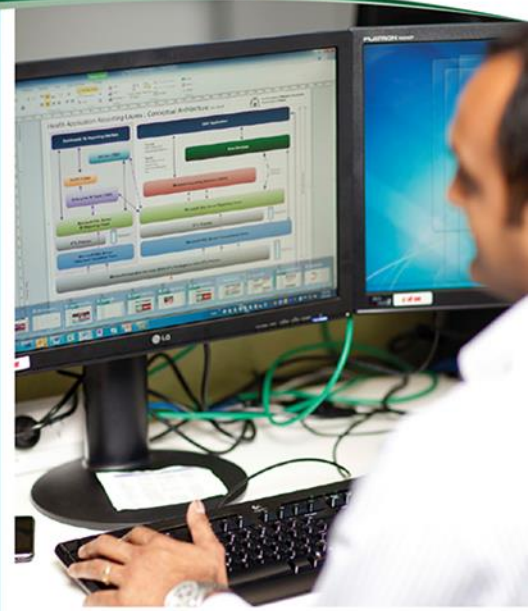




Government of **Western Australia**
Department of **Health**

Information Quality Policy Resource Compendium



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Owner:	Department of Health, Western Australia
Contact:	Information and Performance Governance
Version:	
Approved by:	
Date:	
Links to:	

VERSION	DATE	AUTHOR	COMMENTS
1.0		Brooke McQuade	

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1 Purpose

The *Information Quality Policy Resource Compendium* is a supporting document in the *Information Quality Policy*. The purpose of the compendium is to provide context, background information and resources to assist staff members to comply with the mandated requirements in the *Information Quality Policy*. The compendium is not mandatory unless the requirement is mandated in the policy.

2 Introduction

The [Information Management Policy Framework](#) specifies the information management requirements to ensure the effective and consistent management of health, personal and business information within information assets across WA health entities.

A key principle underpinning the *Information Management Policy Framework* is for information in information assets to be trustworthy. The *Information Quality Policy* addresses this principle. The *Information Quality Policy* ensures that information assets and associated outputs have a high standard of information quality to support the realisation of the WA health system's vision to deliver a safe, high quality, sustainable health system for all Western Australians.

The [Information Management Governance Model](#)¹ provides further details on what constitutes an information asset and provides the Information Management Governance structure defining the roles of the Stewards and Custodians.

3 Information Quality

Information quality refers to the extent that information is suitable for its intended use (i.e. fit for purpose). It is assessed against five standards: relevancy, accuracy and reliability, timeliness, coherence and comparability, and accessibility and clarity.

Figure 1: Standards of Information Quality



3.1 Requirements of Information Quality

The *Information Quality Standards* outline the requirements that staff must comply with to maintain and assess information quality to ensure it is maximised. Information quality is the responsibility of all; however, it is the Custodian’s (and/or nominated staff where applicable) role to ensure information quality issues are documented. The breakdown of the Information Quality Reporting Process is in [Appendix 1](#).

3.1.1 What about biological information assets?

Biological information assets are an exception to the *Information Quality Standards* as they are required to adhere to the applicable Australian Standards below and stored as per the [Patient Information Retention and Disposal \(PIRDS\)](#) within the [Information Retention and Disposal Policy](#):

- AS ISO 15189-2013
- AS ISO/IEC 17025:2018.

3.2 Benefits of Information Quality

The Global Data Management Community (DAMA) defines effective quality management as the planning, implementation, and control of activities that apply quality management techniques to information, in order to assure it is fit for use and meets the needs of information users².

Benefits of capturing information quality include, but are not limited to:

- **Increased knowledge:** through building and enhancing knowledge about the quality of information assets and how it is ensured.
- **Increased trust:** the requirements of information quality aim to increase awareness and transparency not only on the strength, but limitations of an information asset. This helps strengthen trust in the organisation.
- **Increased use:** reporting on information quality aims to increase access, availability and metadata, encouraging the use of information assets.

Understanding more about the information quality of information assets can deliver real benefits to patients. High quality information in the health sector is needed to support patient care, funding, management, planning, monitoring, reporting, National Data Provisions, and strategic decision making. It is imperative that information is valued, available, shared, governed, trustworthy, secure and protected to support the functions and vision of the WA health system.

3.3 Contributors to poor information quality

Despite the numerous benefits of information quality, it is imperative to be aware of contributors to poor information quality. These may include, but are not limited to:

- **Concerns during the collection of information caused by:**
 - non-compliance or training issues
 - interface issues (for example the system allowing mandatory fields to be left blank or in the case of hard copy information assets not documenting mandatory information)
 - changes to business processes, or inconsistent processes
 - failure to update defaulted fields.
- **Concerns caused by processing function, including:**
 - incorrect assumptions about information sources
 - outdated business rules
 - changes in data structures.
- **Concerns caused by system design, including:**
 - application (system) design
 - workflow (system) design (for hard copy information assets)
 - information duplication
 - inability to upgrade system
 - coding inaccuracies and gaps.

3.3.1 What to do when there is an information quality concern

Where noteworthy limitations in information quality are identified, an Information Quality Improvement Plan should be completed. It is important to identify the cause and implement strategies and actions for improvement. Some actions may include:

- **For concerns during the collection of information:**
 - training and re-educating the staff involved
 - defining and re-enforcing rules
 - reminding staff of information governance requirements
 - reviewing and implementing data entry controls (i.e. prevent inaccurate data from being entered)
 - creating a mandatory training module on information quality
 - auditing information capture processes and documentation, and establishing formal controls as required (i.e. robust business processes).
- **For concerns caused by processing function:**
 - reviewing and updating assumptions about information sources
 - training staff in changes in data structure
 - updates to resources (i.e. metadata) providing correct interpretation of information
 - spot audits, or developing an audit schedule to ensure this is continually assessed.
- **For concerns caused by system design:**
 - it is important to raise these with the appropriate technical staff; each health entity should be able to provide a list of contacts for system related information quality issues.
 - for hard copy information assets, a review of the workflow (system) design may be required.

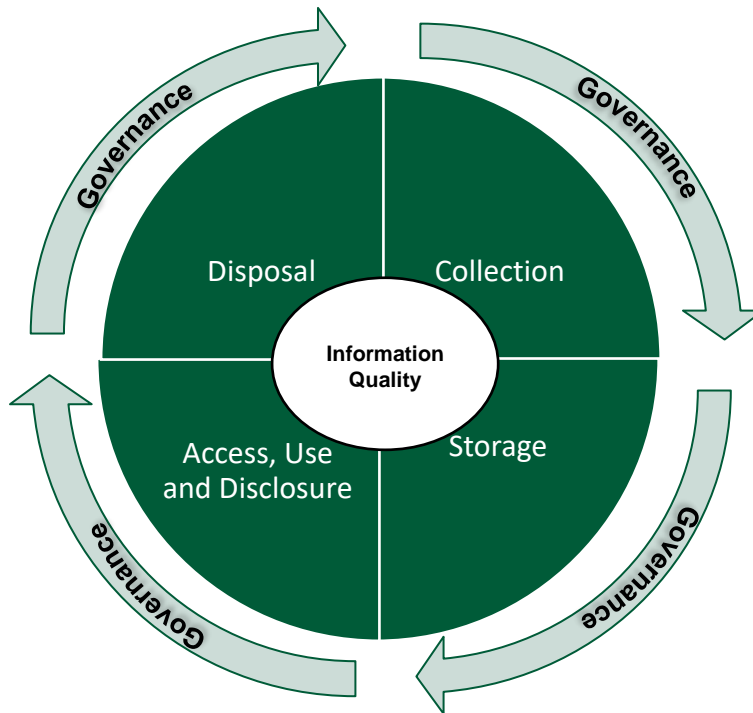
4 Information Lifecycle

The information lifecycle defines the sequence of operational activities that all information assets go through in their existence. The phases within the information lifecycle (illustrated in Figure 1) are collection, storage, access, use and disclosure; and disposal.

Information quality is the guiding principle through each phase of the information lifecycle. Managing information through each phase of the information lifecycle provides the WA health system the ability to monitor and effectively manage patient care, strategic and operational resources and legislative requirements.

This is achieved by setting standards and building quality into the collection, storage, access, use and disclosure, and disposal of information.

Figure 2: The Information Lifecycle



4.1 Information quality throughout the lifecycle

It is imperative that information is accurate and reliable at aggregate and record level, representing what was intended or defined by the official source. Information quality concerns can arise throughout the information lifecycle such as incorrect assumptions about data sources, expired business rules or changed data structures.

Information quality can be assessed throughout each phase of the information lifecycle by considering the following questions:

- Is the information assets and processing steps clearly documented, fully tested and readily available to relevant staff?
- Are effective audit verification checks in place and any errors discovered corrected within established timeframes?
- If there are changes in business practice or activities that impact on the information asset are these documented and communicated to staff?
- Do data validation rules exist and are these documented in systems or processes?
- If duplicate information exists, is it known and managed?
- Are there any gaps in mandatory information? If yes, are these documented?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.2 Collection Phase

The collection phase refers to the creation, acquisition or capture of the information needed to support business, operational or legislative requirements. The collection phase is one of the most important phases. If the design and creation of information is poorly planned this can result in information being inadequate, excessive and not fit for the purpose intended.

Information quality can be assessed in the collection phase by considering the following questions for the relevant standards:

- **Standard 1: Relevance**
 - Is the information fit for a specific purpose for which it was intended?
- **Standard 2: Accuracy and Reliability**
 - Does the information being captured have documented formats and standards?
 - Do staff clearly understand how to collect and create information?
- **Standard 3: Timeliness**
 - Is the information captured as quickly as possible after the event or activity?
- **Standard 4: Coherence and Comparability**
 - Is the information collection process documented?
- **Standard 5: Accessibility and Clarity**
 - If changes in collection have occurred, is this documented and accessible to staff?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.3 Storage Phase

The storage phase refers to the retention and ongoing management of information to ensure its continuing value, security and timely availability. Once information is collected, it must be stored in a manner that best supports business processes, whilst protecting the confidentiality and integrity of the information. The [Information Storage Policy](#)³ contains detailed information about the storage and ongoing retention of WA health system's information.

Information quality can be assessed in the storage phase by considering the following questions for the relevant standards:

- **Standard 2: Accuracy and Reliability**
 - Does the information asset have appropriate security arrangements and in-built controls to prevent unauthorised access and information changes, erroneous information entry, duplication, and effective information? (for hardcopy assets this may include restricted access to the medical records department as an example)
 - Are staff educated, trained or experienced in the requirements necessary for accurate information storage?
- **Standard 3: Timeliness Standard**
 - Is there emergency, contingency and information recovery plans embedded in existing work practices?

- **Standard 5: Accessibility and Clarity**

- Are the key resources and supporting documentation stored in a central area?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.4 Access, Use and Disclosure Phase

The [*Information Access, Use and Disclosure Policy*](#)⁴ facilitates the lawful and appropriate access, use and disclosure of information generated, collected, accessed, used, managed, stored and disclosed by the WA health system.

The terms 'access', 'use' and 'disclosure' are interrelated concepts, however the distinction between these terms is important to understand.

4.4.1 Access Component

The access phase refers to the right or opportunity to use or view information. An individual enacts this access when they use, view or access the environment in which this information is held.

Information quality can be assessed in the 'access' component of this phase by considering the following questions for the relevant standards:

- **Standard 2: Accuracy and Reliability**

- Are appropriate security arrangements and in-built controls in place to prevent unauthorised access? (for hardcopy assets this may include restricted access to the medical records department as an example)

- **Standard 3: Timeliness**

- Is the information available at the time it is needed?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.4.2 Use Component

An individual, role or group uses information if they employ the information for some purpose, put the information into service, turn the information to account, avail themselves of the information or apply the information for their own purposes.

Within the WA health system, information use refers to the authorised or lawful communication or handling of information by the Department, Health Service Providers and Contracted Health Entities.

Information quality can be assessed in the 'use' component of this phase by considering the following questions for the relevant standards:

- **Standard 1: Relevance**
 - Is the information recorded and used in accordance with agreed and legislated requirements?
- **Standard 5: Accessibility and Clarity**
 - Are there resources available to explain ambiguous or technical terms used in the information?
 - Are resources available that help users correctly interpret the information and understand how it can be used?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.4.3 Disclosure Component

An individual, role or group discloses information if they cause the information to appear, allow the information to be seen, make the information known, reveal the information or lay the information open to view. Information sharing is considered a disclosure if a person allows information to become available to another person who would not normally have access to it.

Information quality can be assessed in the 'disclosure' component of this phase by considering the following questions for the relevant standards:

- **Standard 2: Accuracy and Reliability**
 - When disclosing information, are staff aware of the importance of information quality?
 - When information is disclosed is this captured?
- **Standard 5: Accessibility and Clarity**
 - Are resources available to help users correctly interpret the information they have disclosed and understand how it can be used?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

4.5 Disposal Phase

The disposal phase refers to the appropriate removal or archiving of information that is no longer required to support business or operational requirements, or meet legislative requirements.

The [Information Retention and Disposal Policy](#)⁵ contains detailed information on the retention and disposal requirements for information held within the WA health system. Additionally, the retention and disposal of records needs to comply with the relevant requirements of the *State Records Act 2000*.

Information quality can be assessed in the disposal phase by considering the following questions for the relevant standards:

- **Standard 1: Relevance**
 - Have the minimum requirements of the destruction register been completed?
- **Standard 2: Accuracy and Reliability**
 - Is there a destruction record in place?
 - When information is disposed is this captured?
- **Standard 5: Accessibility and Clarity**
 - Are details available to help users correctly interpret what information has been disposed?

The above questions are prompts for ensuring information quality is maximised and should not be considered an exhaustive list.

References

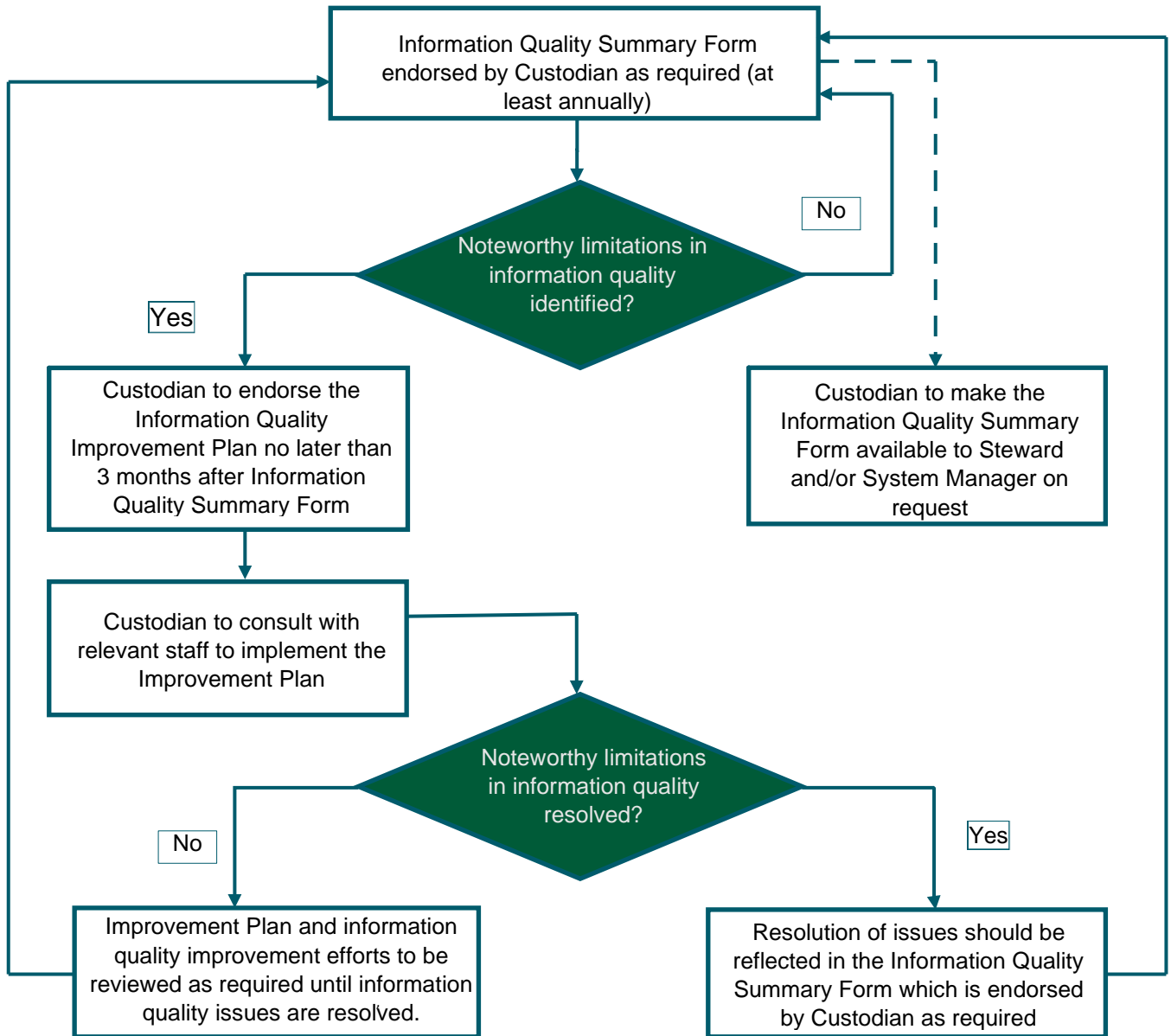
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- 3 Western Australian Government. (2020). *Information Storage Policy*. Department of Health, WA. Available from: <https://ww2.health.wa.gov.au/About-us/Policy-frameworks/Information-Management/Mandatory-requirements/Storage-and-Disposal/Information-Storage-Policy> (accessed 9 August 2021).
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Glossary

Term	Description
Access	Refers to the right or opportunity to use or view information. An individual enacts this access when they use, view or enter the environment in which this information is held.
Biological information	In the context of this policy, biological information refers to biobank samples, genetic samples, cell, and tissue collections.
Custodian	Implements Policy on behalf of the Steward and has the delegated authority for granting access, use and disclosure of information from information assets in line with legislation and policy.
Data	Refer to information.
Information	The terms 'information' generally refers to data that has been processed in such a way as to be meaningful to the person who receives it. Information can be personal or non-personal in nature. The terms 'data' and 'information' are often used interchangeably and should be taken to mean both data and information in this Policy.
Information asset	A collection of information that is recognised as having value for the purpose of enabling the WA health system to perform its clinical and business functions, which include supporting processes, information flows, reporting and analytics.
Information quality	Refers to the extent that information is suitable for its intended use (i.e. fit for purpose) and is evaluated in terms of five standards: relevancy, accuracy and reliability, timeliness, coherence and comparability, and accessibility and clarity.
Information Management Policy Framework	The Information Management Policy Framework specifies the information management requirements that all Health Service Providers must comply with in order to ensure effective and consistent management of health, personal and business information across the WA health system.
Steward	The delegated authority for the information assets outlined within the associated delegation schedule.
Primary user	A person that uses information 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.

Term	Description
Secondary user	A person that uses information to meet a purpose beyond those for which the information was initially collected. Refer to primary user.
Use	A person 'uses' information if they: employ the information for some purpose, put the information into service, turn the information to account, avail themselves of the information or apply the information for their own purposes.
WA health entity	WA health entities include: <ul style="list-style-type: none"> (i) the Department; and (ii) Health Service Providers (North Metropolitan Health Service, South Metropolitan Health Service, Child and Adolescent Health Service, WA Country Health Service, East Metropolitan Health Service, PathWest Laboratory Medicine WA, Quadriplegic Centre and Health Support Services).

Appendix 1: Information Quality Reporting Process



Notes:

1. The Information Quality Summary Form needs to be prepared by the Custodian or nominated staff at least annually, or as deemed necessary by the Custodian. If nominated staff complete the Information Quality Summary Form, they submit the documents to the Custodian for approval.
2. Where noteworthy limitations in information quality are identified, Custodians are to ensure information quality improvement efforts are outlined in an Improvement Plan.
3. Ongoing reviews of the information quality improvement efforts should occur and be approved by the Custodian.
4. The Improvement Plan and review of information quality improvement efforts should be made available to the Steward and/or the System Manager on request or as deemed necessary by the Custodian.



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