Australian Government
Australian Digital Health Agency

My Health Record FHIR Gateway
Presentation Requirements and Guidelines

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Approved for external use

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Note: This document must be read in conjunction with the Portal Operator Registration Agreement (PORA)

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1 Introduction

1.1 Purpose

This document is designed to provide developers of applications (apps) accessing the My Health Record system through its FHIR Gateway with guidelines and requirements for the on-screen presentation of structured, non-CDA My Health Record data.

It is designed to enable developers to make informed design decisions that take into account identified risks associated with the rendering of clinical information.

For the purpose of this document:

- Registered portal operators are referred to as “developers”
- The Agency is referred to as the System Operator (SO) for the purposes of the My Health Record Act 2012 (Cth).
- References to “User” may to refer to a Registered Healthcare Recipient, Authorised Representative or Nominated Representative who may use the portal.

1.2 Intended audience

The intended audience for this document includes:

- Registered portal operators (which includes mobile application developers)
- The system operators (which includes Accenture and the Gateway Operator).

1.3 Scope

This document provides guidance about potential clinical risks that may be encountered when rendering structured clinical information and how to help prevent them. This guidance is provided in the form of recommendations, with responsibility for the effective mitigation of risks remaining with developers of rendering apps.

The document also contains principles that must be met in order for a rendering app to gain access to the My Health Record system through its FHIR Gateway.

The guidance provided is not limited to any particular type of rendering app, any particular type of underlying technology (e.g. mobile devices, web browsers, desktop computers) or any particular type of user interface (e.g. desktop monitor, tablet, mobile phone, smart watch).

The principles included in this document are not intended to be a comprehensive set of rendering requirements. Adherence of a rendering app with the principles included in this document does not guarantee the clinical safety of the app. Developers should apply their own clinical safety management to effectively mitigate the risks associated with the rendering of structured clinical information. The principles and recommendations included in this document are intended to assist developers in this process.

The document contains references to external resources that provide specifications for the presentation of CDA documents. Conformance with requirements contained in these documents is a prerequisite for apps to gain access to the My Health Record system.

1.4 Document structure

The document contains two main parts:

- presentation core principles (section 2)
- presentation recommendations and requirements (sections 3, 4, 5, 6, 7, and 8).

The presentation core principles provide fundamental considerations that must be taken into account for the design of rendering apps and are foundational to the guidance provided in subsequent sections. The guidelines are expected to evolve over time and should not be considered comprehensive. Consequently, app developers should always review the core principles and apply them to the context and use cases of their particular rendering app.

The presentation guidelines after section 2 consist of both requirements and guidance for the rendering of clinical information.

All requirements and recommendations have been written to allow app developers to retain the maximum level of control over the design of their rendering app.

Developers are expected to take full responsibility for the clinical safety of their app and to take the necessary steps to ensure this. Please note, adherence with the requirements and recommendations from this document alone does not guarantee the clinical safety of rendering apps.

1.5 Requirement keywords

The following normative verbs in these requirements should be read as follows.

SHALL	When appearing in a conformance requirement, the verb **SHALL** indicates a mandatory requirement. Its negative form **SHALL NOT** indicates a prohibition.
SHOULD	When appearing in a conformance requirement, the verb **SHOULD** indicates a recommendation. Its negative form **SHOULD NOT** indicates an option that is recommended against.
MAY	When appearing in a conformance requirement, the verb **MAY** indicates an optional requirement.

2 Presentation core principles

The presentation requirements and guidelines in this document have been created based on a set of core principles, including the following:

- App interface designs should take into account **screen real estate** on the devices that the app is expected to support and focus on the optimal presentation of information rather than follow a document-driven approach.
- For **consumer apps**, it is desirable to present information such as medicine dose information in **plain and simple English** in preference to abbreviations (i.e. use dispense labels where available).
- It is important that the **provenance of information is clearly stated or can be easily obtained**. In particular, medicines information sourced from pharmacies or healthcare providers needs to be distinguished from consumer-entered information.

The following sections provide presentation principles that are independent of a particular type of rendering app.

2.1 Device functionality

2.1.1 Principle

The presentation of clinical information needs to be appropriate for the type and screen size of devices that are supported by the rendering app.

2.1.2 Implications

Software providers that support multiple devices and platforms need to ensure the information provided on each supported platform is presented appropriately for that platform.

2.2 Share functionality

Software providers need to ensure the following principles apply when health information is shared by consumers.

2.2.1 Principle

Any shared health information must be clear to note who the information belongs to.

2.2.1.1 Implication

Health information shared should clearly identify the individuals first name, last name, DOB, gender and Individual Healthcare Identifier (IHI).

2.2.2 Principle

Health information is rendered correctly and can be opened in a presentable and legible format when sharing.

2.2.3 Principle

Health information must not be altered or amended during the sharing process.

2.2.4 Principle

When health information is shared via an intermediary server, it must preserve the original clinical data intent.

2.3 Fit-for-purpose design

2.3.1 Principle

Developers of rendering apps must provide clinical content that is fit-for-purpose for their intended use cases, informed by relevant practice standards for usability and interactive designs.

2.3.2 Implications

Designs should incorporate an understanding of the ways that consumers and providers interact with the app. User expectations for each intended use case need to be matched with the most appropriate design.

Good app usability design has been cited as a proxy for reliability of clinical information in an app (refer to *Mobile Health Applications, in the Absence of an Authentic Regulation, Does the Usability Score Correlate with a Better Medical Reliability?* [MHA2015]).

Additional guidance related to clinical data quality can be found in *The Good Practice Guidelines for GP electronic patient records v4* [GPDGC2011] and *Secondary use of general practice data* [GPG2017].

2.4 Clinical safety

2.4.1 Principle

App developers need to ensure that medicine, allergy, and other health information presented to healthcare providers and consumers is:

- clinically useful
- correct, complete, and not misleading in any way
- consistent across the digital health system by adhering to national standards (where possible) to support safe use.

Clear advice should be provided when clinical information is not available.

2.5 Clinical usability

2.5.1 Principle

App developers are to ensure clinical functionality and clinical usability of their apps at the point of use by consumers in various clinical settings.

2.5.2 Principle

App developers are to ensure that no deceptive or manipulative practices including factual omissions, visual design features and any other misleading factors relevant to app user decision-making are included in the designs.

2.6 Ensuring provenance

2.6.1 Principle

Provider apps are to ensure the provenance of provided information is available, or discoverable, to users of the app.

2.6.2 Rationale

The source of the structured data available through the My Health Record FHIR Gateway is mostly through clinical documents stored in the My Health Record system. For provider apps, it is vital that the provenance of the information be available. Links to source data (e.g. clinical documents) must be made available in provider apps.

Provenance information may also be useful for some consumer apps, depending on the use cases.

2.7 Incorporating national guidelines

2.7.1 Principle

Apps displaying medicines information should take into account the *National guidelines for on-screen display of clinical medicines information* [ACSQHC2016], prepared by the Australian Commission on Safety and Quality in Health Care (ACSQHC).

Note: Key elements of these recommendations have been incorporated into the presentation guidelines presented in the following sections.

Appendix A contains a summary of the ACSQHC guidelines.

3 Non-clinical information requirements

Non-clinical information contained in FHIR resources provides the necessary context for the clinical information contained in related FHIR resources. It is important that essential parts of this non-clinical information are easily accessible for any user of rendering apps displaying clinical information.

The most important type of non-clinical information is demographic information about the consumer, whom is associated with the displayed clinical information. This is to ensure the correct clinical information is displayed alongside the consumer.

The following sections provide guidance for the presentation of consumer demographics as well as other types of non-clinical information.

3.1 Consumer demographics

Demographic information is essential for the identification of the consumer whose clinical information is displayed by a rendering app.

Such information is provided by the Patient FHIR resource, which can be accessed through the Get Patient Details API service.

3.1.1 Consumer banner

The consumer banner is a summary of key demographics to identify the consumer to whom the displayed information is related.

Consumer apps may display demographic information about both the user and other consumers linked to their record (e.g. as a nominated representative). The purpose of the consumer banner in this case is to ensure the app user has identified the right person's record (i.e. the individual to whom the clinical data displayed is related).

3.1.2 Consumer banner examples

The following screenshot (Figure 1) outlines a suitable consumer banner for *consumer* apps:

Figure 1 – Example of a consumer banner suitable for consumer apps

The following screenshot (Figure 2) outlines a suitable and common consumer banner for *provider* apps:

Figure 2 – Example of a consumer banner suitable for provider apps

3.1.3 Consumer demographics

When rendering consumer demographics, the following requirements and recommendations apply.

Table 1 - Consumer demographics requirements

ID	Requirement
FGPR100	Provider apps **SHALL** ensure that the demographic data of the consumer whose clinical information is being displayed is displayed at all times. **Note:** *A common way of meeting this requirement is the display of a consumer banner.* **Rationale:** *A rendering app can be used to display clinical information from many different consumers. Potential misidentification of displayed clinical information as belonging to a different consumer is a clinical safety risk. Rendering apps must be designed in a way that minimises this risk by always making the consumer easily identifiable.*
FGPR105	When consumer apps can display records for consumers other than the current user, then the consumer app **SHALL** display at least the given name and family name of the record owner.
FGPR110	When provider apps are capable of printing clinical information, then the provider app **SHALL** print the record owner's demographic data on every page. **Rationale:** *Printed clinical information can be easily associated with a wrong consumer when there are no clear consumer demographics on each page.*
FGPR115	When consumer apps can display records for consumers other than the current user and support the printing of clinical information then the consumer app **SHALL** print the record owner's demographic data on every page.

Table 2 - Consumer demographics recommendations

ID	Recommendation
FGPR120	Rendering apps **SHOULD** display a consumer banner in the parts of the screen that surround the clinical information (e.g. in a panel at the top or bottom of the screen).
FGPR130	Consumer apps **SHOULD** display at least the following fields as part of the consumer banner: • given name and family name • date of birth.
FGPR140	Provider apps **SHOULD** display at least the following fields as part of the consumer banner: • given name and family name • date of birth • gender.

ID	Recommendation
FGPR150	Where consumer demographic fields that have multiplicity in their FHIR resources (e.g. multiple names or MRNs) are displayed as part of the consumer banner, rendering apps **SHOULD** display at least one instance of each. **Note:** *The first instance of a field with multiplicity is not necessarily the most appropriate one to display. Some fields may have additional properties (e.g. indicating that a particular instance is outdated or temporary). Other considerations should include the usage context of the rendering app.*
FGPR160	Consumer apps displaying a record for a consumer other than the current user **SHOULD** display the relationship between the user and the consumer, in addition to the consumer details, as part of the consumer banner.
FGPR170	The meaning of all displayed consumer demographic data **SHOULD** be displayed for the user. **Note:** *One possible way to provide the meaning for displayed consumer demographic fields is the display of field names. Table 1 provides a list of suggested field names and associated formats.*

When displaying consumer demographic data (e.g. from a FHIR Patient resource instance), the rendering may utilise the suggested field names and formats from Table 3 (as defined by the *My Health Record FHIR Gateway – API Specification v2.2*

Table 3 - Consumer demographics – suggested field names

Suggested field name	Format
IHI Number, MRN or URN	8003 6083 3336 8223 (for IHI numbers)
DOB, or Date of birth	01-Dec-1947
Gender	See section 7.6.7 for rendering of gender.
Family name	ENGINEER
Given name(s)	Vijay
Indigenous status	As provided

3.2 Administrative information

This section provides guidance for the display of administrative information.

Administrative information is My Health Record information that is not clinical information. This includes consumer demographics, administrative observations, and other non-clinical information.

3.2.1 Administrative information

The following requirements and recommendations apply to the rendering of administrative information, including consumer demographics:

Table 4 - Administrative information requirements

ID	Requirement
FGPR300	Provider apps **SHALL** ensure that all administrative information is accessible by the user. **Rationale:** *Administrative information is essential for the interpretation of clinical information displayed by a rendering app.*

Table 5 - Administrative information recommendation

ID	Recommendation
FGPR310	Rendering apps **MAY** omit the display of local identifiers for the consumer (e.g. MRNs), Healthcare Provider Identifiers (e.g. HPI-I and HPI-O) and Care Agency Employee identifiers, where this is appropriate for the use case.
FGPR320	Where administrative information fields that have multiplicity in their FHIR resources (e.g. multiple names or communication details for an individual) are displayed *outside* of the consumer banner, rendering apps **SHOULD** display all these instances.
FGPR330	Rendering apps **SHOULD** indicate when administrative information is currently hidden.
FGPR340	Rendering apps **SHOULD** provide users a way to reveal hidden administrative information.
FGPR350	Rendering apps supporting printing of clinical information **SHOULD** display both the current page number and the total number of pages on each printed page.

4 Medicines

This section sets out requirements and recommendations for the presentation of medicines.

FHIR Gateway interfaces returning medicines-related information include:

- Get Prescription and Dispense List
- Get PBS Items
- Get Personal Health Summary – Medications

4.1 Medicines rendering

The following requirements and recommendations apply to the rendering of medicines information:

Table 6 - Medicines rendering requirements

ID	Requirement
FGPR400	Provider apps **SHALL** display all medicines information in full, without any truncation or concatenation. **Rationale:** *Every medicine is specifically tailored to a particular consumer and their health status at a particular point in time. This tailoring is reflected in the details of each medicine. If any of these details are left out, then this can potentially lead to consumer harm.*
FGPR410	Provider apps displaying medicines information **SHALL** always indicate if additional medicines information is available but not yet presented or rendered. **Rationale:** *Due to limitations inherent to the screen dimensions or workflows of a rendering app, medicines information may not always be visible in full. Without a clear indication of additional medicines information being available and easily accessible, a user might interpret the visible medicines information as complete when it is not.*
FGPR420	When displaying medicines information, rendering apps **SHALL** inform the user that the information displayed is not a complete record of the individual's medicines information. **Rationale:** It is not possible for a rendering app to determine whether the medicines information sourced from the consumer's My Health Record or other sources constitutes a complete record of their medicine's information. Users need to be aware of this fact and should not assume that the medicines information displayed is comprehensive.

Table 7 - Medicines rendering recommendation

ID	Recommendation
FGPR430	When displaying medicines information, rendering apps **SHOULD NOT** display any empty fields. **Note**: *Where empty fields exist, it might be best to also suppress the field separators before and after the empty field (if applicable).*
FGPR440	Lists of medicines **SHOULD** be sorted by their dispense dates, in descending order, then by name, in ascending order. **Note**: *Sorting by time is not necessary (where time is available).*

Table 8 provides examples of field names and presentation formats for medicines information. The table covers two possible options when displaying medicines information:

- String representation
- Table representation

Rendering apps may display medicines information in different ways but should adhere to the principles underlying the suggested representation options in Table 2 (as defined by the *My Health Record FHIR Gateway – API Specification v2.2*

Table 8 - Medicine with ingredient or brand information – suggested field names

Suggested field name	Format
Prescribed or Dispensed	See section 7.6.3 for date formatting (time not to be included)
Type	"Prescribed" or "Dispensed"
Medicine details	**Active ingredient(s)** – BRAND – Strength – Directions – Form – *Supply* - Repeats
Active ingredient(s)	**bold**
Brand	UPPER CASE
Strength	As provided
Directions	As provided (use Dispense Label information as a preference for consumer apps)
Form	As provided
Supply	`SUPPLY` followed by *italicised* right-justified integer
Repeats	`REPEAT` followed by right-justified integer

In some cases, neither the brand name nor the active ingredient(s) are provided for the medicine as separate fields. Instead, all relevant information is included in the `medication-additional-therapeutic-good-detail` extension of the Medication FHIR resource.

Table 9 provides a suggested field name and presentation format for these additional details.

Table 9 - Medicines without ingredient or brand information – suggested field names

Suggested field name	Format
Medicine details	As provided

4.2 API-specific recommendations

4.2.1 Get PBS Items

This section provides recommendations specific for presenting pharmaceutical benefits information obtained using the Get PBS Items API service.

The following table outlines suggested field names and presentation formats for PBS items, (as defined by the *My Health Record FHIR Gateway – API Specification v2.2)*

Table 10 - Get PBS Items - suggested field names

Suggested field name	Format
Active ingredient(s)	**bold**
Brand	UPPER CASE
Prescribed	See section 7.6.3 for date formatting (time not to be included)
Supplied	See section 7.6.3 for date formatting (time not to be included)
Form & strength	As provided
Quantity	Right-justified integer
Repeats	`REPEAT` followed by right-justified integer
Code	The leading “0” of five-digit PBS codes **MAY** be trimmed *Display is optional*

4.2.2 Get Prescription and Dispense List

Table 11 - Get Prescription and Dispense List

ID	Recommendation
FGPR500	Where prescription and dispense information is *not* available, rendering apps **SHOULD** inform the user that *no* information is available.
FGPR510	Where only dispense information is available: Rendering apps **SHOULD** inform the user that prescription information is not available.
FGPR520	Where only prescription information is available: Rendering apps **SHOULD** inform the user that dispense information is not available.

5 Allergies and adverse reactions

It is essential that allergies and adverse reactions information is considered in conjunction with a consumer's medicines information.

The requirements and recommendations listed in this section support the safe presentation of such information.

5.1 Allergies and adverse reactions

Table 12 - Allergies and adverse reactions requirements

ID	Requirement
FGPR600	Provider apps **SHALL** ensure that information about allergies and adverse reactions is distinguishable from information about medicines by either: • using unambiguous labelling • using different visual icons or graphic indicators • applying different font/presentation styles • presenting information on different screens, or • some other means to avoid confusion. **Rationale:** *Allergies and adverse reactions are frequently related to substances also contained in certain medicines. Allergy-related substances must at all times be easily distinguishable from medicines information, such as prescriptions, dispenses, and PBS data.* *Clinicians will need to be aware of allergies and adverse reactions when reviewing a consumer's medicines list.*

Table 13 - Allergies and adverse reactions recommendations

ID	Recommendation
FGPR610	Provider apps **SHOULD** display an allergy or adverse reaction indicator for consumers who have at least one allergy or adverse reaction recorded and **SHOULD** offer users a means to access the allergy and adverse reaction details.
FGPR620	Information about allergies and adverse reactions **SHOULD** be displayed before information about medicines. **Note:** *This sequence will allow clinicians to be aware of a consumer's allergies and adverse reactions when subsequently reviewing the consumer's medicines list.*

6 Medical Conditions View

Medical conditions and associated clinical information are also essential for comprehensive patient care. The consolidated view of medical conditions improves accessibility and aids in clinical decision-making by presenting data from various clinical documents such as discharge summaries, event summaries, and shared health summaries.

The requirements and recommendations in this section detail guidelines for rendering apps.

Table 33 – Medical conditions view requirements.

ID	Requirement
FGPR900	Provider apps **SHALL** display medical conditions information from the relevant clinical documents in a consolidated view. This view should compile data from multiple sources, ensuring all pertinent information is accessible in one location. **Rationale:** *Complete information is essential for accurate clinical assessment and decision-making.*
FGPR910	Provider apps displaying medical conditions information **SHALL** clearly indicate the source document and the date of each medical condition entry. **Rationale:** *Clearly indicating the source and date helps ensure traceability and clinical accuracy, providing the necessary context for informed decision-making.*

Table 34 - Medical conditions view recommendations.

ID	Recommendation
FGPR630	When displaying medical conditions information, rendering apps **SHOULD NOT** display duplicate entries. **Note:** *Only the first occurrence of a medical condition, procedure, or history item should be displayed, with a link to the source document and dates. Subsequent duplicates should be omitted to avoid confusion.*

ID	Recommendation
FGPR640	Lists of medical conditions **SHOULD** be sortable by Document type, Date of Onset, Procedure Date, Date of other history items, Source document Date, and Name (alphabetical). **Note:** *Sorting by these criteria ensures that the information is organised systematically, making it easier for users to navigate and find specific conditions.* ***Default Sort Order*** *NCP: onset date, s*ource document date, source document name. NPP (medical conditions)*: Shared Health Summary (latest),* date of onset, source document date, source document name. NPP (medical procedures/latest interventions): *Shared Health Summary (latest),* Procedure date/date of other history items, source document date, source document name.

6.1.1 Get Medical Conditions View API

The GetMedicalConditionsView API provides a comprehensive overview of a consumer's medical conditions, including allergies, adverse reactions, past medical history, procedures, alerts, and Medicare in Hospital Services Items. This view consolidates data from various clinical documents within a patient's My Health Record. The API supports returning data in either CDA format or as a FHIR resource bundle, ensuring that the information is accessible and useful for both consumers and healthcare providers.

This section provides recommendations specific for presenting medical conditions information obtained using the Get Medical Conditions View API service.

Table 35 - Get Medical Conditions View - suggested field names.

Suggested field name	Format
NAME	As provided
DATE OF ONSET	See section 7.6.3 for date formatting (time not to be included)
SOURCE OR AUTHOR	Link to the source document
DOCUMENT DATE	See section 7.6.3 for date formatting (time not to be included)

Table 36 - Get Medical Conditions View

ID	Recommendation
FGPR650	Where medical conditions information is not available, rendering apps **SHOULD** inform the user that no information is available.
FGPR660	Rendering apps **SHOULD** ensure that all relevant medical conditions information is clearly displayed to the user.

7 Diagnostic Services Results

Diagnostic services results are prone to potential misinterpretation by consumers and require interpretation and explanation by a healthcare provider.

A delay period of one week applies before uploaded pathology and diagnostic imaging results become available to consumers. Exemptions have been made for example during pandemic so that some pathology test results are available sooner. All reports are immediately available to healthcare providers, but access controls can be set by the consumer at any point.

This delay period is automatically applied by the FHIR Gateway for consumer apps using the Get Document API method for Pathology and Diagnostic Imaging Report documents.

The requirements and recommendations in this section detail the implications of this delay period for rendering apps.

Table 14 - Diagnostic services results requirements

ID	Requirement
FGPR700	When a consumer tries to access a diagnostic services CDA document or attached results that are subject to the delay period, the consumer app **SHALL** inform the user that the diagnostic services CDA document and results are not available until the delay period has expired. **Note:** *This requirement does not apply to provider apps.* **Rationale:** *A consumer is entitled to see that information exists in their My Health Record despite results not being accessible, even during the delay period.*

Table 15 - Diagnostic services results recommendations

ID	Recommendation
FGPR710	Consumer apps **SHOULD** inform the user about the date from when diagnostic services results will become available for viewing when access to this information is restricted due to the delay period.
FGPR720	Consumer apps listing diagnostic services CDA documents **SHOULD** indicate when the CDA document and attached PDF is not available for viewing due to the delay period. **Note:** *A consumer is entitled to see that a document exists in their My Health Record, even during the delay period. However, they are not permitted to view a Pathology or Diagnostic Imaging Report CDA document (or any attached results contained in it) until the delay period for it has expired.*

8 XML View:

This section provides links to the documentation that provides presentation guidelines and data usage guides for the pathology report view and diagnostic imaging views in mobile apps.

The presentation guides provide the details for presenting the pathology report view and diagnostic imaging view in mobile apps and ensures a consistent display, functionality, and reduces clinical risk.

The data usage guide spreadsheet is distributed as part of the presentation guide and both documents are intended to be read in tandem.

View	Links to the presentation and data usage guides
Pathology Report view	https://developer.digitalhealth.gov.au/specifications/clinical-documents/ep-2053-2015/nehta-2055-2015
Diagnostic Imaging View	https://developer.digitalhealth.gov.au/specifications/clinical-documents/ep-2052-2015/nehta-2054-2015

9 General guidelines

9.1 Provenance

Table 16 - Provenance requirements

ID	Requirement
FGPR800	When displaying each clinical data item, provider apps **SHALL** enable the source of each clinical data item to be determined and viewed. **Note:** *In many cases, to meet this requirement, rendering apps will need to retrieve and display the source CDA document. Requirements for the rendering of CDA documents apply (refer to section 8).* **Rationale:** *Clinical information provided as part of FHIR resources can potentially originate from many different data sources. Healthcare providers will typically associate different levels of trustworthiness with different types of data sources. Data contained in clinical documents that have been digitally signed by healthcare providers will have a higher level of trust than those provided and uploaded by consumer-operated mobile devices.* *Healthcare providers must be able to determine the source of each available data item.*

9.2 Currency

Table 17 - Currency requirements

ID	Requirement
FGPR805	Provider apps **SHALL** display the most recent content from a consumer's My Health Record when there is an active connection to the FHIR Gateway, or an active connection can be established. **Rationale:** *It is essential for clinical decision-making that the most recent information in the My Health Record is displayed by the rendering app.*
FGPR810	Provider apps **SHALL** provide a graphical or textual indication when an active connection to the gateway has failed, and the app is operating while disconnected from the FHIR Gateway.

Table 18 - Currency recommendations

ID	Recommendation
FGPR815	Provider apps **SHOULD** provide a means for the user to determine when the app last connected to the FHIR Gateway successfully.

9.3 Semantics

Table 19 - Semantics requirements

ID	Requirement
FGPR820	Provider apps **SHALL** ensure the meaning of each displayed information item is identifiable by the user. **Note:** *Where the semantics of an information item are not self-evident (e.g. prescription as opposed to dispense date), descriptive labels (e.g. field names) should be displayed.* **Rationale:** *Clinical information that is misinterpreted may lead to a clinical safety risk. All information needs to be presented clearly and understandable.*

9.4 Privacy

Table 20 - Privacy requirements

ID	Requirement
FGPR825	Consumer apps **SHALL NOT** display a healthcare provider's address or telecommunications details if they are marked as "home", which includes "primary home" and "vacation home" details. **Note 1:** *This requirement only applies to consumer apps. Provider apps should display all such information.* **Note 2:** *This privacy-related requirement applies to both the display of information sourced from FHIR resources and the display of CDA documents.* *When using the Agency's Generic Clinical Document Style Sheet [CDASS2016] for the rendering of CDA documents, consumer apps need to ensure to only use v1.3.0 or higher of the style sheet and utilise its privacy parameter to suppress the display of the providers' home details.* **Rationale:** *Providers' home addresses or home telecommunication details are not typically supplied together with clinical information. However, providers are free to include such details if they deem it useful for any receiving healthcare provider (e.g. for after-hours enquiries).* *This information is not intended for consumers. The display of this information to consumers represents a violation of the consumer app developer's privacy obligations.*

9.5 Lists

This section provides recommendations for presenting and sorting clinical information lists.

API services returning lists include:

- Get Prescription and Dispense List

- Get PBS Items
- Get MBS Items
- Get Allergies List
- Get Personal Health Summary – Medications
- Get Personal Health Summary – Allergies
- Search Document List.
- Get Medical Conditions View

9.5.1 List banner

Lists should be accompanied by a list banner displaying key information to identify the type and origin of the information displayed as well as any filters and groupings applied.

The following screenshot (Figure 3) outlines an example of a list banner suitable for a prescription and dispense list. The example shows the title, followed by the start and end date of the filter range selected and grouping criteria applied.

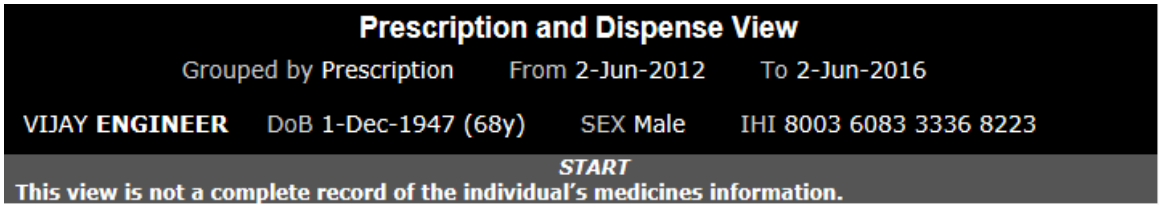

Figure 3 – Prescription and Dispense View Example Banner

9.5.2 List rendering

The following recommendations apply to the rendering of lists of clinical information:

Table 21 - List rendering recommendations

ID	Recommendation
FGPR830	Rendering apps **SHOULD** provide a list banner for each list of clinical information items.
FGPR835	Rendering apps **SHOULD** provide the option to sort list items in ascending and descending order by any of the fields of the list.
FGPR840	Rendering apps **SHOULD** provide a default sort order for all list items that is appropriate for the context. **Note**: *FGPR440 is complimentary to this requirement and takes precedence when displaying medicines.*
FGPR845	Rendering apps **SHOULD** clearly indicate any sort order applied to the list items, including the sort direction (i.e. ascending or descending).
FGPR850	Where items are ordered alphanumerically, the ordering **SHOULD** be done by not considering the case of each of the characters (i.e. case-*in*sensitive ordering).

ID	Recommendation
FGPR855	Where items are ordered by date or time, the ordering **SHOULD** be based on the reverse chronological order of dates and times. It **SHOULD NOT** be based on the text representation of dates and times within the list.
FGPR860	Where items are ordered by date, the ordering **SHOULD** be done using dates in a common time zone (e.g. UTC).
FGPR865	Where items are ordered by date or time, the ordering **SHOULD** be done *without* considering any truncation of these fields that might be applied upon their subsequent display.
FGPR870	Rendering apps **SHOULD** indicate the beginning and end of a list.
FGPR875	Rendering apps **SHOULD** indicate the extent of lists. **Note:** *Commonly used extent indicators include "previous/next" navigators or numbered buttons for each of the pages available.*

Table 22 - List rendering guidance

ID	Guidance
FGPR880	Rendering apps **SHOULD** provide the option to group list items, where relevant to the context.

9.6 Data items

9.6.1 Healthcare Identifiers Service identifiers

Table 23 - Healthcare Identifiers Service identifiers recommendations

ID	Recommendation
FGPR885	HI Service identifiers (e.g. IHI, HPI-O and HPI-I) and Care Agency Employee identifiers values **SHOULD** be formatted as four groups of four digits with a space separating each four-digit group (e.g. 8300 0000 0000 0000).

9.6.2 Entity identifiers

Table 24 - Entity identifiers recommendations

ID	Recommendation
FGPR890	Rendering apps **MAY** display only the healthcare identifier itself, and no other parts of the entity identifier. **Note:** Displaying just the identifier may improve readability and ease of use. *For URN OID identifiers, the healthcare identifier is represented in FHIR as the final arc of the OID assigned to the "value" field of the entity identifier.* *For non URN OID identifiers, the healthcare identifier is represented in FHIR as the value of the element identifier*
FGPR895	For entity identifiers using a local identifier represented as an OID, rendering apps **MAY** display the local identifier itself, its root identifier, and the name of its assigning authority. **Note:** *The local identifier is represented in FHIR as the final arc of the OID assigned to the "`value`" field of the entity identifier.* *The root identifier is represented in FHIR as all arcs except the final arc of the OID assigned to the "`value`" field of the entity identifier.* *The name of the assigning authority is represented in FHIR as the value of the "`assigner.display`" field of the entity identifier.*

9.6.3 Date and time

Table 25 - Date and time recommendations

ID	Recommendation
FGPR900	Time values **SHOULD** be formatted with a one-digit or two-digit hour and two-digit minute separated by a colon, using a 24-hour clock (e.g. 13:00 for 1:00pm or 1:00 for 1:00am).
FGPR905	Time zone values **SHOULD** be formatted as follows: a If a time zone is required, it **SHOULD** be formatted using a plus (+) or minus (-) sign immediately after the time, followed by the number of hours and minutes ahead or behind UTC time respectively. b The hours and the minutes for the time zone **SHOULD** both be two-digit values with no other characters separating the number of hours and minutes (e.g. 13:00+1000 or 1:00-0600).
FGPR910	All dates and times **SHOULD** be displayed in a common time zone throughout all parts of a rendering app.

ID	Recommendation
FGPR915	Date values containing day, month, and year **SHOULD** be formatted as follows: a Date values containing day, month, and year **SHOULD** be formatted with a two-digit day, three-character month, and four-digit year. b The three-character month **SHOULD** be the first three characters of the month with the first letter capitalised. c The day, month and year **MAY** be separated with a single dash separator (e.g. “1-Jan-2011”) or a space (e.g. “1 Jan 2011”) but not a mixture of both.
FGPR920	Date and time values made up of a date value and time value **SHOULD** be formatted as follows: a Date and time values made up of a date value and time value **SHOULD** be formatted with the date first followed by the time with a space between the two. b The individual date and individual time values **SHOULD** be formatted as described in this document (e.g. "10-Jul-2010 1:00" or "1-Jul-2010 1:00+1000").

9.6.4 Document author

Table 26 - Document author recommendations

ID	Recommendation
FGPR925	Rendering apps **SHOULD** display the custodian and attester details where these differ from the author details. These **SHOULD** be displayed after the author details.
FGPR930	If an author’s address is not available, then a rendering app **SHOULD** display the address of the author’s organisation instead.

9.6.5 Person name

Table 27 - Person name recommendation

ID	Recommendation
FGPR935	Person names **SHOULD** be formatted in the following order: Title(s), Given Name(s), Family Name(s), Name Suffix(es) (e.g. “Prof Sir John Gregory Citizen III MP”).
FGPR940	Person names **SHOULD** be formatted in a consistent way throughout all parts of a rendering app.
FGPR945	Where rendering apps are part of a wider system context (e.g. a mobile app working in conjunction with a particular GP desktop system), consumer and provider names **SHOULD** be formatted in a consistent way across all parts of this wider system context.

9.6.6 Consumer age

Table 28 - Consumer age recommendations

ID	Recommendation
FGPR950	When the date of birth is displayed the app **SHOULD** display the consumer's age as well.
FGPR955	The consumer's age **SHOULD** be displayed using the following convention: • If a child's age is greater than or equal to 3 years, show the age in years. • If a child's age is greater than or equal to 56 days and less than 3 years, show the age in months. • If a child's age is greater than or equal to 14 days and less than 56 days, show the age in weeks. • If a child's age is less than 14 days show the age in days. • Use appropriate singular or plural words, for example: ○ 1 day ○ 2 days ○ 1 week ○ 2 weeks ○ 1 month ○ 2 months ○ 1 year ○ 2 years. • Alternatively, use abbreviations "d", "w", "m", "y".

9.6.7 Gender

Table 29 - Gender recommendations

ID	Recommendation
FGPR960	Gender values **SHOULD** be formatted in full with no abbreviations (e.g. "Male", "Female", "Intersex or Indeterminate", "Not stated/Inadequately described").

9.6.8 Phone numbers

Table 30 - Phone numbers recommendations

ID	Recommendation
FGPR965	National and international phone number values **SHOULD** be formatted according to the ITU-T E.123 standard [ITU-T2001]. For example, (07) 1234 5678 and +44 208 1234 5678.

9.6.9 Email address

Table 31 - Email address recommendations

ID	Recommendation
FGPR970	Email address values **SHOULD** be formatted according to the ITU-T E.123 standard [ITU-T2001]. For example, “fred@example.com”.

9.6.10 Absent information

Table 32 - Absent information recommendations

ID	Recommendation
FGPR975	Where an information item has been explicitly marked as absent, rendering apps **SHOULD** indicate the absence of this information by displaying the display name of the provided reason for absence.

10 Clinical documents

Clinical documents in CDA format can be obtained through the Get Document API service. The rendering of such documents has to meet the relevant requirements.

Please refer to the *CDA Rendering Specification v1.0* for a comprehensive list of requirements for the rendering of CDA documents, with variations stated in the clinical documents' conformance profiles.

To aid with the conformant rendering of CDA documents, the Australian Digital Health Agency publishes a set of tools and sample code as part of its *Clinical Documents Integration Toolkit v1.9,* including the *Generic Clinical Document Style Sheet.*

Appendix A ACSQHC guidelines on medicines presentation

The ACSQHC has released *National guidelines for on-screen display of clinical medicines information* [ACSQHC2016], aiming to describe consistent, unambiguous terms and processes for on-screen display of medicines information in clinical information systems.

The majority of recommendations made by the ACSQHC relate to controls that can only be applied by the source Clinical Information System. Apps in general can only present information that have been obtained from source documents in the form provided by the My Health Record system.

These ACSQHC guidelines contain useful information for the on-screen presentation of medicines information, such as the following example of a preferred medicine display format:

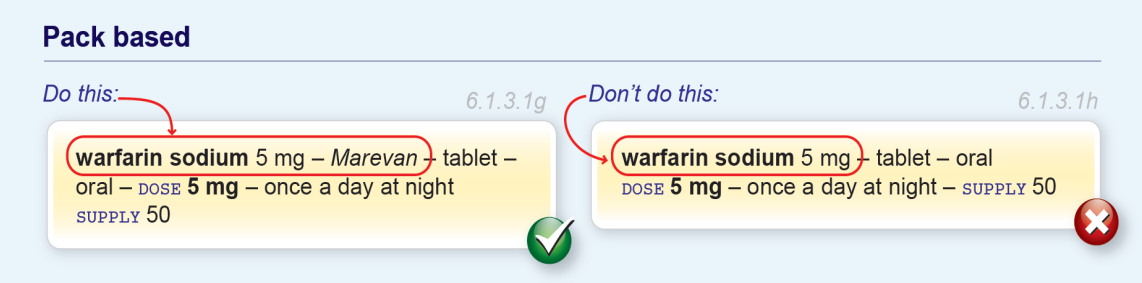

Figure 4 – Example: Preferred medicine display format from ACSQHC guidelines

This appendix provides an overview of some of the key recommendations from the ACSQHC guidelines. It is not intended to provide a comprehensive or authoritative list of medicines presentation guidelines. Developers are encouraged to use the ACSQHC guidelines themselves when developing the design of their rendering apps.

A.1 Brand and active ingredients information

ACSQHC prefer that in a medicine list, that the active ingredient products (i.e. generic name or names) be displayed first in the list followed by brand (including so-called "innovator" and "branded generic") products. This separates the active ingredient from similarly named branded products reducing the risk of selection error.

However, explicit active ingredient(s) and brand (therapeutic good ID) information is not always available in every record obtained from the My Health Record.

For PBS and Prescription and Dispense data where this information is almost always available, specified fields (extensions) contain this information.

Where these fields are *not available,* the FHIR resource is required to at least provide *text* describing the medicine and *may* also provide a *displayName* for coded information.

In this case:

- text information should always be displayed first
- text should be displayed in its original format and not be bolded, and
- if a displayName is also provided, and differs from the text, this can be displayed following the text.

A.2 Dose directions

For dispense records, dose directions are generally equivalent to the “Dispensing Label” prepared by the dispensing pharmacist.

- For consumer apps:
  - Where a prescription can be linked to a dispense item (through a prescription item ID), it is *suggested* that the dispense label information is the prominent dose information used for display. This is to avoid consumer confusion with abbreviations which are common in prescription records.
- For provider apps:
  - The prescription and dispense dose information should be presented “as is” in line with the guidance provided in section 4.2.

A.3 Be consistent

App developers should endeavour to ensure that within an app or across apps, they use:

- the same fonts, styles, and colours for the same fields, of fields with equivalent semantics in prescriptions and dispense items
- the same ordering of fields (e.g. see Table 2), and
- spaces between elements, such as a number, and a unit of measure.

A.4 Show complete information

- Use wrapping to ensure that the entirety of a prescription or a dispense item is visible, and without the need to scroll.

For example, do not do this:

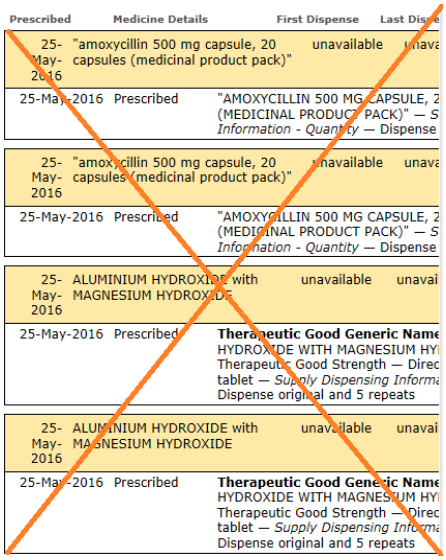

Figure 4 – Bad example of showing incomplete information

Acronyms

Acronym	Description
ACSQHC	Australian Commission on Safety and Quality in Health Care
CDA	Clinical Document Architecture
FHIR	Fast Health Interoperability Resources
IHI	individual healthcare identifier
MBS	Medicare Benefits Schedule
MRN	Medical Record Number
OID	object identifier
PBS	Pharmaceutical Benefits Scheme
UTC	Universal Time Coordinated

Glossary

Term	Meaning
application programming interface	An application programming interface (API) is a particular set of rules and specifications that software programs can follow to communicate with each other. It serves as an interface between different software programs and facilitates their interaction, similar to how the user interface facilitates interaction between humans and computers.
application (app)	A type of application software that for the purposes of this document, can connect to the My Health Record APIs. The types of applications that can connect to the My Health Record APIs are: • **Mobile applications** are developed to run natively on a specific mobile device or platform (e.g. iOS, Android). • **Web applications** are powered by a web browser (e.g. Chrome, Firefox, Safari, etc.) through the internet. Web applications are typically built using HTML, CSS, and JavaScript and served through a mobile or desktop browser. Web applications can be built to look and feel just like a native application but will always runs through a visible browser. • **Hybrid applications** are usually coded in HTML, CSS, and JavaScript. They are run through an invisible browser which has been packaged into a native application. This enables the application to have the look, feel and functionality of a native application. Hybrid applications allow developers to minimise development time as minimal work is required to target various mobile operating systems. An additional benefit of using a hybrid application framework includes allowing developers to access Native API calls which can be used to enable binary security mechanisms from the device itself. Hybrid Applications can also be distributed through native application stores (allowing for additional vetting). • **Progressive web applications** can appear and behave as native applications on mobile devices but do not require installation of the application on the device.
Clinical Document Architecture (CDA)	An HL7 standard intended to specify the encoding, structure, and semantics of clinical documents for exchange.
Fast Health Interoperability Resources (FHIR)	An HL7 standards framework that defines a set of resources that represent granular clinical concepts.
Gateway Operator	The Gateway Operator is the business area responsible for providing and managing the My Health Record system on behalf of the System Operator.
Healthcare Recipient	Healthcare Recipient has the same meaning as in the My Health Records Act 2012 (Cth)

Term	Meaning
Healthcare Provider Identifier – Organisation (HPI-O)	A unique 16-digit number is used to identify organisations which deliver healthcare. in the Australian healthcare setting.
Individual Healthcare Identifier (IHI)	A 16-digit unique number is used to identify individuals who receive or may receive healthcare in the Australian health system.
Medicare Benefits Schedule (MBS)	The Medicare Benefits Schedule (MBS) is a listing of the Medicare services subsidised by the Australian Government. The schedule is managed by the Department of Health and Ageing and administered by Medicare Australia.
My Health Record System	Has the same meaning as in the My Health Records Act 2012 (Cth).
Object Identifier (OID)	An OID is a globally unique ISO (International Organization for Standardization) identifier.
Pharmaceutical Benefits Scheme (PBS)	An Australian Government scheme aimed at providing all Australians with affordable access to a wide range of prescription medicines.
Portal Operator Registration Agreement (PORA)	The conditions that the System Operator imposes on the registration of a Registered Portal Operator.
Registered Portal Operator	Registered Portal Operator means “registered portal operator”, as defined in the My Health Records Act 2012 (Cth).
Representative	Representative means a Nominated Representative or an Authorised Representative.
System Operator	System Operator has the same meaning as in the My Health Records Act 2012 (Cth).

References

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