fields are present prior to proceeding with Data Validation.
Stage 3: Data ingestion	
IHACPA Team	
	Data ingestion does not occur due to the manual processing conducted in stage 4.
Stage 4: Data validation	
IHACPA Team	
NHCDC Validation report	IHACPA perform validation checks to ensure that the data provided by hospital groups fulfils expectations set out by the Data Request Specifications (DRS).

	Activity data (cost A) and cost data (cost c) file checks consist of logic and linking checks between the two files submitted by private hospital groups. IHACPA produce the following validation reports and provide them to hospital groups for review: • Content Validation – Summary • Content Validation – Detailed • Linking Report The results of these checks contain: • **Critical errors:** indicate issues with either the structure or content of the data not in accordance with the valid values and format outlined in the DRS. All critical errors require hospital groups' correction and data resubmission. • **Warnings errors:** indicate a quality issue with the data not in accordance with the valid values and format outlined in the DRS. Warning errrors may not require hospital groups' resubmission. The data submitted by hospital groups must pass validation with no critical errors. The submitted cost data must link with relevant activity data. Hospital groups are required to review their data and correct any critical errors and resubmit to IHACPA for revalidation.
Stage 5: Data preparation *IHACPA Team*	
Reconciliation of data	IHACPA reconcile the cost and activity data by care type sorted by hospital group level and by establishment. IHACPA produce the following report: • Reconciliation Report.
Review Quality Assurance (QA) reports	IHACPA produce QA reports highlighting activity and cost outside expected thresholds and discrepancies compared to the previous financial year. These reports are provided to hospital groups to review the identified areas, provide reasons and confirm it is reflective of their submitted data. Hospital groups will need to resubmit their data if it is a result of incorrect submission of the data.
Assess Data Quality Statements against data submissions	Hospital groups submit a Data Quality Statement to confirm their adherence to the Australian Hospital Patient Costing Standards (AHPCS) and that they have included all in-scope costs in their data submission in accordance with the DRS. IHACPA require hospital groups to confirm that their submitted data is final, once all hospital groups have confirmed, IHACPA will use the data to produce the outputs.
Stage 6: Data uses *IHACPA Teams*	
Business rules	Business rules are applied to truncate or remove out-of-scope data to ensure that the data used for analysis is in-scope and suitable for use.
Sense checks	Sense checks are performed to validate the data and ensure its logical consistency. Examples of these sense checks include checking for inconsistent admission, date of birth, and separation dates.

Remove out-of-scope records	IHACPA determine and remove records that are not in-scope in line with the DRS, masking rules and market share adjustment which is calculated by using the Private Hospital Data Bureau (PHDB) data.
Quality Assurance (QA) of inputs	IHACPA ensures the cost weight reports received are accurately reflected in the NHCDC Private Sector Report.

Private hospital data quality enablers, systems and tools

Enablers, systems and tools (highlighted in **bold**) used as part of IHACPA's private hospital data collections as currently documented are listed below by stage of the data lifecycle, in addition to those listed in Section 6.

Stage 1: Data requirements

Current legislation and national agreements relating to private hospital data collection by IHACPA include the following:

- IHACPA and participating private hospital groups are signatories to individual contracts that stipulate the expectations and standards expected of private hospital data collection as well as being subject to strict confidentiality deeds in regard to the sensitive nature of private hospital data.
- IHACPA is also a signatory to the **National Health Information Agreement**, committing it to working towards developing and using nationally consistent health information.

In addition to those, private hospital data requirements are communicated in the following document:

- Details on the requirements for private hospital activity data are provided in the **Data Request Specifications** (DRS), which are available on the IHACPA website.

Stage 2: Data collection

Private hospital groups (data providers) have established their own internal enablers, systems and tool for quality assurance of private hospital data submissions. While hospital groups are responsible for ensuring data integrity, the mechanisms for undertaking these activities are not standardised.

Private hospital data is provided to IHACPA by hospital groups through the **FTP**.
IHACPA checks the data structure to ensure all required data fields are present and in the correct format as per the DRS.

Stage 4: Data validation

Hospital cost data and activity data are linked at this stage of the process. IHACPA ensure the submitted data contain valid values in accordance with the NHCDC Private Sector DRS and provide validation reports to hospital groups outlining the errors.

The **validation reports** from the quality checks outline the extent to which their data meets the required quality and integrity standards identified in the DRS. At this stage, hospital groups are required to correct critical errors and resubmit their data to address any potential issues with data quality.

Stage 5: Data preparation

IHACPA produce **Data Preparation** reports which reconciles the activity to relevant cost data by care type at the hospital group level and establishment level. IHACPA also remove any Unqualified Baby (UQB) activity and cost at this stage.

IHACPA team produce **Quality Assurance** reports and provide them to hospital groups to conduct a thorough review of the identified areas that are outside of expected thresholds and discrepancies to the previous financial year. The purpose of this review is to identify any discrepancies or issues in the data requiring further clarification from hospital groups.

Current data quality reporting includes submission of hospital groups **Data Quality Statements** to confirm their adherence to the Australian Hospital Patient Costing Standards and that they have included all in-scope costs. Upon submission of the DQS, hospital groups are required to confirm in writing that their data submission is final. IHACPA will then use the data for analysis and production of the outputs.

Stage 6: Data uses

IHACPA produce published outputs annually, including the:

- **NHCDC Private Sector report,** which summarise key findings for private hospital cost and activity for the financial year;
- **NHCDC Private Sector Appendix Tables** containing cost weights by AR-DRG and;
- **Infographic** summarising key figures**.**

These outputs are used by private hospital groups, health funds and private hospital associations for their review**.**

IHACPA also produce participant outputs provided to participating hospital groups who have submitted data to each year's collection and are used for internal benchmarking. This includes individual hospital reports and cost tables by care streams of acute, subacute and mental health, for data that have been submitted, as well as a national cost tables and de-identified national data set.

The Commonwealth place great value in the ongoing production of the NHCDC Private Sector dataset for internal use.

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