

# Sparked



Webinar

## AUCDI Release for Comment & Sparked Update

27 February 2024

Online



# Acknowledgement of Country

We acknowledge the Traditional Custodians of the land  
on which we all gather today.

We pay our respect to elders past, present, and emerging and  
extend our respect to all Aboriginal and/or Torres Strait  
Islander people, acknowledging the First Peoples as the first  
scientists, educators and healers.

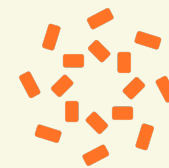
For us in Brisbane, Turrbal and Jagera people



Meeting Overview			
Purpose		To share progress update on Sparked Program	
Agenda			
Item	Start Time	Topic	Facilitator
1	1pm	Welcome	Michael Hosking
2	1.05pm	AUCDI <ul style="list-style-type: none"><li>• Introduction</li><li>• Content overview</li><li>• Release for public comment</li></ul>	Chris Moy Michael Hosking Kylynn Loi
3	1.30pm	AUCDI Q&A	All
4	1.55pm	AU Core <ul style="list-style-type: none"><li>• Progress update</li></ul>	Michael Hosking Kylynn Loi
5	2.00pm	Close	

# Sparked Team

[FHIR@csiro.au](mailto:FHIR@csiro.au)



Kate Ebrill –  
Sparked Lead



Michael Hosking –  
Sparked Deputy Lead



Kylynn Loi –  
Clinical Design Lead



Dr Heather Leslie – Lead  
Clinical data Modeller



Arush Pushkarna –  
Test Lead



Nisha Subramanian –  
Business Analyst



Danielle Tavares-Rixon  
– FHIR technical lead



Dusica Bojicic -  
FHIR IG Author



Brett Esler –  
FHIR Expert



Matt Cordell – Clinical  
Terminology Specialist



Michael Osborne –  
FHIR Terminologist



Heath Frankel –  
FHIR Expert



Chris Kellalea-Maynard -  
Snr Business Analyst



Bernadette Cranston  
– Program Manager



Co-Lead

update

Chris Moy



## Failure to Communicate

The **lack of interoperability** is a major roadblock to moving health care forward. But some hospitals are finding ways to make essential data accessible to those who need it.

The once arcane concept of interoperability among information technology systems has become a mainstream issue, rising from the back rooms of IT departments up to C-suites and the boardroom. Health systems nationwide have invested billions of dollars in electronic health records and IT only to realize the EHR data troves they own now also have to work with that of others. For the most

part, they can't.

As long as that holds true, some of the foundational principles of value-based approaches to care — clinical integration, coordinated patient treatment plans among providers, population health management — will be difficult to realize. To deliver extraordinary quality, "you're going to have to deliver integrated care, and integrated care requires integrated information — no two ways about it," says Randall Gaboriault, senior vice president for innovation and strategic development and chief information officer of Christiana Care Health System, Wilmington, Del.

Urgent initiatives by data standards organizations, the federal government and others seek to remedy the basic lack of interoperability stemming from uncoordinated, proprietary decisions by IT vendors about how to represent, create, send and store computerized data — a fragmented state of affairs more than 20 years in the making. The common goal is to bring data sharing closer to the definition of interoperability: the ability of two or more systems to exchange and use information without special effort on the part of the user.

In a major move to organize the health care industry around a clear set of interoperability targets, the

Department of Health & Human Services has extracted pledges from the largest developers of EHRs — responsible for 90 percent of the health records used by the nation's hospitals — to follow nationally recognized standards in their ongoing development plans and to eliminate any practices that have the effect of blocking information flow from their EHRs.

Sixteen provider systems, including the five largest, also pledged their support, and several professional organizations, including the American Hospital Association, added their backing after HHS Secretary Sylvia Burwell made the announcement Feb. 29 at the Healthcare Information and Management Systems Society's annual convention.

The timelines of most of these efforts are measured in years. But being able to take any discrete element of data in one system and pass it useably to another is an imperative when value-based contracts assigning financial risk for the overall health costs of defined populations of individuals

are coming soon or already inked. True interoperability "would be ideal, and I hope we get there someday," says Jan Lee, CEO of the Delaware Health Information Network in Dover, a thriving outlet for health information exchange. "But that doesn't mean you can't do anything now."

### What happened?

To grasp how health IT got into its morass, we need to understand how it started out. Early IT focused on revenue-producing departments — laboratory, radiology, pharmacy — and spread to nursing floors, because revenue production required physician orders from nursing stations and results to be reported back, says Mark Braunstein, associate director for health systems at the Institute for People and Technology at Georgia Institute of Technology, Atlanta. As with

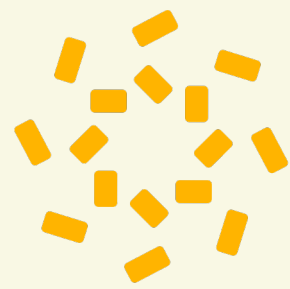
### FRAMING THE ISSUE:

- Interoperability — the capacity of different information technology systems to exchange information for easy use — long has been a problem in health care.
- The explosion in electronic health records has added to the interoperability challenge.
- Value-based care and alternative payment models make sharing information more and more of a necessity.
- Interoperability isn't just a problem for IT professionals: It requires business and care strategies developed by hospital and health system leaders.



# BUILDING THE “adapter”



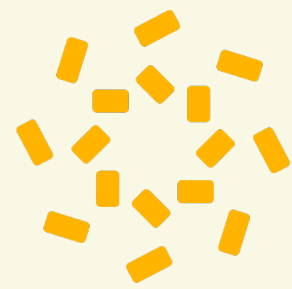


# Sparked



- **Fast Healthcare Interoperability Resources (FHIR, pronounced "fire") standard** is set of rules & specifications for exchanging electronic health care data.
- Flexible & adaptable, so can be used in wide range of settings & different health care information systems.
- Goal is to enable seamless & secure exchange of health care information
- Standard describes data formats & elements (known as "**resources**") & an application programming interface (API) for exchanging electronic health records (EHR).
- Standard was created by Health Level Seven International (HL7) health-care standards organisation.





# Sparked



- Sparked is a **community** comprising government, technology vendors, provider organisations, peak bodies, practitioners, & domain experts to accelerate the creation & use of national FHIR standards in health care information exchange.
- The Sparked program is a partnership of HL7 Australia, Department of Health & Aged Care, Australian Digital Health Agency, & CSIRO.
- We are:
  - Creating open standards in high-priority national use cases
  - Government-initiated & funded
  - Working collaboratively with international FHIR community & other FHIR initiatives
- We are not:
  - A separate legal entity
  - A proprietary activity



# A Community Open to All





## The Partnership



Community coordinator leading the development of the FHIR standards, national data sets & terminology value sets.



**Australian Government**  
Department of Health and Aged Care Strategic leadership for national healthcare agenda.

**Australian Digital Health Agency** - Governance of digital health standards focusing on prioritisation to enable increased use, implementation, and development of digital health standards.



Facilitate the adoption of e-health in Australia by promoting effective use of standards and products developed by HL7 International and supporting their enhancement to meet local needs. Increased use, implementation and development of digital health standards.

## Founding members

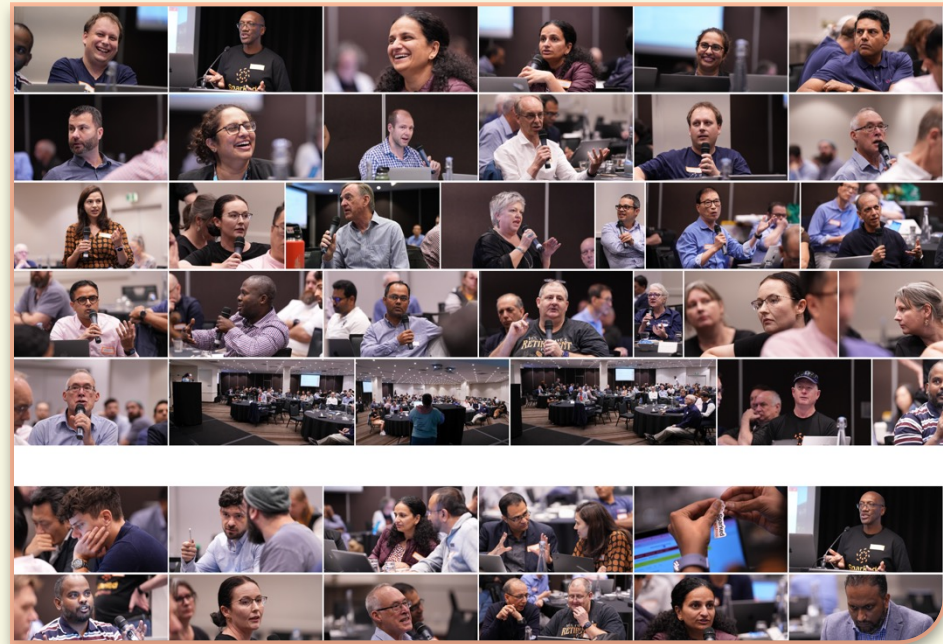
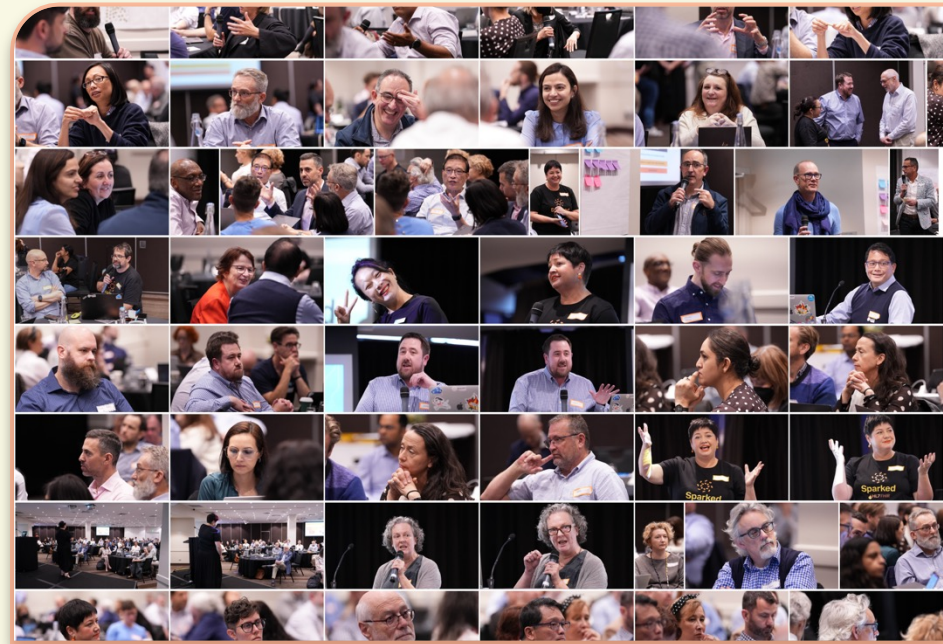
These organisations support the objectives of Sparked and have committed to active participation in the design groups and HL7 AU Connectathons.

We welcome others to register their support.

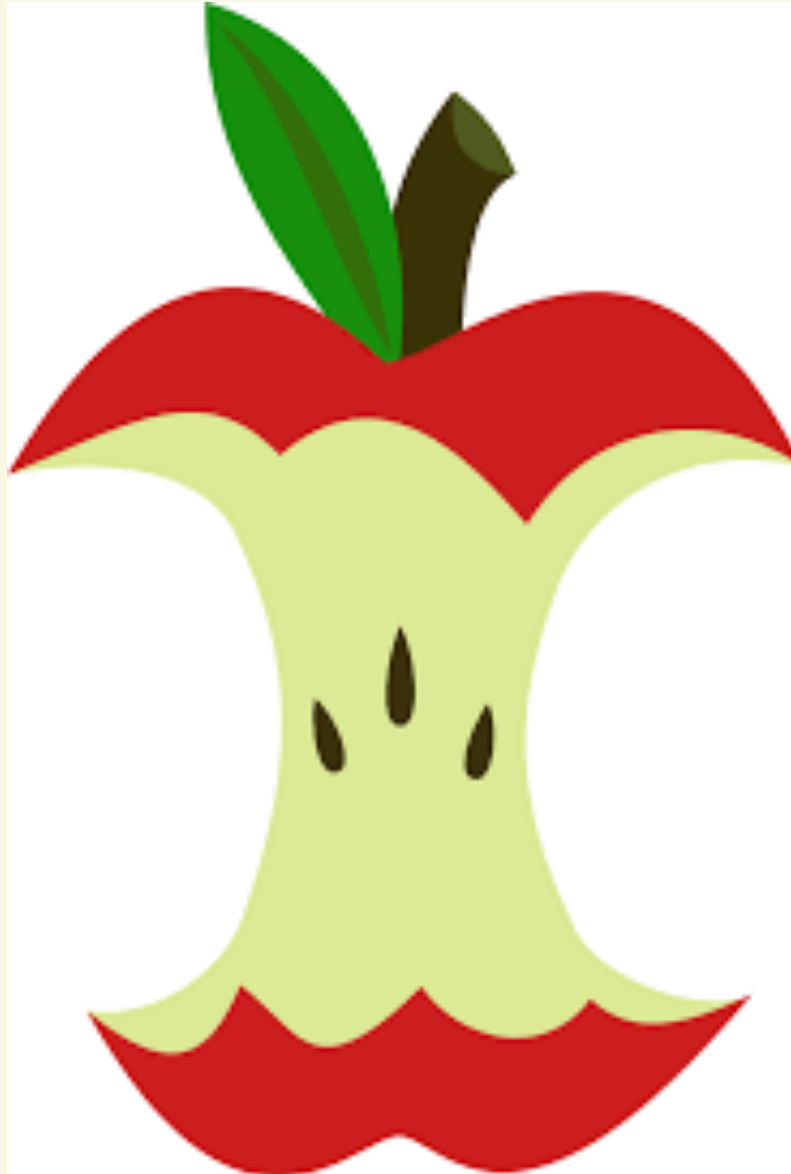


# CLINICAL DESIGN GROUP

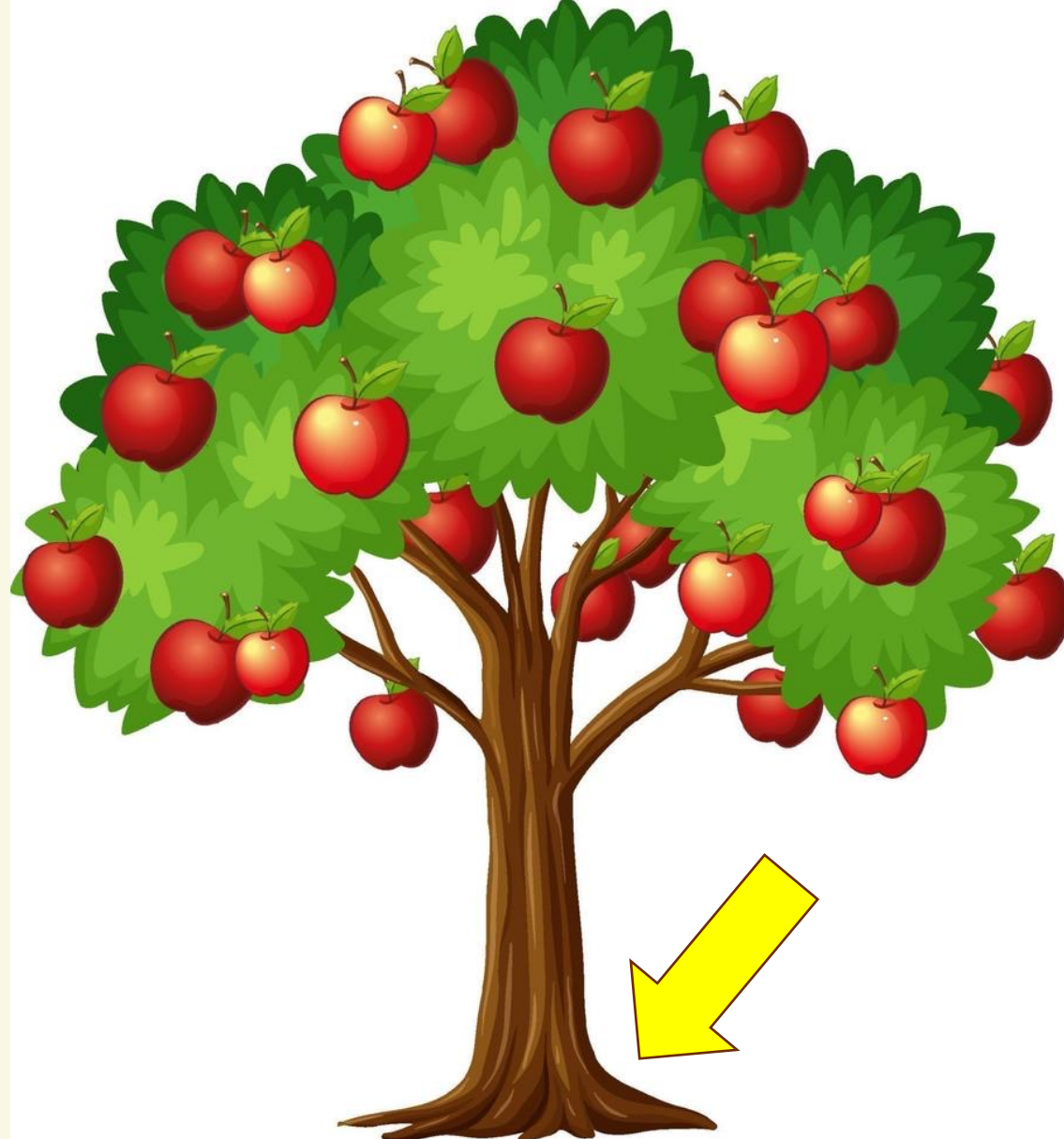
# TECHNICAL DESIGN GROUP



Starting with “core of the core”



WILL GROW INTO THE TREE THAT WE WANT AND NEED





AUCDI  
Update



# Goldilocks Zone

Finding the balance

We need to:

- Support what exists now with no or little extra effort
- Support a model that is clinically meaningful and useful
- Support a model that technically feasible to implement
- Grow and evolve this foundational model over time to support new use cases

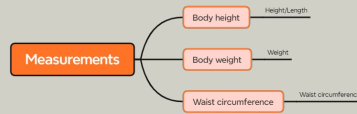
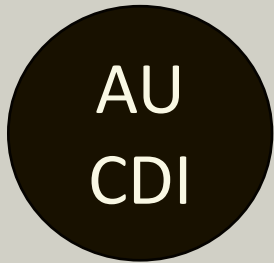






# What is AU Core and Australian Core Data for Interoperability (AUCDI)?

Sparked  
CDG is  
here



Specifies “*WHAT*” clinical information

(and corresponding data elements and terms) should be included for data entry, data use and sharing information supporting patient care



Specifies “*HOW*” the core set of data (above) and information should be structured, accessed and shared between systems

Sparked  
TDG is  
here



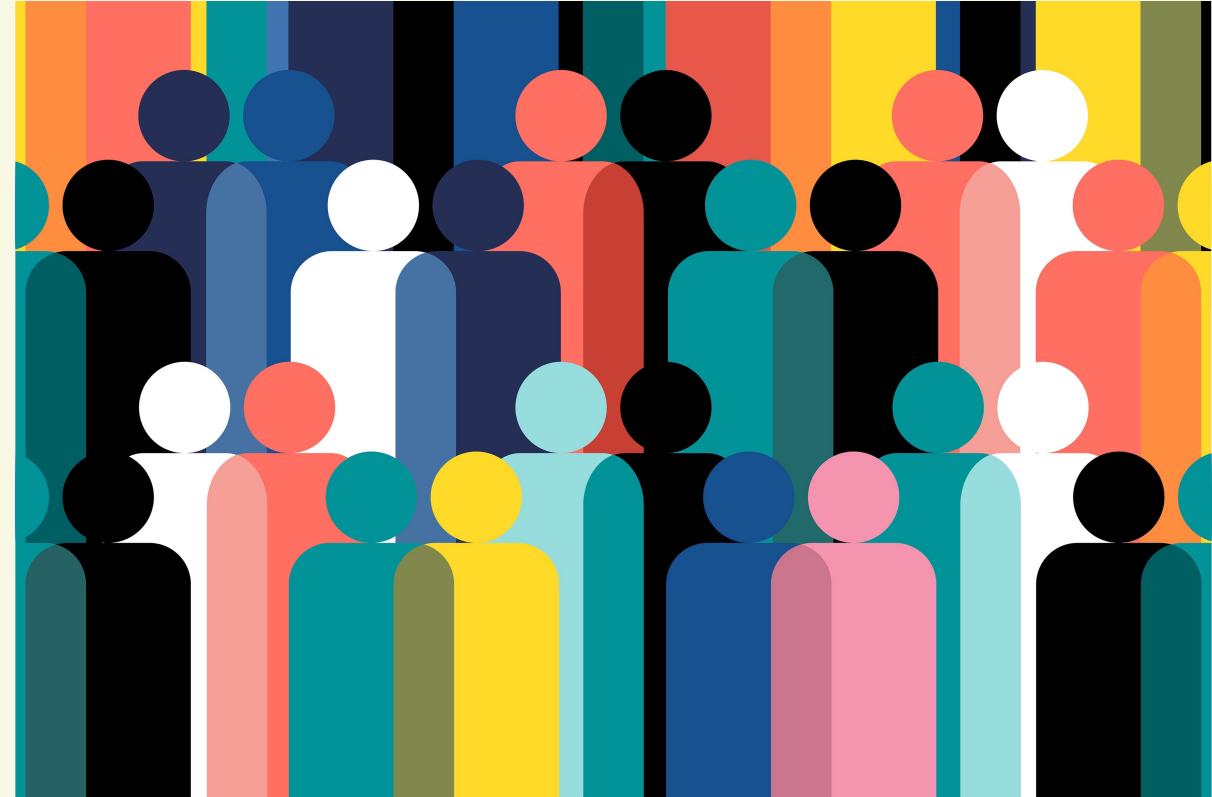
AUCDI  
Feedback



# AUCDI R1 – Open for comment

## Who are we expecting input from?

- All interested stakeholders
- Intended to be inclusive of all points of view and not require specific skill sets or professional background
- Review period:
  - Closes Friday 8 March
  - Please contact us at [fhir@csiro.au](mailto:fhir@csiro.au) if you have any issues





# AUCDI R1 – Open for comment

- AUCDI R1 available on Sparked Confluence page
  - AUCDI R1 draft for comment PDF
  - Feedback form
  - Prep sheet

Sparked Confluence page –  
**AUCDI R1**



# AUCDI R1 – draft for comment contents

## Table of Contents

<b>1. Document Information .....</b>
1.1. Document Information .....
1.2. Approval.....
1.3. Related Documents .....
1.4. Distribution .....
1.5. Version Control.....
<b>2. Introduction.....</b>
2.1. Purpose of document .....
2.2. Intended Audience of the document .....
2.3. How to read the document.....
<b>3. About the Sparked program.....</b>
3.1. Sparked program overview .....
3.2. Sparked program deliverables .....
3.3. Sparked program community approach .....

<b>4. About Australian Core Data for Interoperability.....</b>
4.1. Background .....
4.2. Role and purpose of AUCDI.....
4.3. AUCDI Components .....
4.3.1. Clinical information models .....
4.3.2. Terminologies, SNOMED CT-AU and value sets.....
4.4. Understanding the scope of AUCDI R1 .....
4.4.1. Scope drivers .....
4.4.2. Scope of AUCDI R1.....
4.4.3. AUCDI Use cases.....
4.4.4. A Case Study.....
4.5. AUCDI, FHIR, and AU Core Implementation Guide.....
4.6. Design of the AUCDI .....
4.7. AUCDI and implementations.....
<b>5. How to read the AUCDI .....</b>
5.1.1. <Data group name> (e.g., Adverse reaction risk summary) .....
5.1.1.1. Context.....
5.1.1.2. Concept representation .....
5.1.1.3. Information model .....
5.1.1.4. Specific alignment to AUCDI design principles.....



# At a Glance - AUCDI Release 1 Draft for Comment

## Problem/Diagnosis summary

- Problem/diagnosis name
- Body site/laterality
- Status
- Comment

## Adverse reaction risk summary

- Substance name
- Manifestation/s
- Comment

## Sex and Gender

- Sex assigned at birth
- Gender identity
- Pronouns

## Vital signs

- Blood pressure
  - Systolic
  - Diastolic
- Pulse
  - Rate
- Body temperature
- Respiration
  - Rate

## Procedure completed event

- Procedure name
- Body site/laterality
- Clinical indication
- Date performed
- Comment

## Medication use statement

- Medication name
- Form
- Strength
- Route of administration
- Dose amount and timing
- Clinical indication
- Last administration
- Endpoint
- Comment

## Tobacco smoking summary

- Overall Status

## Measurements

- Height/length
- Body weight
- Waist circumference

## Vaccination administered event

- Vaccine name
- Sequence number
- Date of Administration
- Comment

## Biomarkers

- HDL
- LDL
- Total Cholesterol
- Triglycerides
- HbA1c
- eGFR
- uACR

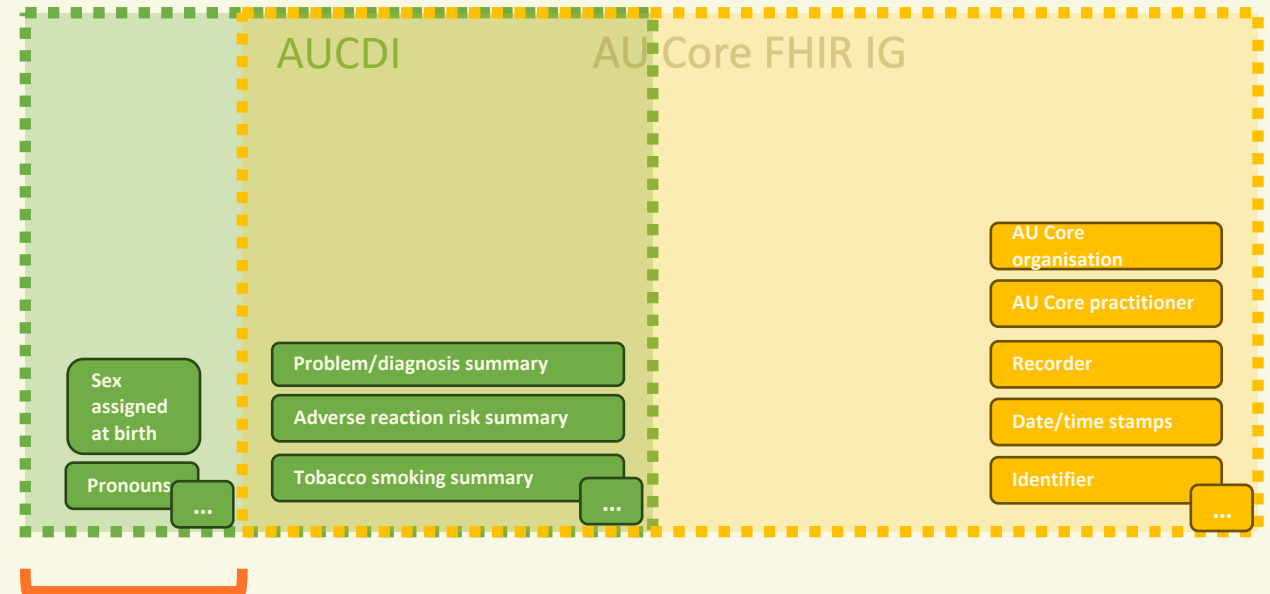
## Encounter – clinical context

- Reason for encounter
- Modality

# Sparked AUCDI and AU Core FHIR IG scope

When clinical data is shared between systems, some system-generated data, like what's listed in yellow, will also be included to ensure context is maintained (e.g., identifiers...etc)

These system-generated concepts will be included in the technical implementation guide



AUCDI will extend wider than the AU Core FHIR IG as it provides the roadmap of clinical data requirements for AU Core FHIR IGs

## 5. How to read the AUCDI

Each data group represents one or more data elements about a single, discrete concept. The sections below (5.1.1 through to 5.1.1.5) provide examples of how the data groups and elements are represented in the AUCDI.

### 5.1.1. <Data group name> (e.g., Adverse reaction risk summary)

#### 5.1.1.1. Context

Every data group contains a table that explains the general attributes, or metadata, of the data group as a whole, comprising:

Table 2. Example context.

Clinical description	A definition or description of the data group concept.
Data group purpose	An explanation of the reason and objective for the data group.
Data group representation	A description of how a clinician might anticipate the data might be recorded within a clinical information system.
Data group alias	A list of synonyms for the name of the data group
Considerations for use	A description of factors that may impact the implementation or use of this data group within a clinical system.
Misuse	Guidance for implementers about possible scenarios or use cases in which this specific data group (as a whole) is not recommended, incorrect or inappropriate. Where applicable, a suitable alternative data group will be suggested.

In addition, every data group contains an introductory narrative framing the concept by highlighting design, use, and implementation considerations.

Note the two exceptions, 'Measurements and Vital signs' and 'Biomarkers' where a set of data groups have been grouped into a collection of similar concepts, framed by a shared context.

## Concept representation

An image of a mind map for each data group showing all R1 data elements.

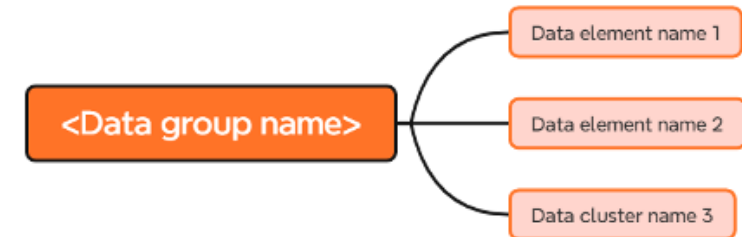


Figure 8. Example mind map structure.



### 5.1.1.3. Information model

Every data group also contains a table that explains the specific attributes for each data element comprising:

Table 3. Example information model.

	Description	A description or definition of the name of the data element
<b>&lt;Data element name&gt;</b>	Element occurrence	Optional or mandatory: single occurrence only or allows more than one occurrence, for example, to record more than one coded value
	Data type	An indication of the type of data allowed to be captured; a choice of data type is allowed if more than one data type is noted.
	Proposed code system/value set	For CodeableConcept data types, a proposed value set will be recommended or proposed.  For example: an agreed value set of SNOMED CT-AU terms limited to the context of the data element
	Examples	Examples of acceptable data entries may be provided to clarify what information could be recorded in this data element.
	Alias	A list of synonyms for the name of the data element.
	Considerations	A description of factors that may impact the implementation or use of this data element within a clinical system.

## Specific alignment to AUCDI design principles

All data groups are designed to align with the data design principles outlined in section 7. These principles apply equally to every data group, while the applicability of five of the design principles may vary depending on the specific concept for the data group and specific alignment with national clinical and technical standards, projects, and legislation that support the rationale for the data group and its component data elements may be highlighted.

The topic headings for each of these design principles are:

Table 4.

<b>Reduce duplication, Single entry, single development (multiple use and reuse)</b>	Identifies known or anticipated opportunities to reuse the health information, recorded as per the data group specification, within other contexts or specifications.
<b>Driven by a clinical quality and safety use case supporting patient-centred care</b>	Identifies known or anticipated benefits of using the data group in patient outcomes.
<b>Aligns and leverages agreed national standards and initiatives</b>	Identifies relevant Australian standards, specifications, or projects.
<b>Aligns with international standards and initiatives</b>	Identifies relevant international standards, specifications, or projects.
<b>Inclusive engagement to involve all healthcare domains and modalities</b>	Identifies the applicability of the data group to specific healthcare domains, peak bodies, or types of data recording.

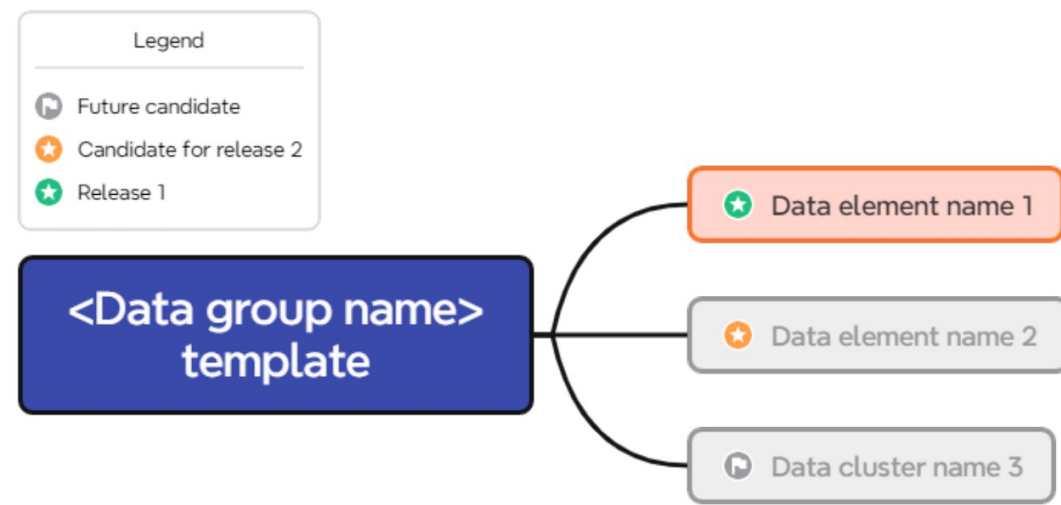
## For future consideration

Each data group or collection contains a description of how the Release 1 content might evolve. Specific considerations may be highlighted, and issues that may have been identified as controversial may require further investigation and discussion.

Finally, a mind map of a proposed, comprehensive data group is considered a potential road map for future AUCDI releases and clinical information system evolution.

Each mind map has a legend:

- Nodes displayed as black text on an orange background and containing a green star icon are included in R1,
- Nodes displayed as grey text on a grey background and containing an orange star are candidate data elements for Release 2, and
- Nodes displayed as grey text on a grey background and containing a grey flag are candidate data elements for future AUCDI releases.





# Feedback

1. Suggestions for improvement in the data groups or elements
  1. Is the clinical content correct (e.g., data element names and descriptions)
  2. Is the metadata appropriate (e.g., use and misuse)
  3. Is there anything missing or inappropriate
  4. Are there issues with the use of terminology (code system and value set) of the data elements
2. Suggestions for additional data elements not yet in the backlog and why?
3. Are there significant barriers to development, implementation, or use for any of these data elements in Draft AUCDI R1 that warrant a change in definition, or removal?
4. Suggestions around additional use cases and data groups/elements to support those use cases to go on our roadmap
5. General feedback on the document, including
  - Additional references
  - Additional information to provide greater clarity or context around the AUCDI and its use
  - Additional national standards and initiatives we should be considering

# Feedback

- Through the Microsoft form
  - General feedback
  - Specific feedback about each data group and each data element
  - Overall recommendation for each data group
    - Accept
    - Minor revisions
    - Major revisions
    - Reject
    - Abstain
- Due 8 March 2024
- Please share with your networks!
- Please contact us at [fhir@csiro.au](mailto:fhir@csiro.au) if you have any questions





# AUCDI Timeline





AUCDI

Q&A

The image features a solid orange background with six white rounded rectangles scattered across it. The rectangles are of various sizes and orientations, some tilted and some horizontal. The text 'AU Core Update' is positioned on the right side of the image.

# AU Core Update

# AU Core R1 Ballot for Comment in March



1

## Ballot sign-up

08/02/2024 to  
08/03/2024

2

## Ballot period

11/03/2024 to  
31/03/2024  
submit issues and  
ballot votes

3

## Ballot resolution period

01/04/2024 to  
31/05/2024

4

## Ballot resolution snapshot

AU Core 0.4.0-draft  
published  
25/06/2024

AU Core Ballot for Comment  
Voter **sign-up form**



For more information check out  
**Introduction to AU Core**

Zoom recording: QR code | Passcode: FhF\$4%kD





AU FHIR Accelerator



Register for Sparked

Draft AUCDI R1 for comment



AUCDI Feedback

Thank you