


Sparked



Day 2, September 12, 2024

Clinical Design Group

A photograph of three people standing in a hallway. On the left is a woman with long brown hair and glasses, wearing a black t-shirt with the Sparked logo. In the center is a man with a beard and glasses, also wearing a black t-shirt with the Sparked logo. On the right is a woman with dark hair, wearing a black t-shirt with the Sparked logo and a name tag. The background is a purple wall with a door.

AUCDI RELEASE

Sparked
AUCDI

Sparked
AUCDI



Acknowledgement of Country

We acknowledge the Traditional Custodians of the land on which we all gather today, the land of the Jagera and Turrbal people.

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

Agenda – Day 2

Time	Topic	Facilitator / Speaker
8.30am	Registration	
eRequesting in Action		
9.00am	eRequesting in Action Introduction and Recap	Michael Hosking
9.15am	eRequesting in Action Requester Perspectives Provider Perspectives Intro to RCPA and RANZCR catalogues Industry perspectives DoHAC perspective	Rob Hosking Ken Sikaris Carmen Wong David Willock Jess White Angus Millar Jeremy Sullivan
10.30am	Morning Tea	
11.00am	Workshop 4: eRequesting terminology in Action Identifying opportunities for standardisation of national catalogues	Liam Barnes & Michael Hosking
12.15pm	AUeReqDI Release 1 update	Kylynn Loi
12.30pm	Lunch	
Chronic Disease Management		
1.30pm	Chronic Disease Management Introduction	DoHAC
1.40pm	Chronic Disease Management Perspectives	Jackie O'Connor Steven Kaye Nyree Taylor Tim Blake
2.10pm	Workshop 5: Chronic Disease Management Use Cases – Exploring workflows and scoping	Kylynn Loi & Kate Ebrill
3.00pm	Afternoon Tea	
3.30pm	Workshop 5: Chronic Disease Management Continued - Data Group development	Kylynn Loi, Heather Leslie, & Kate Ebrill
4.15pm	Closing remarks and next steps	Kate Ebrill

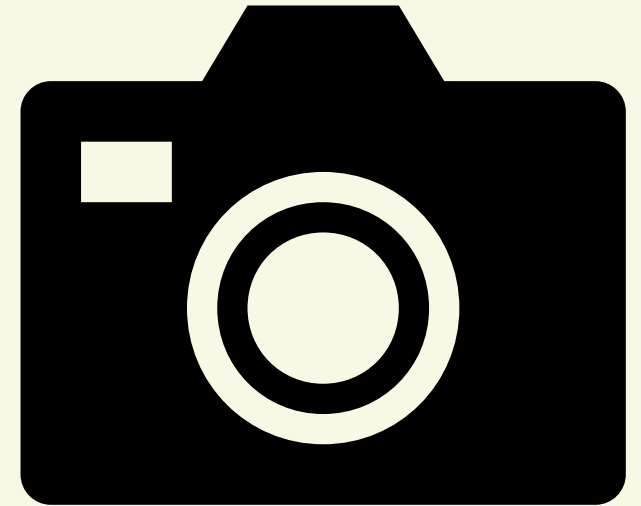


Photos/Video

Please be advised that photographs and video will be taken at the event for use on our website and in other written and online publications.

By entering this event, you consent to the photography and video and using your image and likeness.

If you do not wish to be photographed or videoed, please inform the Sparked team.



eRequesting in Action



Detailed Agenda – Day 2 AM – eRequesting

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10.30am	Morning Tea	
11.00am	Demo & Workshop 4: <u>eRequesting terminology in Action</u> Identifying opportunities for standardisation of national catalogues	Liam Barnes Michael Hosking

Objectives



Objectives



Revisit our progress on eRequesting



Discuss the benefits and opportunities of nationally standardised terminology catalogues



Show how national terminology catalogues can work

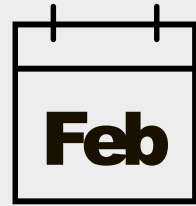


Identify considerations for nationally standardised terminology catalogues

Revisit



Where we've come from



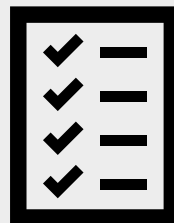
Identified priorities and workflow scope



AUeReqDI R1 comments under review



AUeReqDI R1 to be published



eRequesting Terminology Catalogues under development



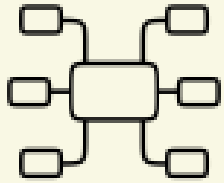
eRequesting FHIR Terminology Valuesets under development



What are AU eReq IG and Australian eRequesting Data for Interoperability (AUeReqDI)?

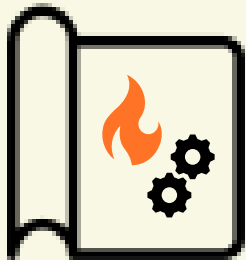
CDG is here

AU
eReq
DI



Specifies “*WHAT*” clinical information (and corresponding **data elements and terms**) should be included for data entry, data use and sharing information supporting **eRequesting**

AU
eReq
IG



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

TDG is here

AUeReqDI R1 Draft for Community scope

Builds upon AUCDI and AU Core – (Patient, Problem/diagnosis (condition), etc.)

AUeReqDI R1 scope

- Service request (generic)**
- Service name
 - Clinical indication
 - Clinical context
 - Urgency
 - Service due
 - Comment
 - Distribution list*
 - Urgent contact*
 - Billing guidance*

- Implanted device summary***
- Device name
 - Status
 - Overall comment
 - Last updated

- Service request (Pathology test request)**
- Test name ("Service name")
 - Clinical indication
 - Clinical context
 - Urgency
 - Service due
 - Comment
 - Fasting status
 - Distribution list*
 - Urgent contact*
 - Billing guidance*

- Service request (Medical imaging request)**
- Test name ("Service name")
 - Clinical indication
 - Clinical context
 - Urgency
 - Service due
 - Timing
 - Comment
 - Target body site/laterality
 - Modality
 - Contrast use
 - Distribution list*
 - Urgent contact*
 - Billing guidance*

CDG is here

- Incorporated from AUCDI**
- Problem/ Diagnosis
 - Adverse reaction risk
 - Sex and gender

Proposed IG scope

- Service request (generic)**
- Requester order identifier
 - Billing
 - Requester
 - Receiver order identifier
 - Receiver
 - Distribution list

- Service request (Pathology test request)**
- Requester order identifier
 - Billing
 - Requester
 - Receiver order identifier
 - Receiver
 - Distribution list
 - Specimen collection
 - Collector
 - Collection date/time
 - Identifier/label
 - Body site/laterality
 - Self determination
 - Rule 3 exemption
 - S4B(3) exemption
 - Result recipient
 - Urgent result contact

- Service request (Medical imaging request)**
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TDG is here

- Identified for AUCDI Backlog**
- Current pregnancy status
 - Estimated Date of Delivery
 - Last menstrual period
 - Menstruation summary

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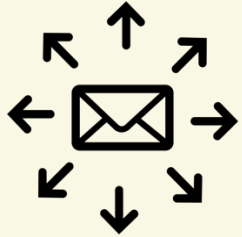
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eRequest workflows in scope for R1 Community Consensus from February



1. Request generated, and **Consumer can choose** a suitable provider

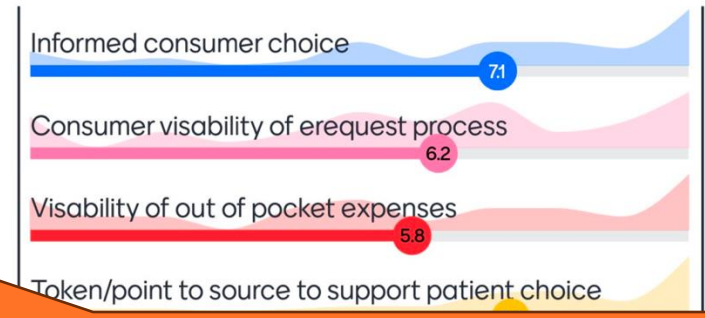
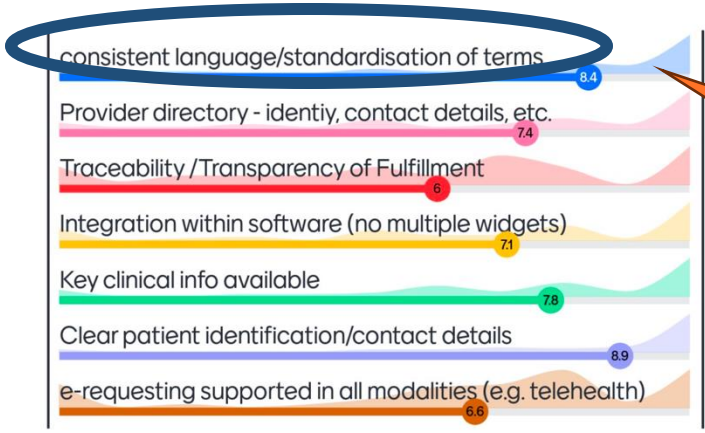


2. Healthcare provider discusses and **agrees with Consumer the recommended provider** with a Request Generated to that provider with the consumer following the recommendation



3. Healthcare Provider discusses and **agrees with Consumer** a recommended provider, request generated and later the **consumer chooses an alternative to the recommended provider**

Priorities R1



CDG Top-voted priority:
consistent language and standardisation of terms

Priorities R1



Results from activities held at the 14 Feb 2024 (TDG) workshop

What does success look like - where would you like us to be in 2 years?

No more paper requests!!!!	R1 Complete and Mandated - R2 Underway	Industry implementation of IG	Transparent standardisation at the point of care
Green shoots of adoption	Initial requests being sent and received electronically	Implementation of erequesting in our clinical information system	Industry engaged with implementation

A small volume of Erequests are transmitted nationally in anger	Standardisation of terminology and workflows	Seamless cross enterprise access	No paper/faxed requests
Path and Rad to be friends :(R1 done and dusted. Stakeholders using, and providing brutal feedback. Builders building and listening. Government very happy.	Patients can access their requests online	Accurately identified patient, test, result recipients, accurate patient safety & clinical info
Erquesting is the default and preferred method of requesting	Industry adoption of electronic referral, underpinned by FHIR	Consistent terminology for requesting	Data collected for Quality Indication
Waaaay more HIE	Standardised terminology value sets with effective governance to respond to changing needs,	GPs and Allied Health are requesting a health service	Really available information for all based on R1. And a bit more...
All listens to consultation and cross references health record and suggests relevant tests with associated instructions, approx costs and pt friendly instructions.	Clear identifiable test request with patient ID and good clinical information	General public has been updated and don't expect too much Profession has been educated regarding the need Implementation guide implemented Software providers have heads up for R2	Seamed interoperability
Standardised Terminology	Standardised terminology, patient identifiers	Consumers happy	System trusted by patients and referrers
Literacy for electronic records	Information flows to GP systems to give more visibility would also be nice...	Diagnostic eRequesting with all green requirements. Receiving orders routinely. Order status response messages. Moving to include more data streams	Platforms to built future-proofed trust frameworks that protect patient data
Optimistic	Geeks know what the GPs want	FHIR	Thirsty

Most mentioned from TDG

Standardised terminology

Requester perspective

Rob Hosking

RACGP



**WHEN YOU SEE
MULTIPLE DOCTORS**

Provider perspective
Ken Sikaris
Dorevitch

Pathology Requesting

A/Prof Ken Sikaris

BSc, MBBS, FRCPA, FAACB, FFSc, GAICD

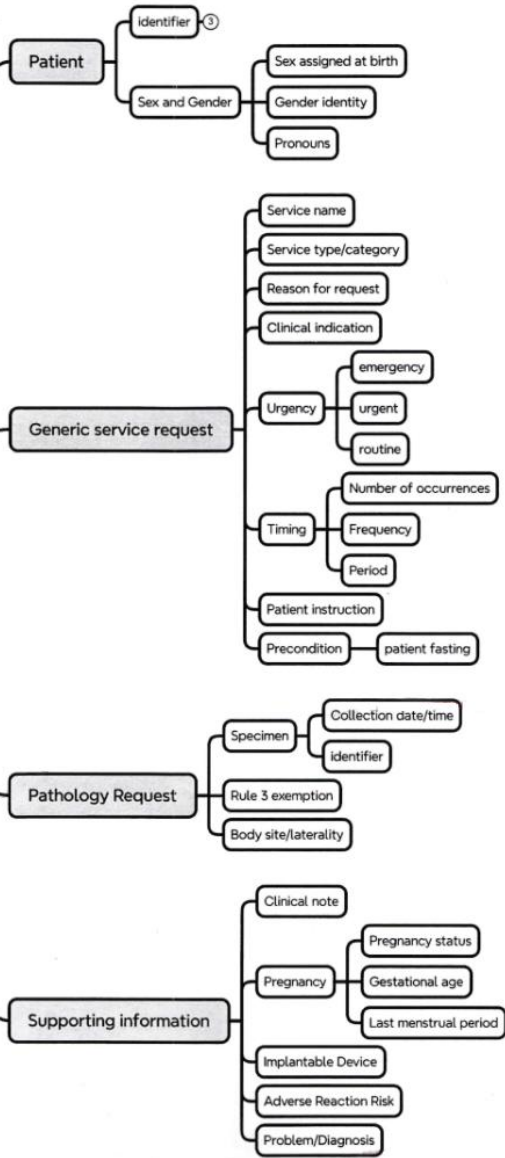
Sparked Community Co-Design Workshop

Brisbane

12th September 2024



Pathology eRequesting



Graham Grieve (MAACB)

AACB Examination Prize

Mr G Grieve

1992

Examinations

The following people were admitted as Fellows of the Association:

Andrew Wootton
Peter Vervaart

The following people were admitted as Members of the Association:

Richard Banter	David Kanowski
Christine Chin	Susan Kilbride
Michael Freemantle	Ivan Peluso
Grahame Grieve	Mary Anne Townsend
Graham Jones	Samuel Vasikaran

David Kanowski and Mary Anne Townsend were commended for attaining a high standard in the examination and Grahame Grieve was awarded the AACB Examination Prize.

Herbert K, **Sikaris KA**, Grieve G,
O'Neal D, Lee P, Hale G, Best JD,

Lipid risk factor profiles in Women with Coronary Artery Disease; Influence of Diabetes. Proceedings of the 1995 Atherosclerosis Society Annual Meeting, 1995

Schneider HG, Grieve G, Desmond P, **Sikaris KA**,

Amylase Versus Lipase in the diagnosis of pancreatic disease. Proceedings of the XVI IFCC Congress, London, June 1996.

Pathology Units and Terminology Standardisation



PUTS 2012

Pathology Information Terminology and Units Standardisation



PITUS 2014



PITUS 2016

PITUS 2018-20



JANUARY 2024

STANDARDISED PATHOLOGY INFORMATICS IN AUSTRALIA (SPIA) GUIDELINES v4.1

RCPA

SPIA

*Standardised Pathology
Informatics in Australia*

V4.1

9 Safe pathology requesting

- S9.04 Pathology requests should be computer-generated.
- S9.09 Computer systems used for requesting pathology or decision support should allow for the capture of pertinent clinical information.
- S9.11 Computer systems used for requesting pathology must support the use of standardised terminology for pathology tests.
- S9.13 The clinician must have access to appropriate knowledge systems to assist with ordering relevant pathology tests.
- S9.14 Electronic requesting systems should have electronic decision support.

Ann Intern Med. 2006;145:488-496.

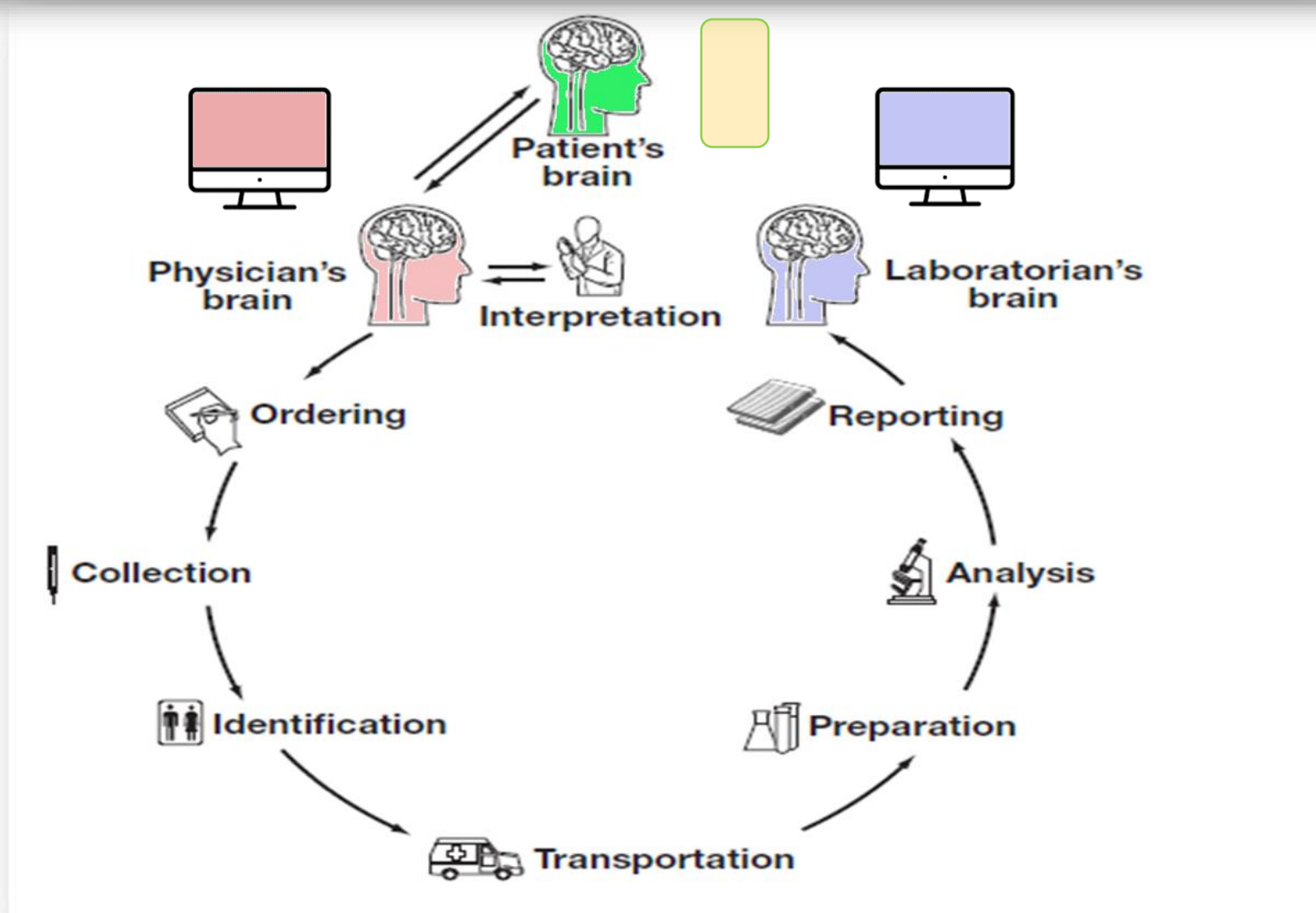
Missed and Delayed Diagnoses in the Ambulatory Setting: A Study of Closed Malpractice Claims

Tejal K. Gandhi, MD, MPH; Allen Kachalia, MD, JD; Eric J. Thomas, MD, MPH; Ann Louise Puopolo, BSN, RN; Catherine Yoon, MS; Troyen A. Brennan, MD, JD; and David M. Studdert, LLB, ScD

- Diagnosics Errors: 181/370 (59%) of malpractice claims
 - 59% serious harm, 30% death
- Causes
 - **55% failure to order diagnostic test**
 - 45% no follow up plan
 - 37% no history / examination
 - **37% incorrect interpretation diagnostic test**

The Brain-to-Brain Loop Concept for Laboratory Testing 40 Years After Its Introduction

Mario Plebani, MD,¹ Michael Laposata, MD, PhD,² and George D. Lundberg, MD³





PATHSUPPORT FINAL REPORT

PREPARED FOR THE

DEPARTMENT OF HEALTH

BY

THE ROYAL COLLEGE OF PATHOLOGISTS OF AUSTRALASIA

NOV 2014

The Royal College of Pathologists of Australasia
ABN: 52 000 173 231

Durham Hall
207 Albion Street
Surry Hills NSW 2010
Ph: 02 8356 5858 Fax: 02 8356 5828

- Aim

- *to seek input on the possible use of desktop software to help improve the quality of pathology ordering by General Practitioners*
- **Monash University**
- **UNSW / AIHI**
- **University of Sydney / FMRC**
- **National Prescribing Service**
- **Pathology Sector**
- **Desktop Software Vendors**
- **GP Workshops**

RCPA PathSupport;

Consensus of problems identified

Clinician

1

Difficulty in providing the best care due to **lack of clinical context**

2

Difficulty in requesting “recommended” tests due to **lack of easily accessed guidance**

3

Difficulty in **avoiding the ordering of tests of “no value”** for a context.

4

The generation of **unintended bills** due to lack of knowledge of Medicare schedule

5

Difficulty in ordering “additional tests” due to **lack of knowledge**

6

Specimen collection issues due to **lack of patient information sheets**

7

Time wasted and reduction in quality of care due to **data entry errors** (eRequesting)

8

Difficulty in providing the best pathology consulting due to a lack of *further* clinical information associated with the test e.g. **current medications, current problems**

P
a
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t

Pathology

Design Principles

1. Manually override suggest tests
2. No negative impact on workflow

The need for clinical information in e-Requests

1. Reimbursement Requirement
2. To perform the correct tests for that clinical context
3. To interpret the pathology results in that clinical context
including the identification and urgent communication of life threatening results

MBS Review; Final Report



An MBS for the 21st Century Recommendations, Learnings and Ideas for the Future

Medicare Benefits Schedule Review Taskforce
Final Report to the Minister for Health

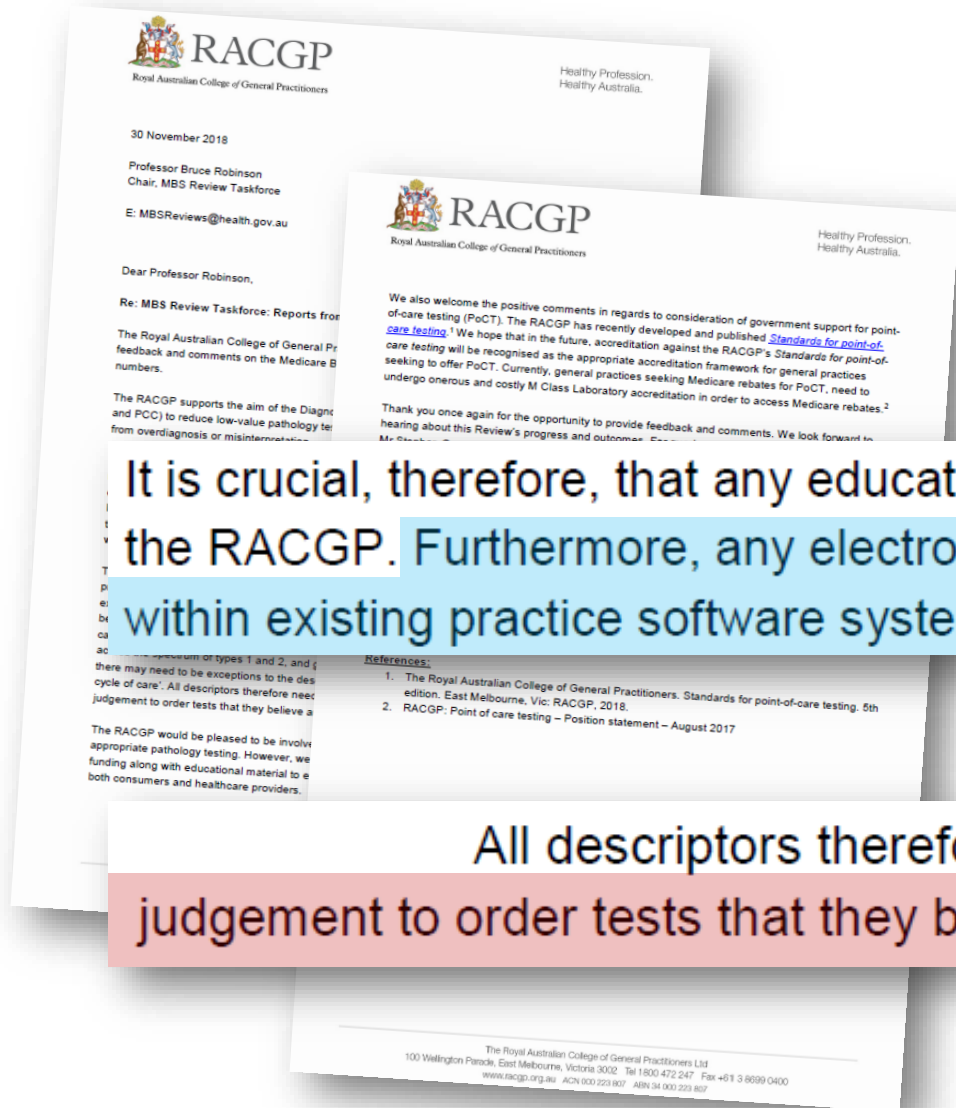
December 2020

Clinical Decision Support

Clinical Decision Support (CDS) can be defined as 'the provision of advice at the point of care (when decisions are being made by the medical professional) that is tailored to the clinical context of the specific patient.' CDS can enhance high value advanced imaging requests, reduce inappropriate overuse and misuse, and **provide a source of clinical knowledge for requesting clinicians.**

The Taskforce recommends a focused effort to support the use of CDS tools that are currently available and to facilitate the development and expansion of CDS tools to enable appropriate use of health services.

RACGP Response



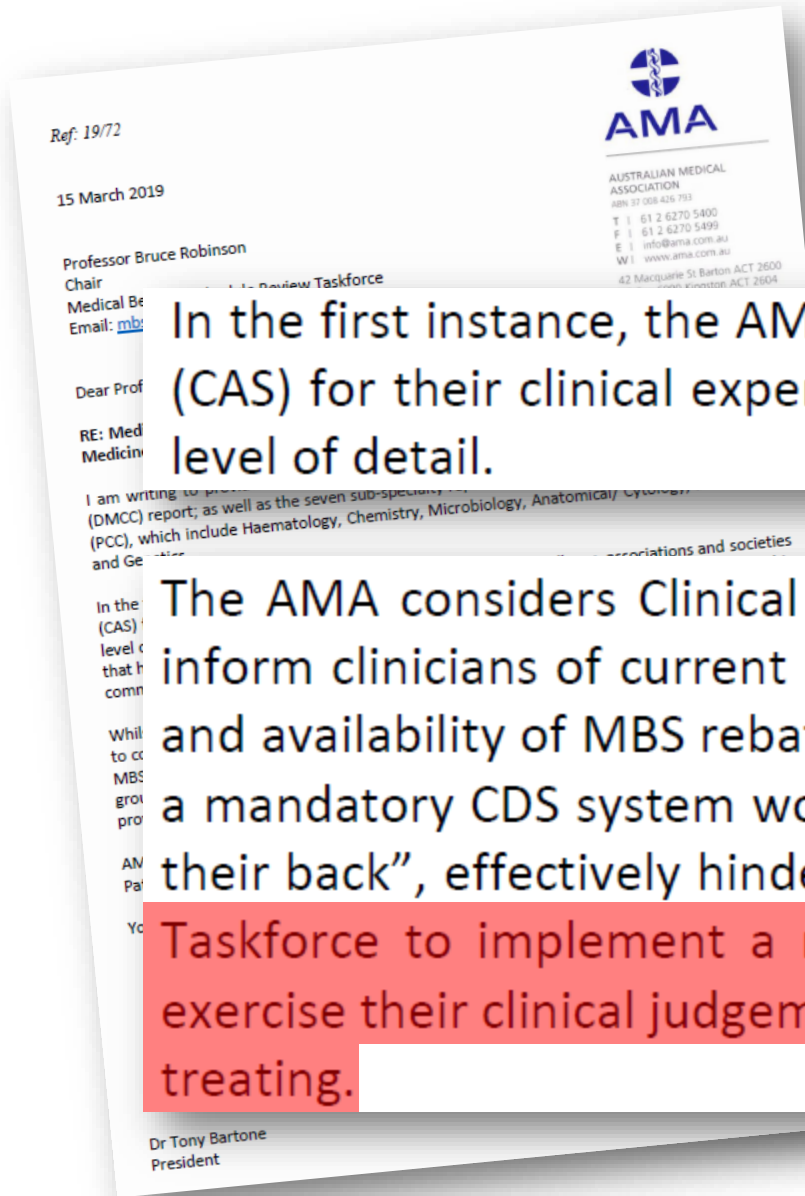
Integration

It is crucial, therefore, that any education and decision support is developed in close consultation with the RACGP. Furthermore, any electronic clinical decision support would need to be implemented within existing practice software systems for this mechanism to be effective.

All descriptors therefore need to be flexible, so clinicians can use their own clinical judgement to order tests that they believe are clinically relevant for the patient.

Clinical autonomy

AMA Response



In the first instance, the AMA generally refers to the relevant colleges, associations and societies (CAS) for their clinical expertise and advice on the report findings and recommendations at this level of detail.

The AMA considers Clinical Decision Support (CDS) systems to be useful tools to educate and inform clinicians of current best practice, at the point of care, for requesting of diagnostic tests and availability of MBS rebates. However, the AMA believes that the DMCC recommendation for a mandatory CDS system would, as an AMA representative conveyed "tie doctors' hands behind their back", effectively hindering their ability to tailor care for patients. The AMA urges the MBS Taskforce to implement a non-mandatory CDS system and/or allow clinicians to continue to exercise their clinical judgement in relation to the particular circumstances of the patient they are treating.

AMA Response;

Integration

Furthermore, if a CDS system is implemented, a key issue will be to ensure the system is integrated into clinical software, and not be a stand-alone system, so that pathologists can communicate results quickly, effectively, and equitably to requesting and treating doctors.

I have been advised that CDS prototypes exist and feedback from members reveal there are several good systems worldwide for radiology including the one developed at Royal Perth Hospital in Western Australia. I am also aware that the RCPA has undertaken extensive work (funded by the Department of Health) in developing CDS prototypes for pathology. It would therefore be logical for the Taskforce to leverage this work, if the initial trial of CDS for radiology items proves acceptable to the medical profession and is effective in ensuring clinically appropriate requesting of diagnostic tests.



Dr Frank Pyefinch

MBBS . Grad Dip IT

Chief Executive Officer



Lorraine Pyefinch

BHSc (Nursing), MMNT

Executive Director

Best Practice
An evolution in medical software

Leading Software for Healthcare Practitioners.

- Secure Digital Patient Records
- Integration with Medicare for Simple Bulk Billing
- Billing, Scheduling & Patient Reminders in One Platform

Bp Premier **Bp Allied** **Bp VIP.net**

Bp Premier **Bp VIP.net** **Bp Allied**

Pathology request

Request date: 19/04/2017

Laboratory: Best Pathology Service



- Clinical context (may be multiple)
- Abdominal Pain
 - Abdominal Pain (Pregnancy)
 - Antenatal Screen (<20 weeks)
 - Antenatal Screen (24-28 weeks)
 - Antenatal Screen (30-36 weeks)
 - Diabetes Diagnosis
 - Diabetes Monitoring (3 monthly)
 - Diabetes Monitoring (Annual)
 - Diabetes Screening
 - Fatigue
 - Health Check-Up
 - UTI (Diagnosis)
 - AAA testing

- Additional tests
- AFP <ideally gestational age 15-17/40>
 - CMV Ab
 - Genital swab MCS
 - GTT <fasting>
 - Hb electrophoresis
 - Hep B viral load
 - Hep C viral load
 - Iron studies
 - Pap smear
 - Second trimester screen <record patient ...>
 - Swab HSV PCR
 - Urine Chlamydia PCR <first void>
 - Urine Gonorrhoea PCR <first void>

- Indication
- should add if at risk e.g. PHx of NTD or uncontrolled diabetes.
 - should add if at risk e.g. child worker.
 - should add if at risk e.g. PHx, MSU.
 - should add if at risk e.g. obese or ATSI.
 - should add if at risk e.g. ethnicity.
 - should add if Hep B carrier.
 - should add if Hep C carrier.
 - should add if at risk e.g. vegan or <25 y/o.
 - should add if due for biannual pap smear.
 - should replace First trimester screen if >13/40.
 - should add if genito-urinary ulcer.
 - should add if at risk e.g. <25 y/o.
 - should add if high risk e.g. sex worker.

Include all contexts

Initial recommended test [More info](#)
 FBE, First trimester screen <record patient wt and gest date 10-13 wks 6 days>, Glucose <random>, Group & Ab screen, HBsAg, Hep C Ab, HIV Ag/Ab, Rubella Ab (immune status), Syphilis Ab, Urine MCS
First trimester screen could consider **Harmony** prenatal test if financial consent given.
Hep C Ab recommended especially in those at risk.
Hep B viral load: Medicare rebate is available. If Medicare criteria is not met, a fee of up to \$200 is charged.
[MBS schedule for Hepatitis B viral load](#)
Hep C viral load: Medicare rebate is available. If Medicare criteria is not met, a fee of up to \$200 is charged.

Favourite tests

Search tests:

Commonly abnormal other tests

- EUC
- LFT
- Chol, Trig, HDLC <random>
- Glucose <fasting>
- Ca, PO4
- Urate
- CRP

Tests requested:

Additional clinical information:

Free text:

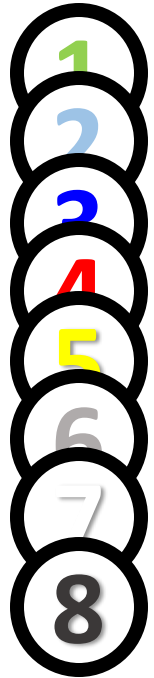
Billing: Direct Bill

Fasting

Data version: 10.2

Add an entry to the actions database

Due on: 19/04/2017





General practice data and electronic clinical decision support

Consultation Regulation Impact Statement

4. Problems with eCDS

- Lack of transparency of evidence base for some eCDS recommendations
- Challenges integrating eCDS functionality onto clinical workflow
- Lack of oversight on implementation, integration and use of eCDS
- No central repository for clinical guidelines
- Clinical guidelines not optimised for integration into eCDS



Australian Government
Department of Health and Aged Care



SMART®

- help healthcare providers to deliver more effective and timely health care through informative, evidence-based **clinical decision support systems** and data-driven insights.

Digital Health Blueprint
2023–2033

A more personalised and connected health
and wellbeing experience for all Australians

 HL7® FHIR®

SNOMED CT
The global
language of
healthcare



eRequesting and electronic Clinical Decision Support

The Australian Government has invested \$5.8 million over two years from 2023-24 for the Department of Health and Aged Care to collaborate with key sector stakeholders to design a national eRequesting capability. This work includes establishing the technical, clinical terminology and exchange standards required to implement a national eRequesting capability for pathology and diagnostic imaging health services, subject to future decisions of government.

This co-design process will establish the ability to implement the first end-to-end digital pathway for patients and their healthcare providers, from an eRequest to diagnostic result that would be shared to My Health Record. This work will establish information and data standards for pathology and diagnostic imaging, enabling electronic Clinical Decision Support (eCDS) tools and systems to support health

This work will establish information and data standards for pathology and diagnostic imaging, enabling electronic Clinical Decision Support (eCDS) tools and systems to support health professionals across their scope of practice.

Short-term horizon

Partners

CSIRO

Australian Digital Health Agency

Software industry

Nationally Standardised Catalogues (Radiology)

Carmen Wong

RANZCR



The Royal Australian
and New Zealand
College of Radiologists*

The Faculty of Clinical Radiology

Standardised terminology for Radiology

SPARKED CDG WORKSHOP

Carmen Wong

12 September 2024

Toward interoperability

Foundational Interoperability

Secure data exchange without processing.

Structural Interoperability

Data is formatted for easy exchange and understanding.

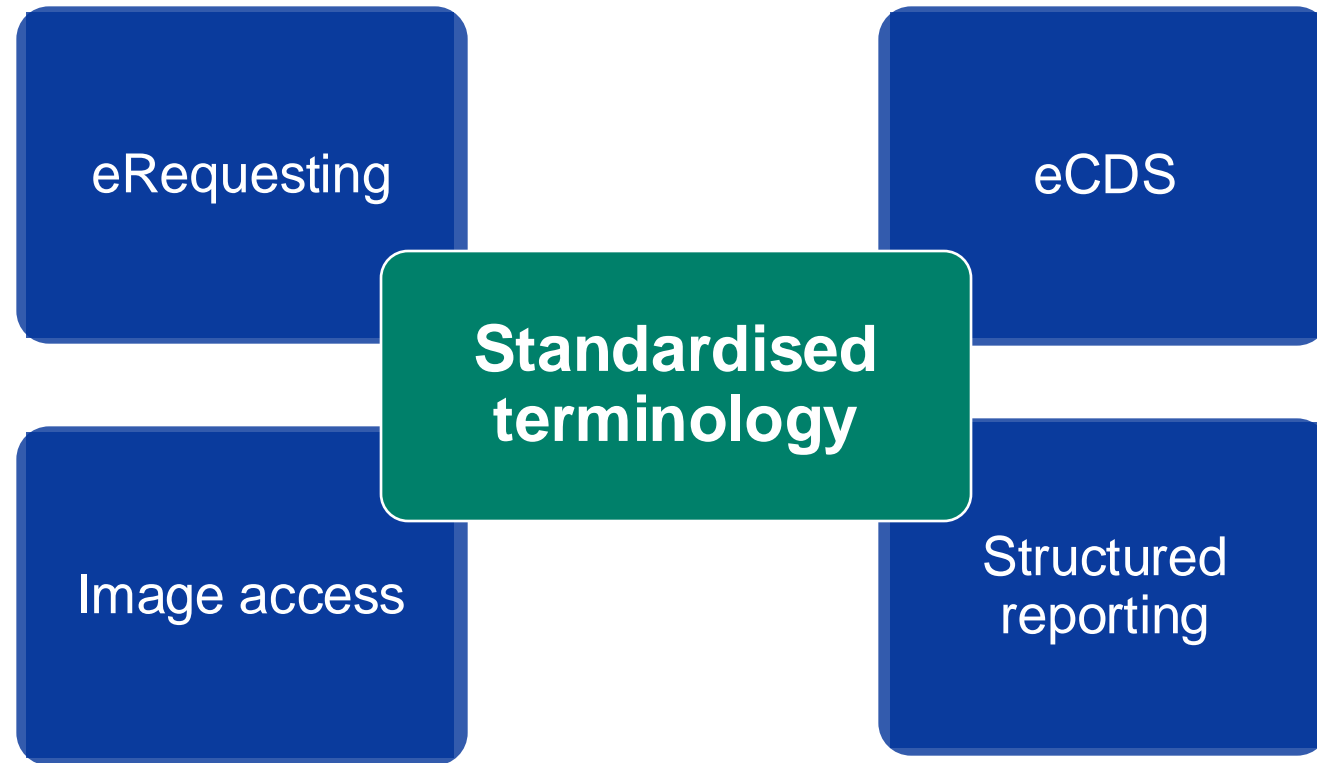
Semantic Interoperability

Standardised codes and terminology enable accurate data exchange.

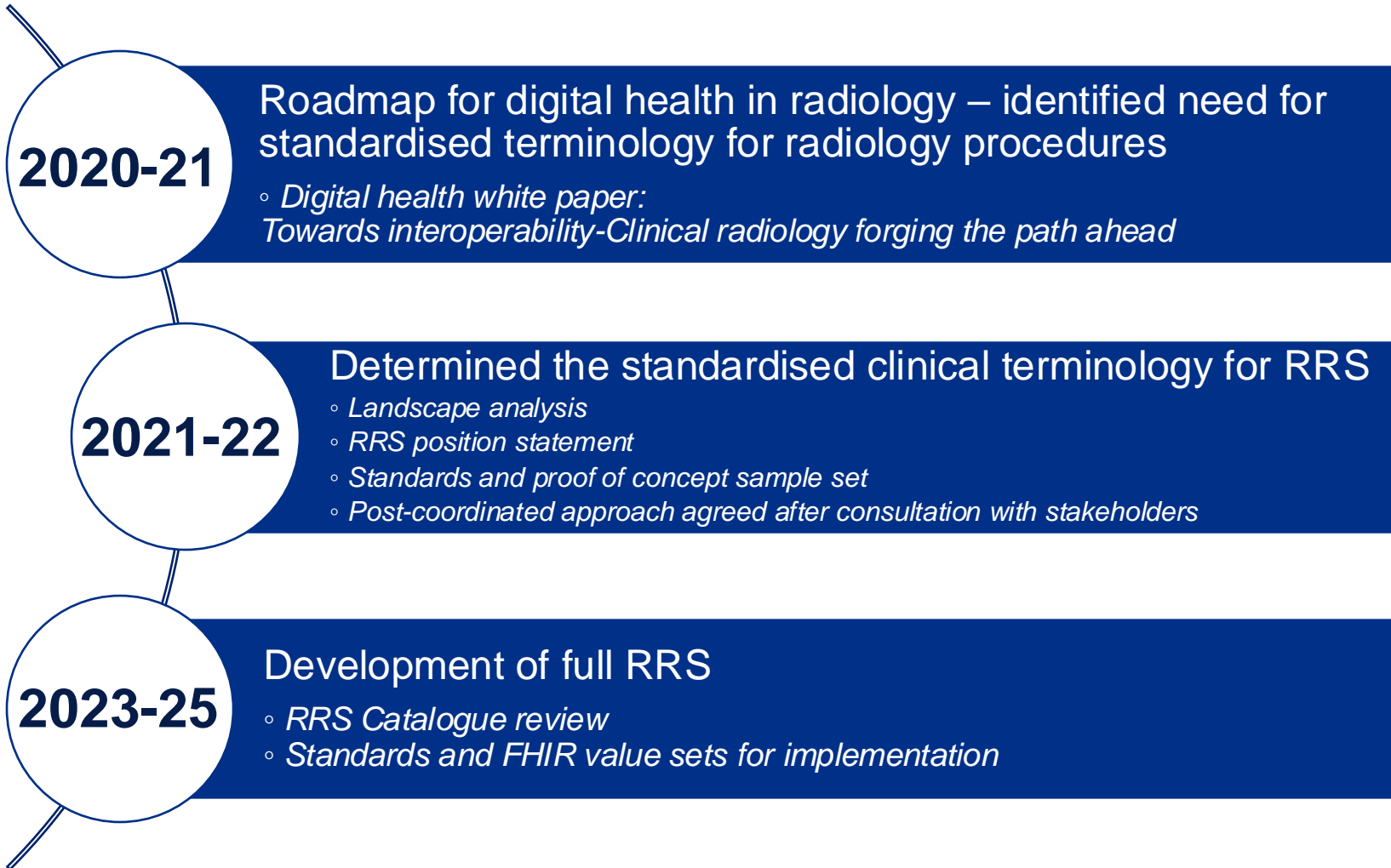
Organisational Interoperability

Governance, policy, and organisational considerations to facilitate seamless and secure data exchange across healthcare entities

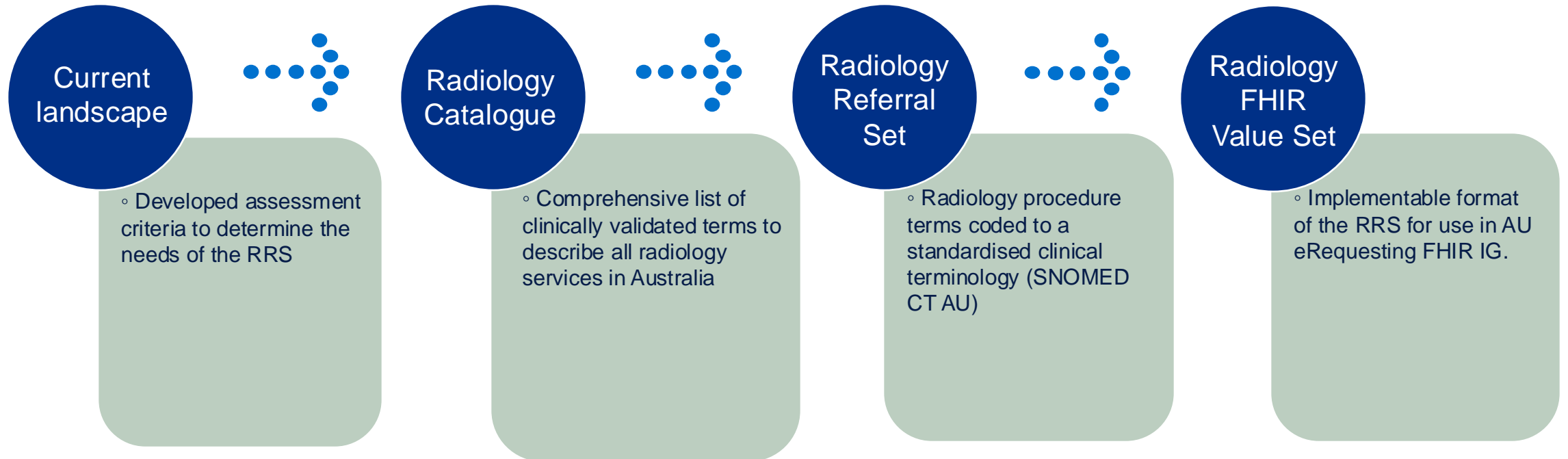
Use cases



Radiology Referral Set



Development approach



Guiding Principles

Term Structure

Common structure based on three fields:

- Modality
- Body site
- Laterality

A fourth field of contrast usage is added when relevant

Clinical Relevance

Terms must refer to clinically relevant procedures and not those that are only theoretically possible.

Granularity

Balance between unambiguous specification of the examination and limiting the number of permitted terms.

Specificity

The term should be the most specific one referring to the whole of the region routinely included in the examination

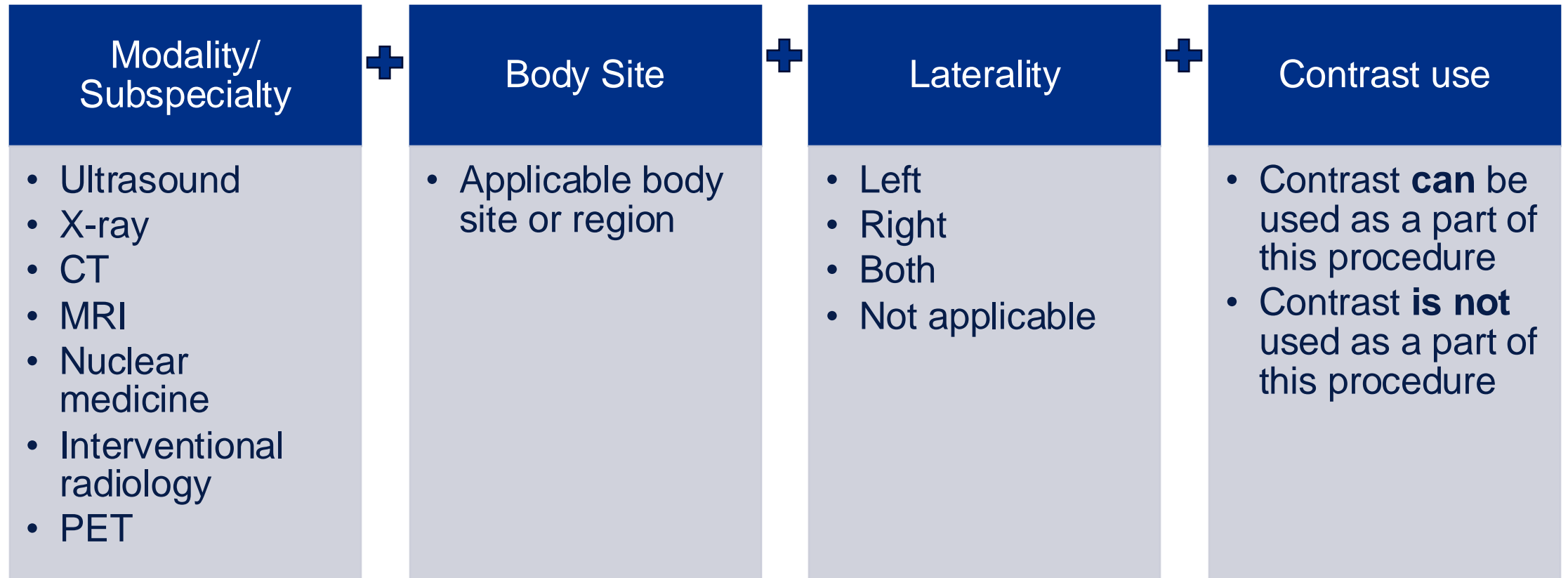
Additional Editorial Guidance Required

Nuclear Medicine

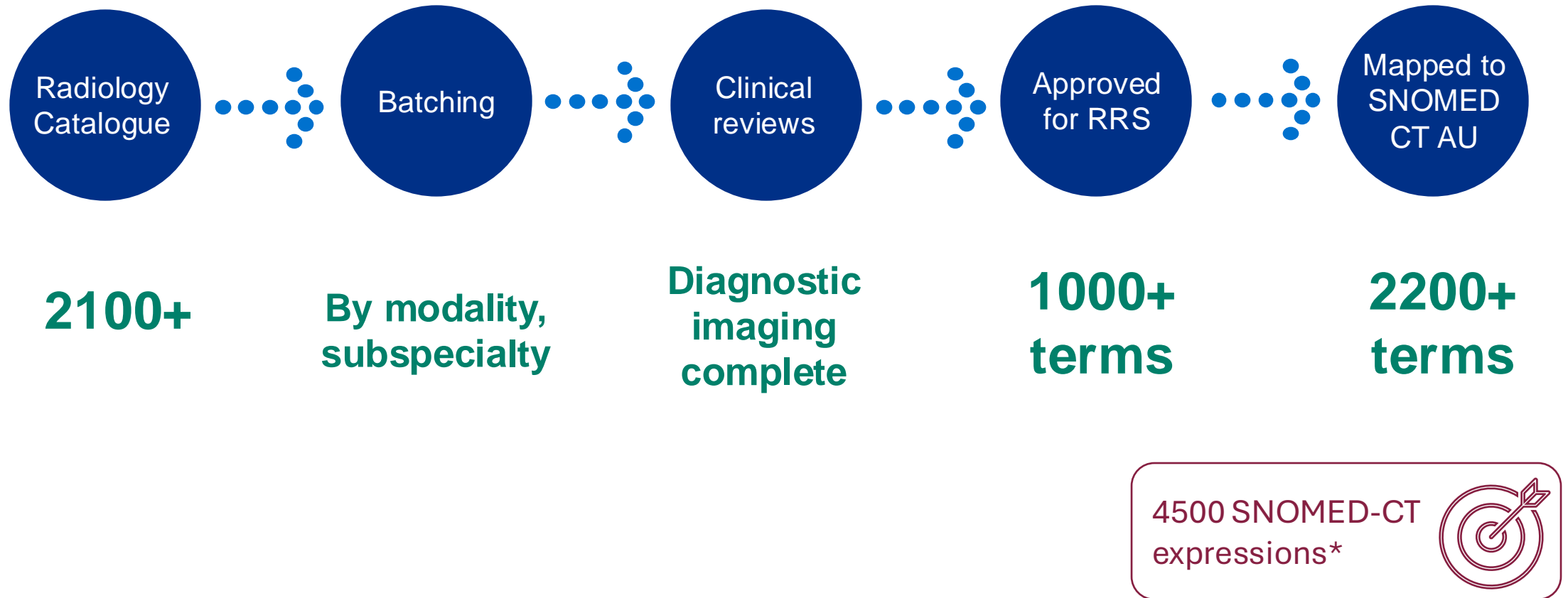
Interventional Radiology &
Interventional Neuroradiology

Hybrid Modalities

Term structure



Progress to date



*Estimated Sept 2024, this figure may change during the clinical review process and gaps are identified or procedures are deprecated

Progress to date

↑ 2228 unique terms uploaded to SNAP2SNOMED

= 698 directly equivalent mapped terms

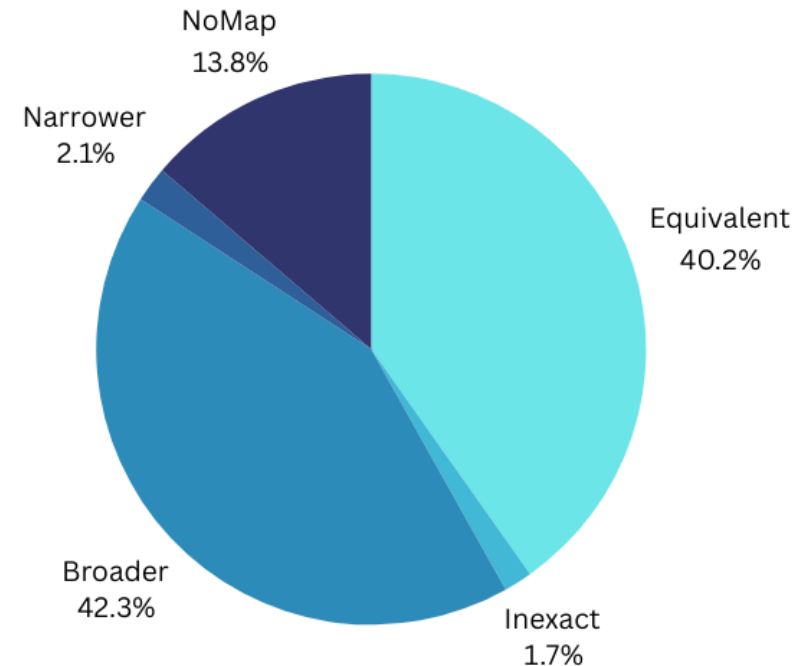
▼ 735 broader terms requiring refinement

▲ 36 narrower terms requiring refinement.

≠ 29 inexact terms requiring refinement.

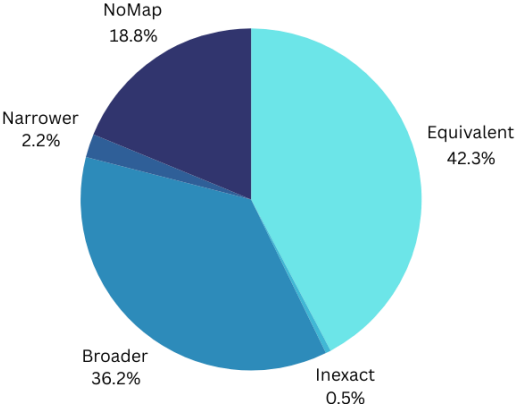
✘ 239 terms with no representation within SNOMED-CT AU

RRS coverage in SNOMED-CT AU

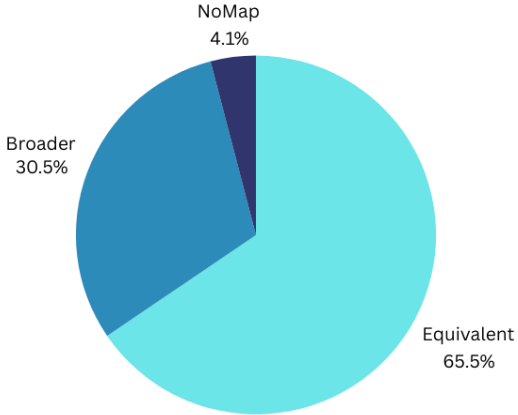


SNOMED CT coverage

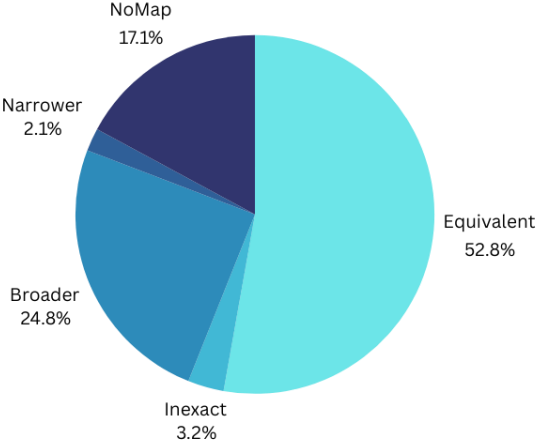
ULTRASOUND



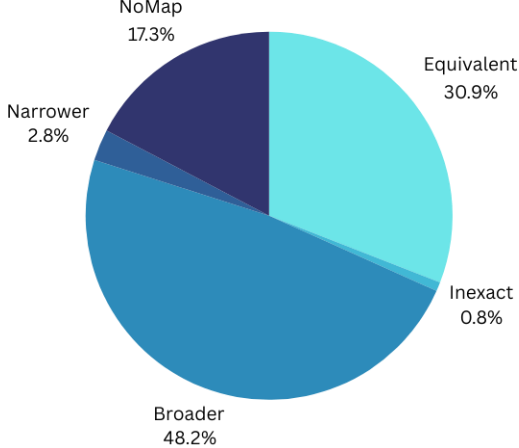
X-RAY



MRI



CT



Progress to date RRV draft candidate v1

Expansion

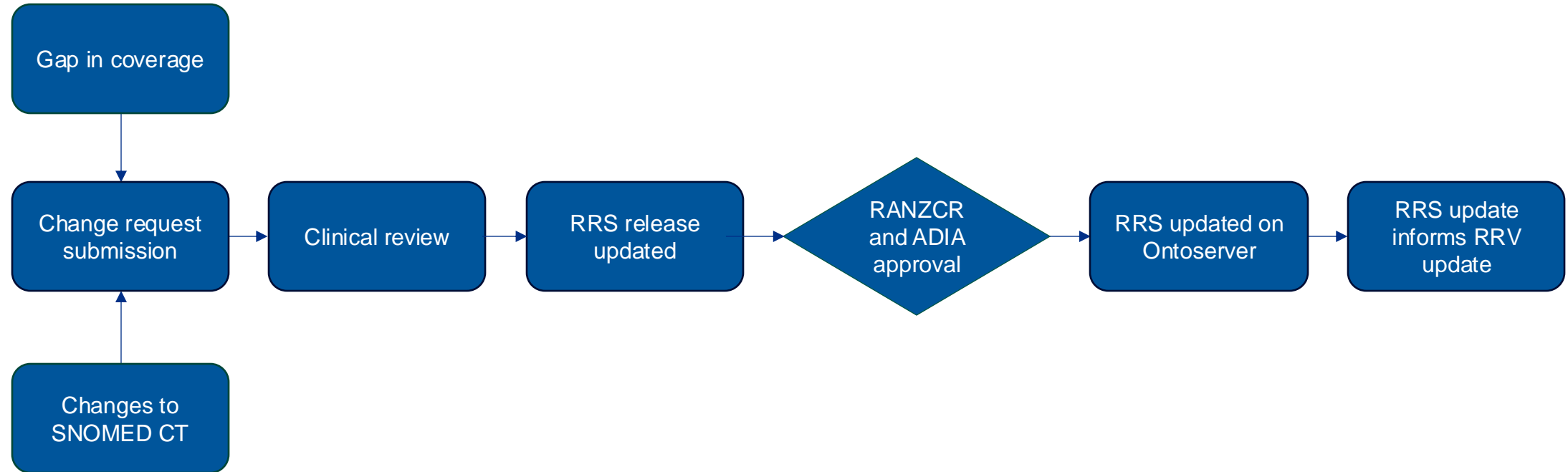
Size: 513

version	http://snomed.info/sct/http://snomed.info/sct/32506021000036107/version/20240831
used-codesystem	http://snomed.info/sct/http://snomed.info/sct/32506021000036107/version/20240831
displayLanguage	en-US,en;q=0.9,en-AU;q=0.8
warning-draft	https://ranzcr.com/fhir/ValueSet/radiology-referral 0.1.0-ballot

Code	Display	System	Inactive	Version
45036003	Ultrasound of abdomen	http://snomed.info/sct	false	
444900008	Ultrasound of abdomen with contrast	http://snomed.info/sct	false	
418394000	Ultrasound scan of abdomen and pelvis	http://snomed.info/sct	false	
241462009	Ultrasound of abdominal aorta	http://snomed.info/sct	false	
241512001	Ultrasound of Achilles tendon	http://snomed.info/sct	false	
871000087105	Ultrasound of left Achilles tendon	http://snomed.info/sct	false	
881000087107	Ultrasound of right Achilles tendon	http://snomed.info/sct	false	
1921000087100	Ultrasound of bilateral Achilles tendons	http://snomed.info/sct	false	
431844005	Ultrasound of acromioclavicular joint	http://snomed.info/sct	false	
241480000	Ultrasound scan of adrenals	http://snomed.info/sct	false	
11691000087107	Ultrasound of left adrenal gland	http://snomed.info/sct	false	
11681000087105	Ultrasound of right adrenal gland	http://snomed.info/sct	false	



Target operating model





The Royal Australian
and New Zealand
College of Radiologists*

The Faculty of Clinical Radiology



australian diagnostic imaging association

Thank you

Standards@ranzcr.edu.au

Nationally Standardised Catalogues (Pathology)

David Willock

RCPA

Pathology Information

Sparked Clinical Design Group

12 September 2024

David Willock
Digital Lead

RCPA

Standardised Terminology and the SPIA Guidelines

9 October, 2024

PITUS and SPIA

- The RCPA [Pathology Information, Terminology and Units Standardisation](#) (PITUS) projects have progressed development of standardised pathology data since 2011.
- As part of the above, the RCPA has developed the Standardised Pathology Informatics in Australia (SPIA) Guidelines along with associated Information Models and Terminology Reference Sets.
- The above Reference sets are available for both Reporting and Requesting. They are downloadable from the ADHA National Clinical Terminology Service – [RCPA resources](#)
- The Requesting Ref Set is being used by the Sparked Program to provide content for the e-Requesting standard.

Standardised Pathology Information

- Providing standardised terms for the same test provides unambiguous information with surety. If standard information is being exchanged, then we can start to:
 - Improve pathology information, for example by reducing transcription errors
 - Build robust decision support, because knowledgebases that support Clinical decisions need to use the same terminology
 - Provide more accurate data analytics and research; data will not need to be converted or manipulated (often manually)
- The RCPA has a rich history in providing Terminology and other Informatics products, supporting the position that more appropriate testing benefits Consumers, Providers, Requestors and Government
- The College acknowledges the time given freely by Fellows to provide oversight and review of the SPIA content.

Standardised Pathology Information

- Benefits include
 - The inclusion of clinical and/ or historical information on pathology requests where appropriate, allowing Pathologists to provide analysis and reporting in the clinical context
 - Consumer choice (digital requests) and convenience
 - Requestors can provide digital requests easily from within the clinical workflow
- Reduction of Risk associated with
 - Transcription errors
 - Misinterpretation of data due to ambiguity of terminology
 - Laboratory variation

Standardised Pathology Information

- If you can't find a Requesting term, you can
 - download the [bulk request template](#) from the [NCTS](#) website and
 - email your submission along with supporting documentation to help@digitalhealth.gov.au or Terminology-Support@csiro.au
- Or you can email the RCPA at pitus@rcpa.edu.au

e-Requesting and eCDS Findings from recent work

9 October, 2024

Recent work on e-Requesting and eCDS

- The RCPA recently finalised a project on e-requesting and e-Clinical Decision Support (eCDS).
- The draft Report has been submitted to the Department.
- Broad consultation included Pathologists, GP's, PHN's, and Medical Software providers.

Findings – e-Requesting

- Paper pathology requests will remain for many reasons, including Patient preference
- When available e-requesting is used by many GP's and can further support Requestors by providing more appropriate test list functionality, providing advice on MBS rebates/ rules, and enabling paper to be switched off
- However, e-requesting is not always used by GP's for various reasons, including the configuration at both the Requestor and Provider end; and differing configurations for different solutions
- When surveyed, feedback suggests that if a standard for e-requests was introduced it could be implemented by all PSPs within 5 years, and 76% could implement within a 3-year window

Findings e-Requesting

- 50% of the surveyed PSP's provided an e-acknowledgement of an e-Request
- Anecdotally, only 50% of pathology requests contain clinical information or the reason for the request. This is seen as the most important piece of information on a request for a PSP, to enable them to provide analysis in the clinical context
- A benefit that could be built into an e-requesting solution is the ability for the PSP to provide immediate feedback to, or seek clarification from, the requestor
- Any campaign to broaden the use of e-requesting should be funded on an ongoing period (until e-requesting is embedded) rather than a single year
- Lack of FHIR expertise is a barrier to entry for FHIR-based services for Jurisdictions (and likely others) and additionally they would benefit with assistance to model/ map terminology

eCDS Findings

- eCDS in this context is digital functionality within the Requestor workflow when requesting Pathology, to support more appropriate testing
- Whilst there was insufficient information from GP Surveys to inform a position on eCDS use, there is a suggestion that it would support *some* GP's *some* of the time.
- This was supported by GP Webinars, that is, whilst eCDS is generally supported, it will not be universally used, and when it is used, it will more likely be for complex cases.
- There remain concerns from clinicians about how eCDS will be implemented, including complexity and the drivers for implementing.

eCDS Findings

- In line with the findings from the work of the RCPA in 2015, where eCDS is introduced, there is a need to ensure:
 - Clinical autonomy for the Requestor is maintained
 - Integration within the clinical workflow
 - Content is reviewed and endorsed by both GP's (and other Requestors) and Pathologists
- Similarly, GPs need to be confident that the development and implementation of eCDS is safe, current, evidence-based, clinically lead and trusted; concerns that it may do harm must be addressed.
- GPs use a wide range of “passive” decision support tools, and the RCPA Manual is a well-recognised source of truth.

Industry perspectives
Angus Miller
Sonic Healthcare

Industry perspectives

ANGUS MILLAR
SONIC HEALTHCARE

SOFTWARE
INTEGRATION
DEVELOPER





FHIR eRequesting



- Sonic's terminology use in FHIR requesting
- Don't get burnt, FHIR challenges and lessons learned
- FHIR publishing, what is it!



FHIR eRequesting



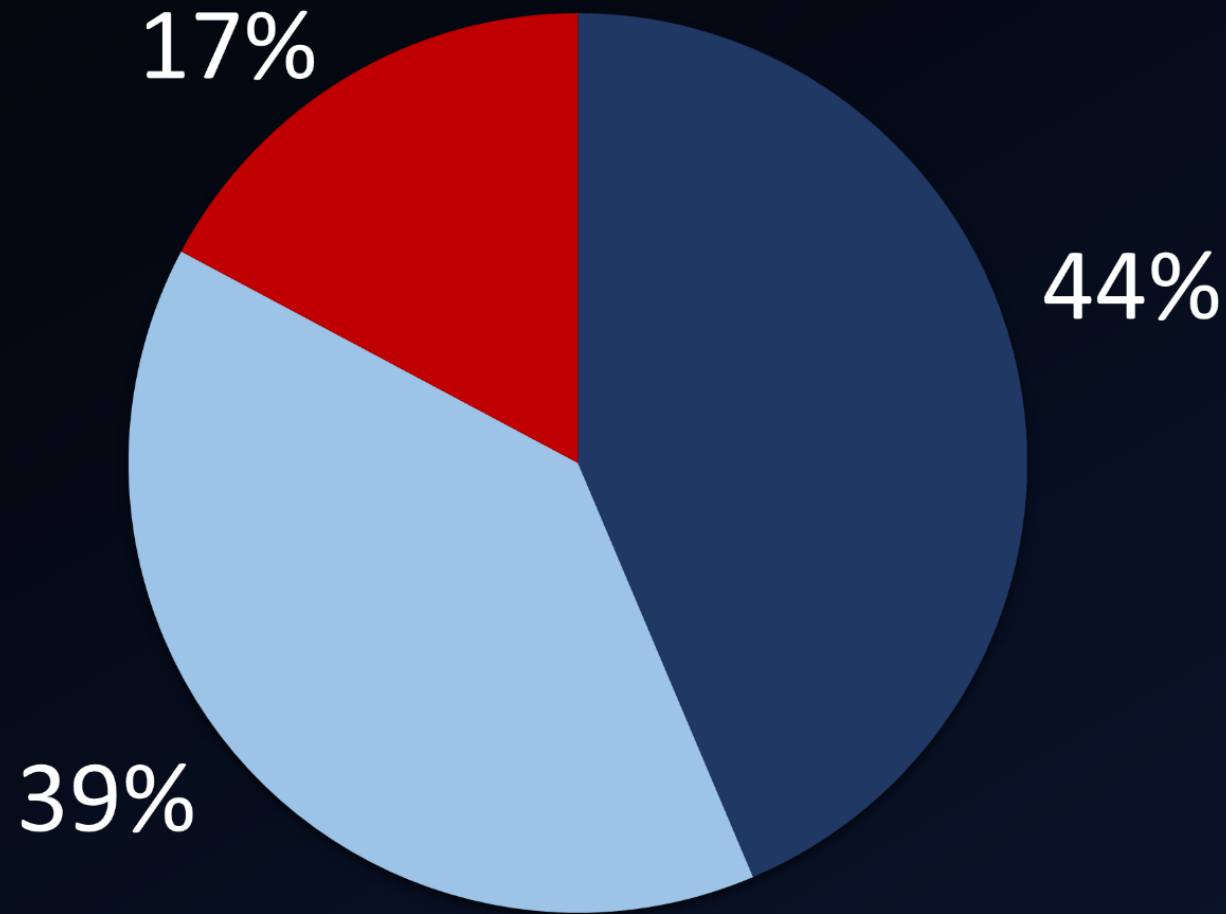
SONIC
HEALTHCARE



- SNP Live since October 2023 (All labs in February 2024)
- Real-time request status updates (*Requested, Received, With-Lab, Completed*)
- Designing the ability to acquire eRequests from third-party diagnostic provider
- Diagnostic Imaging being worked on now
- Informs Sparked eRequesting specification design
- Single SNOMED-CT requesting pathology catalogue

Requesting Pathology Terminology

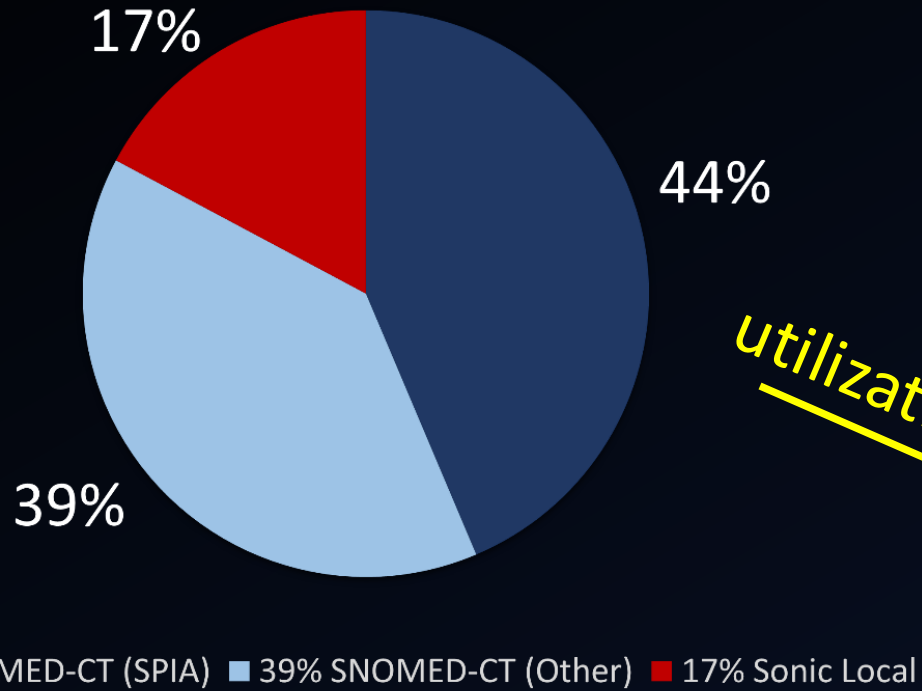
Sonic Pathology test catalogue by terminology



■ 44% SNOMED-CT (SPIA) ■ 39% SNOMED-CT (Other) ■ 17% Sonic Local

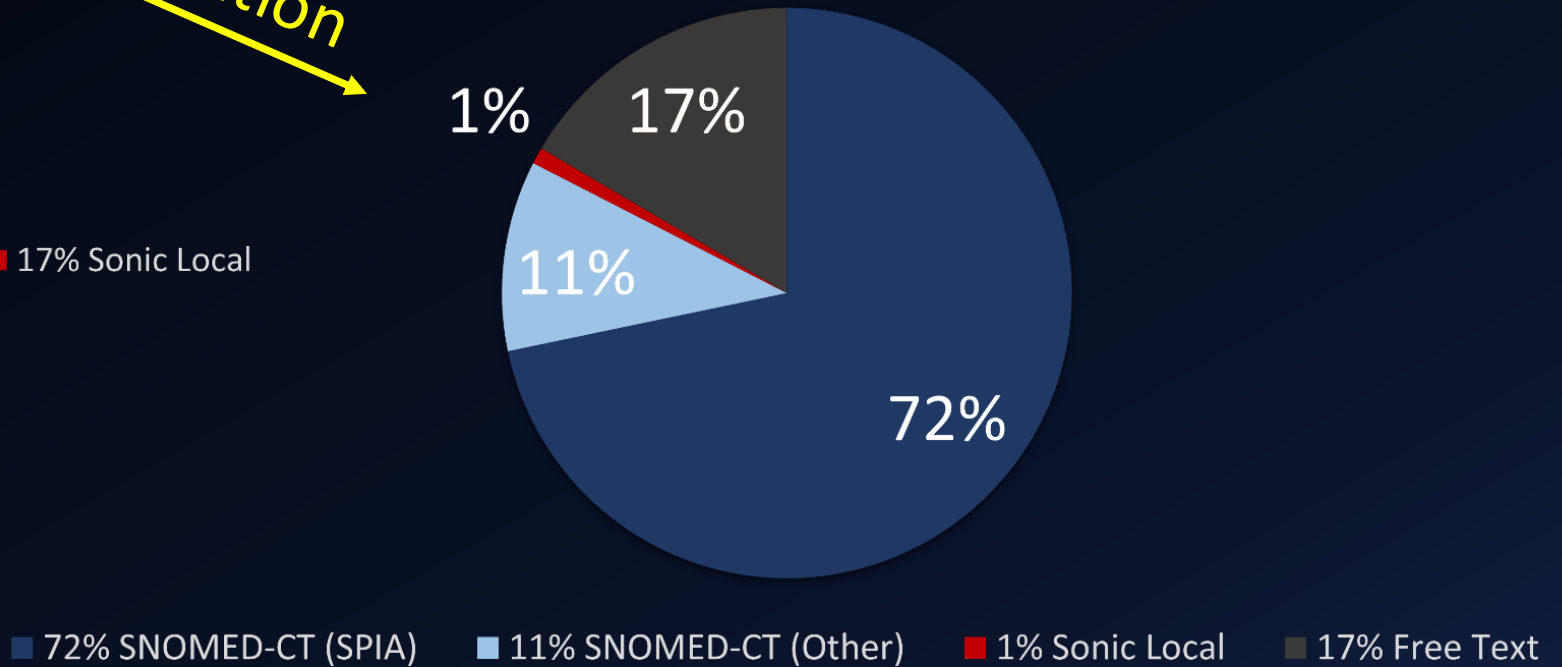
Requesting Pathology Terminology

Sonic Pathology test catalogue by terminology



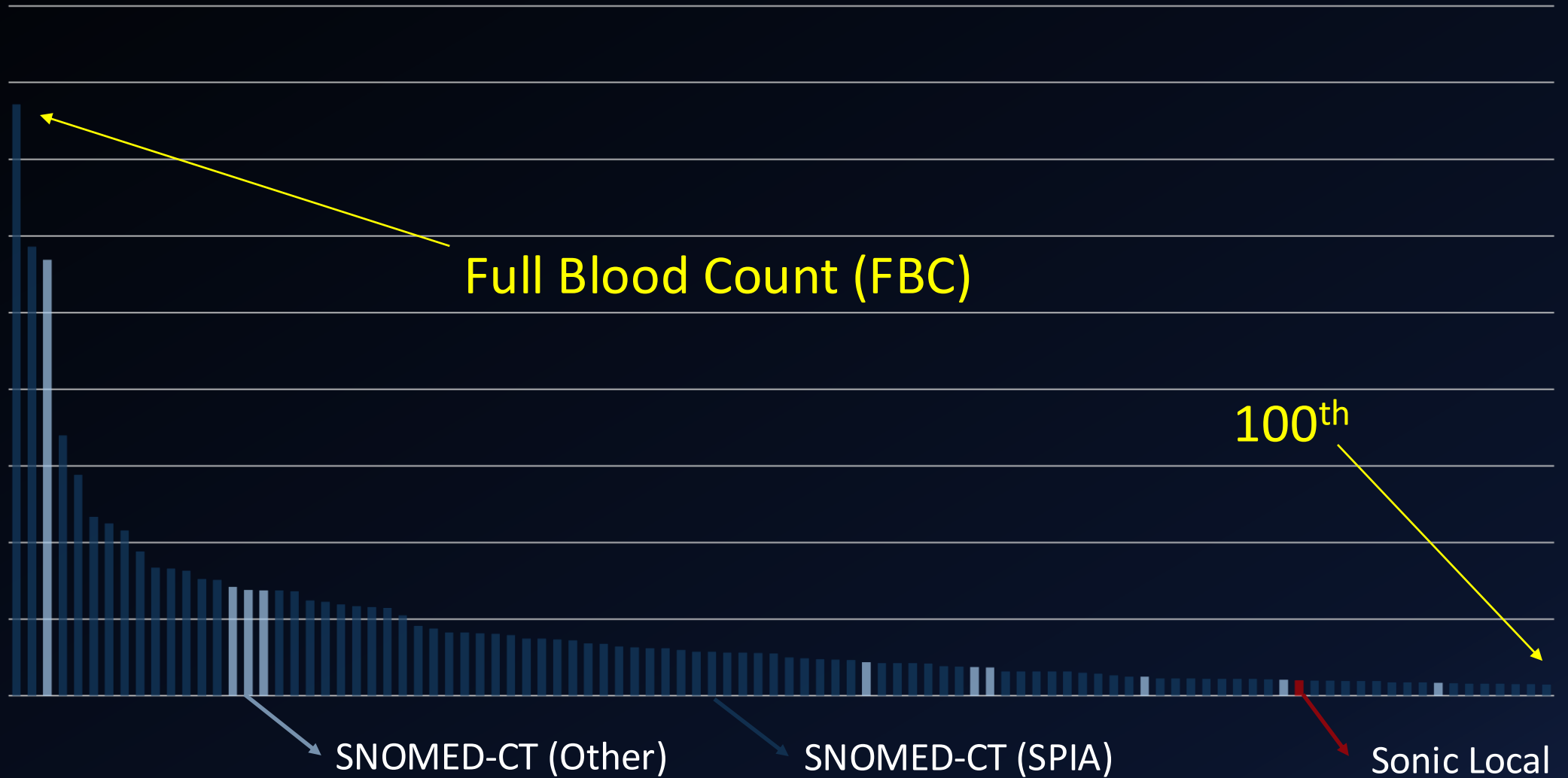
utilization

Magentus - Sonic Pathology
Frequency of terminology use over six months



Requesting Pathology Terminology

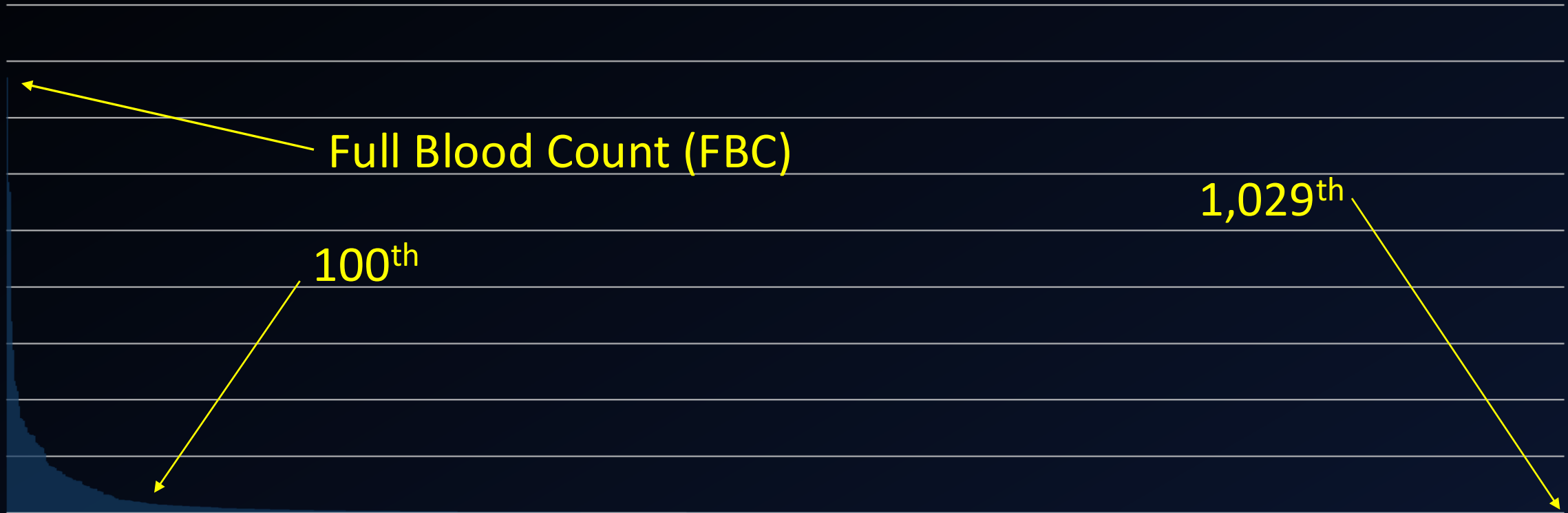
Magentus - Sonic Pathology
Top 100 uniquely requested tests by frequency over six months



Requesting Pathology Terminology

Magentus - Sonic Pathology

All uniquely requested tests by frequency over six months



Cover your top 100 tests with SNOMED and you will have covered 85% of your workload

Don't get burnt!

 FHIR
challenges &
lessons learned



Legacy system, challenges with extra clinical information

- Legacy systems only consume minimal amounts, of very specific, structured clinical information
- No distinction between what the requester wrote in clinical notes and what was provided as structured information
- Structured data must be vetted by requester's before being sent
- How to manage, test specific, extra clinical information

Appropriate use of 'Free Text Tests'

Free Text Test: *HbA1c, glucose, c-peptide, UEC, CMP, LFT, FBE, B12, folate, iron studies, LDL, HDL, TG, chol, TSH, T4, vitamin D, urine ACR, BMI, GAD Ab, islet cell Ab, ZnT8 Ab*

- Creates manual work on the Laboratory
- Prone to mistakes, tests are easily missed

Technical Challenges and Insight

- FHIR Servers which use eventual consistency (*Performance is not everything!*)
- Verbosity of FHIR Resources
- Subscriptions/Notification/Polling vs Messaging
- Pagination of FHIR query results
- FHIR Server migration simplicity

FHIR 

Its not just sending health messages

AN ENTIRE FRAMEWORK
FOR CLINICAL DATA MANAGEMENT



FHIR IG Publishing

Sonic Healthcare eRequesting

SONIC HEALTHCARE

Sonic Healthcare Australia Requesting
0.1.0 - ci-build

Home Implementation Resources Artifacts Downloads

Table of Contents > Artifacts Summary > Sonic Patient

Sonic Healthcare Australia Requesting - Local Development build (v0.1.0) built by the FHIR (HL7® FHIR® Standard) Build Tools. See the Directory of published versions.

Content Detailed Descriptions Mappings Examples XML JSON TTL

4.8.1 Resource Profile: Sonic Patient

Official URL: http://sonichealthcare.com.au/StructureDefinition/sonic-patient	Version: 0.1.0
Draft as of 2024-08-24	Computable Name: SonicPatient

Sonic's Patient profile for diagnostic requesting

Usage:

- Refer to this Resource Profile: Sonic Consent, Sonic Coverage, Sonic Encounter, Sonic Service Request Abstract... [Show 2 more](#)
- Examples for this Resource Profile: Patient/SonicPatientDonaldDuck and Patient/SonicPatientMinnieMouse

4.8.1.1 Formal Views of Profile Content

Description of Profiles, Differentials, Snapshots and how the different presentations work.

Differential Table Key Elements Table Snapshot Table Statistics/References All

HL7 Sparked AU eRequesting Implementation Guide
0.2.0-ci-build - CI Build

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AU eRequesting Implementation Guide, published by HL7 Australia. This guide is not an authorized publication; it is the continuous build (HL7® FHIR® Standard) CI Build. This version is based on the current content of <https://github.com/HL7/au-au-fhir-erequesting/> and published versions.

Official URL: http://hl7.org.au/fhir/ereq/ImplementationGuide/hl7.fhir.au.ereq	Version: 0.2.0-ci-build
IG Standards status: Draft	Maturity Level: 0
Copyright/Legal: Used by permission of HL7 International, all rights reserved Creative Commons License, HL7 Australia© 2024+; Lic Reserved.	

1.1 Introduction

AU eRequesting is provided to support the use of HL7® FHIR® for clinical requesting and ordering in an Australian context. It sets the minimum conformance and implementation in systems.

AU eRequesting defines the Data model and RESTful API interactions that set minimum expectations for placing and accessing electronic requests for patients.

The focus AU eRequesting Release 1 (R1) is support of pathology and medical imaging requests in community-based care provision, and developing a foundational request model that can be applied beyond diagnostic requesting.

1.2 Project background

- Introduction
- Project background
- Dependencies
- AU eRequesting Actors
- AU eRequesting FHIR RESTful interactions
- AU eRequesting typical sequence
- How to read this guide
- Collaboration

HL7 Sparked AU Base Implementation Guide
4.2.2-ballot - Ballot

Home Guidance FHIR Artefacts Examples Support Change Log

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This page is part of the Australian Base IG (v4.2.2-ballot: AU Base R4.2 Ballot 5) based on the HL7® FHIR® Standard R4. The current version which supersedes this version is 4.1.0. For a full list of available versions, see the Directory of published versions.

Official URL: http://hl7.org.au/fhir/ImplementationGuide/hl7.fhir.au.base	Version: 4.2.2-ballot
IG Standards status: Trial-use	Computable Name: AUBaseImplementationGuide
Copyright/Legal: HL7 Australia© 2018+; Licensed Under Creative Commons No Rights Reserved.	

HL7 Sparked AU Core Implementation Guide
0.3.0-ballot - R1

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This page is part of the AU Core (v0.3.0-ballot: AU Core R1 Ballot 5) based on the HL7® FHIR® Standard R4. For a full list of available versions, see the Directory of published versions.

Official URL: http://hl7.org.au/fhir/core/ImplementationGuide/hl7.fhir.au.core	Version: 0.3.0-ballot
IG Standards status: Draft	Maturity Level: 0
Computable Name: AUCoreImplementationGuide	
Copyright/Legal: Used by permission of HL7 International, all rights reserved Creative Commons License, HL7 Australia© 2022+; Licensed Under Creative Commons No Rights Reserved.	
Page standards status: Informative	

HL7 FHIR Release

Home Getting Started Documentation

This page is part of the FHIR Specification (4.0.0) based on this version is 4.0.0. For a full list of available versions, see the Directory of published versions.

Welcome to FHIR®

FHIR is a standard for health care data exchange, designed to be interoperable, secure, and easy to use. It is the foundation for modern health care systems.

First time here? See the interactive glossary, the developer's introduction / glossary & tutorials. See also the copyright notice for more information.

Technical Content:

- 4.0.1, Oct 20 2019: Corrections to invariants & generated conformance resources, and add ANCO Normative Status Note

Level 1 Basic framework on which the specification is built

Level 2 Supporting implementation and binding to external specifications

Foundations: Base Documentation, SMT, STON, Data Types, Extensions

Support: Implementation, Security & Privacy, Conformance, Terminology, Exchange

Australian eRequesting

Australian Core Standard

Australian Base Standard

HL7 International Standard

Sonic Healthcare Australia Requesting - Local Development build (v0.1.0) built by the FHIR (HL7® FHIR® Standard) Build Tools. See the [Directory of published versions](#)

4 Artifacts Summary

This page provides a list of the FHIR artifacts defined as part of this implementation guide.

4.0.1 Structures: Abstract Profiles

These are profiles on resources or data types that describe patterns used by other profiles, but cannot be instantiated directly. I.e. instances can conform to profiles *based* on these abstract profiles, but do not declare conformance to the abstract profiles themselves.

Sonic Service Request Abstract	Sonic's abstract base ServiceRequest resource profile
Sonic Task Fulfillment Abstract	Sonic Task Fulfillment Abstract Profile
Sonic Task Fulfillment Group Abstract	Sonic Task Fulfillment Group Abstract Profile

4.0.2 Structures: Resource Profiles

These define constraints on FHIR resources for systems conforming to this implementation guide.

Sonic Consent	My Health Record Consent Withdrawal
Sonic Coverage	Sonic Coverage Profile
Sonic Encounter	Sonic Encounter (Transient Encounter for the context of the diagnostic request)
Sonic Organization	Sonic Organization
Sonic Patient	Sonic's Patient profile for diagnostic requesting
Sonic Practitioner	Sonic Practitioner Profile
Sonic PractitionerRole	Sonic PractitionerRole Profile
Sonic ServiceRequest Imaging	Sonic ServiceRequest Imaging Profile
Sonic ServiceRequest Pathology	Sonic ServiceRequest Pathology Profile
Sonic Task Fulfillment Imaging	Sonic Task Fulfillment Imaging Profile
Sonic Task Fulfillment Imaging Group	Sonic Task Fulfillment Imaging Group Profile
Sonic Task Fulfillment Pathology	Sonic Task Fulfillment Pathology Profile
Sonic Task Fulfillment Pathology Group	Sonic Task Fulfillment Pathology Group Profile

Contents:

- [Structures: Abstract Profiles](#)
- [Structures: Resource Profiles](#)
- [Structures: Data Type Profiles](#)
- [Structures: Extension Definitions](#)
- [Terminology: Value Sets](#)
- [Terminology: Code Systems](#)
- [Example: Example Instances](#)

4.8.1.1 Formal Views of Profile Content

Description of Profiles, Differentials, Snapshots and how the different presentations work.

properties

Differential Table
Key Elements Table
Snapshot Table
Statistics/References
All

This structure is derived from [AUCorePatient](#)

Name	Flags	Card.	Type	Description & Constraints
Patient			AUCorePatient	
id	S	0..1	id	Logical id of this artifact
Slices for Identifier				Content/Rules for all slices
identifier:mrm	S	0..1	AUMedicalRecordNumber(4.2.2-ci-build)	Identifies this patient across multiple systems
identifier:insurancemember	S	0..1	AUInsuranceMemberNumber(4.2.2-ci-build)	Identifies this patient across multiple systems
type				
coding		1..1	Coding	Code defined by a terminology system
active	S	1..1	boolean	Whether this patient's record is in active use
Slices for name		1..*	HumanName	A name associated with the patient Slice: Unordered, Closed by value:use
name:official	S	1..1	HumanName	A name associated with the patient
use		1..1	code	usual official temp nickname anonymous old maiden Fixed Value: official
family		1..1	string	Surname
given		1..2	string	Given and middle names
prefix		0..1	string	Title
Slices for telecom		0..*	ContactPoint	A contact detail for the individual Slice: Unordered, Closed by value:use, value:system
telecom:mobile	S	0..1	ContactPoint	A contact detail for the individual
system		1..1	code	phone fax email pager url sms other

Sonic Healthcare Australia Requesting - Local Development build (v0.1.0) built by the FHIR (HL7® FHIR® Standard) Build Tools. See the [Directory of published versions](#)

3 Downloads

3.1 Downloadable copy of entire specification

A downloadable version of the entire implementation guide as a website is available so it can be hosted locally.

It is not recommended to view locally without hosting, but you can extract the files and open the index.html file in a web browser. This will provide access to the table of contents, introduction, and navigation links to different sections of the implementation guide.

- [Downloadable Copy](#)

3.2 Package file

The following package file includes an NPM package file used by many of the FHIR tools. It contains all the value sets, profiles, extensions, list of pages and uris in the IG, etc defined as part of this version of the Implementation Guides. This file should be the first choice whenever generating any implementation artefacts since it contains all of the rules about what makes the profiles valid. Implementers will still need to be familiar with the content of the specification and profiles that apply in order to make a conformant implementation:

- [R4 Package](#)
- [R4B Package](#)

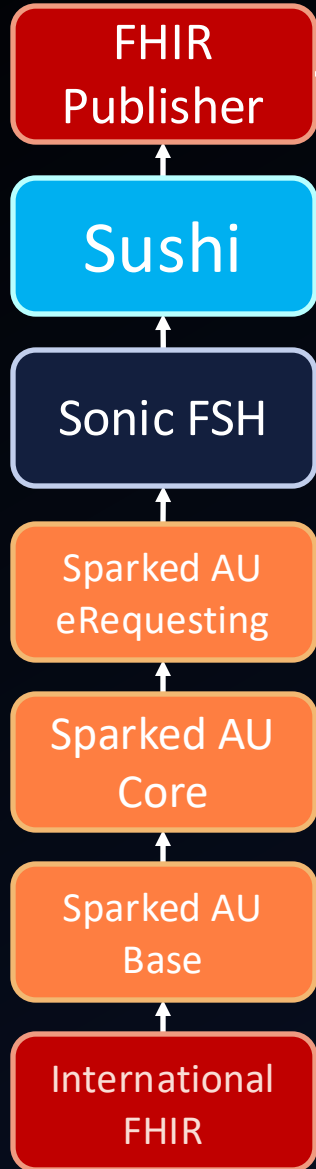
See the overview on [validating FHIR profiles and resources](#) for more information about validating profiles and how to use these artefacts.

3.3 Examples

All examples included in this implementation guide are available for download:

- [Downloadable copy of entire specification](#)
- [Package file](#)
- [Examples](#)
- [Consolidated CSV and Excel file representations of profiles](#)
- [Implementation Guide Details](#)

FHIR IG Publishing



www.sonichealthcare.com.au/fhir-requesting

Sonic FHIR IG Artefacts

Sonic Healthcare Australia Requesting
0.1.0 - ci-Build

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Official URL: <http://sonichealthcare.com.au/StructureDefinition/sonic-patient> Version: 0.1.0
Draft as of 2024-08-24 Computable Name: sonicPatient

Sonic's Patient profile for diagnostic requesting

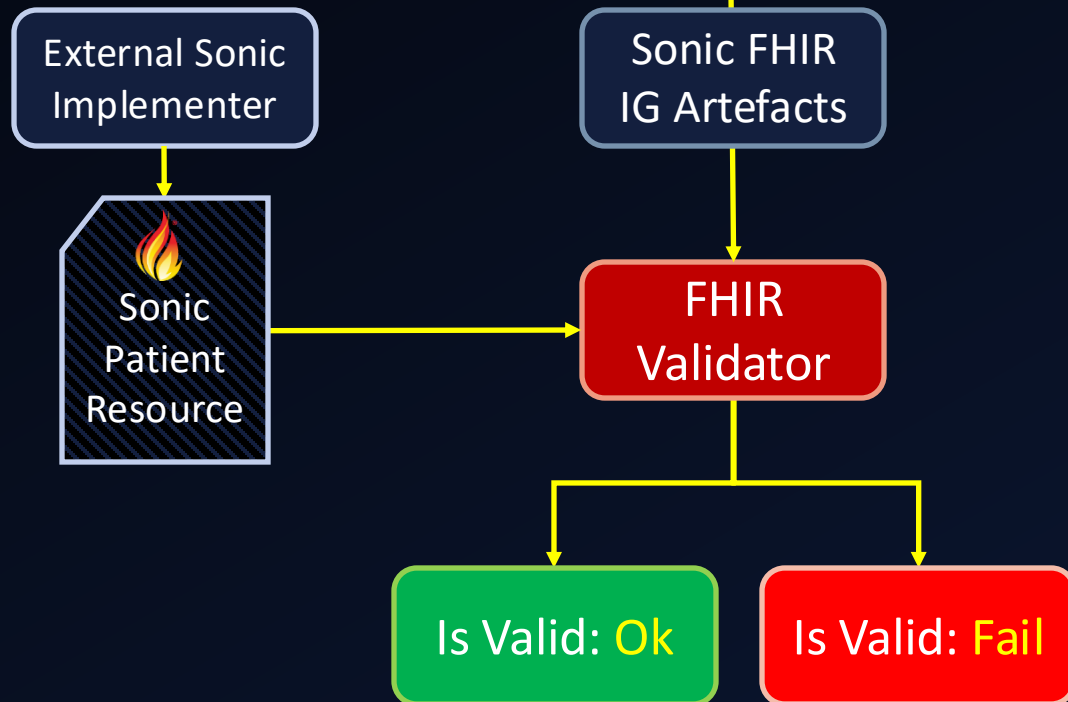
Usage:

- Refer to this Resource Profile: Sonic Consent, Sonic Coverage, Sonic Encounter, Sonic Service Request Abstract...
- Examples for this Resource Profile: Patient/SonicPatientDonaldDuck and Patient/SonicPatientMinnieHouse

4.8.1.1 Formal Views of Profile Content

Description of Profiles, Differentials, Snapshots and how the different presentations work?

Differential Table Key Elements Table Snapshot Table Statistics/References All



Deep Dive with FSH by Chris Moesel

<https://fshschool.org/courses/fsh-seminar/04-deep-dive-with-fsh.html>

FSH School

<https://fshschool.org/FSHOnline>

IG Publisher Documentation

<https://confluence.hl7.org/display/FHIR/IG+Publisher+Documentation>

Industry perspectives

Jess White

Best Practice



eRequesting – An Industry Perspective

Jess White
Best Practice Software

A bit about Best Practice Software

- Australian Medical Software Provider
- Established in 2004
- We Currently support :
 - Over 6000 Primary Healthcare Clinics
 - Over 40,000 Clinicians
 - 100k + end users
 - 200 eco-system Partners
 - 50 eOrdering Partners

The screenshot displays the Bp Premier software interface for a patient named Mr. Alan Abbott. The top section shows patient details including name, address, Medicare No., D.O.B., Age, Birth Sex, and Family members. Below this, there are sections for Allergies / Adverse Drug Reactions, Reactions, and Notifications. The Notifications section lists several items with their due dates and reasons, such as 'Outstanding requests' and 'Preventive health'. A table of prescriptions is visible, listing drug names, strengths, doses, quantities, and other details. The table includes columns for Drug name, Strength, Dose, Quantity, Rpts., Script type, Long term, Last script, Approval No., Subst., Reg. 49, First script, and Reason for prescription. The table contains several rows of data, including 'Load 375 375sqmm Intrauterine di', 'Losec 20mg Tablet', 'Nitrofurantoin 100mg Capsule', 'Poloxalkol 10% Drops', and 'Ventolin CFC-Free 100mcg/dose h 100mcg/dose h 100mcg/dose 1-2 puffs Every 4 hours p.r.n. 2x200 dose 5'.

Bp Premier

HTML

Current Challenges



Clinical Pathology Test List



Lots of These!



Diagnostic Imaging Test Lists!



Completing request forms

Whether your practice is computerised or not, Sullivan Nicolaides Pathology is able to provide a request form that will suit your requirements. Notes on how to complete each section of the request form are given below. Most All request forms are completed via a practice management software program. If you are completing the request form by hand, please print clearly.

Medicare section:

- Enter your patient's Medicare number (1).
- To meet Medicare Australia's requirements for bulk-billing eligible concession patients, your patient must sign and date the Medicare assignment (2).

Concession status:

- Indicate if the patient holds any of the following concession cards (3):
- Person card (PNC), Healthcare card (HCC), Veterans Affairs card.

Patient details section:

- Fill in all requested patient information, paying particular attention to:
- Patient's full name, date of birth, gender, and address (4).

Request details section:

- List all tests required (5).
- List any relevant clinical notes or medications (6).
- Tick Private and Confidential if results are to be reported in a sealed envelope (7).
- If the request is covered under Rule 3 Exemption guidelines tick Rule 3 Exemption box (8).
- The requesting doctor must sign and date the form (9).

Certified patient identification statement
The person collecting the sample, whether it be the requesting doctor, nurse, or other surgery or hospital staff member, or SNP collector, MUST complete (with their name and signature) this statement (10). Failure to do so may result in a recollection being requested.
This certification process is a regulatory requirement. Following this procedure has been shown to eliminate adverse events. Should an adverse event occur, failure to follow the certification process for correct patient identification may lead to medico-legal action being taken against all involved.

Priority section:

- If the requested test is urgent, tick the 'Urgent' box and note the time that results are required by (11).
- Provide a fax or a phone number, including after hours contact details, for result delivery.

Doctor and Copy doctors section:

- Record your name, provider number, and suburb as the requesting doctor (12).
- Record the full name and suburb of any doctors the results reports are to be copied to (13).

Patient Involuntary Statement
Medical practitioners to tick if they require Sullivan Nicolaides Pathology to perform the tests on clinical grounds. A medication rebate will only be payable if SNP performs the service (14).



Current Challenges



File Open Request Clinical View Utilities Bp Comms Help

Name: Alan Abbott D.O.B.: 30/06/1945 Age: 79 yrs Birth Sex: Male 4h 50m 2s Finalise visit

Address: 12 John St Woodlane 4035 Phone: (m) 0427556232 Email: alan.abbott@bpsoftware.com.au Gender: Not Recorded Pronc

Medicare No.: 4133180467 - 1 12/13 Record No.: 101 Pension No.: 123456789 Comment: On warfarin

Occupation: Tobacco: Alcohol: Elite sports: Ethni

Blood Group: Advance Health Directive:

Allergies / Adverse Drug Reactions:

Item	Reaction	Severity
House dust mite	Bronchospasm	Severe
Trifle	Nausea	Severe
Aluminium Hydroxide		

Notifications:

Type	Due	Reason
Outstanding requests	20/08/2024	There are 2 outstanding requests for this patient!
Preventive health	11/09/2024	Influenza vaccination should be considered!
Preventive health	11/09/2024	Vaccination against pneumococcus should be considered!
Preventive health	11/09/2024	Vaccination against shingles should be considered!

There are unchecked reports for this patient!

Expand Collapse

Seen by: Dr Frederick Findacure Visit type: Surgery Reason for visit

Visit date: 9/11/2024 Visit time: 11:31:32 AM Confidential

Mr. Alan Abbott Today's notes

01

For Best Practice Software:

Supporting and managing multiple e-Ordering Test Lists

- Supporting the importing of different result formats
- Multiple areas of our software need manual data entry

02

For Customers:

- Installation of Multiple messaging brokers
- Address Book Management
- No standard test lists or terminology being used between existing providers
- Manual data entry required in EMR due to inconsistency of reporting

03

For Industry:

- Each software vendor may require different technical requirements for result import and send
- Referrer Education Needed
- \$\$\$ to pay a messaging broker to transmit results

OPPORTUNITY



eRequesting Uptake

- Reduce current administrative burden managing requests
- Reduce transcription errors
- Reduce overhead on Clinicians (Re-print requests!)



Clinical Decision Support

- Guidance Based Requesting
- Recommended Tests

Real-time access to data

- Removing need for messaging brokers, reduces send and delivery risks
- Access to what tests have been previously done and when?

Data Standards

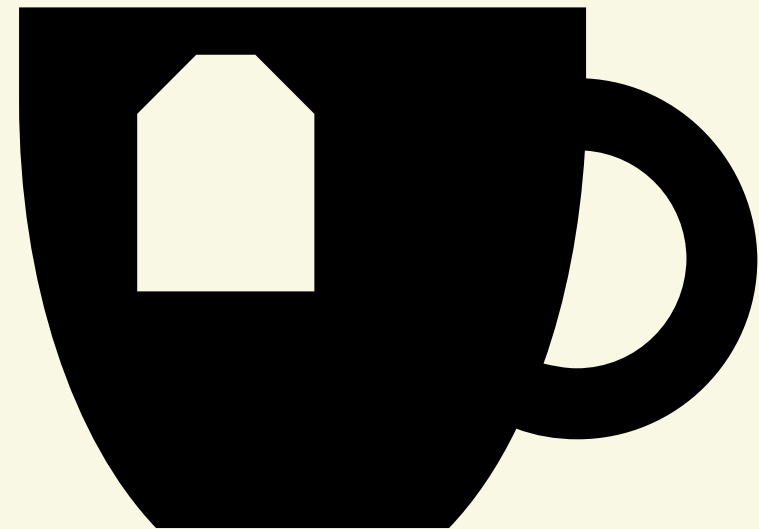
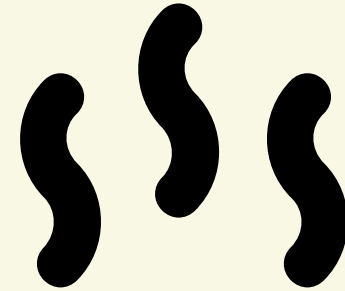
- Consistent requesting terminology = better requesting + reporting

Questions?

Jessica White
Best Practice Software
Jessica.White@bpsoftware.net

Department of Health and
Aged Care
Jeremy Sullivan

Back at 11:00am



Morning tea

The background is a solid orange color with several lighter orange rounded rectangles scattered across it. The text is centered on the right side of the image.

Accenture
Grant Carter

Updating Pathology Test Name Diversity

MHR Discovery

August 2024



 **accenture**

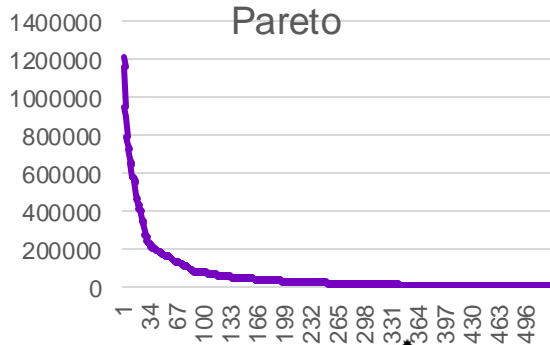

Australian Government
Australian Digital Health Agency


My Health Record

MHR Pathology test name diversity

- For one month period May-Aug 24
 - 34,016 unique test result names
 - One LIS contributes most of the variation*
 - 44,673,497 total test uploads
 - Low coding rates
 - 0.3% SNOMED
 - mainly COVID PCR
 - Top ~30 →

90%+ of actual distinct tests occur in the top 30, but Pareto has a *very long tail!*



Row Labels	Sum of COUNT_OF_REPORTS
FULL BLOOD COUNT	1,212,426
FULL BLOOD EXAMINATION	1,162,839
Urea, electrolytes and creatinine measurement	949,397
GENERAL CHEMISTRY	893,801
ROUTINE HAEMATOLOGY	794,287
C-REACTIVE PROTEIN	752,582
GENERAL BIOCHEMISTRY	725,141
IRON STUDIES	725,141
LIPID STUDIES	725,141
THYROID FUNCTION TEST	725,141
HAEMATOLOGY	725,141
Liver function tests - general	725,141
E/LFT (MASTER)	725,141
MASTER FULL BLOOD COUNT	725,141
Routine Biochemistry	725,141
Total serum calcium, magnesium and phosphate measurement	725,141
Point of Care Testing	725,141
SERUM CHEMISTRY	725,141
Haematology: Complete Blood Examination	725,141
C-reactive protein measurement	725,141
FULL BLOOD PICTURE	725,141
GLUCOSE	725,141
LIVER FUNCTION TESTS	725,141
IFOBT PAT	725,141
S-_ROUTINE CHEMISTRY	725,141
.BLOOD COUNT	725,141
VITAMIN D	725,141
MASTER IRON STUDIES	725,141
THYROID TEST MASTER	725,141

FULL BLOOD COUNT	1,212,426	949,397
FULL BLOOD EXAMINATION	1,162,839	893,801
MASTER FULL BLOOD COUNT	563,369	752,582
FULL BLOOD PICTURE	411,613	725,141
Full Blood Count Comment	2,146	679,416
Full Blood Picture (POCT)	6	658,076
		652,299
		584,997
		583,017
		580,994
GENERAL CHEMISTRY	893,801	580,994
GENERAL BIOCHEMISTRY	725,141	563,369
Routine Biochemistry	557,238	557,238
SERUM CHEMISTRY	444,875	557,238
S-_ROUTINE CHEMISTRY	347,566	487,754
Protein Chemistry	198,662	461,458
Chemistry: Ca Ion Calc, ECU LFT CAL PHO URA GL, eGFR	90,789	444,875
Biochemistry	29,063	433,228
		417,719
		411,613
		409,203
		365,685
		351,001
		347,566
		323,621
		276,961
		273,884
		267,934

MHR Pathology common panel categories

All MyHR Path CDA uploads to August 2022		112,521,933
Panels		
Lipids		
	lipids	1,770,566
	Cholesterol (not in lipid panel)	47,440
	Triglycerides (not in lipid panel)	28,103
		1,846,109
EUC (UEC)		
	Chemistry	8,757,122
	UEC	161,623
	EUC	661
		8,919,406
Hepatic (LFT)		
	Liver	3,060,267
	LFT	1,411,151
		4,471,418
Full Blood Count		
	Full blood	9,202,820
	Blood count	365,244
	FBC	137,343
		9,705,407
Iron Studies		
	Iron	2,068,834
	Fe	30,283
		2,099,117
TFT		
	Thyroid	1,983,138
	TFT	226,709
		2,209,847

~ 30% of all tests

MHR Pathology common tests released within 7 days

Tests			
INR		INR	187,617
		International normalised ratio	391,637
		SA (from Haemostasis and Thrombosis)	98,529
			677,783
HBA1C		HBA1C	806,329
		SA Hba1C	301,466
			1,107,795
Glucose		Glucose (<u>any body fluid, GTT, G6PD</u>)	1,867,570
Covid		nucleic acid or serology	4,369,420
RSV		RSV	81,848
		Resp sync	888
			82,736
HBsAG		Hep. Hep B various	850,000

MHR Pathology test panel diversity – LIS specific e.g.

- For one month period May-Aug 24
 - 6,328 unique Chemistry panel variants from single LIS (Cerner)
 - Format is panel (eg Chemistry: followed by a variant list of tests performed in the panel)

But list is limited to 80 characters

- Top ~30 →

Row Labels	Sum of COUNT_OF_REPORTS
Chemistry: Ca Ion Calc, ECU LFT CAL PHO URA GL, eGFR	90,789
Chemistry: Ca Ion Calc, eGFR, ECU LFT CAL PHO URA GL	43,315
Chemistry: ECU LFT CAL PHO URA GL, Ca Ion Calc, eGFR	31,447
Chemistry: Glucose	31,182
Chemistry: POC Blood Gas Arterial	27,557
Chemistry: POC Blood Gas Venous	24,422
Chemistry: ECU LFT CAL PHO URA GL, Ca Ion Calc, eGFR, Magnesium	23,643
Chemistry: Ca Ion Calc, eGFR, ECU LFT CAL PHO URA GL, Magnesium	21,387
Chemistry: Ca Ion Calc, ECU LFT CAL PHO URA GL, eGFR, Magnesium	20,783
Urine Chemistry: Creatinine	17,754
Chemistry: eGFR, Ca Ion Calc, ECU LFT CAL PHO URA GL	15,299
Chemistry: Ca Ion Calc, ELE URE CRE CA MG PHO LFT, eGFR	13,519
Chemistry: Electrolytes, Urea, Creatinine, eGFR	12,769
Chemistry: ELEC CREA UREA LFT, eGFR	12,149
Chemistry: eGFR, Electrolytes, Urea, Creatinine	10,596
Chemistry: Ca Ion Calc, eGFR, ELE URE CRE CA MG PHO LFT	10,374
Chemistry: Ca Ion Calc, ECU LFT CAL PHO URA GL, Magnesium, eGFR	10,343
Chemistry: eGFR, Ca Ion Calc, ECU LFT CAL PHO URA GL, Magnesium	8,981
Chemistry: ECU LFT CAL PHO URA GL, eGFR, Ca Ion Calc	7,143
Chemistry: ECU LFT CAL PHO URA GL, eGFR, Magnesium	7,141
Chemistry: ECU LFT CAL PHO URA GL, eGFR	6,438
Chemistry: eGFR, ELEC CREA UREA LFT	6,218
Urine Chemistry: Protein Creatinine Ratio, Creatinine	5,200
Chemistry: ECU LFT CAL PHO URA GL, Ca Ion Calc, Magnesium, eGFR	5,025
Point of Care - Chemistry: Point of Care - CG4, Point of Care - Chem 8	4,339
Immunochemistry: Protein Electrophoresis	3,950

MHR Pathology synonyms, non-specific “&junk” test names

- For one month period
May-Aug 24
- “Junk” examples

HL7 Mask for iSTAT
 HL7 Mask for XBBIOA
 HL7 Mask for XBC3N
 HL7 Mask for XBMAG
 HL7 Mask for XBUOA
 HL7 Mask for XXBFLU
 HL7 Mask for XXBGEN
 HL7 Mask for XXBTUM
 HL7 Mask for XXBURC
 HL7 Mask for XXBUTX

RECENT MYNIC EMIGRANTS
 RECOLL.INAPPROPRIATE CODE
 RECOLLECT
 RECOLLECT BUN
 RECOLLECT CC
 RECOLLECT CC1
 RECOLLECT DR
 RECOLLECT MAIN
 RECOLLECT NOT DONE
 RECOLLECT NOTIF
 RECOLLECT NOTIF2
 Recollection
 RECOLLECTS
 RECOLLECTS

REPORT TO DOCTOR
 Surgical Pathology
 DOCTORS UDS
 Laboratory
 U-DOCTORS UDS
 Outside Lab
 No doctor signature
 Outside Lab

REFERRED TO INVTAL
 REFERRED TO MDU
 REFERRED TO MELB. HEALTH
 REFERRED TO MND
 REFERRED TO MONASH
 REFERRED TO MONASH UNI
 REFERRED TO PATHWEST FSH

SENDAWAY TEST
 SENDAWAY TEST 2

Contains cytopathology	Total
Surgical Pathology	2,140
Cytopathology	1,864

Synonym variants

HIV EIA
 HIV FURTHER TESTING
 HIV geno drug resist
 HIV GENOTYPE
 HIV GENOTYPE &DRUG RESIST
 HIV GENOTYPE SENDAWAY
 HIV Genotype Sendaway Page 1/2
 HIV INSURANCE/COMMERCIAL
 HIV LOAD ULTRA SENS
 HIV P24 ANTIGEN
 HIV PROVIRAL DNA
 HIV PRO-VIRAL DNA
 HIV Proviral DNA NAT
 HIV RNA
 HIV RNA GENOTYPING
 HIV RNA/VIRAL LOAD
 HIV SEROLOGY

7 .GH 0
 3 .GH 120
 9 .GH 150
 0 .GH 180
 1 .GH 30
 2 .GH 45
 3 .GH 60
 4 .GH 75
 5 .GH 90

HEP C GENO/SUBTYPE
 HEP C GENOTYPE
 HEP C GENOTYPING
 HEP C PCR (QUALITATIVE)
 HEP C PCR IMVS
 HEP C PCR QUAL
 Hep C RNA - PCR
 Hep C RNA (PCR)

Service category variances e.g.

FULL BLOOD COUNT	IRON STUDIES	HBA1C
Chemistry	Chemistry	Blood Bank
Hematology	Hematology	Chemistry
	Laboratory	Hematology
		Laboratory

MHR Meaningful clinical use proxy (clinical view downloads)

MHR Clinical View downloads		
Per annum		
18,913,232	Path views	
16,457,376	Meds views	
17,711,408	DI Views	
12,610,208	MOV Views	
8,591,024	Hro Views	
2,245,516	MCV's	New view, extrapolated
734,916	CIV's	
158,912	My GP	

Meds view generally well accepted, but...

- May not (always) contain private scripts, OTCs
- Patient may opt-out of PBS uploads
- Historical issues with PBS claim identity (very low %)
- PSML & RSMC are unfortunately PDFs
- AMT coded clinical documents (other than Dr, Pr) still infrequent
- Colours, fixed columns, advisories not liked by all
- FHIR API still not released

Meds view testimonial: A single document with everything I need about a patient's medications, easy to read, easy to download and incredibly useful. Absolutely brilliant

-Too good to be true but it is! Please pass on my thanks to the team who developed it

MHR Path view test name grouping example

View generated on 15-Mar-2022 16:49

Reports - grouped by Test Name and ordered by Specimen collection date						
09-Apr-2021 to 16-Apr-2021 (11 months ago)						
Organisation	Specimen collected date	Time	Test name	Status	Report	Report group
Medical Laboratories	16-Apr-2021 (11 months ago)	22:12	BIOCHEMICAL ANALYSIS	Final	1st Report	(View 45 more within 6 days)
		22:12	General Chemistry	Final	1st Report	(View 52 more within 6 days)
		18:00	Full Blood Count	Final	1st Report	(View 7 more within 6 days)
Medical Laboratories	15-Apr-2021 (11 months ago)	18:30	Faecal Pathogens PCR	Final	1st Report	(View 1 more on the same day)
Medical Laboratories	14-Apr-2021 (11 months ago)	19:30	Coagulation Profile	Final	1st Report	(View 5 more within 4 days)
		18:20	Screen MRSA/VRE/ESBL	Final	1st Report	(View 1 more within 3 days)
		18:20	Sputum MCS	Final	1st Report	(View 1 more within 4 days)
		18:20	Urine MCS	Final	1st Report	(View 2 more within 4 days)
Medical Laboratories	12-Apr-2021 (11 months ago)	11:20	Catheter - Vascular	Final	Report	
Medical Laboratories	11-Apr-2021 (11 months ago)	17:55	Thyroid Studies	Final	Report	
		12:30	Blood Cultures	Final	1st Report	(View 2 more within 4 days)
Medical Laboratories	10-Apr-2021 (11 months ago)	23:55	Surgical Pathology	Final	1st Report	(View 1 more on the same day)
		23:45	Blood Bank Tests	Final	Report	
		23:40	General Cytology	Final	1st Report	(View 1 more within 1 day)
Medical Laboratories	09-Apr-2021 (11 months ago)	12:00	Bronchial Lavage MCS	Final	1st Report	(View 1 more on the same day)

Medsvieview – PBS and Prescription derived unique ingredient view

Medicines Preview - Latest Documents, PBS Claims, Dispenses, Prescriptions with no later dispenses - sorted by descending event date.

15-Jul-2013 to 25-Nov-2016 (6 months ago)

Source/Author	Date	Medicine - Active Ingredient(s)	Medicine - Brand	Directions
Latest dispense	25-Nov-2016 (6 months ago) (11 dispenses in 3 years)	FLUTICASONE + SALMETEROL	SERETIDE MDI 250/25 250MCG/ACTION + 25MCG/ACTION INHALATION: PRESSURISED, 120 ACTUATIONS	Prior Prescription Record was SERETIDE MDI 250mcg-25mcg/dose INHALER dose 2 puffs b.d. rinse mouth after use
Latest dispense	25-Nov-2016 (6 months ago) (61 dispenses in 3 years)	MACROGOL-3350 + SODIUM CHLORIDE + POTASSIUM CHLORIDE + BICARBONATE	MOLAXOLE 13.12G + 350.7MG + 46.6MG (0.63 MMOL POTASSIUM) + 178.5MG SOLUTION, 30 SACHETS	Prior Prescription Record was MOVICOL 13.125g/350.7mg/178.5mg/46.6mg SACHET dose 1 nocte for bowel motion
Latest dispense	25-Nov-2016 (6 months ago) (26 dispenses in 3 years at 3 forms/strengths)	MIRTAZAPINE	MIRTAZON MIRTAZAPINE 30MG TABLET, 30 Dispense Claim differs 2 months before as MIRTAZAPINE-GA MIRTAZAPINE 45MG TABLET, 30 Dispense Claim differs 17 months before as AXIT 15 MIRTAZAPINE 15MG TABLET, 30	Prior Prescription Record was MIRTAZAPINE 30mg TABLET dose 1/2 nocte for sleep and mood
Latest dispense	25-Nov-2016 (6 months ago) (29 dispenses in 3 years)	PARACETAMOL	OSTEOMOL 665 PARACETAMOL PARACETAMOL 665MG TABLET: MODIFIED RELEASE, 96 TABLETS	Prescription on same day is not available.
Latest dispense	25-Nov-2016 (6 months ago) (5 dispenses in 3 years)	SALBUTAMOL	ASMOL CFC-FREE SALBUTAMOL 100MCG/ACTION INHALATION: PRESSURISED, 200	Prior Prescription Record was VENTOLIN CFC-FREE 100mcg/dose INHALER dose 2 puffs b.d. when required for shortness of breath/wheeze
Latest dispense	23-Nov-2016 (6 months ago) (45 dispenses in 3 years)	ISOSORBIDE MONONITRATE	MONODUR 120MG ISOSORBIDE MONONITRATE 120MG TABLET: MODIFIED RELEASE, 30 TABLETS	Prior Prescription Record was IMDUR 120mg SR TABLET dose 1 mane for angina
Latest dispense	23-Nov-2016 (6 months ago) (23 dispenses in 3 years)	PERHEXILINE	PEXSIG PERHEXILINE MALEATE 100MG TABLET, 100	Prior Prescription Record was PERHEXILINE MALEATE 100mg TABLET dose 1 b.d. for angina
Latest dispense	14-Nov-2016 (7 months ago) (49 dispenses in 3 years at 2 forms/strengths)	WARFARIN	MAREVAN WARFARIN SODIUM 1MG TABLET, 50 Dispense Claim differs 10 months before as MAREVAN WARFARIN SODIUM 3MG TABLET, 50	Prior Prescription Record dose as directed, thins blood
Latest dispense	12-Nov-2016 (7 months ago) (29 dispenses in 2 years)	DUTASTERIDE + TAMSULOSIN	DUODART 500UG/400UG DUTASTERIDE 500MCG + TAMSULOSIN HCL 400MCG CAP: MODIFIED RELEASE, 30	Prior Prescription Record was DUODART 500mcg/400mcg SR CAPSULE dose 1 daily for bladder/prostate
Latest dispense	08-Nov-2016 (7 months ago) (44 dispenses in 3 years)	NICORANDIL	IKOTAB NICORANDIL 20MG TABLET, 60	Prior Prescription Record was IKOREL 20mg TABLET dose 1 b.d. for angina

The background is a solid orange color with several lighter orange, rounded rectangular shapes scattered across it, creating a pattern. The text is centered in white.

NSW Health Pathology Juliana Iles-Mann

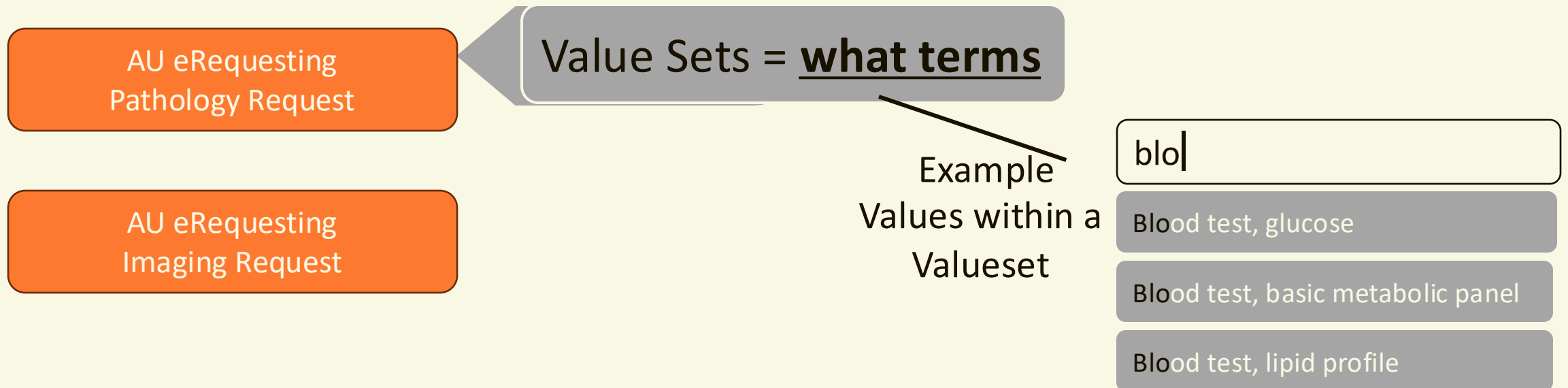


Workshop 2: Validate eRequesting terminology



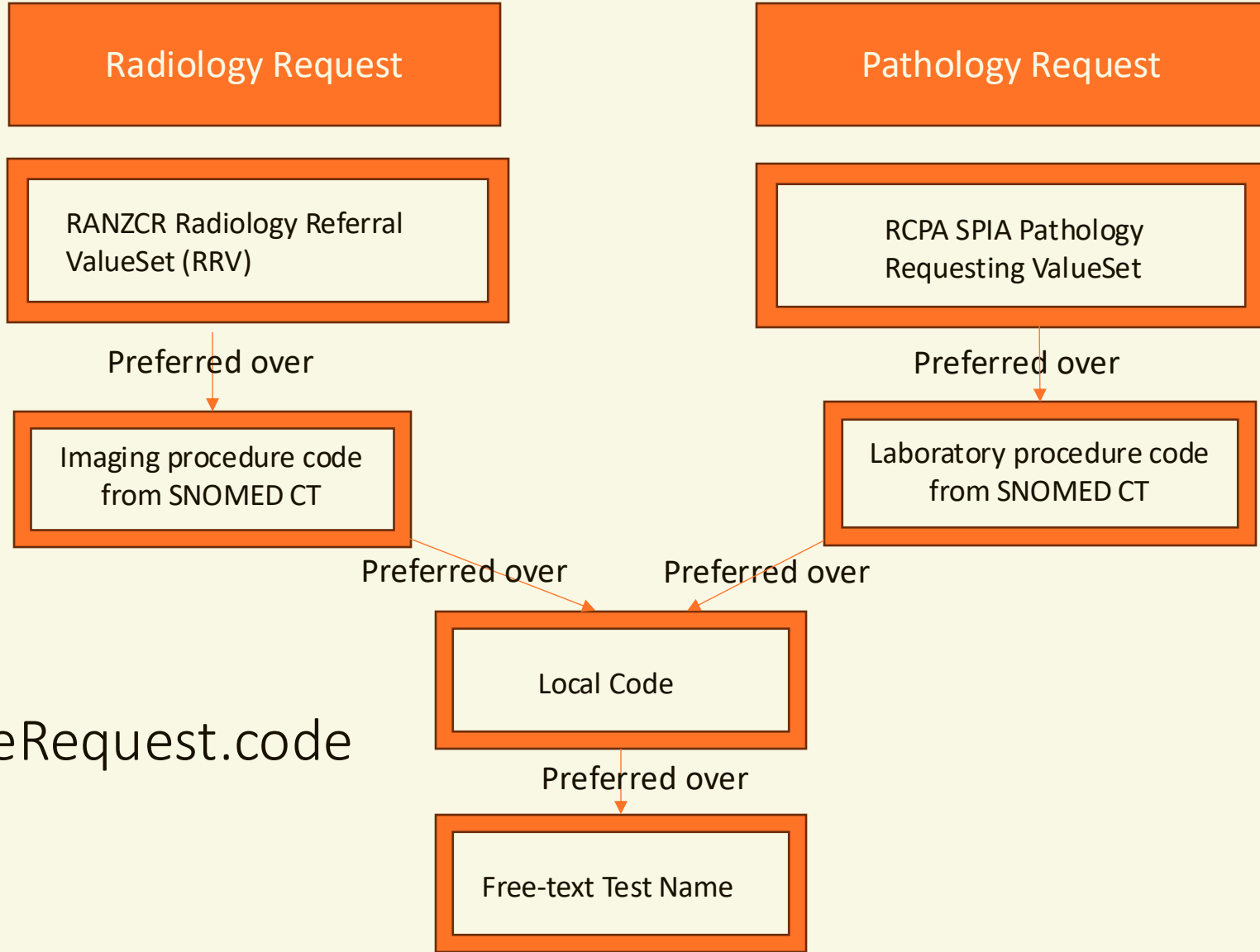
FHIR Terminology

- The connection between a data element and a specific set of standardised codes or terms.
- Ensures that everyone uses the same terms & codes, improving consistency and communication.





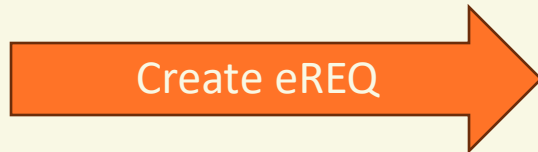
Starting point for consensus



Agreed ServiceRequest.code binding

eRequesting – example information pathways

Requester
(Placer)



Provider
(Filler)



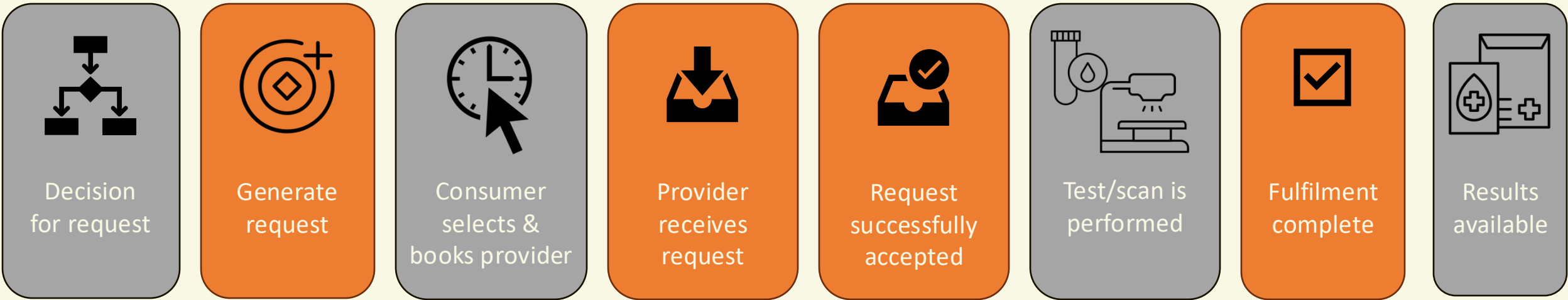
RECORD

SEND

RECEIVE/RETRIEVE



eRequest workflow - Demo context



In scope for R1

Out of scope for R1



eRequest workflow - Demo context



In scope for R1

Out of scope for R1



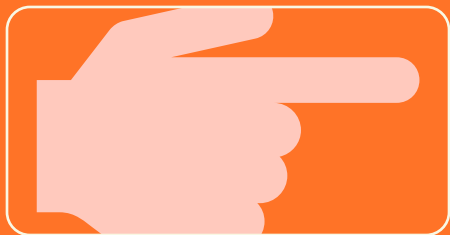
Demo context - Request Selection



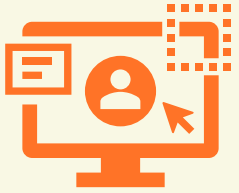
Identified request/s



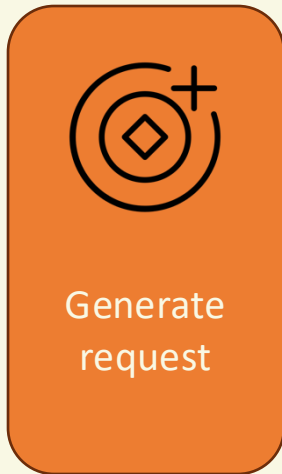
Completed most of eRequesting form



Select the request



eRequest demo scope



Pathology

Pathology tests
(SPIA FHIR Valueset)

Medical Imaging

Demo Valueset Scope:
Xray
Ultrasound
CT Scan
MRI

More content
to be added
....

Scope of today's demo

look at a visual representation of the terminology value sets when generating a request



Demo

An example visualisation of:

- the data model (AUeReqDI)
- National eRequesting terminology

in the context of a CSIRO SMART on FHIR form component

- Showing test selection component, one example visualisation
- Agnostic of system implementation





Demo

eRequest SMART on FHIR

Procedure terminology selection example

Medical Imaging eRequest Demo Examples



Select to filter

OR



Search to filter

1

Filter by modality, body site and laterality, if applicable

Examination

Procedure components

* Procedure focus: Plain x-ray

Body site: Structure of ankle and/or foot

Laterality: Left, Right, Right and left

Contrast: Yes, No

Procedure for request: X-ray of left ankle

2

Select test



1

Search

Examination

Procedure components

* Procedure focus: [input field]

Body site: [input field]

Contrast: Yes, No

Procedure for request: [input field with "left ankle xray"]

X-ray of left ankle

2

Select test

Pathology eRequest Demo Example

*** Test**

*** Test name**

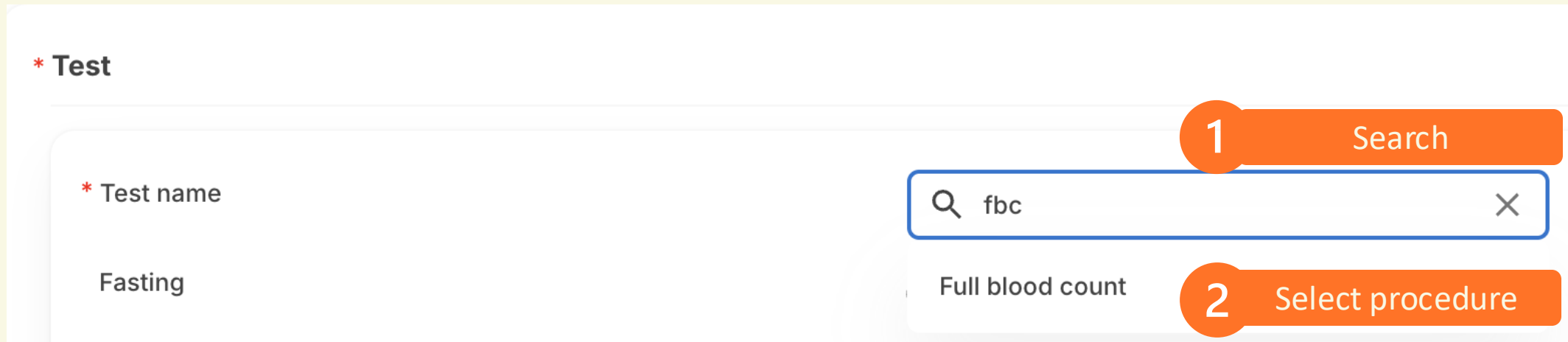
Fasting

1 Search

Q fbc X

2 Select procedure

Full blood count

The image shows a web form for creating a pathology eRequest. The form is titled '* Test' and has a section for '* Test name' with the value 'Fasting'. To the right, there is a search bar containing 'fbc' and a 'Search' button. Below the search bar, a dropdown menu is open, showing 'Full blood count' as the selected option. A 'Select procedure' button is located below the dropdown. Two orange callout boxes with numbers '1' and '2' highlight the search and selection steps respectively.



eRequest Terminology Demo Link

go.csiro.au/FwLink/e-request-form

Radiology Request Form (multifield demonstrator) selected

Title	Publisher	Date	Status
Pathology Request Form	AEHRC CSIRO	July 16, 2024	Draft
Radiology Request Form (multifield demonstrator)	AEHRC CSIRO	September 3, 2024	Draft

1 Select form

2 Select 'Create Response'

Create response Unselect



Example search list

Test	Multifield input				Single field input
	Test focus	Body site	Laterality	Contrast	Example search term
X-ray of chest	Plain x-ray	Structure of thorax (search: thor)			cxr
X-ray of left femur	Plain x-ray	Bone structure of femur (search: femur)	Left		x fem
CT of acromioclavicular joint	Computed tomography	Acromioclavicular joint structure (search: clav)	Right		ct ac r
MRI of bladder with contrast	Magnetic resonance imaging	Urinary bladder structure (search: bladder)		Yes	mri bla con
MRI of colon	Magnetic resonance imaging	Colon structure (search: col)			mri col
MRI of prostate with contrast	Magnetic resonance imaging	Prostatic structure (search: pros)		Yes	mri pro con
Fluoroscopy guided left nephrostomy	Fluoroscopy	Kidney structure (search: kid)	Left		left neph f
Ultrasound guided left nephrostomy	Ultrasound	Kidney structure (search: kid)	Left		left neph ul
Ultrasound of right Achilles tendon	Ultrasound	Structure of Achilles tendon (search: ach)	Right		ul ach r
Coronary angiography	Angiography	Coronary artery structure (search: cor)			cor ang



Workshop 4: Activity 1 – eRequesting Nationally Standardised Terminology Catalogues (20mins + 10mins report back)

- Each table will discuss having nationally standardised terminology catalogues
 - Benefits
 - Challenges
 - Opportunities
 - Risks

Document your key points on the worksheet, and once time is up, report back your key findings to the group



As a **group**
at your table



Workshop 4: Activity 2 – eRequesting Nationally Standardised Terminology Catalogues – Support Requirements (10mins + 10mins report back)



Each table will discuss the support needed to adopt nationally standardised terminology catalogues.



Write your expectations and recommendations of each stakeholder, then report back to the group.



As a **group**
at your table

Menti



Sparked Terminology Survey

Sparked is seeking feedback to improve our understanding of the requirements for supporting the use of national terminology catalogues for Pathology and Radiology tests in systems that implement the AU eRequesting IG

Take the survey here:

<https://forms.office.com/r/A7x03LV3j3>

To complete later

**AU eRequesting Terminology
Requirements for Pathology and
Radiology Test Catalogues**



Preliminary Terminology requirements survey findings

Findings

Various systems are used for creating and filling requests

Current Terminology requirements vary between jurisdictions and provider systems (eg. LIS).

Mapping between external and internal codes – requires expertise

Need for nationally agreed terminology sets

Users report interacting differently by selecting standard procedures, separate fields for modality/body site and free text

Enhancements needed to support catalogues for Rad/Path including management of unrecognised codes and standardised test panels



Next Steps



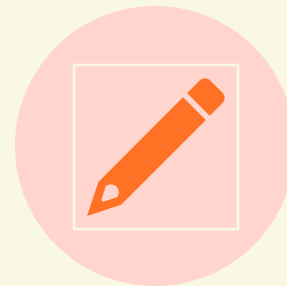
Consolidate findings



Share findings with relevant stakeholders (eg. feedback to TDG)



Review options for progressing nationally standardised catalogues



Continue to iterate on terminology content



AUeReqDI R1 Draft for Comment

- Draft for Comment now closed
- Currently working through comment and feedback
- 26 submissions received
 - Group and individuals
 - Government, Health or care providers, industry peak bodies, software vendors and consultants
- 110+ feedback items
- Due to be published October 2024





Back at 1:30pm

Lunch

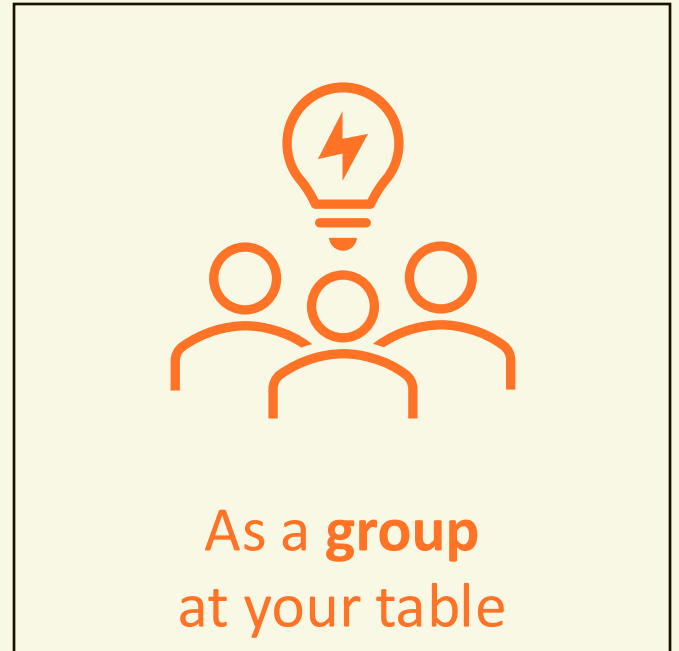




Quick rewind back to yesterday

Workshop 2: Activity 2 - Australian Patient Summary Release 1 detailed data group scoping

- As a group, answer the questions on the worksheets for each of the data groups.
- Should we?
 - Use the AUCDI R1 as is for AU PS R1
 - Expand AUCDI R1 to include additional data groups/elements?
 - Proceed with proposed approach
 - Suggest an alternative approach



Data groups we missed:

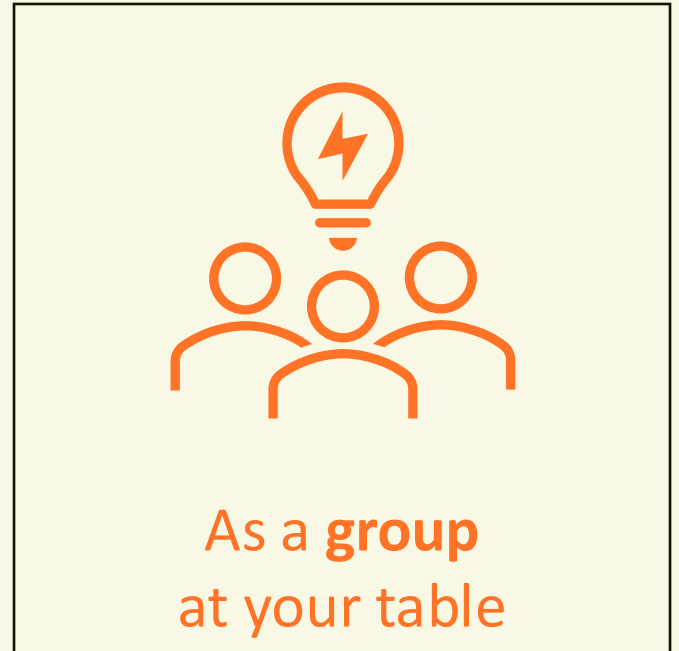
Pregnancy and Adverse reaction risk (allergies and intolerances)



Quick rewind back to yesterday

Workshop 2: Activity 2 - Australian Patient Summary Release 1 detailed data group scoping

- As a group, answer the questions on the worksheets for each of the data groups.
- Should we?
 - Use the AUCDI R1 as is for AU PS R1
 - Expand AUCDI R1 to include additional data groups/elements?
 - Proceed with proposed approach
 - Suggest an alternative approach



Data groups we missed:

Pregnancy and Adverse reaction risk (allergies and intolerances)

Chronic Disease Management
– real time, integrated shared
care planning



Objectives

- Identifying and prioritising the scope of a AUCDI R2 to support Chronic Disease Management (real-time, shared care planning)



Introduction

DOHAC

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Allied Health Perspective

Jackie O'Connor (AHPRA)

Chronic Disease Management & Allied Health Professionals

Jackie O'Connor – Digital Health Program Manager

AHPA Ordinary Members





Our Affiliate Members



Who is the audience?

- Medicare funded CDM plans = 15 of 39 professions
- System additions:
 - Community health, Aboriginal medical health services, compensable schemes, imaging requests
- Broad workflows = nuanced communication
- Inefficiencies limit sharing beyond referrers and mandates

Receipt and delivery

- MHR not fit for purpose
- GP's to AHP = fax
- Email + or - password
- Secure messaging
- EMR/CIS
- Snail mail

Information shared

- Referrals received and reports provided in response
- Aged care plans = little to no input
- Medicare CDM requirements met
- 3rd party insurers = outcome measure results and guided assessment forms
- Details = practitioner discretion = enormous data diversity

Challenges & Opportunities

CHALLENGES	OPPORTUNITIES
Lack of information = clinical risk & costly delays	Limit delays in treatment provision & optimise outcomes Decrease costs for various stakeholders
Return communication not addressed	Increased levels of coordinated care and understanding of decisions made
Limited care plans produced	Increased use and communication of information
Accuracy & currency concerns Language interpretation difficulties Siloed information remains	One easy to interpret source of truth
Potentially conflicting goals with limited opportunity for consumer vs practitioner differentiation	1 set holistic goals informed by consumer, aligned with treatment plans

Challenges & Opportunities

CHALLENGES	OPPORTUNITIES
Loss of documents = delays & funding ineligibility	Accessible documentation
Privacy & security concerns	Ability for consumers to manage access
Confused consumers	Empowered consumers

Current state = not ok

- System level data required:
 - Policy development
 - Fill research gaps
 - Informed choice
- Holistic data standards needed to make digital integration valuable to & viable for AHPs

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GP Perspective
Steven Kaye

- Chronic Disease Management:
- A General Practice perspective

Dr Steven Kaye



RACGP

- Chronic Disease Management
 - (CDM)



RACGP

• Introduction – CDM overview

- Increasingly, with an ageing population and improved health care intervention, more people are living with some level of **Chronic Disease** than ever before.
- Improved knowledge in health generally has led to an explosion of diagnoses & therapies (pharmacological and others) and **improved outcomes** for the individual and across most of population groups
- Evidence indicates that best **chronic illness care** is ideally structured, integrated and multidisciplinary.
- Direct **measurement** of outcomes have traditionally been difficult to obtain with inconsistent data, often recorded in traditional, analogue, non-shared forms.
- **Review** periods, Feedback & Preventive Care are often ill-defined and seen as a burden to the patient (rather than an opportunity to tweak management and enhance data tracking)

• Challenges

- **Communications** across the care team – Fax? Paper? Static document?
- **Mindset** of Clinicians – data measurement (incl outcomes) and Population Health trends seem mysterious
- Current **templates** & other documents used in the process
- The complexity of creating **meaningful** care plans that are up-to-date and individually personalized
- Keeping track of what everyone on the care team is doing and ensuring duty-of-care responsibilities are managed – **Coordinated care**
- Regular review and **follow-up** and getting patients back for a visit they may think is unnecessary
- The **red tape** of Medicare requirements, regardless of “best practice”, time-consumption & outcomes

• Opportunities

- There is a clear need for technology to support the sharing & **integration** of information and data collection a part of chronic disease management
- Technical solutions can create the **flow of information** *connected to the individual* across the healthcare system
- **Education** (benefits & techniques of authorship of high quality data for improved patient outcomes) and available **Incentives** across all of health, promoting an integrated, multidirectional patient-centered system
- **Data Quality & Consistency** is imperative:
 - development of “living” documents to be shared across clinical & analytic disciplines,
 - CDS (Clinical Decision Support) to be activated,
 - Data extraction/interrogation, analysis & system development to be meaningful
 - KPI's and meaningful outcome data at individual/practice/region level could becomes a reality.

Questions, Discussion and Thanks.

Steven Kaye

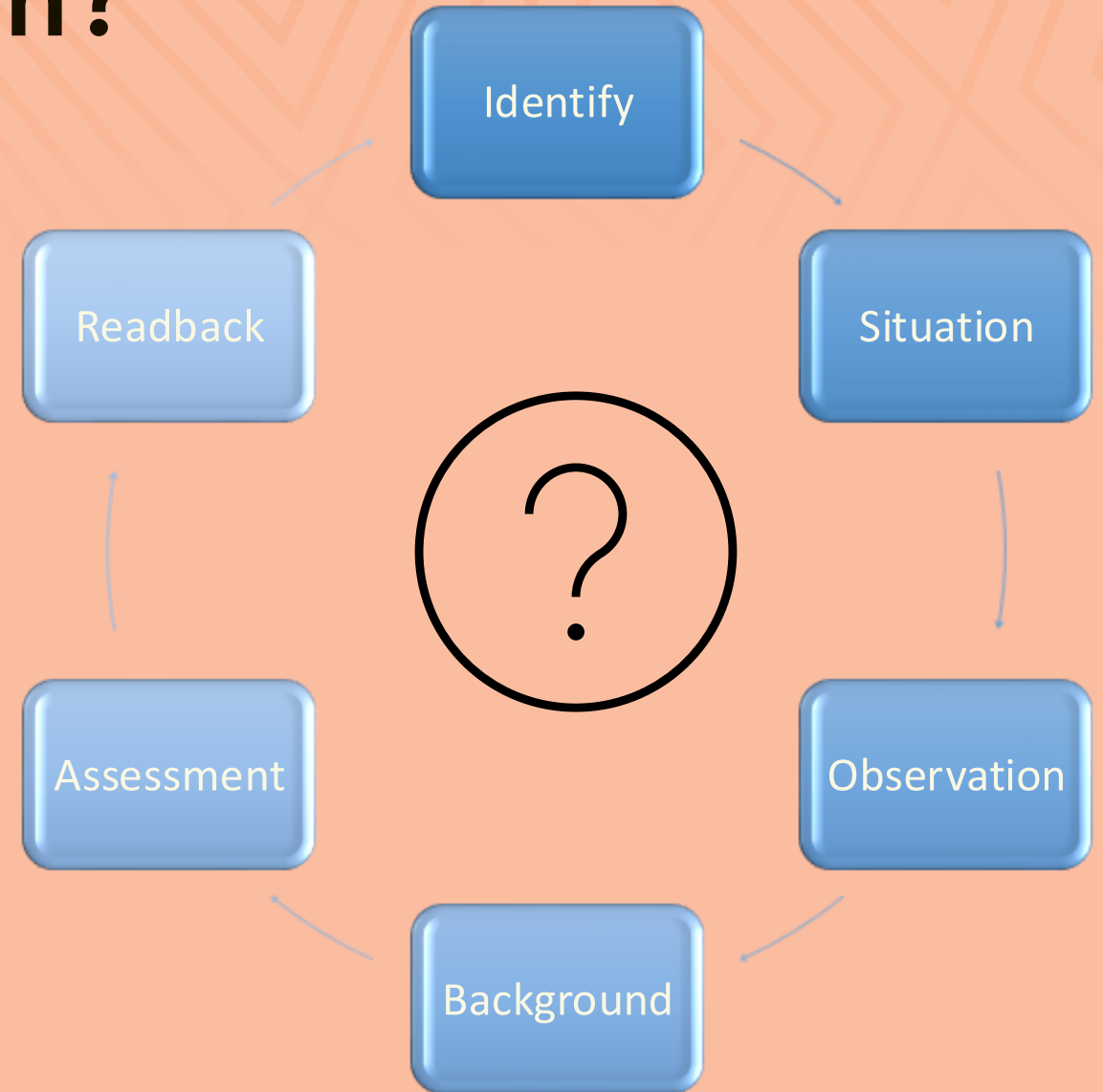


Perspective
Nyree Taylor

What is a CarePlan?

Three key points to consider when Care Planning for Victorian Indigenous populations


1. Individualised person-centred care plan
2. Standardised data to inform continuity of care
3. Human 'life' care planning vs Medicare Care planning




COPD & Continuity of Complex Care


- COPD Victorian Indigenous populations
 - Different data 'picture' to highest incidence population compared with National data set
 - Data is incomplete in information – smoking 'cessation'.
- COPD & 715
 - Currency of data is not 'of value' and is too expensive to maintain at local level
 - Granularity of data in care plans lacks continuity of care/meaning



My COPD Action Plan Name _____ Date of plan _____ 

Normal for me	My symptoms My 'normal' is • I have a usual amount of cough/phlegm • I can do my usual activities.	My plan Medication/s for COPD Puffs every AM: Puffs every PM:		Medication/s for COPD Puffs every AM: Puffs every PM:	Oxygen prescription I need to use home oxygen on _____ setting or L/min for _____ hours/day	Reliever inhaler: Puffs when I need it to relieve my symptoms
I'm unwell	My symptoms are worsening if I am: • Coughing more than usual • More breathless • Needing my reliever medication more often • More tired / lethargic • Having difficulty with usual activities.	If I get more out of breath I will use my reliever inhaler more. Medication: _____ Take _____ puffs every _____ hours.	If I get more out of breath despite taking my reliever medications I will start my rescue pack - prednisolone. Medication: _____ _____ times per day _____ mg Daily for _____ days	If I get more phlegm and/or change in colour (dark yellow, green or brown) I will start my rescue pack - antibiotics. Medication: _____ _____ times per day For _____ days	My flare ups Date prednisolone started _____ days or weeks	Date antibiotics started _____ days or weeks
Very unwell	I am becoming more unwell if: • I am getting worse despite the extra medications (including increased reliever, prednisolone and/or antibiotics).	My plan • Speak to my doctor today as I am no better.		If no urgent GP appointments are available, present to your local hospital emergency department.		
Emergency	I'm extremely unwell if: • I am experiencing sudden shortness of breath • I am feeling scared • I am unusually confused or drowsy • I am having chest pain.	My plan • Dial 000 for an ambulance or press my medical alarm button • Continue to use my reliever as needed until the ambulance arrives • Try my breathing control techniques.		Plan prepared by _____ Doctor / Nurse Practitioner (circle) Name: _____ Clinic phone: _____ Next review date: _____ <input type="checkbox"/> Reminder created Signature: _____		

For more information about managing exacerbations, visit the dedicated clinical path resource. 

Please turn page over 

Managing breathlessness

Self-management

What is missing?

- Source of truth data
 - Currency
 - Accuracy
 - Click fatigue
 - Forms
- Good local stories
 - Programs such as TIS
 - Prevention and early intervention measures – highlighting the success of these

Spa



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 more horizontal. The text 'Perspective' and 'Tim Blake' is positioned to the right of the central rectangles.

Perspective
Tim Blake

Menti





Workshop 5

Chronic disease management



Objectives - Workshop 5: Chronic Disease Management



Identifying the data groups required to support real-time shared care planning and chronic disease management



Understanding data requirements in the chronic disease management workflow



Chronic Disease Management – Use Cases Collected

Continuity & Co-Ordination of Care Across Time/Location/Provider Type	Remote Patient Monitoring	Advance Care Directives	Medication Management
Patient Care Management Plan (e.g. Mental Health Plan, Chronic Disease Plans)	Setting Goals of Care and Follow up	Risk Management	Value Based Healthcare
Patient Self Management	Public Health Initiatives		

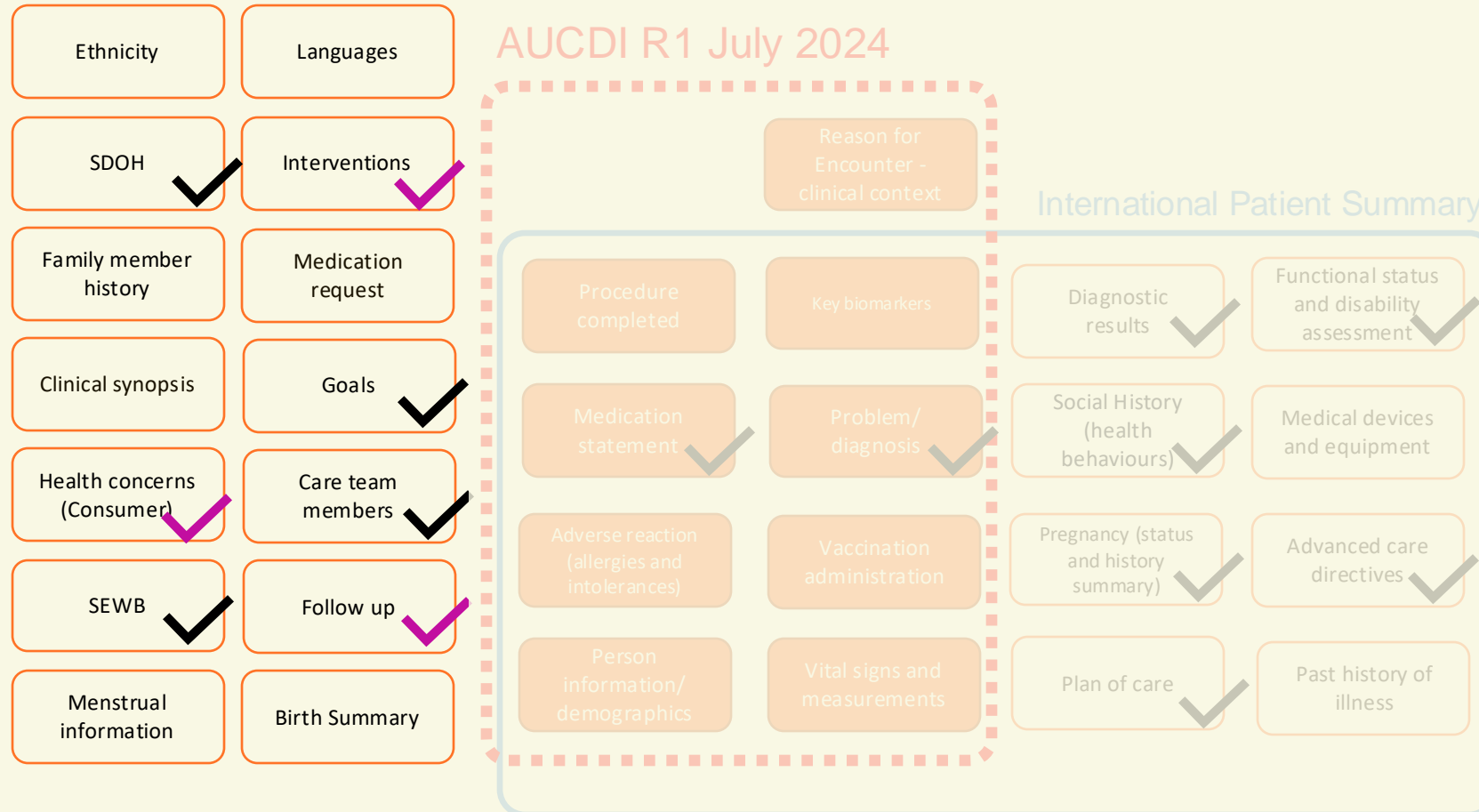
Summary of Chronic Disease Management use cases identified from both workshops





AUCDI backlog focused on Chronic Disease Management (CDM)

- ✓ Priority based on F2F meetings
- ✓ Related to plan of care/care planning





Pan Canadian Health Data Content Framework

Integrated care plan

The following data elements pertain to the plan to meet the health, wellness, care and service needs and objectives of a person.

Data element name	Data element definition
Reviewer First Name	The first name of the individual who has the responsibility for reviewing, maintaining or updating this information
Reviewer Last Name	The last name of the individual who has the responsibility for reviewing, maintaining or updating this information
Entry Date	The date that the care plan entry was made
Identified Needs	Information about the health needs, problems or concerns that the integrated care plan aims to address
Person Strengths	The person's strengths and assets relating to their goals and hopes about their health and well-being
Person Goals and Wishes	A description of a person's desired outcomes of their care
Social Determinant of Health Goals	A description of the person's goals and wishes regarding social determinants of health-related concerns, conditions or diagnoses (e.g., food security)
Person Treatment Preferences	A description of a person's goals, preferences and priorities for care and treatment in case that person is unable to make medical decisions because of a serious illness or injury (e.g., cardiopulmonary resuscitation)
Safety Considerations	Information about specific safety measures that are required to ensure the safety of the person (e.g., home safety features, maintenance of equipment and furnishings)
Other Required Services	Information about the specific services and programs that are required to address physical, psychosocial and/or cultural needs
Person Responsibilities	The person's responsibilities regarding their care and health (e.g., taking medications, informing the team of changes in their health status)
Team Responsibilities	The team members' responsibilities, including those of caregivers, in the delivery of care or services
Caregiver Involvement	An indication of whether a member of the person's family or social circle is currently involved in the person's care plan
Timeframe for Goals	The time frame required to achieve the goals and wishes identified within the care plan, as determined by the person
Agreement With Care Plan	Indicates whether the plan was discussed with and agreed to by the person or legitimate representative
Treatment Recommendation	A treatment recommendation that aligns with the person's goals and wishes
Given Recommendation Date	The date of each recommendation included in the care plan; however, it may be that the plan is given on a single date with multiple recommendations in the same plan
Other Care Planning Documents	References to other care-planning documents, including the type, location and date
Integrated Care Plan Summary	Indicates which parts of the medical record are used to inform the integrated care plan (e.g., immunizations, procedures, encounter)
Next Planned Review Date	The date when the care plan will be reviewed next
Care Plan Evaluation	An assessment of whether the person is achieving their goals and wishes related to their care plan



Team Care Arrangement plan example

TEAM CARE ARRANGEMENTS - MBS ITEM No. 723	
Patient's Name: <<Patient Demographics:Full Name>>	Date of Birth: <<Patient Demographics:DOB>>
Contact Details: <<Patient Demographics:Full Address>>	Medicare or Private Health Insurance Details: <<Patient Demographics:Medicare Number>> <<Patient Demographics:Health Insurance>>
Details of Patient's Usual GP: <<Doctor:Name>> <<Doctor:Full Address>>	Details of Patient's Carer (if applicable): <<Doctor:Full Address>>
Date of the last Care Plan / Team Care Arrangements (if done): <<Date of last Care Plan/TCA>>	
Other notes or comments relevant to the patient's Team Care Arrangements:	
PAST MEDICAL HISTORY	
FAMILY HISTORY <<Clinical Details:Family History>>	
MEDICATIONS <<Clinical Details:Medication List>>	
ALLERGIES	

TEAM CARE ARRANGEMENTS - MBS ITEM No. 723		
Goals - changes to be achieved	Required treatments and services including patient actions	Specific arrangements for treatments/services (when, who, and contact details)

Copy of Team Care Arrangements offered to patient? <<Copy of TCA offered to patient?>>

Team Care Arrangements added to the patient's records? <<TCA added to patient record?>>

Copy / relevant parts of the Team Care Arrangements supplied to other providers? <<Copy of TCA supplied to other providers?>>

Referral forms for Medicare allied health and dental care services completed? <<Referral forms for Medicare AHPs completed?>>
[For referral forms call 1800 067 307, go to www.hic.gov.au/providers/forms or look under "Supplied" templates]

Date service was completed: <<Date service completed>> **Proposed Review Date:** <<Review date (6 months recommended)>>

I have explained the steps and any costs involved, and the patient has agreed to proceed with the Team Care Arrangements. <<Steps and costs explained, patient agreed>>
The patient also agrees to the involvement of other health providers and to share their clinical information (without / with restrictions). <<Patient agrees to AHPs and sharing information>>

GP's Signature: _____ Date: _____

GP Management Plan Example



<<Miscellaneous:Practice Letterhead>>

GP MANAGEMENT PLAN - MBS ITEM No. 721 (DIABETES)

Patient's Name: <<Patient Demographics:Full Name>> **Date of Birth:** <<Patient Demographics:DOB>>

Contact Details: <<Patient Demographics:Full Address>> **Medicare or Private Health Insurance Details:** <<Patient Demographics:Medicare Number>> <<Patient Demographics:Health Insurance>>

Details of Patient's Usual GP: <<Doctor:Name>> <<Doctor:Full Address>> **Details of Patient's Carer (if applicable):**

Date of last Care Plan/GP Management Plan (if done): <<Date of last Care Plan/GPMP>>

Other notes or comments relevant to the patient's management plan:

PAST MEDICAL HISTORY

FAMILY HISTORY

<<Clinical Details:Family History>>

MEDICATIONS

<<Clinical Details:Medication List>>

ALLERGIES



GP MANAGEMENT PLAN - MBS ITEM No. 721 (DIABETES)

Patient problems / needs / relevant conditions	Goals - changes to be achieved	Required treatments and services including patient actions	Arrangements for treatments/services (when, who, contact details)
1. General			
Patient's understanding of diabetes	Patient to have a clear understanding of diabetes and patient's role in managing the condition	Patient education	GP / nurse Diabetes educator
2. Lifestyle			
Nutrition	Maintain healthy diet	Patient education OR As per Lifescripts action plan	GP to monitor Dietician
Weight	Your target: BMI < __ Ideal: BMI ≤ 25 kg/m ²	Monitor Review 6 monthly OR As per Lifescripts action plan	Patient to monitor GP/nurse to review
Physical activity	Your target: Ideal: Exercise at least 30 minutes walking or equivalent 5 or more days per week	Patient exercise routine OR As per Lifescripts action plan	Patient to implement
Smoking	Complete cessation	Smoking cessation strategy: Consider:	Patient to manage GP to monitor

		- Quit - Medication OR As per Lifescripts action plan	
Alcohol intake	Your target: < __ standard drinks per day Ideal: ≤ 2 standard drinks per day (men) ≤ 1 standard drinks per day (women)	Reduce alcohol intake Patient education OR As per Lifescripts action plan	Patient to manage GP to monitor
3. Biomedical			
Cholesterol/Lipids	Your targets: LDL < __ Cholesterol < __ HDL > __ Triglycerides < __ Ideal: LDL < 2.5 mmol/L Cholesterol < 4.0 mmol/L HDL ≥ 1.0 mmol/L Triglycerides < 2.0 mmol/L	Annual check	GP
Blood pressure	Your target: < __ Ideal: < 130/80 mm Hg	Check every 6 months	GP/nurse
HbA1c	Your target: < __ Ideal: ≤ 7%	Check every 6 months	GP/nurse
Blood glucose level	Your target: < __ Ideal: < 7 mmol/L (4-6 fasting)	Daily monitoring Check every 6 months	Patient GP/nurse
4. Medication			
Medication review	Correct use of medications, minimise side effects	Patient education Review medications	GP to review and provide education
5. Complications of diabetes			
Eye complications	Early detection of any problems	Eye check every 2 years Referral by GP	GP Eye specialist
Foot complications	Prevent foot complications	Patient education on foot care Patient to check feet regularly Check feet every 6 months	GP / podiatrist / nurse Patient GP
Kidney damage	Avoid renal complications Your targets: < __ µg/min timed overnight collection < __ mg mg/L spot collection < __ mg/mmol women < __ mg/mmol men albumin creatinine ratio Ideal: < 20 µg/min timed overnight collection < 20 mg mg/L spot collection < 3.5 mg/mmol women < 2.5 mg/mmol men albumin creatinine ratio	Test for microalbuminuria annually	GP
Sexual dysfunction	Maintain sexual function	To be discussed with patient where applicable	GP

Copy of GP Management Plan offered to patient? <<Copy of GPMP offered to patient?>>
Copy / relevant parts of the GP Management Plan supplied to other providers? <<Copy of GPMP supplied to other providers?>>

GP Management Plan added to the patient's records? <<GPMP added to patient's records?>>

Date service was completed: <<Date service completed>>

Proposed Review Date: <<Review date (recommended 6 months)>>

Workshop 5: Activity 1 – Chronic Disease Management (CDM) workflow

In your group, complete the worksheet for the Data Groups

CDM Data groups

- Social Determinants of Health (SDOH)
- Interventions
- Goals
- Health concerns (consumer)
- Care team members
- Social Emotional Wellbeing (SEWB)
- Follow up



As a **group**
at your table

Workshop 5: Activity 1 – CDM Workflow considerations (20 min)

- What information is needed to support shared care for Chronic Disease Management?
 - Settings
 - Systems
 - Is this data being recorded?
 - How? Current challenges/gaps
 - What should a future state look like? What and how should it work? e.g. shared care tool
- If there are other data groups in the AUCDI backlog that **SHOULD** be considered for CDM, please add them to the sheet



As a **group**
at your table



CDM in AUCDI R2 - Core of the core

Social Determinants of Health

Physical activity summary
 Food and nutrition summary
 Sexual health summary
 Gambling summary
 Housing summary
 Living arrangement summary
 Social network summary
 Transport access summary
 Personal safety summary
 Education summary
 Occupation summary
 Health access summary
 Financial summary
 Literacy
 Communication capability
 And ..?

Health concerns (consumer)

Goals

Patient, clinical, carer, ?

Interventions

International Classification of Health Interventions (ICHI)
 ICHI covers interventions carried out by a broad range of providers across the full scope of health systems and includes interventions on: diagnostic, medical, surgical, mental health, primary care, allied health, functioning support, rehabilitation, traditional medicine and public health.

How do we approach this?

Social Emotional Wellbeing



© Gee, Dudgeon, Schultz, Hart and Kelly, 2013

Follow-up

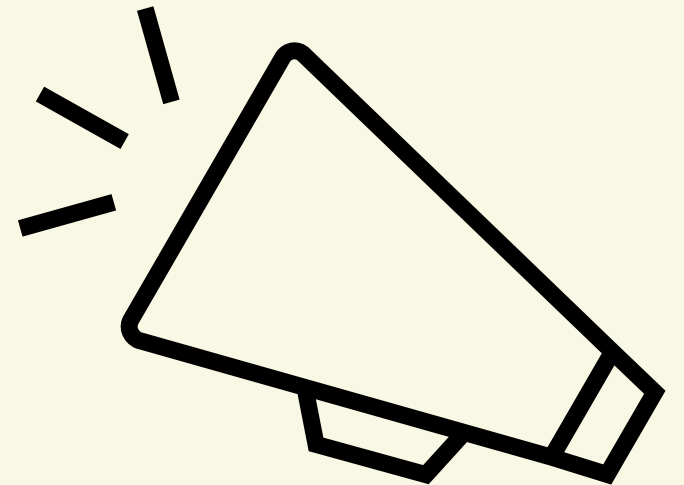
Recalls and reminders, post op follow up, ?

Care team members

Report back time!

Please tell us your table's
agreed inclusions and
justifications

10 min



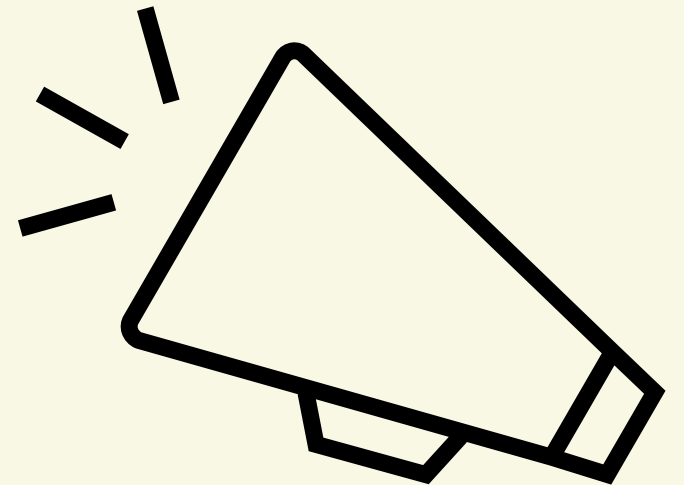


Workshop 5: Activity 2 – Chronic Disease Management AUCDI R2 Scoping (15min)

- Which **Chronic Disease Management** data groups do we prioritise for inclusion in the **second release** of AUCDI?
 - Consider
 - Availability of structured and coded information
 - Feasibility
 - Data quality
 - Usefulness
 - Remember ‘Core of the Core’
- As a group at your table, using the worksheet, identify which data groups and why they should be in AUCDI R2

Report back time!

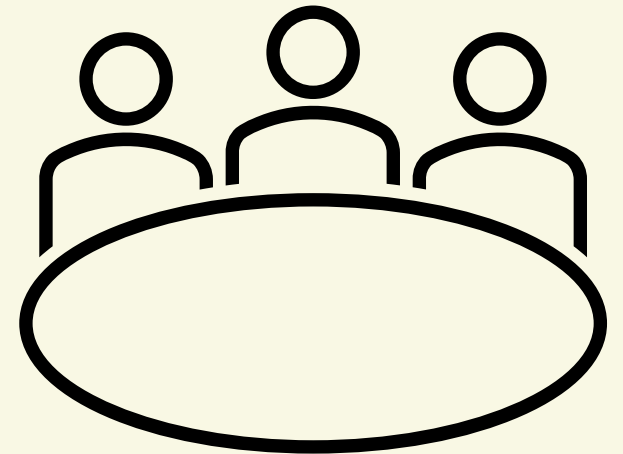
Please tell us your table's
agreed inclusions and
justifications
(10 min)



Discuss as a table!

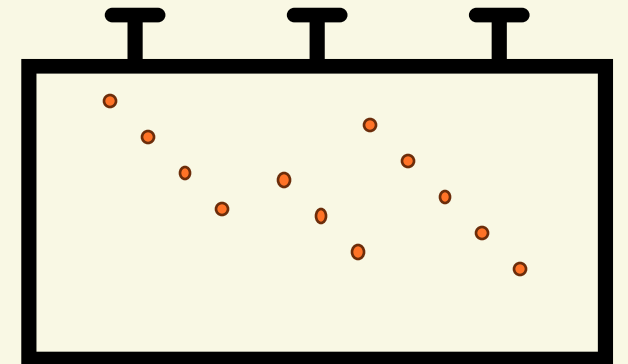
As a group, are your priorities
still the same?

(5 min)




Sticker up!

Each table places their priority stickers on the big voting sheet on the wall.



Afternoon tea





Workshop 5

Chronic disease
management
continued



Objectives - Workshop 5: Chronic Disease Management continued...



Identifying the data groups required to support real-time shared care planning and chronic disease management



Identifying what additional work on AUCDI is needed to support chronic disease management



Activity 3 – Chronic Disease Management AUCDI Release 2 detailed data group scoping

- For each of the agreed data groups in for Chronic Disease Management in AUCDI R2, there is a worksheet which provides (where relevant)
 - Some background information
 - Mindmaps representing the roadmap of where that data group could go
 - Mindmaps or text representing a proposed approach
 - Discussion questions
- As a group, answer the questions on the worksheets for each of the data groups.



Activity 3 – Chronic Disease Management

AUCDI Release 2 detailed data group scoping

- As a group, answer the questions on the worksheets for each of the data groups.



As a **group**
at your table

Menti



Sparked Evaluation



Sparked Evaluation

CSIRO Evaluation

CSIRO Evaluation Team

to ensure Sparked is fit for purpose and is serving the community's needs

DoHAC Evaluation

Independent external evaluation

to examine the broader Sparked deliverables and policy perspectives

Why should you participate?

- Influence what's needed to improve the community process
- Support our agile way of working so we can adapt
- Contribute to the global benchmark of what success looks like for a national accelerator
- Shape the future direction for creation and adoption of FHIR standards in Australia



CSIRO Sparked Evaluation Update

The CSIRO AeHRC is continuously evaluating the effectiveness of Sparked to inform improvements and changes to the accelerator



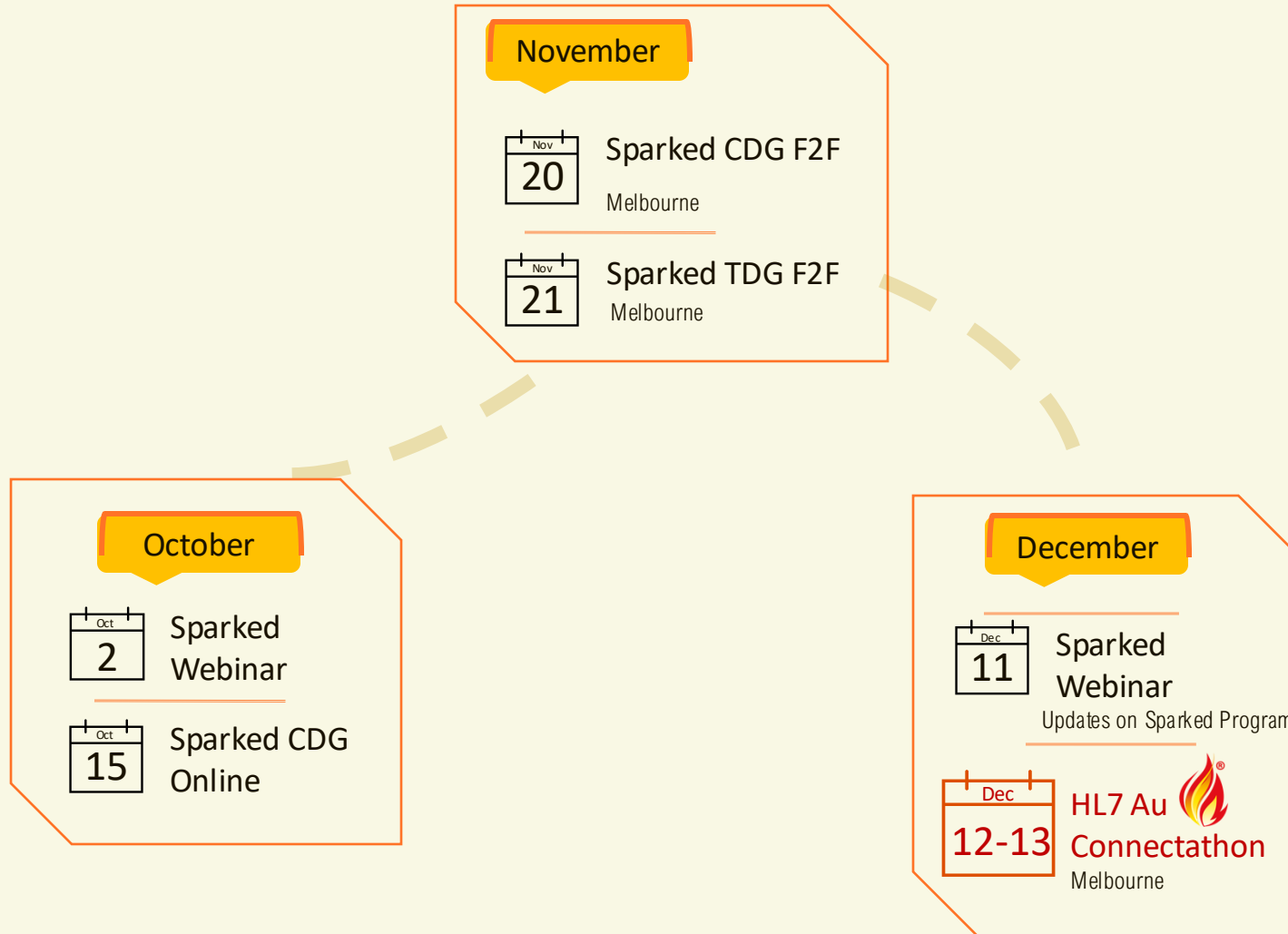


DoHAC Evaluation Update

DoHAC have selected Voronoi as an independent evaluator of the Sparked accelerator



Upcoming Events 2024



Menti



AU FHIR Accelerator



Register for Sparked

Thank you



Thank you