



Data Quality Policy

1. Purpose

High quality data in the health sector is needed to support patient care, funding, management, planning, monitoring, reporting and strategic decision making. This policy describes the principles that staff within the WA health system must comply with in order to manage and maintain high data quality with respect to its five dimensions¹ - relevance, accuracy, timeliness, coherence and interpretability. The policy also provides a standard approach for monitoring the quality of data collections and quality improvement efforts to ensure data are fit for their intended use.

This policy supersedes OD 0380/12 - *Data Quality Policy* and is a mandatory requirement under the *Information Management Policy Framework*.

2. Applicability

This policy applies to, and is binding upon, each Health Service Provider and its staff members. The policy also applies to staff within the Department of Health (the Department), as well as Contracted Health Entities where specified in their contractual agreements with the Minister for Health, the Department (on behalf of the State) or a Health Service Provider.

In particular, the policy applies to staff members that create, modify, use and interpret data including Data Stewards and Data Custodians, as well as data quality, clinical and administration staff.

Data in any format that are collected, used and reported by the WA health system such as, but not limited to, patient, clinical, administrative, financial and human resource data collections, as well as data warehouses are within scope of this policy.

Individual patient (client) medical records (hard copy or electronic (e.g. BOSSnet)) are out of scope for this policy. However patient information collected in other health information management systems (e.g., PSOLIS, WebPAS) is within scope.

3. Policy requirements

Health Service Providers, the Department and Contracted Health Entities are responsible for developing and reviewing their own operational procedures and guidelines to ensure that data quality is managed effectively throughout the WA health system and in accordance with this policy. In line with the policy principles, these documents must include specific arrangements for ensuring high data quality at the point of data capture, during the processing of that data, and appropriate data quality checks before data is released.

All staff have a shared responsibility in managing the quality of data in accordance with the requirements of the mandatory policy principles, as well as local operational procedures

¹ The dimensions of data quality and their definitions are based primarily on the [Australian Bureau of Statistic Data Quality Dimensions](#), but have been customised for the WA health system.

Before referencing this mandatory policy please ensure you have the latest version from the [Policy Frameworks website](#).

and guidelines. Staff are also responsible for ensuring that any known or perceived data quality issues are reported to the Data Custodian (or nominated data quality staff where available).

Accordingly, data collections within scope of this policy must be assigned a Data Custodian in accordance with the [Data Stewardship and Custodianship Policy](#). The Data Custodian is responsible for ensuring data quality issues and improvement processes are documented in accordance with the mandatory reporting requirements outlined in Appendix A.²

Data Custodians (and nominated data quality staff where available) must use these data quality documents to:

- evaluate the quality of the data for internal use
- advise primary and secondary users of any strengths and limitations of the data so they can make an informed decision about the fitness for purpose of the data
- inform data quality statements that accompany a data submission or for reporting purposes
- identify and implement strategies for data quality improvement
- advise the Data Steward of data quality and improvement issues on request or as deemed appropriate by the Data Custodian.

Completion of these data quality documents is a minimum requirement and is not intended to be exhaustive. Data Custodians may include additional information about the quality of a data collection to supplement these documents.

Policy principles

The following overarching principles for high quality data within the WA health system must be applied:

Principle 1: Relevance – data must be relevant and meet the needs of users.

Data relevance is of paramount importance when establishing or maintaining a data collection. If data is not relevant or does not add meaning to the work that is done, its value decreases substantially, even if the other characteristics of data quality have been met.

Relevancy is supported by ensuring:

- The aim, purpose and scope of the data collection are clearly documented and align with users' needs.
- Data requirements are clearly specified and regularly reviewed to reflect any necessary changes in data capture.
- Data definitions and classifications are documented and managed.
- Stakeholder feedback is used to assess whether the data is fit for purpose.

² Refer to the [WA Health Information Register](#) for a current list of Data Stewards and Data Custodians of existing data collections.

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- The amount of data collected is proportionate to the value gained from it.

Principle 2: Accuracy – data must be accurate and truthful at aggregate and record level, representing what was intended or defined by their official source.

It is important that data is captured correctly in the first instance. Decisions informed by inaccurate data could be sub-optimal, costly and potentially dangerous.

Accuracy is supported by ensuring:

- Information is captured once only as close to the point of activity or service delivery as possible.
- Data standards, as well as data collection and processing steps are clearly documented, fully tested and readily available to relevant staff.
- Information systems have appropriate security arrangements and in-built controls to prevent unauthorised access and data changes, erroneous data entry, duplication, and missing data.
- Effective audit verification checks are in place and any errors discovered are corrected within established timeframes.
- Staff are educated, trained, and experienced in the requirements for accurate data.

Principle 3: Timeliness – data must be timely, up-to-date and available.

Timeliness can be measured as the time between when information is expected and when it is readily available for use. The timeliness of data depends on the systems, processes for collecting, recording, storing, processing, accessing and displaying data as well as the ability and capacity of the people involved in each phase of activity.

Timeliness is supported by ensuring:

- Data are captured as quickly as possible after the event or activity.
- Expected timeframes and processes relating to the collection, editing, reporting and intended use of the data are documented and readily available.
- Monitoring techniques are used to evaluate expected timeframes for data capture against actual performance to identify issues that require improvement.
- Staff are appropriately managed to meet workload demands and operational requirements.
- Emergency, contingency and data recovery plans are embedded in existing work practices to facilitate the timely recovery of information.

Principle 4: Coherence – data must be comparable, reliable and consistent over time.

Coherence is an important component of quality as it provides an indication as to whether the information can be usefully compared with other sources to enable data compilation and comparison over time. Patterns or trends found in the data can be used to inform strategic decision making, such as the allocation of funds and resources for the provision of health care.

Coherence is supported by ensuring:

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- Data collection processes are clearly defined and stable to ensure consistency over time.
 - Data are recorded and used in accordance with agreed requirements, rules, standards and definitions to ensure integrity and consistency.
 - Changes in business practice or activities impacting on the data collection are documented and communicated with staff.
 - Data validity and internal audit verification checks are used to monitor and maintain the reliability of data over time.
 - Wherever possible, the same data (i.e. unit level transactional data) should be used for reporting at all levels of organisation management and planning.
 - A standardised approach is used for uniquely identifying health systems, healthcare providers and individuals (e.g. Unit Medical Record Number, Medical Board Registration number).

Principle 5: Interpretability – resources must be readily available to ensure data are understood and utilised appropriately.

Supporting documentation must be made readily available to the user to help provide insight into the data and assist in the interpretation and application of the information.

Interpretability is supported by ensuring:

- Key resources and supporting documentation (e.g. manuals, user guides, technical specifications) are stored in a central area and are readily available to encourage prompt access by primary users of the data.
- A standardised approach is used for reporting and maintaining metadata about data collections.
- Documentation that supports the interpretation and utilisation of the data are made readily available to secondary users of the data.

4. Compliance, monitoring and evaluation

The System Manager, through the Purchasing and System Performance Division, Department of Health may carry out compliance audits to ascertain the level of compliance with this policy and may provide updates to Data Stewards, Chief Executives, the Director General and other relevant persons regarding the findings of compliance monitoring activities.

Data Custodians have responsibility for ensuring that the Data Quality Summary, as well as the *Data Quality Improvement Action Plan* (where applicable), are completed and made available to the Data Steward on request or as appropriate (see Appendix A). All data quality documentation must be retained in accordance with best practice recordkeeping requirements, such as approved retention and disposal schedules.

5. Related documents

The following documents are required to give affect to this policy (i.e. the documents included are mandatory in accordance with policy requirements):

- [Data Quality Summary](#)
- [Data Quality Improvement Action Plan](#).

6. Supporting information

The following document informs this policy (i.e. the document is not mandatory to the implementation of this policy but may support the implementation of the policy):

- [Data Quality Improvement Action Plan Template](#).

7. Definitions

Term	Definition
Accuracy	This dimension of data quality refers to the degree to which the data correctly describe the condition it was designed to measure.
Coherence	This dimension of data quality refers to the internal consistency of a data collection, as well as how well it compares with other sources of information, within a broad analytic framework and over time.
Data	The term 'data' generally refers to unprocessed information, while the term 'information' refers to data that has been processed in such a way as to be meaningful to the person who receives it. In this policy the terms 'data' and 'information' have been used interchangeably and should be taken to mean both data and information.
Data collection	A systematic gathering or organised collection of data, in any format, for a particular purpose, including manual entry into an application system, questionnaires, interviews, observation, existing records and electronic devices. This process is usually preliminary to statistical analysis of the data. Examples include the Department's National Minimum Data Sets, such as the Elective Surgery Wait List, Emergency Department Data Collection and Hospital Morbidity Data Collection, as well as the Emergency Department Information System (EDIS), iPharmacy, Patient Administration System (webPAS), Theatre Management System (TMS) and Oracle – Financials, Alesco and Objective.
Data Custodian	The position (s) responsible for the day-to-day management of a data collection. The Data Custodian is responsible for overseeing the reporting and monitoring requirements for data quality and improvement in accordance with this policy.
Data entry	Refers to the initial capture of data that is entered into systems, as well as any subsequent updates to this data by authorised staff.

Data quality	Refers to the extent that data are suitable for its intended use (i.e. fit for purpose) and is evaluated in terms of five dimensions: relevancy, accuracy, timeliness, coherence and interpretability.
Data quality staff	Data quality staff have designated data quality functions as part of their role or have acquired the necessary skills to assist and advise on data quality issues. They may undertake detailed reviews of data quality issues on behalf of the Data Custodian and advise on improvement strategies.
Data source	The information system, database, users and specific area that the data has originally come from.
Data standards	Data standards are documented agreements on representation, format, definition, structuring, transmission, manipulation, use, and management of data.
Data Steward	With respect to data quality, is a delegated position responsible for setting the strategic direction with regard to data quality management, while providing support for data quality improvement strategies.
Data Warehouse	A Data Warehouse integrates data, from many heterogeneous sources and stores them in an easily accessible central repository. A Data Warehouse is designed to support business decisions by facilitating the consolidation of data to support analysis and reporting at different aggregate levels.
Internal consistency	Related data items within a collection have consistent values.
Interpretability	This dimension of data quality refers to the ease with which the data can be understood by the user and the availability of information to help provide insight into the data.
Metadata	A set of data that describes and gives information about other data.
Patient (client) medical record	Is the primary repository of information regarding a documented (hard-copy, electronic (e.g. BOSSnet)) account of an individual patient's health, illness and treatment during each visit or stay at a health service.
Primary user	A person that uses data for the principal reason it was collected. Refer to secondary user.
Quality improvement	An integrative process that links knowledge, structures, processes and outcomes to enhance quality throughout an

	organisation. The intent is to improve the level of performance of key processes and outcomes with an organisation.
Relevance	This dimension of data quality refers to the degree by which the data meets the needs of the user in terms of concepts measured and the population represented.
Secondary user	A person that uses data to meet a purpose beyond those for which the data was initially collected. Refer to primary user.
Timeliness	This dimension of data quality reflects the length of time between the availability of the data and the event or phenomenon it describes. Therefore, the timeliness dimension of data quality reflects the extent to which data are sufficiently up-to-date for a task.
Transaction data	Data that is directly derived as a result of transactions and describes an event.

8. Policy owner

Assistant Director General Purchasing and System Performance Division

Enquiries relating to this policy may be directed to:

Title: Senior Policy Officer

Division: Data, Quality and Governance

Email: RoyalSt.PSPInfoManagement@health.wa.gov.au

9. Review

This mandatory policy will be reviewed and evaluated as required to ensure it remains relevant and current. At a minimum it will be reviewed within 3 years after first issue and at least every 3 years thereafter.

Version	Effective from	Effective to	Amendment(s)
MP 0057/17	1 July 2017	29 May 2019	Original version
MP 0057/17 v.1.1	29 May 2019	Current	Minor Amendment – Fixed broken links

The review table indicates previous versions of the mandatory policy and any significant changes.

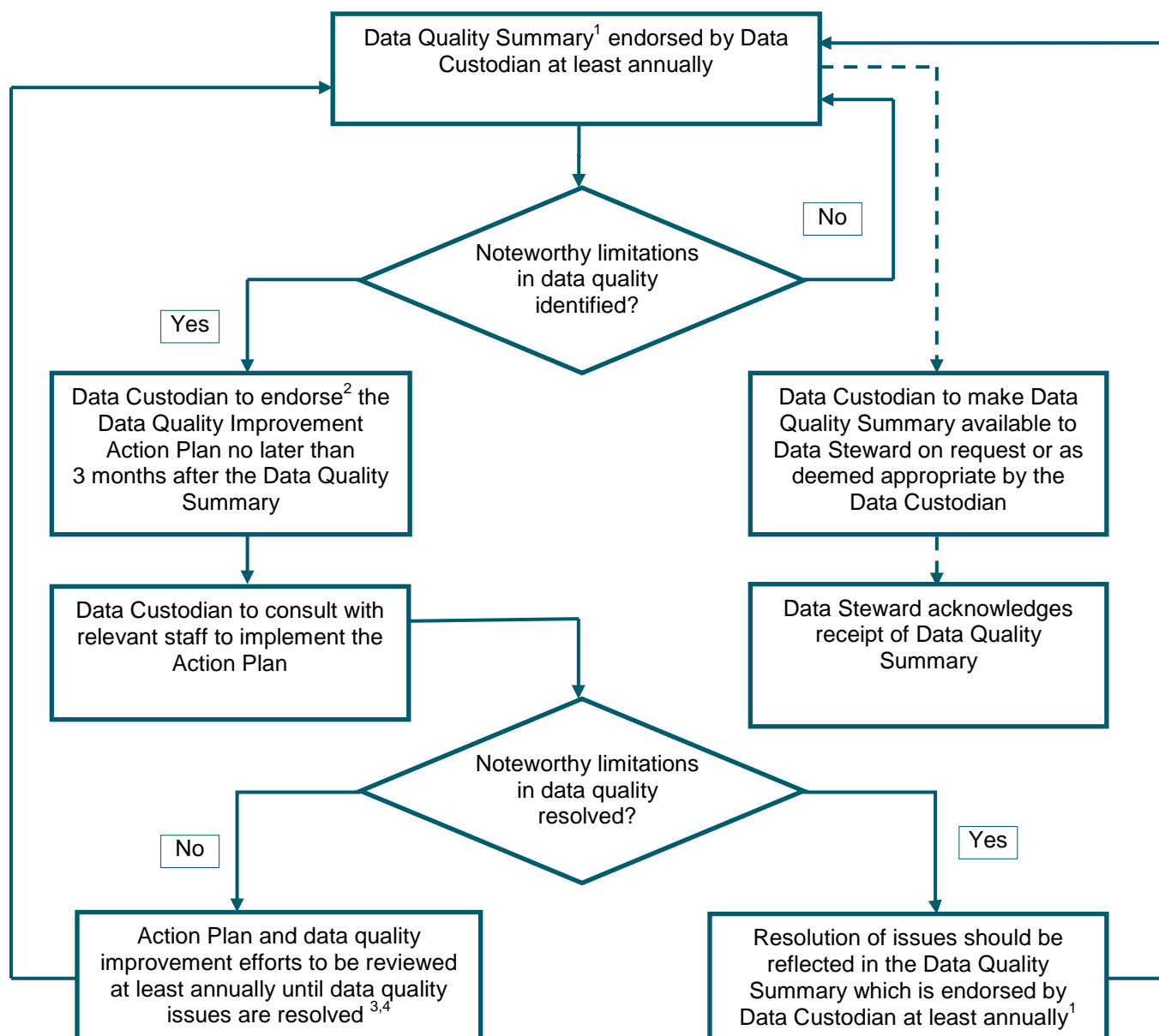
10. Approval

This mandatory policy has been approved and issued by the Director General of the Department of Health.

Approval by	Dr David Russell-Weisz, Director General, Department of Health
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Approval date	23 June 2017
Published date	29 May 2019
RMR#	F-AA- 52988

Appendix A – Data Quality Reporting Process



Notes:

1. The Data Quality Summary must be prepared by the Data Custodian or nominated data quality staff at least annually or at shorter intervals as deemed necessary by the Data Custodian. If data quality staff complete the Data Quality Summary, they must submit the documents to the Data Custodian for approval.
2. Where noteworthy limitations in data quality are identified, Data Custodians must ensure that data quality improvement efforts are outlined in a Data Quality Improvement Action Plan (Action Plan).
3. The ongoing review of data quality improvement efforts must be prepared by the Data Custodian or nominated data quality staff at least annually (or at shorter intervals as deemed necessary by the Data Custodian), in consultation with relevant staff. If completed by data quality staff, they must submit the documents to the Data Custodian for their approval. There is no prescribed format for the annual evaluation, albeit findings should consider accomplishments towards meeting objectives/activities of the Action Plan, lessons learned, changes to timeframes and priorities, and any further actions to improve data quality for at least the coming year.
4. The Action Plan and review of data quality improvement efforts must be made available to the Data Steward on request or as deemed necessary by the Data Custodian.



This document can be made available in alternative formats on request for a person with a disability.

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