Rural and Remote Health Equity Roundtable

17 – 18 July 2024

Sparked

HL7 FHIR

Acknowledgement of Country

We acknowledge the Traditional Custodians of the land on which we all gather today, the land of the Larrakia 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 Thursday

Time	Topic	Facilitator
8:00am	Registration	
8:30am	Overview of the day's objectives and workshop agenda	Kate Ebrill
9:00am	Presentation : NHI project update WORKSHOP 1: Healthcare Identifiers Objective: to help inform the Agency and Services Australia about IHI data matching challenges, lessons learned and recommended solutions for Aboriginal and Torres Strait Islander peoples and those in rural and remote areas.	NT Health Facilitated by Kieron McGuire and Chris Genc
10:30am	Morning Tea	
11:00am	WORKSHOP 2: Barriers and Opportunities with data standardisation in rural and remote Australia Objective: to ensure that the data foundations being developed by Sparked reflect the priority use cases and data elements for rural and remote Australia	Introduction by Dr Chris Pearce and Dr Andrew Bell Facilitated by Kate Ebrill, Kylynn Loi, and Heather Leslie
12:30pm	Lunch	
1:30pm	WORKSHOP 3: Social Determinants of Health (SDOH) and Social and Emotional Wellbeing (SEWB) Objective: to explore and understand the importance of SDOH and SEWB information, identify key use cases and priority data elements.	Introduction by Jason Agostino and Maia Sauren Facilitated by Kate Ebrill, Kylynn Loi, and Heather Leslie
3:00pm	Afternoon Tea	
3:30pm	WORKSHOP 4: Population Health Objective: To explore and identify the key opportunities for AUCDI/SDOH/SEWB to support population health use cases. For example regional and national reporting, quality indicators, etc.	Facilitated by Kate Ebrill, Kylynn Loi, and Heather Leslie
4:15pm	Closing remarks and next steps	Kate Ebrill

Objectives

Objectives for the workshop

Reflect and discuss barriers and opportunities with data standardisation in rural and remote Australia

Identify priority use cases to inform core data for interoperability (AUCDI) development over the next 12 months for rural and remote Australia

Validate AUCDI R2 backlog to ensure it reflects needs of rural and remote Australia

Develop the roadmap for Social Determinants of Health and Social Emotional Wellbeing data group definition

Identify opportunities for population health use of data

Introductions and Menti

Getting to know each other

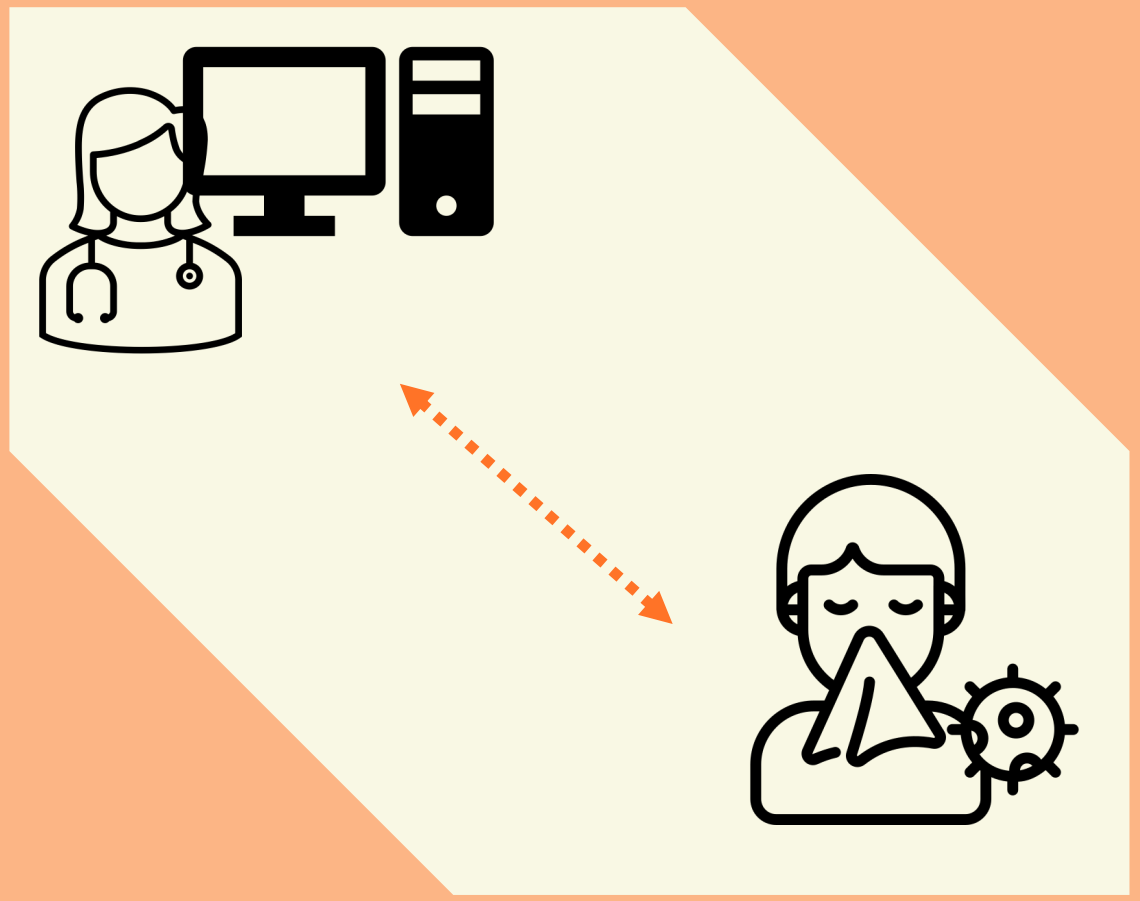
- Introduce yourself at your table
- As a group discuss your key objectives for the day

Why standardise?

Why Standardise?

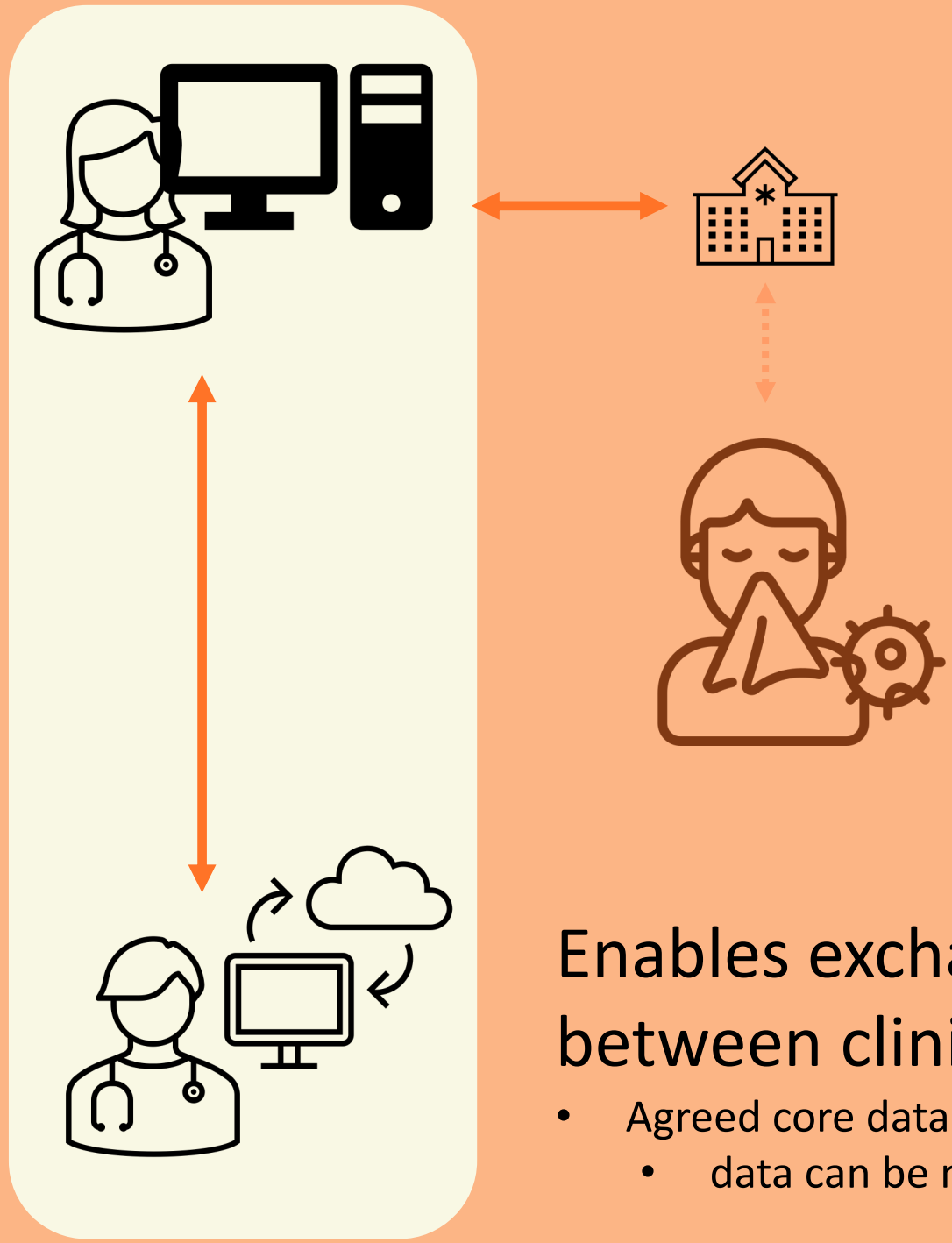
Single Provision Multiple Use/Reuse

Sparked
HL7 FHIR



Improves clinician patient experience

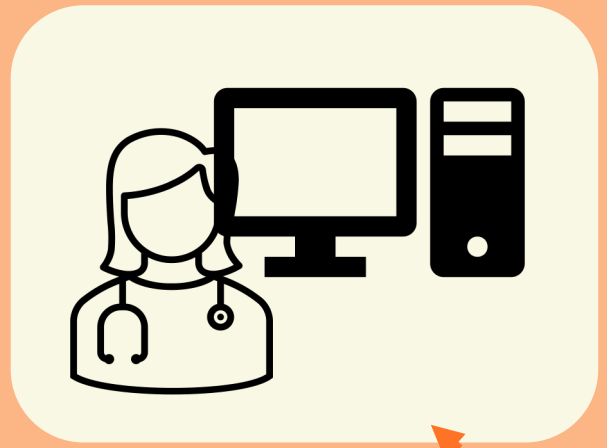
- Agreed core data and agreed exchange formats
  - Enter data once, reuse many times across different use cases
  - Use of standardised clinical decisions support, Smart Forms and other knowledge related tools to support person centred care
  - Best of breed user tools made available through agreed interfacing with existing software



Enables exchange of data with meaning between clinical systems

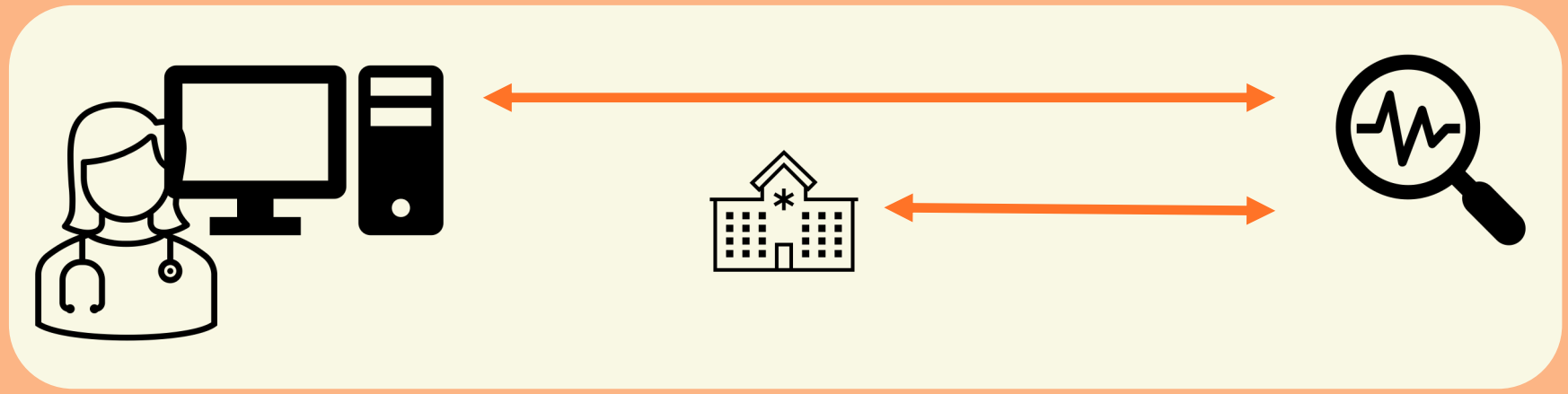
- Agreed core data and agreed exchange formats
  - data can be meaningfully exchanged

Sparked
HL7 FHIR



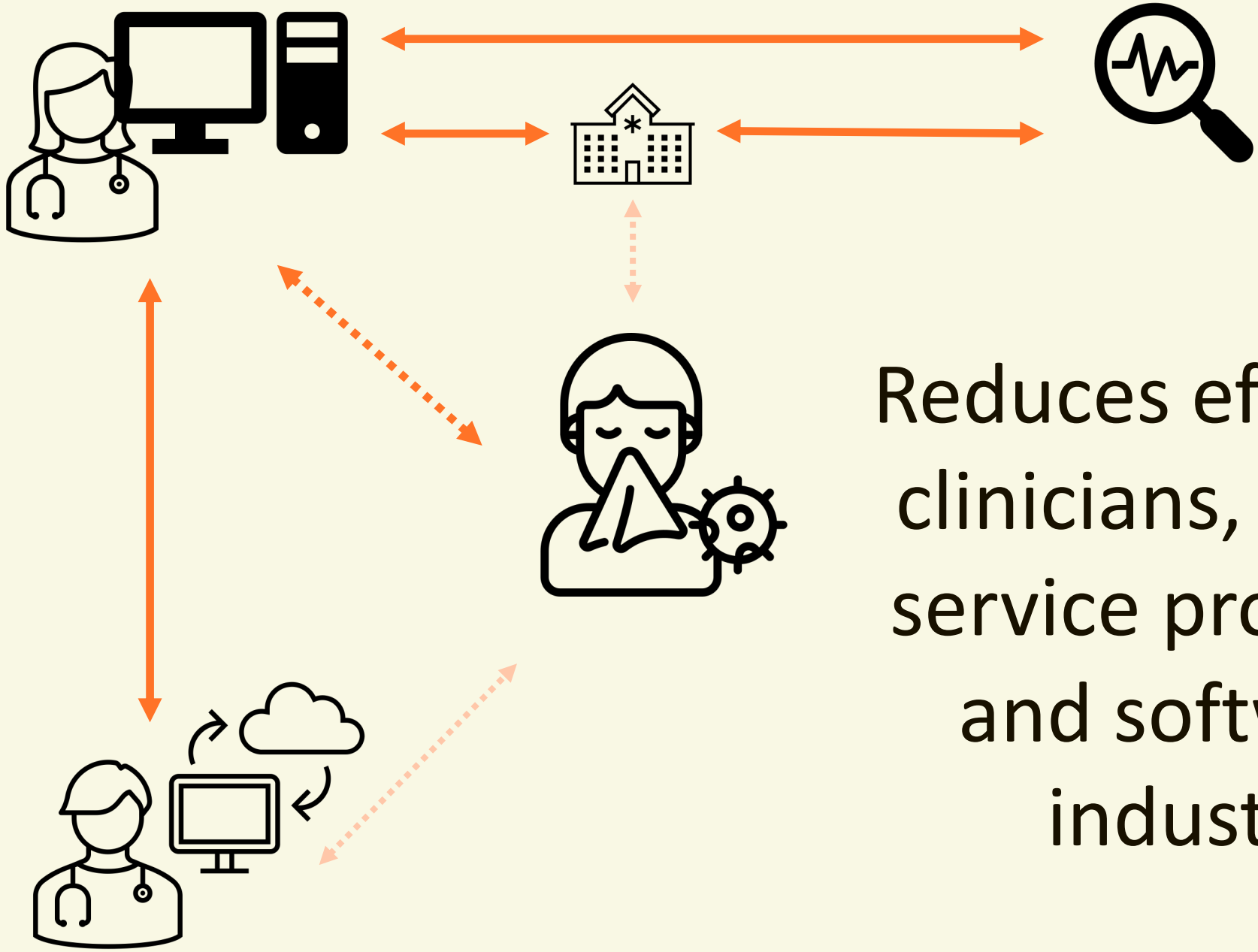
Supports industry and innovation

- Agreed core data and agreed exchange formats
  - Standardised knowledge related activities such as common decision support tools and Smart Forms that can be used across systems, rather than a unique one per project or implementation
  - Provides a ready-made library of information models, questionnaire modules, value sets that can fast-track the development of new clinical systems, forms, applications or projects.
  - Allow best of breed, value add software to be built agnostic of existing systems and then used together as “plug and play”

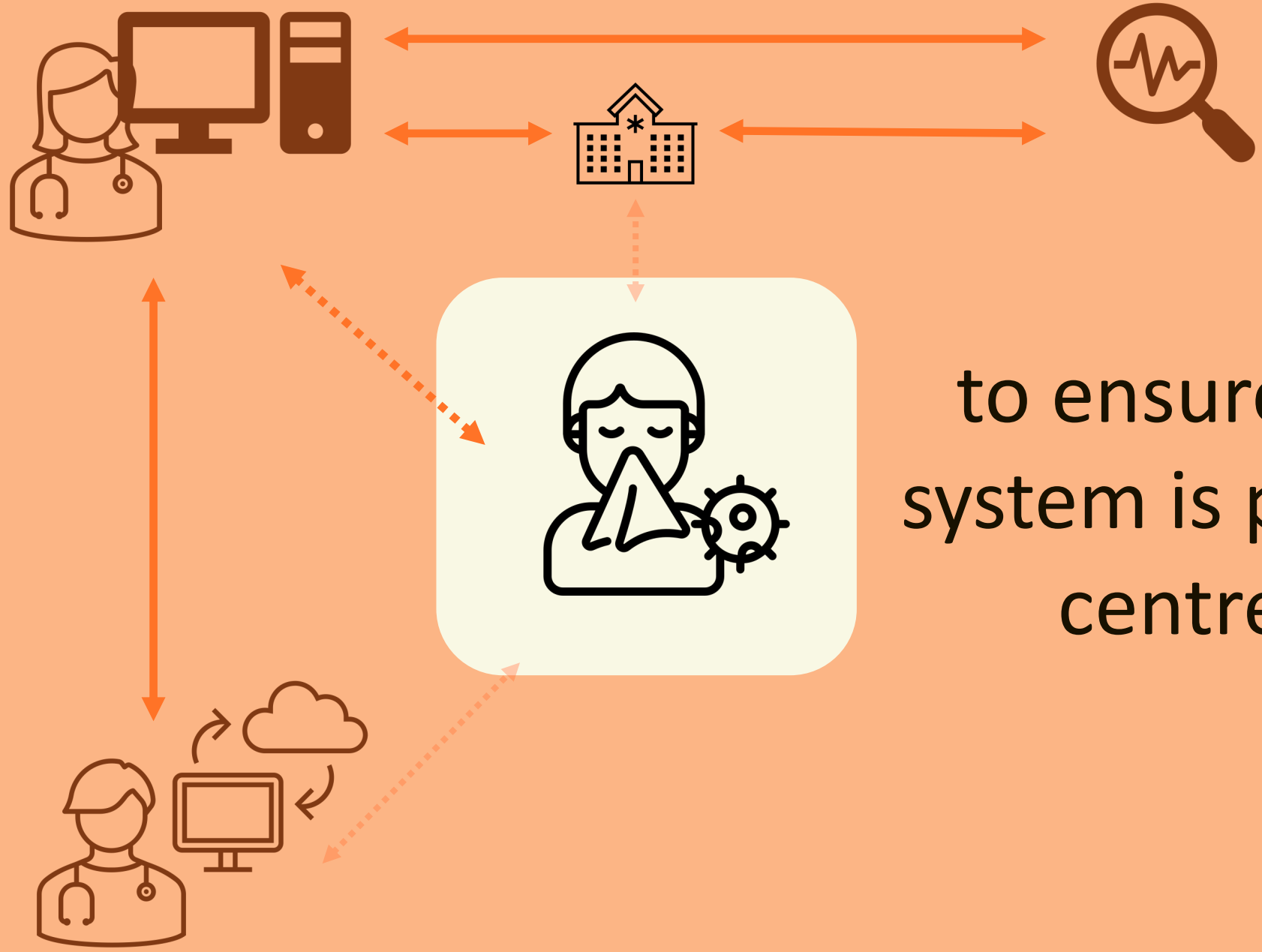


Supports population health, reporting and analytics

- Agreed core data and agreed exchange formats
  - Supports interrogation of data sets using standardised queries, resulting in consistent data results
  - Supports safer and more accurate extracts, aggregation and analysis of data (assuming appropriate privacy, consent and authorisation)



Reduces effort for clinicians, health service providers and software industry



to ensure the system is person centred

Workshop 1

NHI project update

NT Health

NT HEALTH

Expansion of NHIs within NT Health

Steve Schatz,
Clinical Engagement & Design Support Lead
Office of the CCIO

NORTHERN TERRITORY GOVERNMENT

NHI Uptake Improvement Project Vision:

To have a compliant & unified healthcare system in the Territory that is empowered by National Health Identifiers (NHIs) to deliver seamless, coordinated care for all, fostering improved patient outcomes and a more efficient healthcare ecosystem. **(aka "Get healthcare providers and patients to use NHIs more")**

Key project objectives:

1. **Compliance with ACSQHC's standard** (see advisory AS18/11) **& national legislation** (negating reliance on exemptions)
2. **Improved identification, communication & more seamless patient handovers**
3. **Better inter-agency, organisation and cross-border information sharing**
4. **Enhanced data interoperability & analytics**
5. **Optimised resource allocation & utilisation**

Phased approach:

PHASE	Description
1	Enrich current external messages with NHIs (with National Portals & also intersystem messaging)
2	Embed NHI visibility & use into core EMRs
3	Implement new messages (to NT Health) for specified documents posted to MHR *(dependant on capacity/resourcing)*
4	Create new MHR documents & functionality with ADHA using NHIs such as *(dependant on ADHA)*

Phase 1:

	Description	Details
PHASE 1	Enrich current external messages with NHIs	1. **Immediately enforce HPI-I for all current MHR uploads** 2. **Enhance HI connections** for Core EMRs to validate/use/store NHIs. 3. **Enrich existing external messages to national repositories** letters, summaries, eResults, eReports, etc. 4. **Include NHIs in existing external messages sent on SEMS.** 5. **Improve validations with HI service & business partners.** 6. **Improve CQI & Supports;** Dedicated team, including the development of policies / procedures / dashboards, and other monitoring tools to support NHI adoption & address failures.

Phase 2:

	Description	Details
PHASE 2	Embed NHI visibility & use into core EMRs	1. **Display NHIs appropriately in systems:** Acute Care (Acacia/CareSys/etc.) & Primary Care (PCIS/CCIS/etc.) 2. **Print NHIs on Paper/PDFs for:** Referrals, Letters, Summaries, Path/DI (Request & eResults / eReports) 3. **Enhance onscreen / printed lists to include NHIs:** IHI / HPI-I / HPI-O 4. **Improve system search abilities using NHI's:** IHI / HPI-I / HPI-O 5. **Enrich Local & National reporting outputs:** IHACPA / AIHW / National Data Linkage Programs.

Phase 3:

	Description	Details
PHASE 3	Implement new messages (to NT Health) for specified documents posted to MHR (include NHIs)	1. **Post NT Health APPs (Advance Personal Plans)** 2. **Post NT Health ACTS (Aged Care Transfer Summary)** 3. **Modulate integration architecture to support matching of NHIs provided on:** • Incoming referrals • Incoming eResults/eReports • Incoming Specialist Letters, Discharge Summaries & other hospital communications

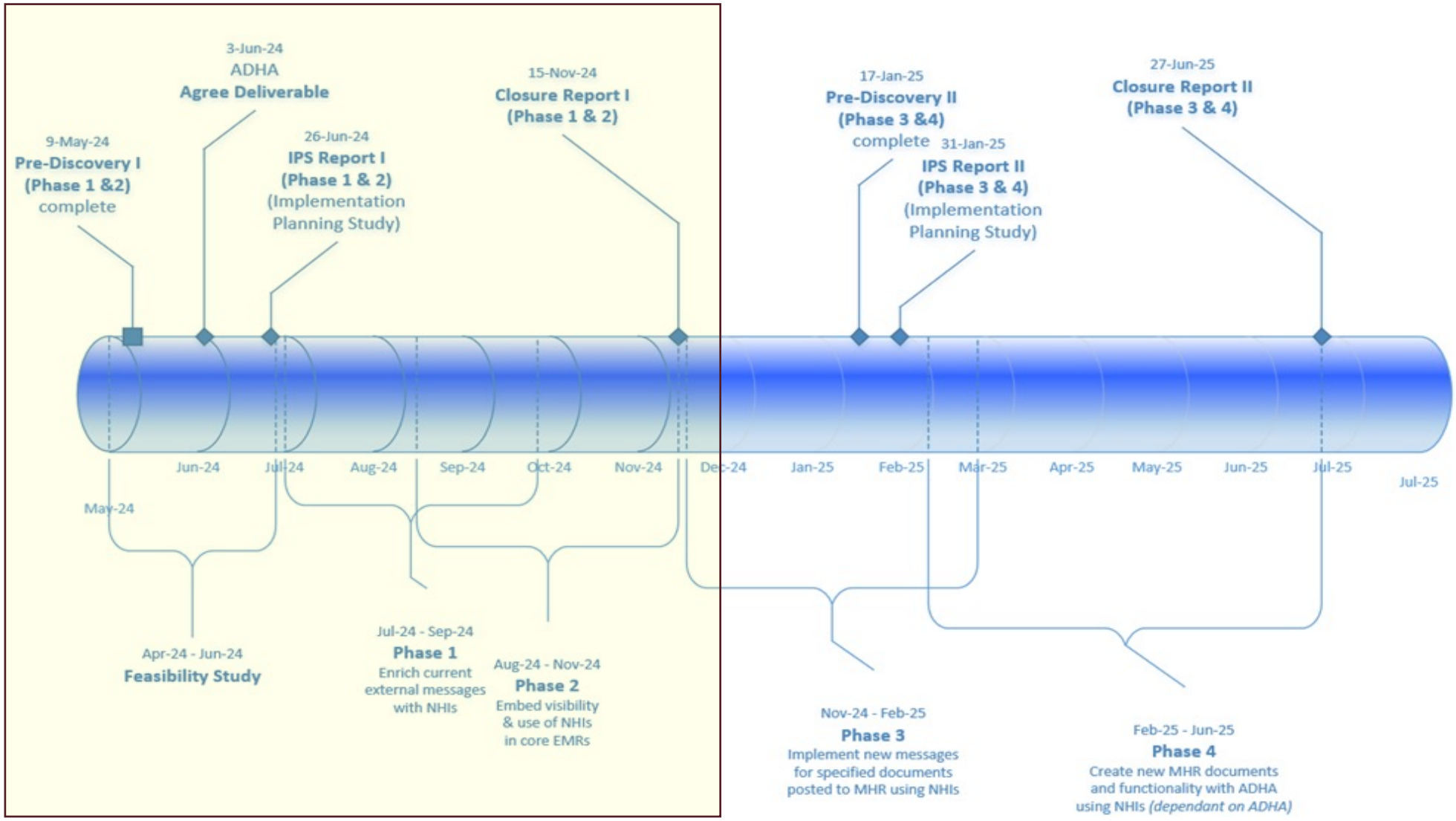
Phase 4:

	Description	Details
PHASE 4	**Create new MHR documents & functionality with ADHA using NHIs such as** *(dependant on ADHA)*	1. **Post enriched content PHC Medical Event Summaries to MHR.** (i.e. consolidated notes) 2. **Post current eReferral's to MHR.** 3. **Post current Antenatal Summaries to MHR.** 4. **Post all eRequest's to MHR** (commencing with Path / DI). 5. **Post "Other" major hospital document types to MHR** (e.g., MDCPs, Letters and Summaries currently excluded). 6. **Post current OPD notifications to MHR** (SEMS Appts, Waitlist, DNAs, Attendances etc.). 7. **Post & Integrate systems with patient determined Usual GP** (inc. concepts for Care Teams, Correspondence Manager, etc) drawn from MyHR (to improve validations, and semi-automatically determine recipients for NTH communications)

Timelines

3

NHIs Enhancement Project Timeline



NORTHERN TERRITORY GOVERNMENT

Workshop 1: Healthcare Identifiers (Australian Digital Health Agency)

- Improvements to healthcare identifier data matching and data quality improvements are key strategic activities outlined in the recently released National Healthcare Identifiers Roadmap 2023-2024.
- Objective: to help inform the Australian Digital Health Agency and Services Australia about IHI data matching challenges, lessons learned and recommended solutions for Aboriginal and Torres Strait Islander peoples and those in rural and remote areas.

Australian Government

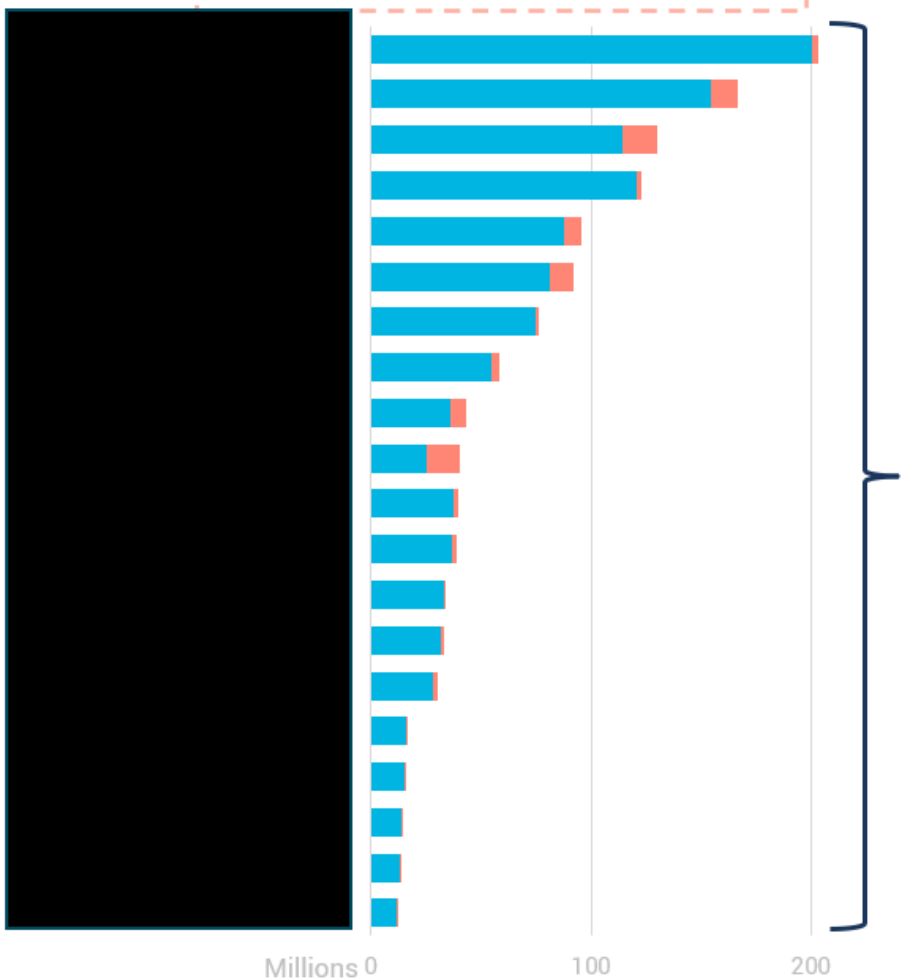
Australian Digital Health Agency

Sparked rural and remote roundtable Healthcare Identifier Matching

Kieron McGuire, Monique Warren, Chris Genc

Match rates by vendor and product.

Top 20 Products by search volume (1)



Most frequent error messages (3)

Error Description	Total	%
Invalid Locality-Postcode-State	1,944,892	**27.1%**
Invalid Surname	1,911,532	**26.7%**
Invalid Firstname	1,561,535	**21.8%**
The IHI search request does not contain the minimum search criteria (2)	558,015	**7.8%**
Failed Medicare card number check digit routine	253,507	**3.5%**
Invalid Address Line 1	187,242	**2.6%**
Invalid DVA file number	171,114	**2.4%**
Future DOB	156,935	**2.2%**
Invalid Locality	110,802	**1.5%**
Birth year less than 1800	96,640	**1.3%**
Other	220,419	**3.1%**

Insights

1. **128 Vendor products** accessing the HI Service over the reporting period, with the top 20 products representing **89%** of searches made.
2. The three most frequent error messages account for **75.5%** of errors returned (**5.4 million**).
3. The 10 most frequent error messages returned for these products tracks the most frequent error messages by all vendors (*see page 22*), with only slight changes to the order.

- **44 different error message types returned** across these 20 products (34 bucketed under the 'Other' Category).

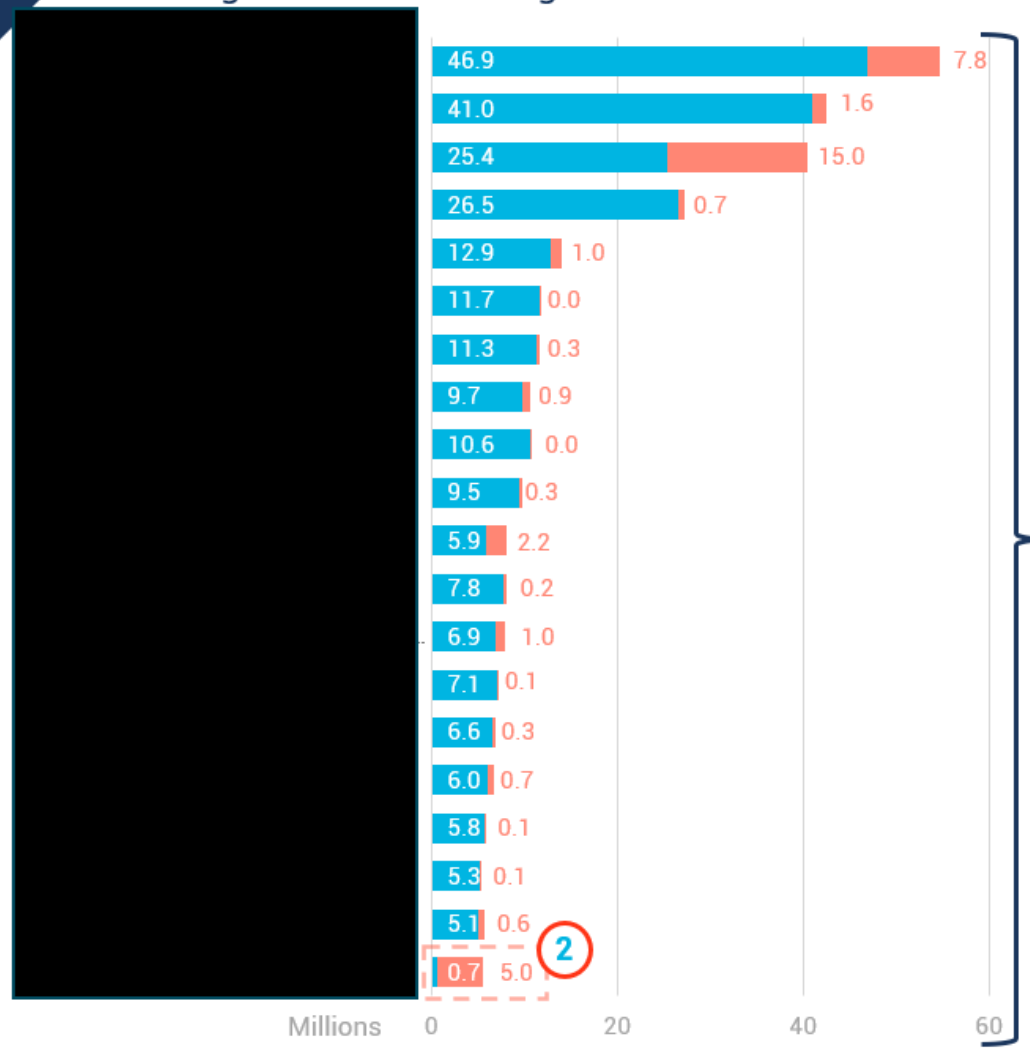
Reporting Period: Jan '22 – April '24

** Does not include "This IHI record has a RETIRED IHI status and cannot be retrieved via this channel message*

Match Found No Match Found

HPI-Os with highest search rates across the HI Service.

Organisations with highest search volume



Most frequent return messages

Error Description	Total	%
This IHI record has a RETIRED IHI status and cannot be retrieved via this channel	1,751,981	**55.0%**
The IHI search request does not contain the minimum search criteria (1)	558,015	**17.5%**
Invalid Locality-Postcode-State	278,862	**8.8%**
Invalid Surname	204,063	**6.4%**
Invalid Firstname	123,156	**3.9%**
Failed Medicare card number check digit routine	95,696	**3.0%**
Future DOB	55,454	**1.7%**
Invalid Address Line 1	38,762	**1.2%**
Birth year less than 1800	27,731	**0.9%**
Invalid Locality	17,294	**0.5%**
Other	32,461	**1.0%**

Insights

- **20,296** unique users (organisations) accessed the HI Service over the reporting period.
- [redacted]

(1) Error message 'The IHI search request does not contain the minimum search criteria' is up from **7.5%** when compared to total messages sent by all vendors (see *page 22*).

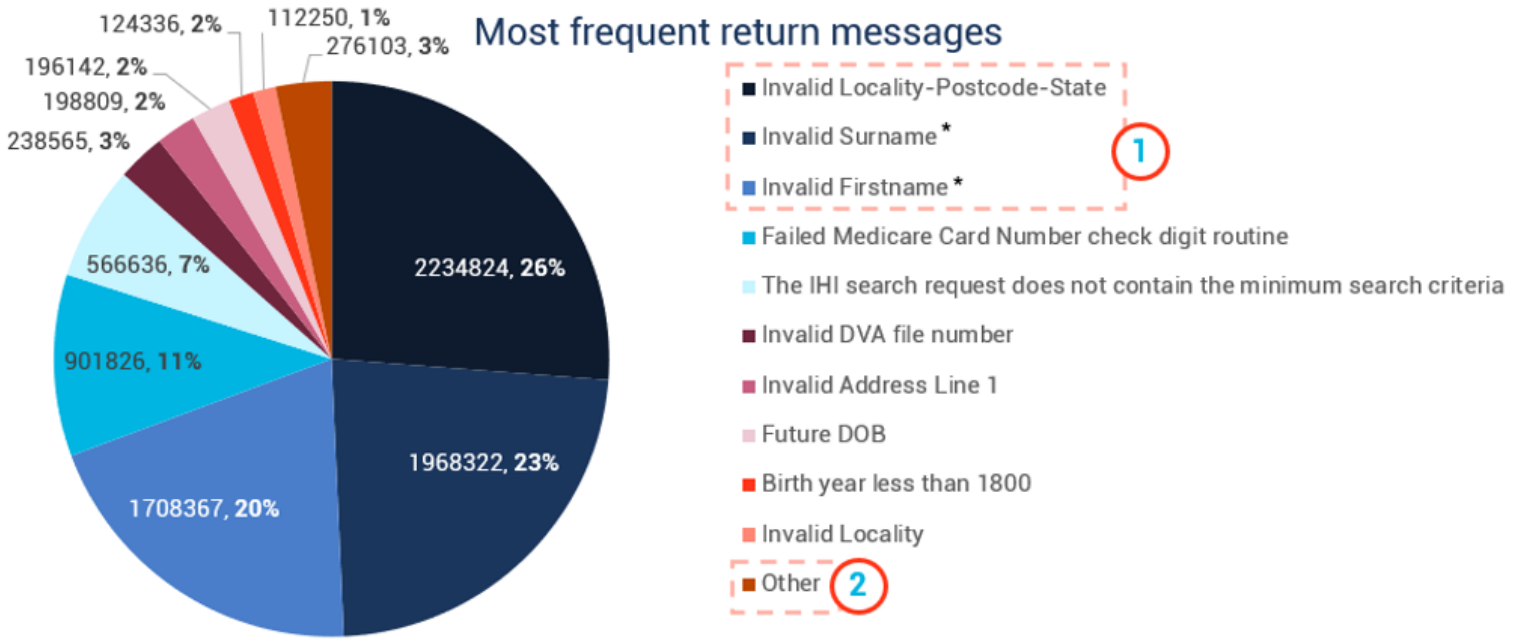
(2) [redacted]
Top 20 organisations by no match found rate, and utilises software in the top 20 products by no match rate
[redacted]

Reporting Period: Jan '22 – April '24
** Blank Org means there was an issue with the joining table in the data warehouse and the org could not be extracted*

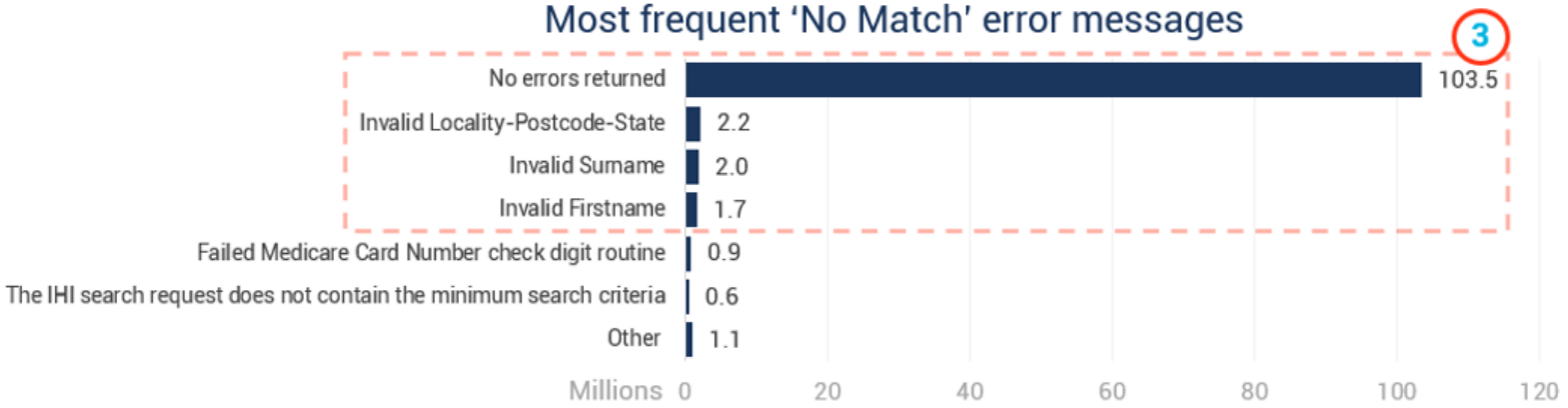
Match Found No Match Found

Most common error messages returned to users.

Most frequent return messages



Most frequent 'No Match' error messages



Insights

- The 'Match Found' return message "**This IHI record has a RETIRED IHI status and cannot be retrieved via this channel**" is not included in the chart but represents **46%** of all messages returned to a user (**7,306,556** returned over the reporting period).

1. Combined, the entering of an **Invalid Postcode**, **Surname** and **First name** represent **69%** of all errors returned to users.

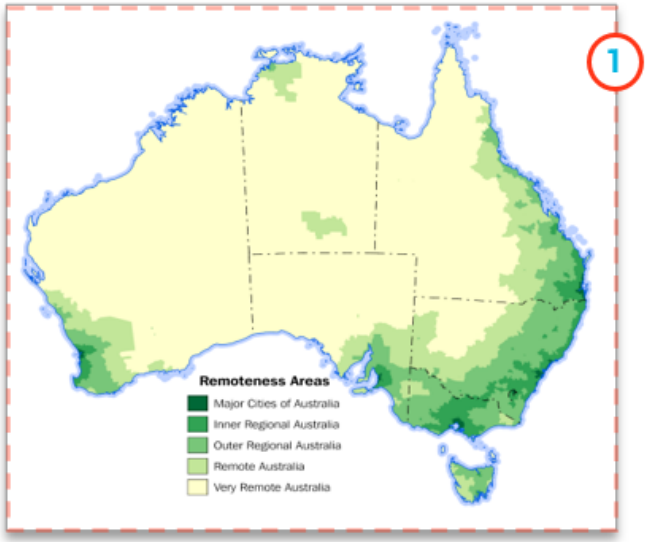
2. There are **40** distinct return messages grouped into the '**Other**' category, which combined represent **3%** of all messages returned over the reporting period.

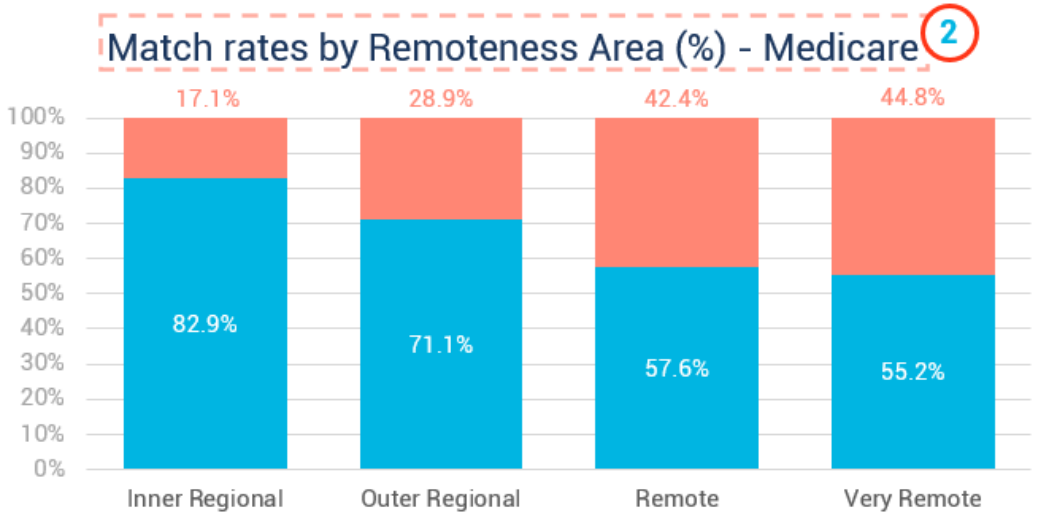
3. [redacted]

** Note: error returned due to invalid characters being included in the search field*

Reporting Period: Jan '22 – April '24

Medicare card number search match rates for organisations in regional, rural and remote areas are significantly lower than the overall match rate average.





Insights

1. Definition of Regional, rural and remote are based off ABS designations, and a sample of **776** organisations were selected from these areas for analysis, based on some assumptions*.

2. When including all search types, match rates for Inner Regional, Outer Regional, Remote and Very Remote are all within the expected range when compared to the overall Australian average; however, when viewing solely Medicare card number searches, the rates are significantly below the average (*Total Medicare average is **20%** - see page 20*).

2. General trend when looking at all search types is the more remote/less population dense the area a clinic is located, the lower the match rate is. This is especially so for Medicare card number searches.

3.

Match Found % | No Match Found %

The challenge

Digital health systems must query the HI Service to find a patient's IHI using the patient's identifying information:

- name;
- date of birth;
- Sex; and
- either Medicare card+IRN or DVA file number*.

Failures can occur due to:

- Differences in name
- Differences in dates of birth
- Unavailability of Medicare card / DVA file numbers

The ultimate challenge

How can we find an IHI for someone if:

- We don’t know the name on their Medicare/IHI record
- We don’t know the date of birth on their Medicare/IHI record
- They don’t have their Medicare card with them
- They don’t have a personal digital device

Meeting the challenge

What we have done

- Soft-matching introduced in 2016

What we are doing

- Introducing additional search options
- Allowing additional names and an alternate date of birth

What we are considering

- Commence the evaluation of phonetic matching of names in online searches with a view to potential future use.
- Explore the integration of Healthcare Identifiers into the Australia Government Digital Identity System - so that patients can present a Digital Identity with their IHI attached.

Enhanced search options

- Ignore sex when searching with Medicare card / DVA file number
- Add additional names on behalf of a known patient
- Add an alternate date of birth on behalf of a known patient
- Search using a mobile phone number or email address in place of a Medicare / DVA file number*

*Note that soft-matching rules will apply when a mobile phone number is used, but not when an email address is used

Enhanced search options - timeline

- June 2024: changes deployed into production
- October 2024: Conformance profile draft for stakeholder consultation
- July 2025: Software developers can declare conformance and apply for Notice of Connection to use the new capabilities

Discussion topics

- Using the new HI Service features to improve on current state
- Blue sky thinking – beyond current state

Discussion – new HI Service features

- How might you take advantage of the enhanced search options to improve IHI matching for your patients?
- How can the Agency best support you to do this?
- Can you foresee any unintended consequences of these enhanced search options?
- What else can we do to improve IHI matching in remote and rural communities?

Discussion – blue sky thinking

- Cultural practices
- Patient cohorts with unique challenges
- Duplicate IHIs
- Successful solutions
- HI Service FHIR uplift
- Lessons learned
- Additional barriers to a successful IHI match

Australian Government

Australian Digital Health Agency

Further feedback and ideas:

Email: interoperability@digitalhealth.gov.au

Australian Digital Health Agency

@AuDigitalHealth

@AuDigitalHealth

Australian Government

Australian Digital Health Agency

Workshop 2

Workshop 2: Barriers and Opportunities with data standardisation in rural and remote Australia

Objectives:

- To ensure that the data foundations being developed by Sparked reflect the priority use cases and data elements for rural and remote Australia
- Understand rural and remote perspectives on connected care use cases
  - Patient summary (portability of record)
  - Chronic disease management
- Identify and prioritise data elements for AUCDI to support rural and remote

Perspectives

Chris Pearce & Andrew Bell
Australian College of Rural & Remote Medicine
Northern Territory Health

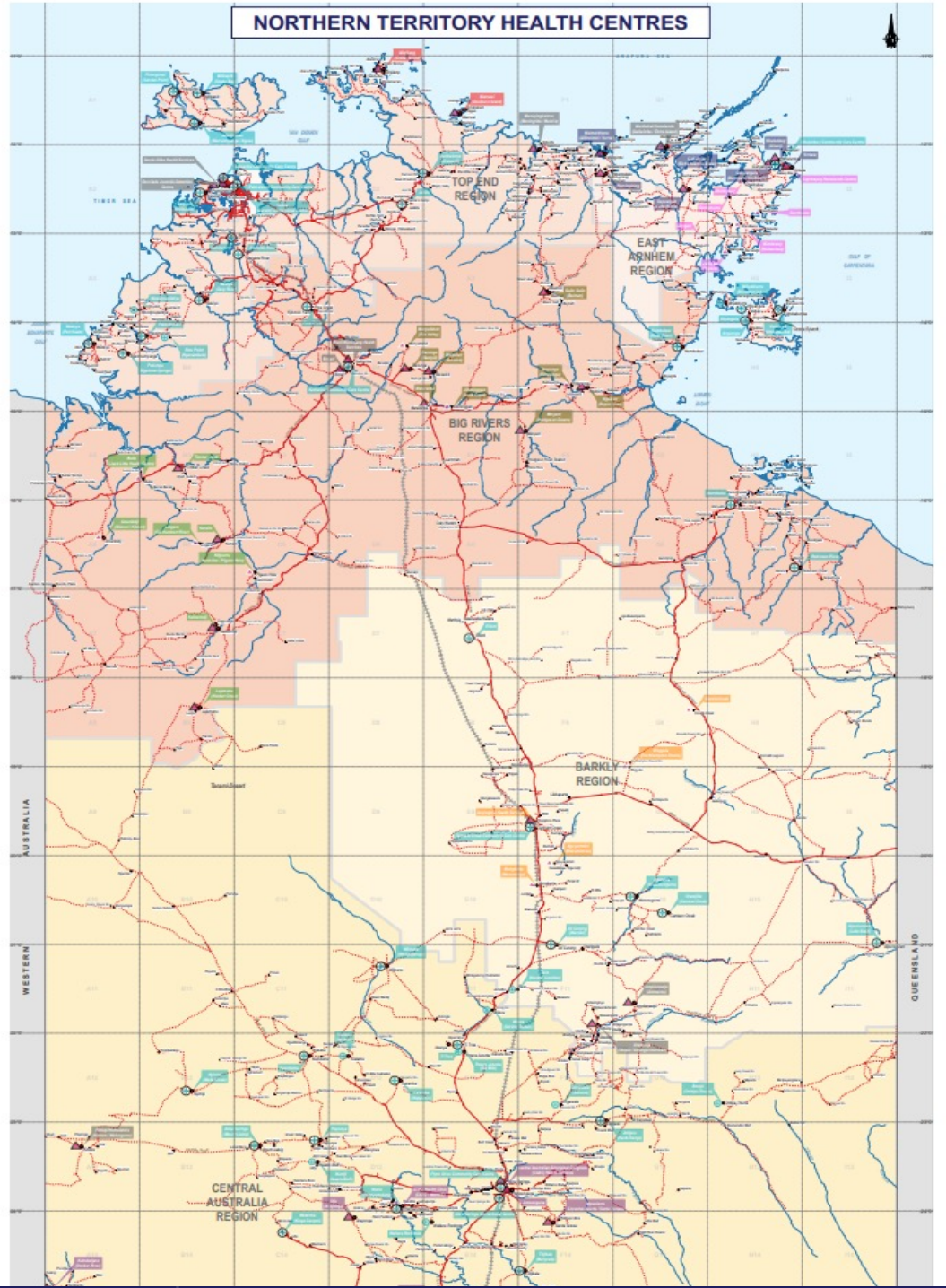
NT HEALTH

How will FHIR make clinician's days better?

How will it improve patient care?

Dr Andrew Bell / Office of the CCIO

NORTHERN TERRITORY GOVERNMENT



NORTHERN TERRITORY GOVERNMENT

Remote Health Landscape:

1. Socially and economically disadvantaged population, high burden of chronic illness, requiring complex systematically planned care, often mobile between PHC providers.

2. Large temporary population, “health care home” elsewhere

3. Travelers, often with complex care needs.

How could FHIR make things better:

Three examples:

- Two low hanging fruit
    - One great for providers
    - One great for system designers

- One a harder nut to crack but very high value to consumers.

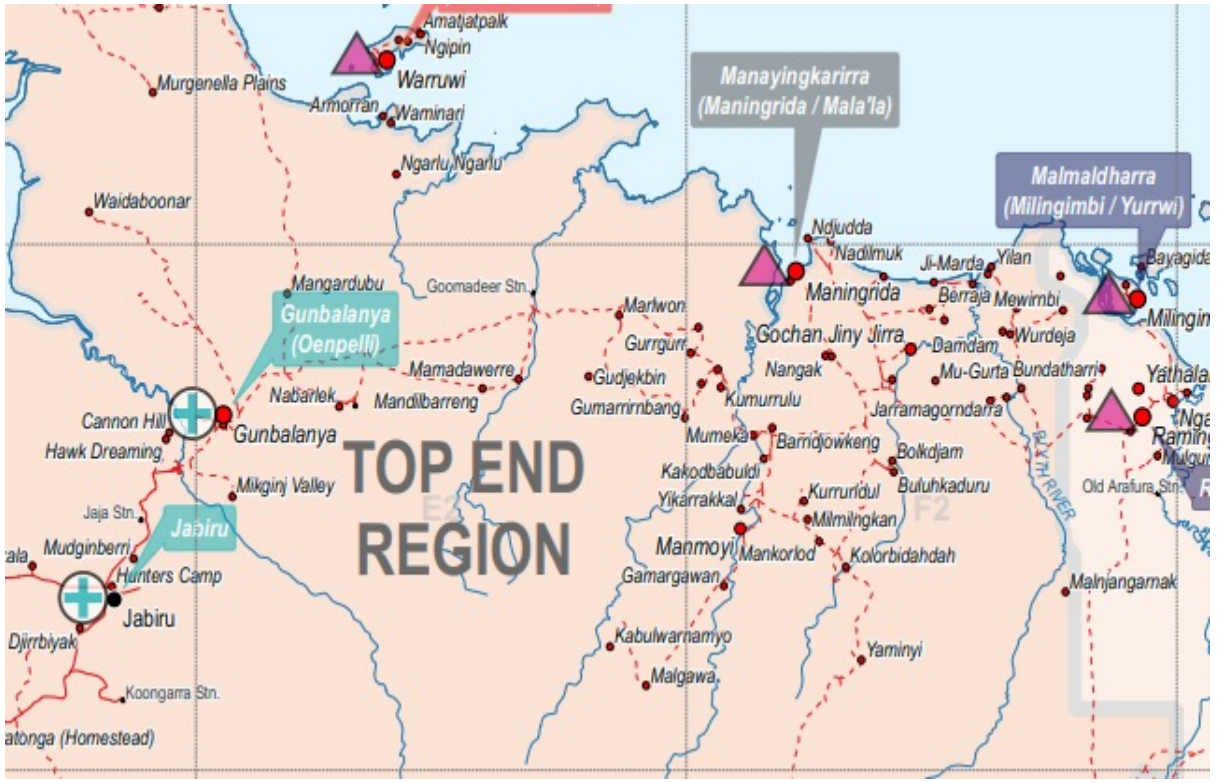
Example 1: Patient Summary

Patient moves from Maningrida (Mala'la Health Service - *Communicare EHR*) To Gunbalanya (NTG – *PCIS* EHR)

Now:

Faxed summary or emailed PDF

Manual Transcription



NORTHERN TERRITORY GOVERNMENT

Example 1: Patient Summary

Patient moves from Maningrida (Mala'la Health Service - *Communicare EHR*) To Gunbalanya (NTG – *PCIS* EHR)

Now:

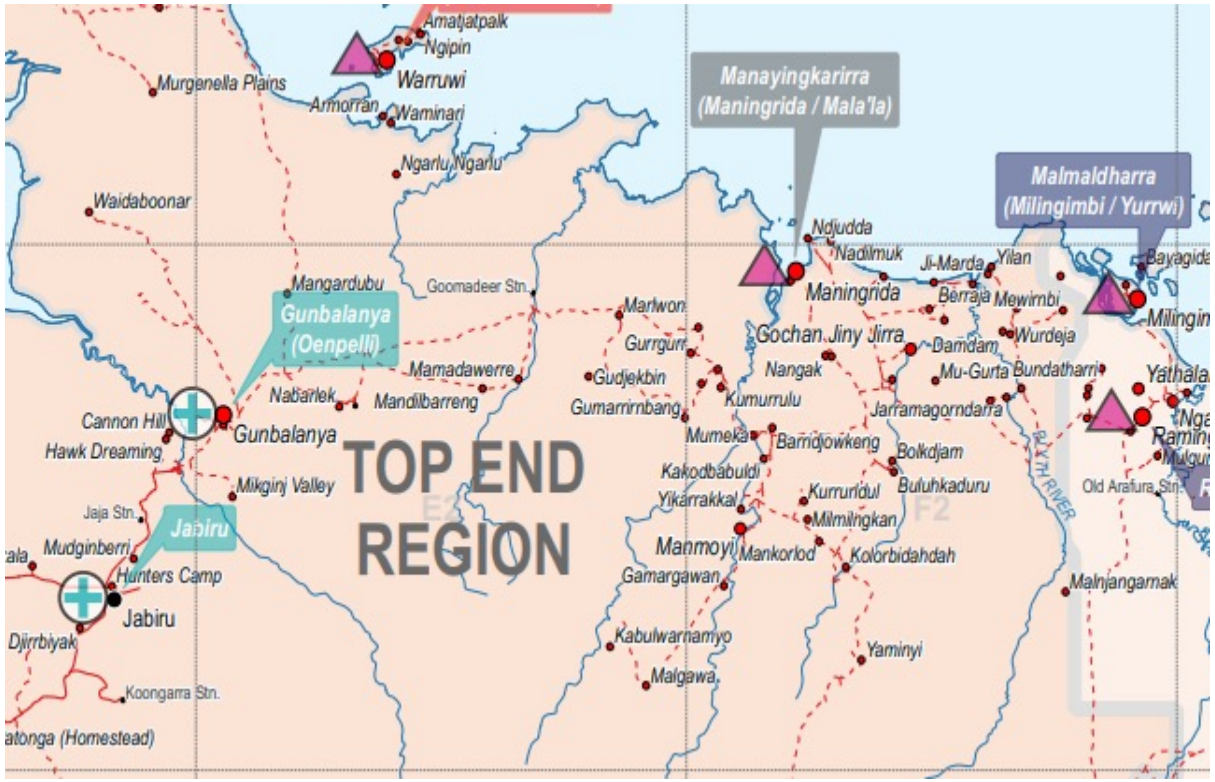
Faxed summary or emailed PDF

Manual Transcription

FHIR future world:

eRequest standardised summary

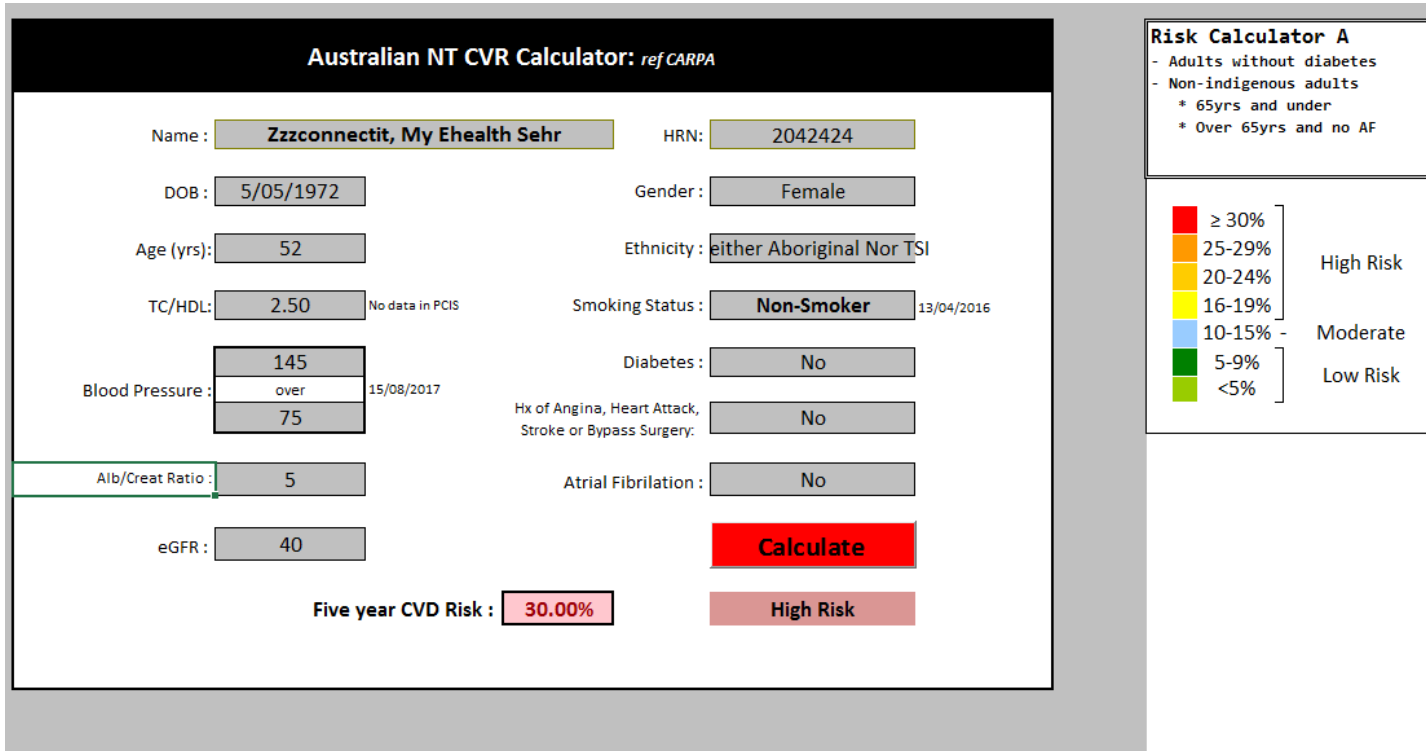
Data ingested into requesting system



NORTHERN TERRITORY GOVERNMENT

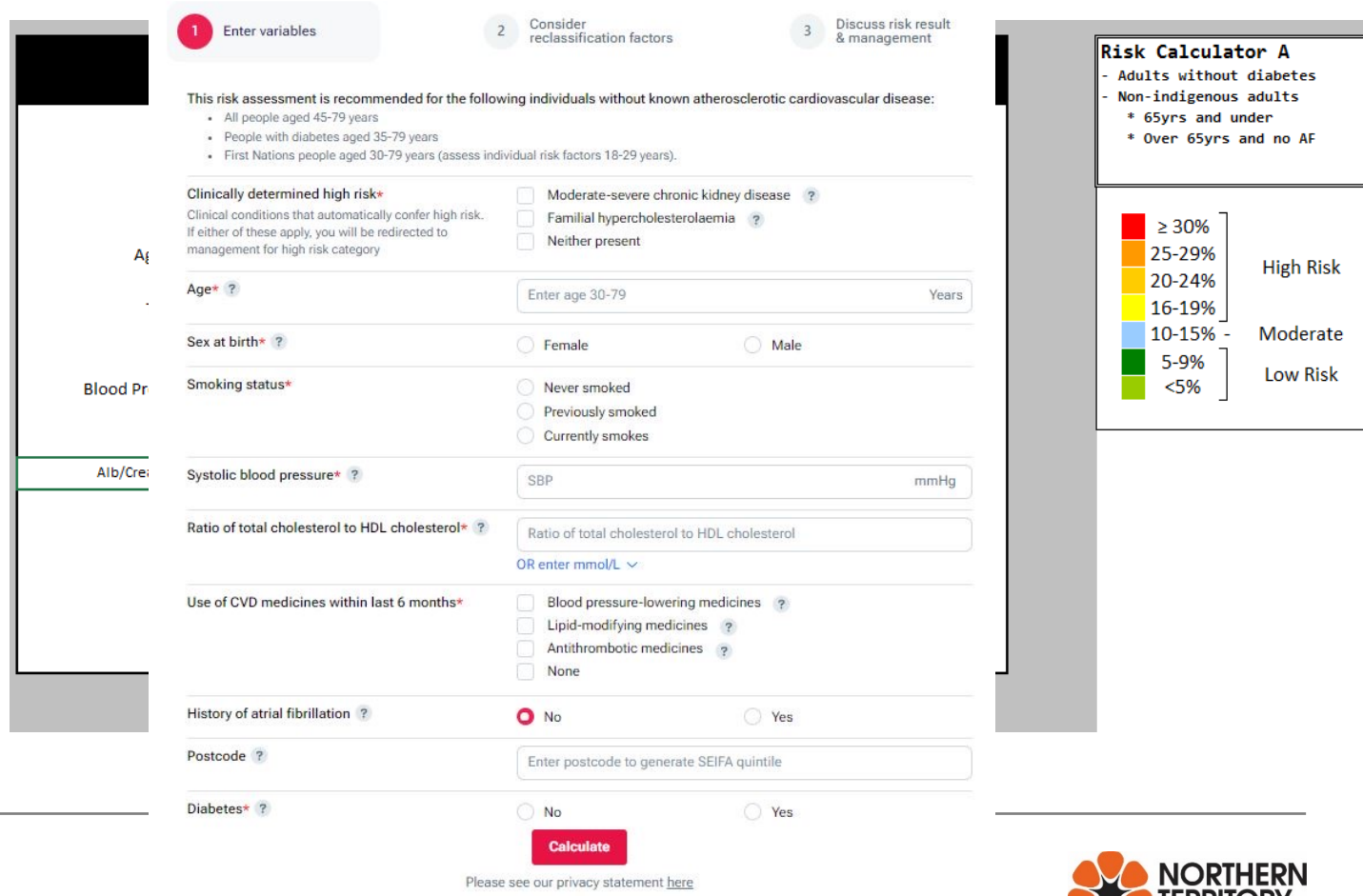
Example 2: Decision Support

1. Cardiovascular Risk Calculator



Example 2: Decision Support

1. Cardiovascular Risk Calculator: New NHF guidelines



Example 2: Decision Support

1. Cardiovascular Risk Calculator: New NHF guidelines

Now:

new builds of complex calculator

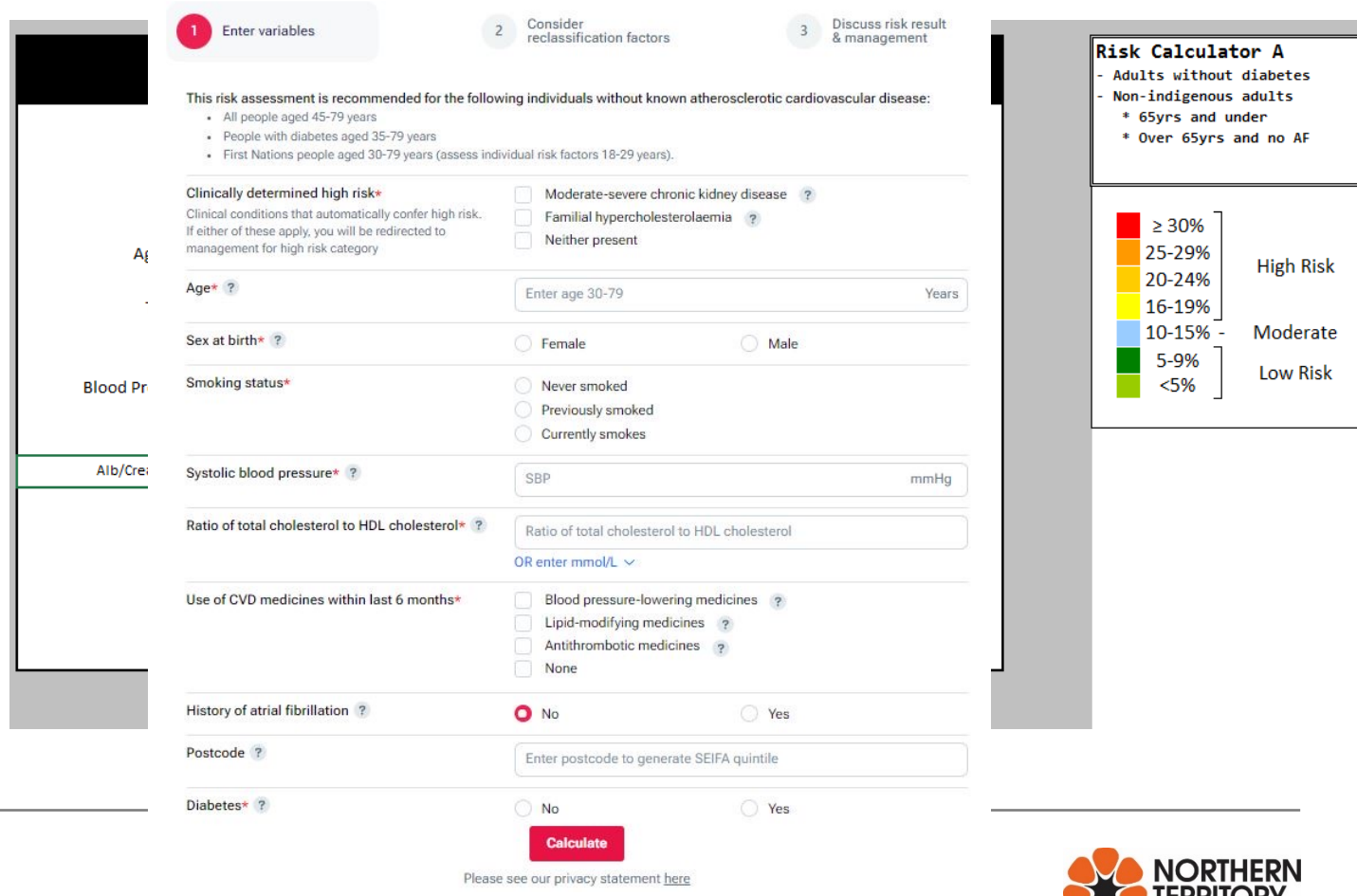
in each product

FHIR future world:

National heart Foundation releases

FHIR enabled calculator with new

guidelines



NORTHERN TERRITORY GOVERNMENT

Example 3: Complex Care Plans

Client with complex care needs moves from Gunbalanya (NTG) to Ngukurr (Sunrise Health Service)

Plan of care is in Gunbalanya, no visibility from Ngukurr

NORTHERN TERRITORY GOVERNMENT

Example 3: Complex Care Plans

Client moves from Gunbalanya to Ngukurr

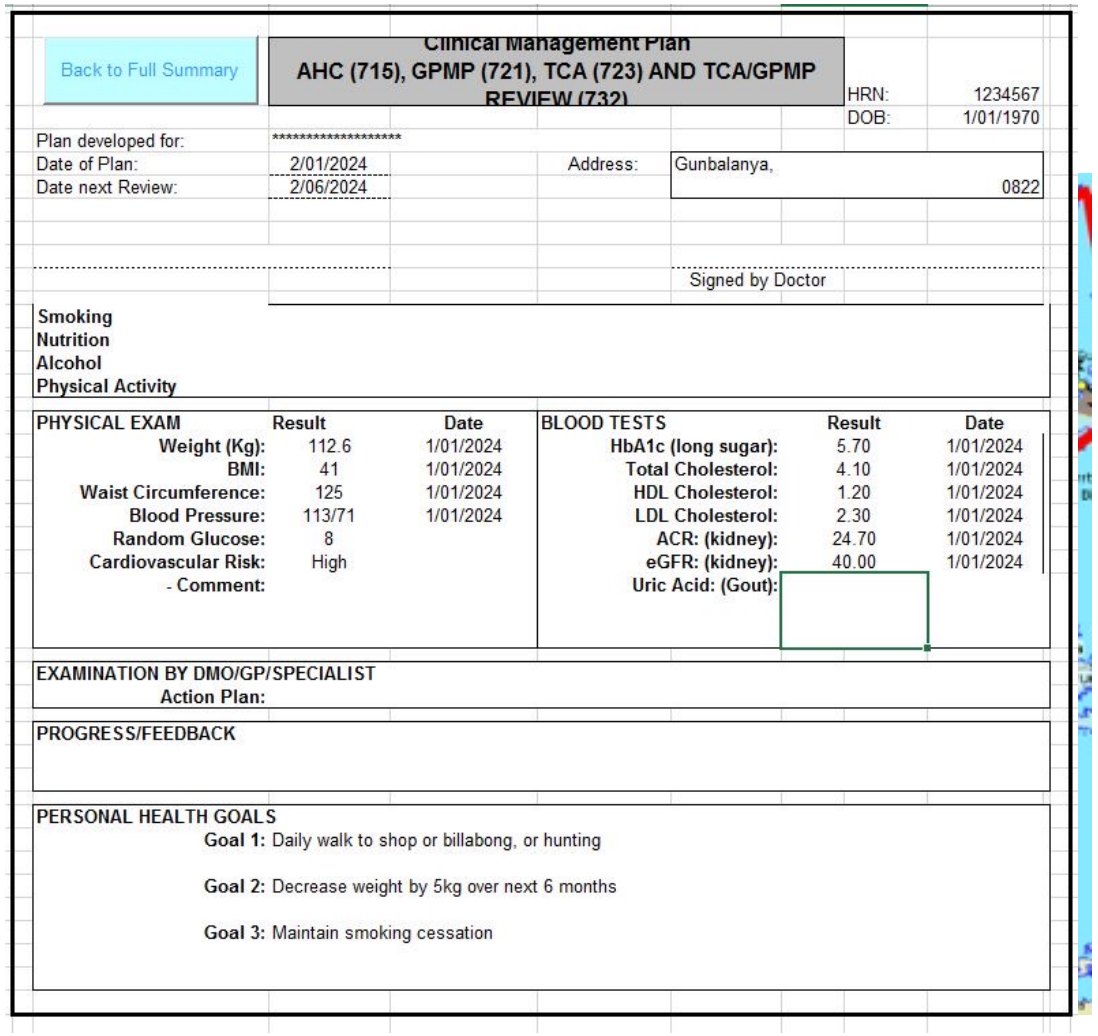
Now:

The best we can do is an inadequate document or start from scratch:

FHIR future world?

Detailed transfer of past events, planned future care, goals, care team members, updates…

A plan for a patient, not a provider



Back to Full Summary

Clinical Management Plan
AHC (715), GPMP (721), TCA (723) AND TCA/GPMP REVIEW (732)

HRN: 1234567
DOB: 1/01/1970

Plan developed for: **********
Date of Plan: 2/01/2024
Date next Review: 2/06/2024
Address: Gunbalanya, 0822

Signed by Doctor

Smoking
Nutrition
Alcohol
Physical Activity

PHYSICAL EXAM	Result	Date
Weight (Kg):	112.6	1/01/2024
BMI:	41	1/01/2024
Waist Circumference:	125	1/01/2024
Blood Pressure:	113/71	1/01/2024
Random Glucose:	8	
Cardiovascular Risk:	High	
- Comment:		

BLOOD TESTS	Result	Date
HbA1c (long sugar):	5.70	1/01/2024
Total Cholesterol:	4.10	1/01/2024
HDL Cholesterol:	1.20	1/01/2024
LDL Cholesterol:	2.30	1/01/2024
ACR: (kidney):	24.70	1/01/2024
eGFR: (kidney):	40.00	1/01/2024
Uric Acid: (Gout):		

EXAMINATION BY DMO/GP/SPECIALIST
Action Plan:

PROGRESS/FEEDBACK

PERSONAL HEALTH GOALS

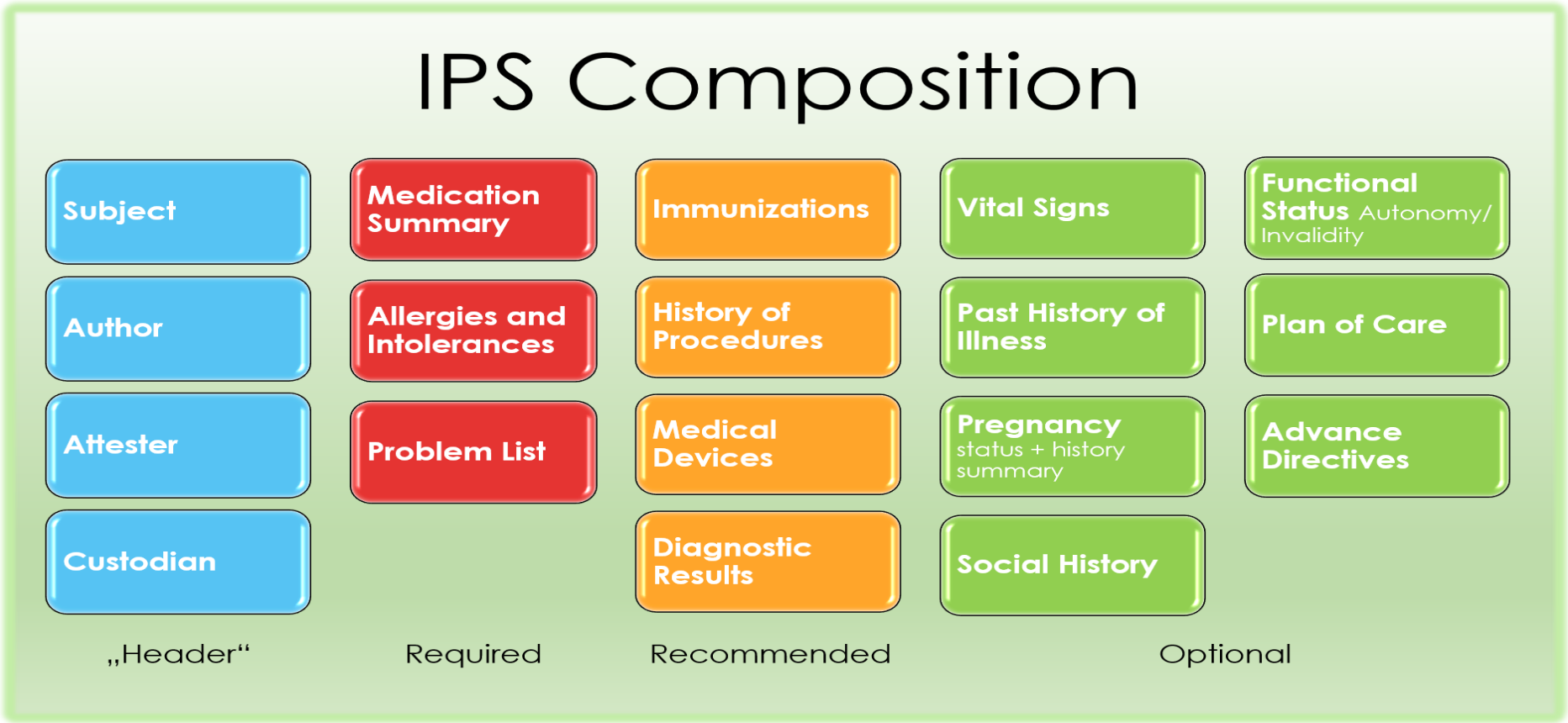
Goal 1: Daily walk to shop or billabong, or hunting

Goal 2: Decrease weight by 5kg over next 6 months

Goal 3: Maintain smoking cessation

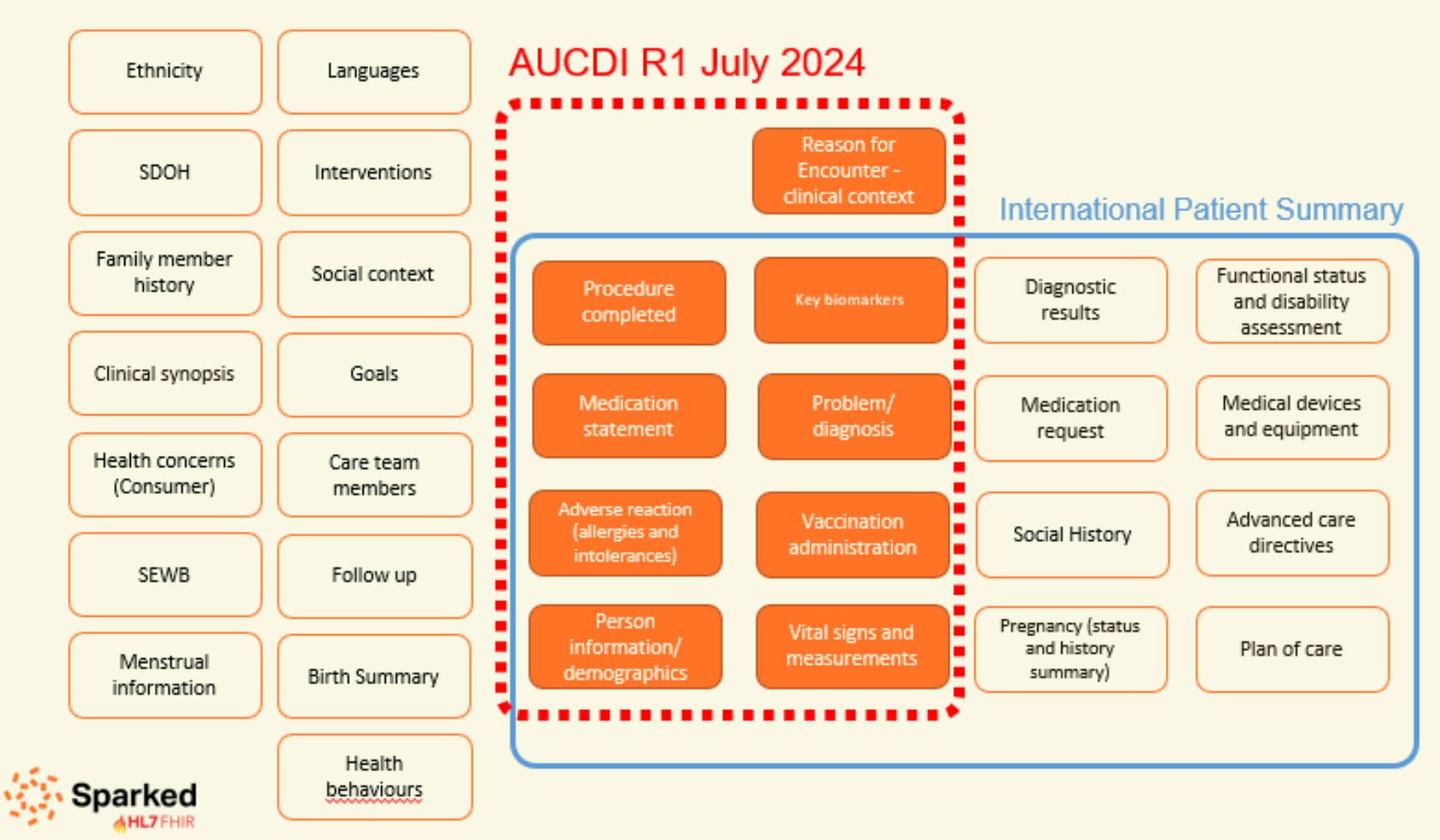
Example 1: Patient Summary

International Patient Summary



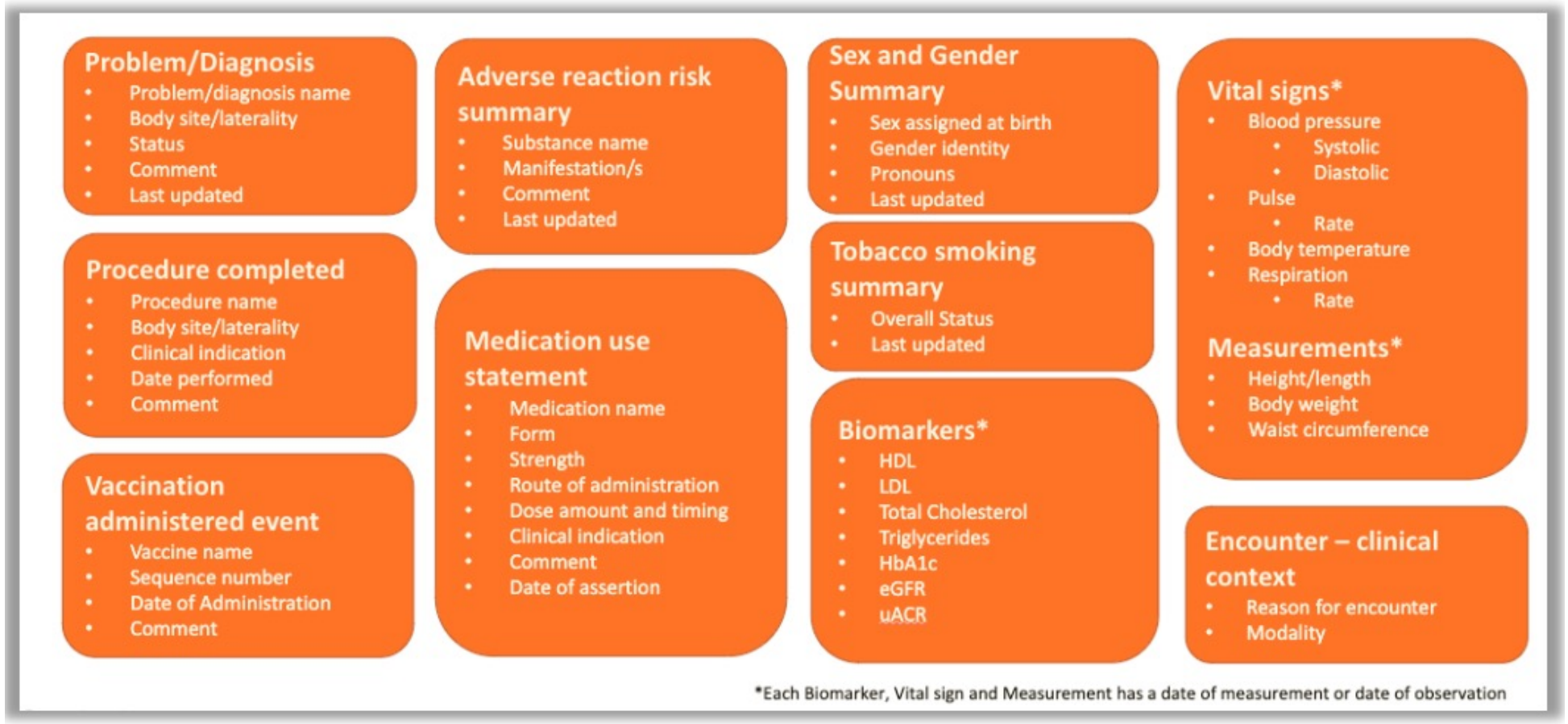
NORTHERN TERRITORY GOVERNMENT

Patient Summary



NORTHERN TERRITORY GOVERNMENT

AUCDI R1: CVR calculator?



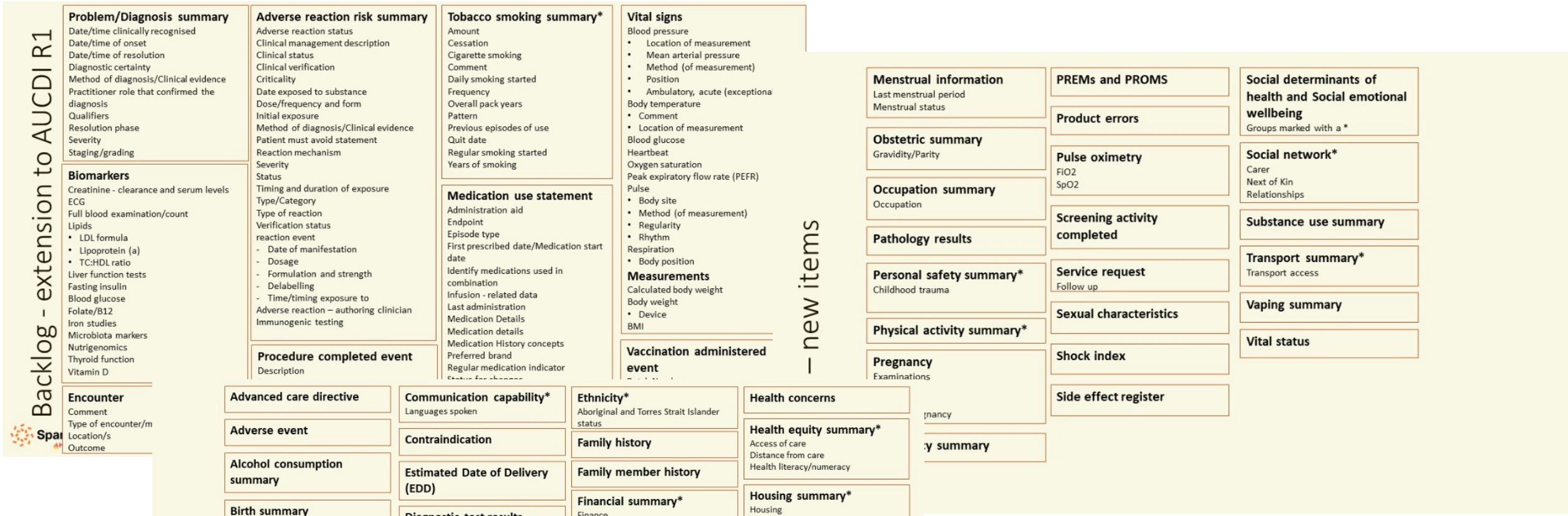
NORTHERN TERRITORY GOVERNMENT

Care Planning

Complexity and a lot of work

Whose priorities will rise to the top?

Care Planning: it's all in here somewhere…



NORTHERN TERRITORY GOVERNMENT

Complexity and a lot of work

Whose priorities will rise to the top?

NORTHERN TERRITORY GOVERNMENT

Workshop 2: Barriers and Opportunities with data standardisation in rural and remote Australia

Objectives:

- To ensure that the data foundations being developed by Sparked reflect the priority use cases and data elements for rural and remote Australia
- Understand rural and remote perspectives on connected care use cases
  - Patient summary (portability of record)
  - Chronic disease management
- Identify and prioritise data elements for AUCDI to support rural and remote

What is the Australian Core Data for Interoperability (AUCDI)?

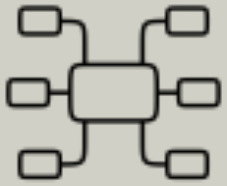
- Common data foundation for national interoperable health information exchange in Australia
- Incorporates and builds upon existing standards and prior work
- A living artefact that will evolve and grow in future iterations

AUCDI provides the common data foundation that can be referenced for specific use cases, with data groups being reused and extended as necessary.

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

CDG is here

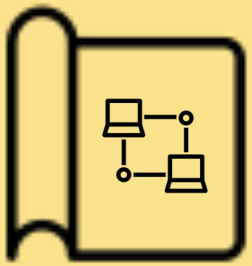
AU CDI



Specifies *"WHAT"* **clinical information** (and corresponding data elements and terms) should be included for data entry, data use and sharing information supporting patient care

TDG is here

AU Core



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

Sparked HL7 FHIR

AUCDI Release 1 Scope Drivers

Concepts for a health summary (guided by clinical content of IPS)

- Clinical content to underpin any type of health summary

- Transfer of care summary
- Chronic disease management
- Decision support – e.g. CVD risk
- Referral

Core Principles of AUCDI Design

1. Reduce duplication - Single entry, single development (multiple use and reuse)
2. Supports patient centred care - driven by a clinical quality and safety use case
3. Not data for data's sake
4. Driven by primary clinical data use not secondary data use needs
5. Supports best practice care, clinical guidelines and clinician workflow
6. Systems can support now or with minimal effort, supporting a strategic roadmap with an agile iterative process
7. Leverage agreed national health data standards
8. Involve and consider all healthcare domains and care modalities

“Core of the Core” AUCDI Release 1 at a glance

Problem/Diagnosis
- Problem/diagnosis name
- Body site/laterality
- Status
- Comment
- Last updated

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

Vaccination administered event
- Vaccine name
- Sequence number
- Date of Administration
- Comment

Adverse reaction risk summary
- Substance name
- Manifestation/s
- Comment
- Last updated

Medication use statement
- Medication name
- Form
- Strength
- Route of administration
- Dose amount and timing
- Clinical indication
- Comment
- Date of assertion

Sex and Gender Summary
- Sex assigned at birth
- Gender identity
- Pronouns
- Last updated

Tobacco smoking summary
- Overall Status
- Last updated

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

Vital signs*
- Blood pressure
  - Systolic
  - Diastolic
- Pulse
  - Rate
- Body temperature
- Respiration
  - Rate

Measurements*
- Height/length
- Body weight
- Waist circumference

Encounter – clinical context
- Reason for encounter
- Modality

Sparked HL7 FHIR

*Each Biomarker, Vital sign and Measurement has a date of measurement or date of observation

Federal Budget 2024-25

Continue work already underway to improve:

- consumer access to their health information.
- healthcare providers ability to provide safe, high quality care.

- Building on work underway via Australia's FHIR accelerator program - **Sparked** – planning work will be undertaken to establish:
  - a long-term **FHIR standards development roadmap**
  - a digital **Chronic Disease Management Plan**
  - an internationally consistent **patient summary**; and
  - capabilities to enable **reason for a health encounter** to be captured in clinical systems.
- Complete consultation and policy work to inform the business case for a future national **eRequesting** capability for Australia.
- Complete initial policy work to establish a national **electronic Clinical Decision Support** (eCDS) governance framework.

Workshop 2 - Priorities for use and exchange of core data in Rural and Remote Australia

Activity 1: Refining the workflows and information (data flows)
20mins, 10 mins report back

- Portability of record
  - Transfer of Care
  - Patient Summary
  - Reason for encounter
- Chronic Disease Management

Activity 2: AUCDI data model gaps
10 mins

Activity 3: Individual prioritisation of AUCDI backlog
10 mins

Activity 4: Group prioritisation of AUCDI backlog
10 mins

Activity 1: Refining the workflows and information (data flows)

As a group at your table, identify:

- What are the key priorities to support use of core data within your systems and to exchange that information.
  - For example:
    - GP Management plan
    - Health assessments
    - eReferrals
    - Encounter note
    - Clinical decision support
    - GP to Aged Care
    - Aged Care Transfer
    - Patient summary for inclusion in eRequesting, eReferral
    - International patient summary
    - Bulk FHIR for reporting- local , state, national
- Who is this information relevant for?
  - For example: The consumer, the provider, the broader care team...
- How could this information be best used?

As a **group** at your table

Activity 2: AUCDI data model gaps

"Core of the Core" AUCDI Release 1 at a glance

Problem/Diagnosis
- Problem/diagnosis name
- Body site/laterality
- Status
- Comment
- Last updated

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

Vaccination administered event
- Vaccine name
- Sequence number
- Date of Administration
- Comment

Adverse reaction risk summary
- Substance name
- Manifestation/s
- Comment
- Last updated

Medication use statement
- Medication name
- Form
- Strength
- Route of administration
- Dose amount and timing
- Clinical indication
- Comment
- Date of assertion

Sex and Gender Summary
- Sex assigned at birth
- Gender identity
- Pronouns
- Last updated

Tobacco smoking summary
- Overall Status
- Last updated

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

Vital signs*
- Blood pressure
  - Systolic
  - Diastolic
- Pulse
  - Rate
- Body temperature
- Respiration
  - Rate

Measurements*
- Height/length
- Body weight
- Waist circumference

Encounter – clinical context
- Reason for encounter
- Modality

Sparked HL7 FHIR

*Each Biomarker, Vital sign and Measurement has a date of measurement or date of observation

Backlog - extension to AUCDI R1

Problem/Diagnosis summary
Date/time clinically recognised
Date/time of onset
Date/time of resolution
Diagnostic certainty
Method of diagnosis/Clinical evidence
Practitioner role that confirmed the diagnosis
Qualifiers
Resolution phase
Severity
Staging/grading

Biomarkers
Creatinine - clearance and serum levels
ECG
Full blood examination/count
Lipids
- LDL formula
- Lipoprotein (a)
- TC:HDL ratio

Liver function tests
Fasting insulin
Blood glucose
Folate/B12
Iron studies
Microbiota markers
Nutrigenomics
Thyroid function
Vitamin D

Encounter
Comment
Type of encounter/modality
Location/s
Outcome

Adverse reaction risk summary
Adverse reaction status
Clinical management description
Clinical status
Clinical verification
Criticality
Date exposed to substance
Dose/frequency and form
Initial exposure
Method of diagnosis/Clinical evidence
Patient must avoid statement
Reaction mechanism
Severity
Status
Timing and duration of exposure
Type/Category
Type of reaction
Verification status
reaction event
- Date of manifestation
- Dosage
- Formulation and strength
- Delabelling
- Time/timing exposure to

Adverse reaction – authoring clinician
Immunogenic testing

Procedure completed event
Description
Intent
Total duration
Location performed
Procedure status

Tobacco smoking summary*
Amount
Cessation
Cigarette smoking
Comment
Daily smoking started
Frequency
Overall pack years
Pattern
Previous episodes of use
Quit date
Regular smoking started
Years of smoking

Medication use statement
Administration aid
Endpoint
Episode type
First prescribed date/Medication start date
Identify medications used in combination
Infusion - related data
Last administration
Medication Details
Medication details
Medication History concepts
Preferred brand
Regular medication indicator
Status for changes
Reason for prescribing
Regular medication

Sex and Gender
Sex parameter for clinical use

Vital signs
Blood pressure
- Location of measurement
- Mean arterial pressure
- Method (of measurement)
- Position
- Ambulatory, acute (exceptional)

Body temperature
- Comment
- Location of measurement

Blood glucose
Heartbeat
Oxygen saturation
Peak expiratory flow rate (PEFR)
Pulse
- Body site
- Method (of measurement)
- Regularity
- Rhythm

Respiration
- Body position

Measurements
Calculated body weight
Body weight
- Device

BMI

Vaccination administered event
Batch Number
Body site
Route of administration
Target disease
Vaccine serial ID

Backlog – new items

Advanced care directive

Adverse event

Alcohol consumption summary

Birth summary
Place of birth

Care pathways

Care plan

Care team members
Name
Organisation
Role
Contact
CC option

Clinical evidence

Clinical synopsis
Author
Summary (free text)

Communication capability*
Languages spoken

Contraindication

Estimated Date of Delivery (EDD)

Diagnostic test results
Arterial blood gases
Cardiac imagery
Colonscopy
ECG
Full blood examination
Gastroscopy
Genetic/genomic test results
Imaging results
Imaging test results – echocardiography
Path test results
Path test results – histology
Spirometry

Diet

Drug interactions

Education summary*
Education level

Ethnicity*
Aboriginal and Torres Strait Islander status

Family history

Family member history

Financial summary*
Finance
Income
Social economic (?)

Food and nutrition summary*
Diet
Food security

Functional status and disability assessment

Genetic/genomic test results
Genetics
Epigenetics

Goals
Frequency
Function impact
Measureable time frame/SMART
Preventative nutrition goals
Relevant supports

Health concerns

Health equity summary*
Access of care
Distance from care
Health literacy/numeracy

Housing summary*
Housing
Housing status
Rurality

Imaging completed

Imaging results

Informed Consent

Living arrangements*
Household
Residential setting

Medical devices

Medication order

Medication summary

Sparked
HL7 FHIR

Backlog – new items

Menstrual information
Last menstrual period
Menstrual status

Obstetric summary
Gravidity/Parity

Occupation summary
Occupation

Pathology results

Personal safety summary*
Childhood trauma

Physical activity summary*

Pregnancy
Examinations
Progress
Risk (level)
Start of pregnancy

Pregnancy summary

PREMs and PROMS

Product errors

Pulse oximetry
FiO2
SpO2

Screening activity completed

Service request
Follow up

Sexual characteristics

Shock index

Side effect register

Social determinants of health and Social emotional wellbeing
Groups marked with a *

Social network*
Carer
Next of Kin
Relationships

Substance use summary

Transport summary*
Transport access

Vaping summary

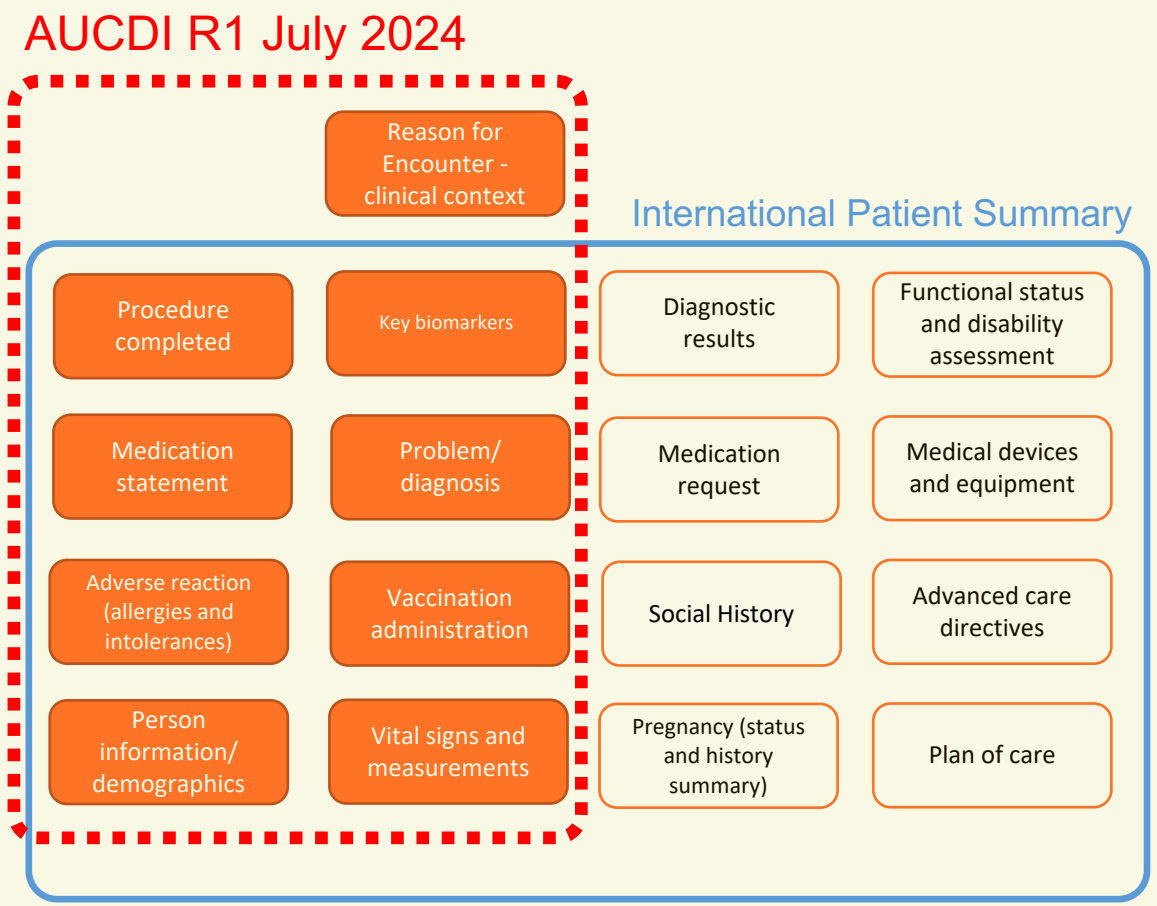
Vital status

Sparked
HL7 FHIR

Activity 2: AUCDI gaps – what's missing?

As a group at your table, identify the high-level data buckets that are missing – write each data group on an individual post it note

Ethnicity
Languages
SDOH
Interventions
Family member history
Social context
Clinical synopsis
Goals
Health concerns (Consumer)
Care team members
SEWB
Follow up
Menstrual information
Birth Summary
Health behaviours



As a **group** at your table

Sparked HL7 FHIR

Activity 3: Individual prioritisation of AUCDI backlog

Each person should have 8x **ORANGE** coloured sticker dots

- Identify priority data groups to be included in next release AUCDI
- Place the dots on the pages on the data groups on the wall

As an **individual**

Optional

If you identify data groups that should not be included in AUCDI, please mark them with a BLACK sticker dot.

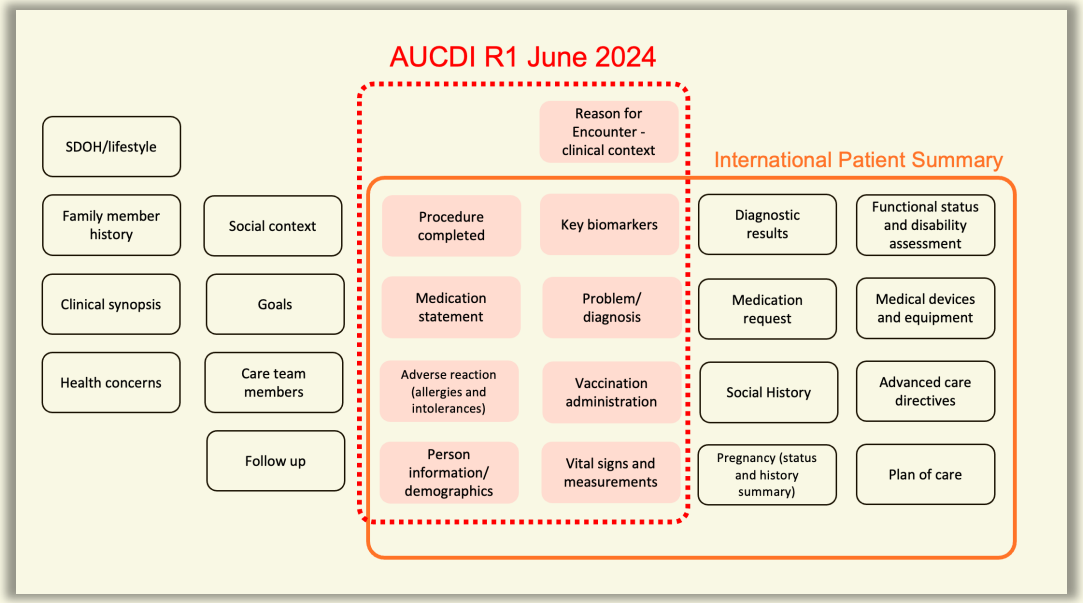
Activity 4: Group prioritisation of AUCDI backlog

May Workshop Overview

Stakeholders were asked, as an individual, to identify priority data groups to be expanded/included in the next release of AUCDI.

They were asked to identify 5x high priority (red), 5x medium priority (orange), and 5x low (green) priority use cases.

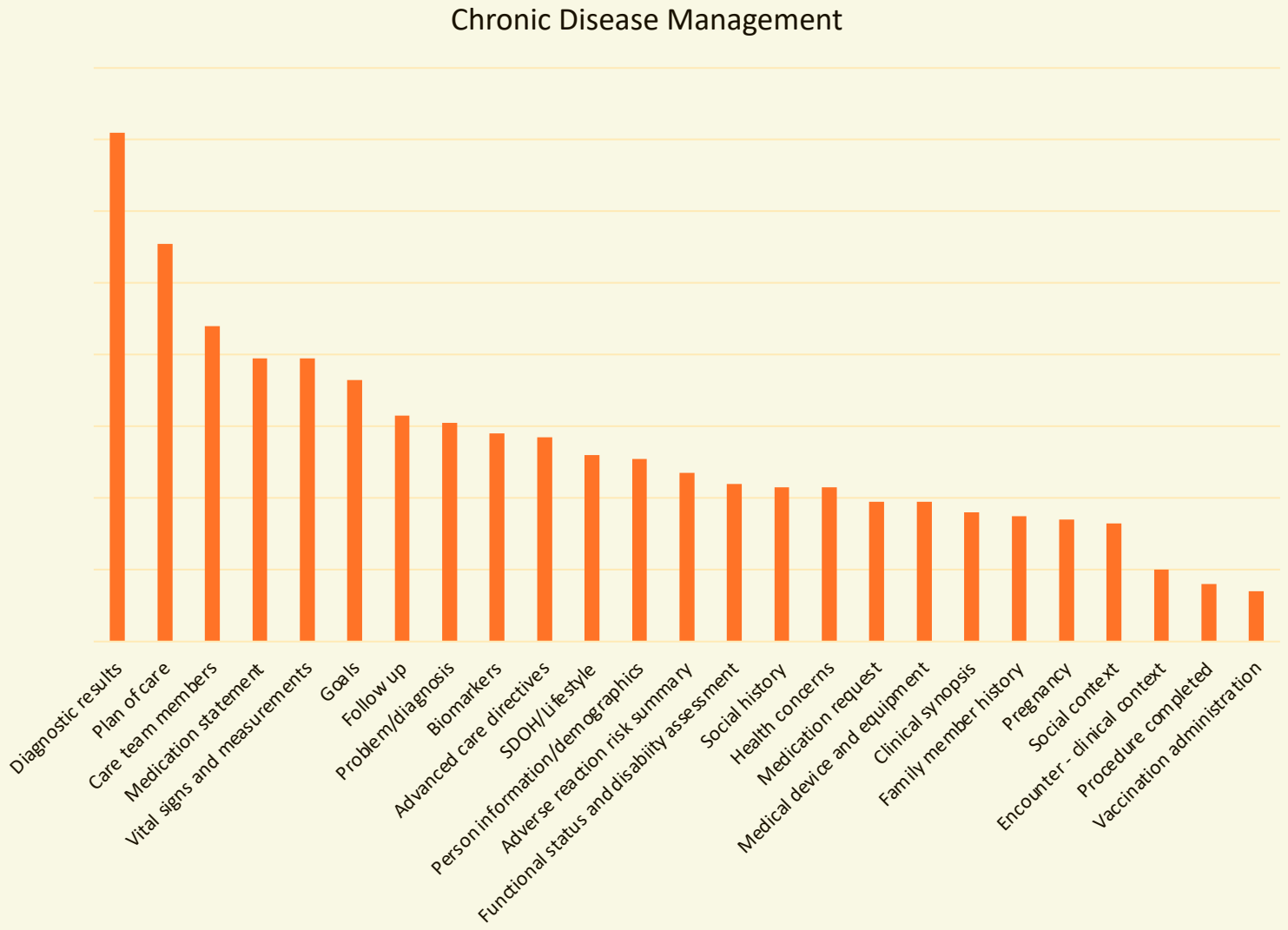
The following slides detail all responses received from attendees on the day.



MAY WORKSHOP RESULTS

For the Chronic Disease Management use case, the following data groups received the highest number of total votes from attendees:

- Diagnostic results,
- Plan of Care,
- Medication statement,
- Care team members, and
- Vital signs and Measurements.



Sparked HL7 FHIR

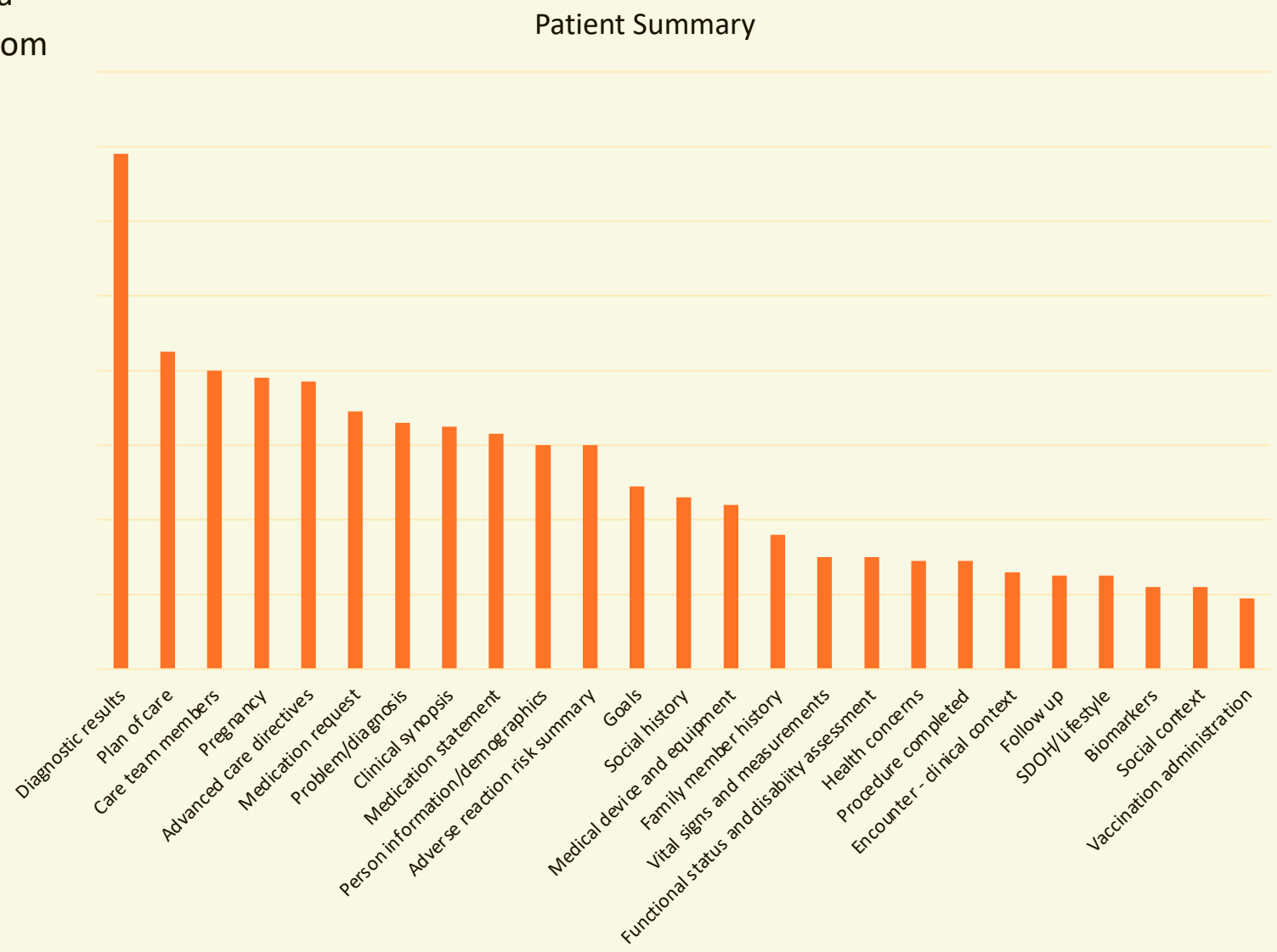
Results of May workshop

For the Patient summary use case, the following data groups received the highest number of total votes from attendees:

- Diagnostic results
- Plan of care
- Care team members

This was closely followed by:

- Pregnancy,
- Advanced care directives,
- Medication request,
- Problem diagnosis,
- Clinical synopsis,
- Medication statement,
- Person information/demographics, and
- Adverse reaction risk summary



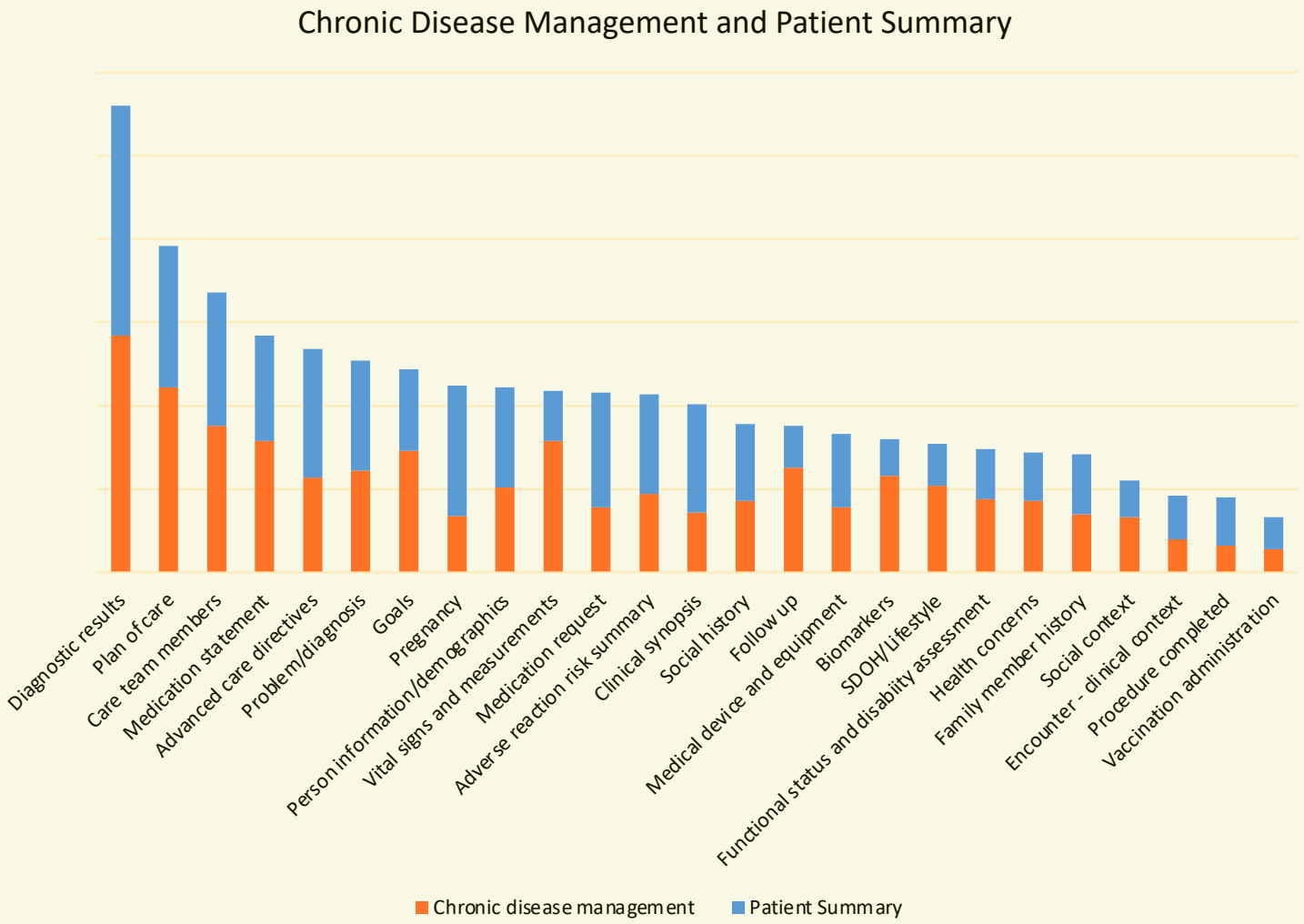
Sparked HL7 FHIR

MAY WORKSHOP RESULTS

When analysing the votes for the data groups across the two use cases, there are clear commonalities; specifically:

- Diagnostic results,
- Plan of care, and
- Care team members

Whilst these three had a higher number of total votes, the remaining data groups were quite closely clustered together.



Sparked HL7 FHIR

Workshop 3

Workshop 3: Social Determinants of Health, Social and Emotional Wellbeing and health behaviours

Objectives:

- To explore and understand the importance of SDOH, SEWB, and health behaviour information,
- To identify key use cases
- To prioritise data groups.

Workshop 3 - Social Determinants of Health (SDOH) and Social and Emotional Wellbeing (SEWB)

- Activity 1: Identifying important information/data to support workflow and exchange of information
  20 mins, 10 min report back
- Activity 2: Data model gaps
  10 mins
- Activity 3: Individual prioritisation of backlog
  10 mins
- Activity 4: Group prioritisation of backlog
  10 mins

Perspectives

Jason Agostino & Maia Sauren
National Aboriginal Community Controlled Health Organisation
Kimberley Aboriginal Medical Services

WIC-K
Wellbeing Informed Care - Kimberley

Transforming Indigenous
Mental Health and Wellbeing
www.TIMHWB.org.au

THE UNIVERSITY OF WESTERN AUSTRALIA

KIMBERLEY ABORIGINAL MEDICAL SERVICES LTD

Social and Emotional Wellbeing: Exploring the foundations for appropriate and usable clinical terminology

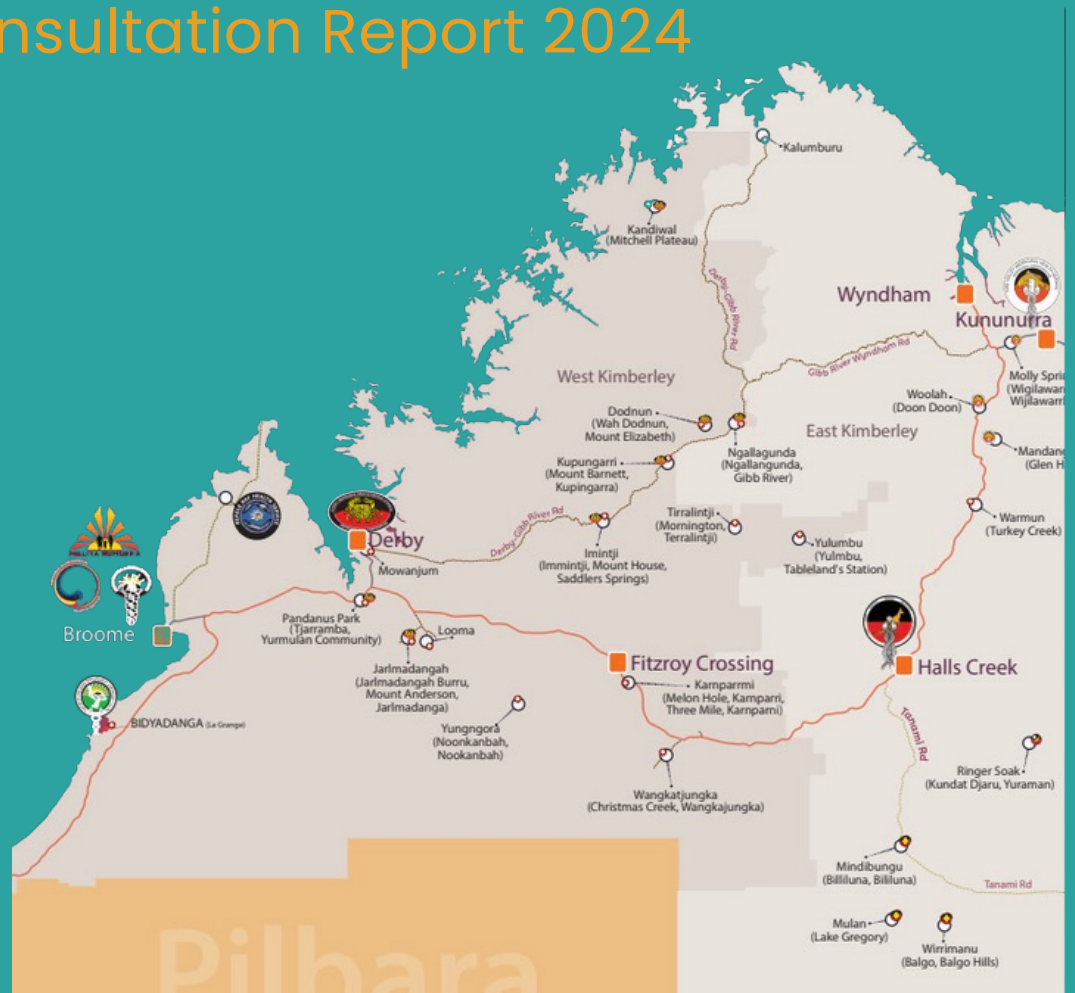
Presenter: Dr Maia Sauren (KAMS Manager health informatics)

Contact: Dr Emma Carlin (KAMS/ UWA Senior Research Fellow)

emma.carlin@rcswa.edu.au for further information

WELLBEING INFORMED CARE - KIMBERLEY

Community Consultation Report 2024



We stand on Yawuru Country.

We acknowledge and pay our respects to Aboriginal Elders and Leaders, past, present and emerging.

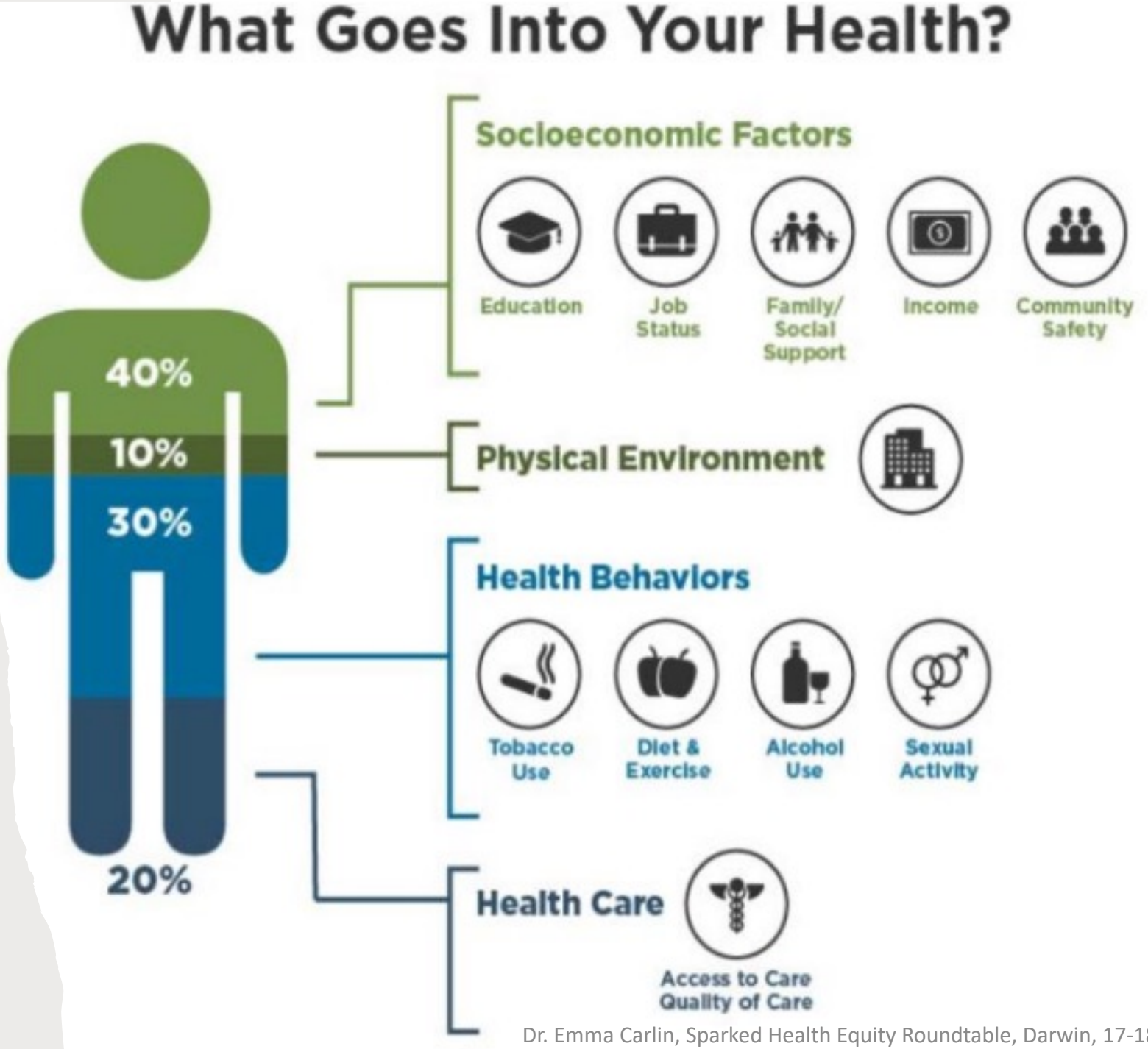
Clinical coding within ACCHS

(ACCHS = Aboriginal Community Controlled Health Services)

- Gradual adoption of standardised codes
- Diverse information entered by healthcare professionals
  - Different EMRs
  - Different customisation
  - Free text entry

Towards holistic health

- Super important
- Could be coded better



Social Determinants of Health

Economic Stability	Neighbourhood & Physical Environment	Education	Food	Community & Social context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Early childhood education	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Vocational training		Community engagement	Provider linguistic & cultural competency
Debt	Parks	Higher education		Discrimination	Quality of care
Medical bills	Playgrounds			Stress	
Support	Walkability				
	Geography				

Health Outcomes

Mortality, Morbidity, Life Expectancy, Healthcare Expenditures, Health Status, Functional Limitations

Social Determinants of Health

- **Responsible** for health inequalities
- Unfair, avoidable differences in health status
- Conditions in which people
  - Born
  - Grow
  - Live
  - Work
  - Age
- Circumstances shaped by
  - Money
  - Power
  - Resources – global, national, local

Social determinants of health coding

A review of four clinical terminology vocabularies identified over 1000 clinical terms relating to the SDoH.

Despite the volume of clinical terminology, the terms did not consistently match practice needs and were conceptually ambiguous.

Recommendation:

*…bring together **clinical content experts** (patients and providers), policy makers, and informaticists to achieve consensus on what is **useful** for SDoH codes to document, what level of granularity, and for what purposes.*

SEWB Wheel

SEWB Diagram adapted from Gee et al., (2014)

Because…

"Since the current SDOH framework fails to acknowledge that structural racism is the root cause of racial health disparities, it is inadequate as a means to achieve racial health equity.

Hence, the SDOH framework must be revised."

Ruqaiijah Yearby, Structural Racism and Health Disparities: Reconfiguring the Social Determinants of Health Framework to Include the Root Cause, 48, Law, Med. & Ethics 518-526 (September 2020).

Relationship between social determinants of health and SEWB

Social Determinant of Health Domain	Social and Emotional Wellbeing domain
Economic Stability	Body: Influences access to healthcare, nutrition, and living conditions. Mind and Emotions: Affects stress levels and mental wellbeing. Family and Kinship: Provides resources for family wellbeing. Community: Contributes to community resilience. Culture, Land, and Spirituality: Supports cultural and spiritual practices
Education	Body: Enhances health literacy and informed healthcare choices. Mind and Emotions: Develops critical thinking and emotional resilience. Family and Kinship: Empowers families through education opportunities. Community: Promotes civic engagement and collective wellbeing. Culture, Land, and Spirituality: Preserves cultural heritage and knowledge
Neighborhood Environment	Body: Provides safe and supportive environments for physical health. Mind and Emotions: Reduces stress and promotes mental wellbeing. Family and Kinship: Impacts family dynamics and cohesion. Community: Fosters social interaction and a sense of belonging. Culture, Land, and Spirituality: Reflects and supports cultural practices and spiritual connections
Social Support Networks	Body: Offers emotional support and reduces stress-related health issues. Mind and Emotions: Enhances emotional resilience and wellbeing. Family and Kinship: Promotes supportive family and community relationships. Community: Builds cohesive and resilient communities. Culture, Land, and Spirituality: Maintains cultural practices and social connections
Access to Healthcare	Body: Directly impacts physical health outcomes and disease prevention. Mind and Emotions: Supports mental health and reduces stigma. Family and Kinship: Affects family health and caregiving dynamics. Community: Contributes to community health and emergency preparedness. Culture, Land, and Spirituality: Integrates cultural and spiritual support in healthcare
Food Access	Body: Essential for nutrition, physical health, and disease prevention. Mind and Emotions: Reduces stress related to food insecurity. Family and Kinship: Supports family nutrition and wellbeing. Community: Impacts community health, equity, and resilience. Culture, Land, and Spirituality: Reflects cultural food practices and beliefs

- Mental health terminology coding:
  - diagnosis of a mental health condition
  - management of the diagnosed mental health condition
- Terminology (SNOMED, ICPC-2+) is highly stigmatising
- Mental health as a *diagnosis and condition* are not what we want to focus on

SEWB is not mental health clinical terminology

Instead: focus on broader holistic health profile

Benefits of implementing SEWB clinical terminology

- Consistent coding
- Generate localised aggregated data pertaining to nature & prevalence of adverse SEWB and the impacts on health
- Inform evidence-based health priority setting
- Drive advocacy efforts
- Catalyse development of data-driven health promotion strategies & population health interventions
- Aboriginal owned data
- Measure health outcomes associated with adversity
- Improve care

What are the barriers?

- Lack of understanding of the value of SEWB data
  - how it can be used at the patient and population health level
- New and emerging space
  - ACCHS working out systems and approaches to coding
  - No standards of health KPIs related to mental health/SEWB that promote good data standards, information collection
- Unclear what terminology to use and when
  - Gaps and overlap in existing terminology

Towards a reference guide

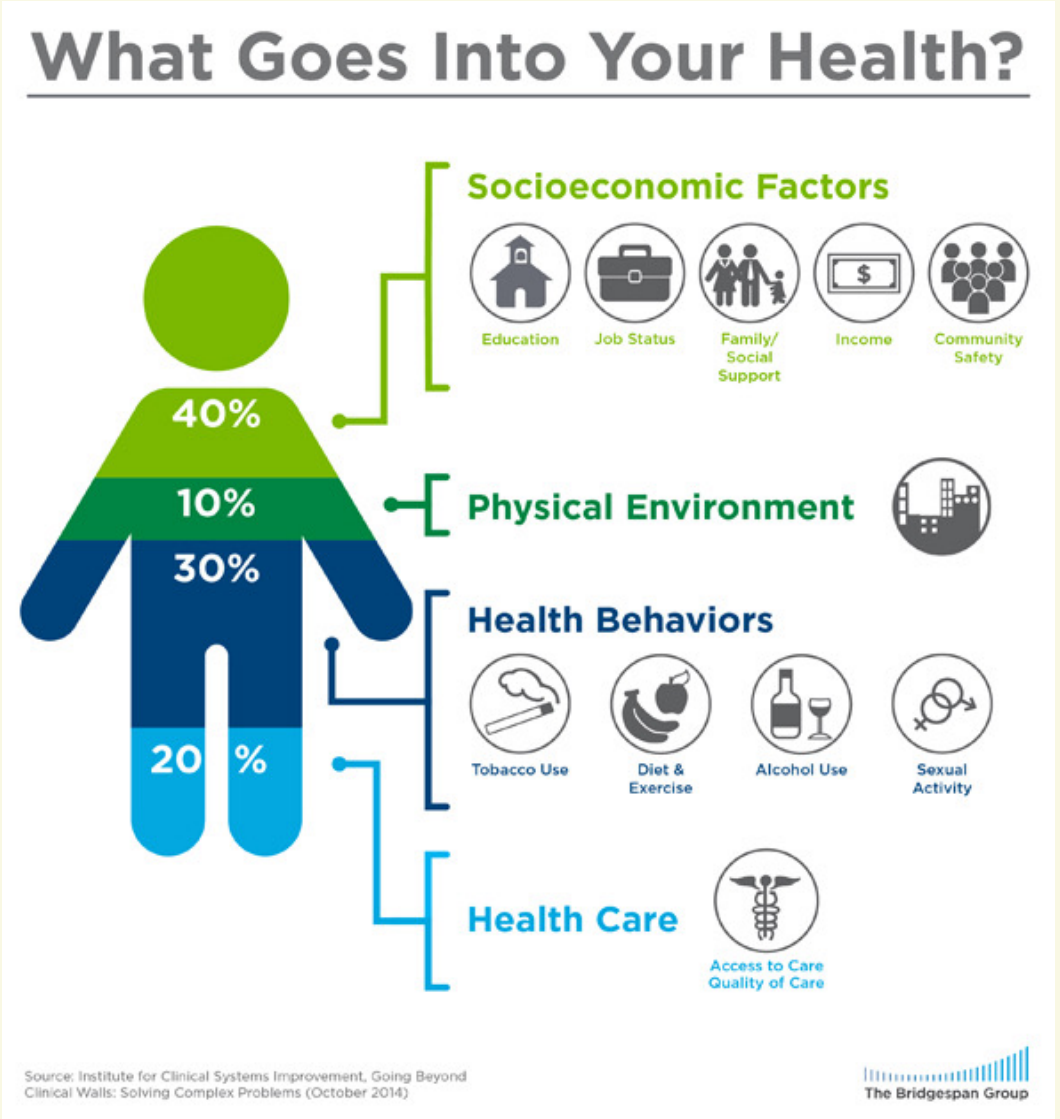
Experiment	Use	Feedback	Advocate	Release	Implement
New project engaging with ACCHS to map/gap SEWB terms against SNOMED and ICPC-2+	Use information from ACCHS/ CSIRO/UWA workshop to 1. create working definitions for mapped and gapped terms 2. provide implementation & use suggestions	Send outputs to ACCHS & SEWB experts for feedback Work through consensus process until we have terms that people agree to their definition and use	Advocate for gap terms to be built into SNOMED-CT and ICPC-2+	Release reference guide to ACCHS as a living document through ACCHS peaks	Advocate for implementation & evaluation of improved SEWB clinical coding

Workshop 3: Social Determinants of Health, Social and Emotional Wellbeing and health behaviours

Objectives:

- To explore and understand the importance of SDOH, SEWB, and health behaviour information,
- To identify key use cases
- To prioritise data groups.

Determinants of Health



Sparked HL7 FHIR

Social and emotional wellbeing

Sparked HL7 FHIR

Print outs on your table for reference

Defining Social Determinants

The social determinants of health are the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries.

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	
Medical bills	Playgrounds	Higher education		Stress	Quality of care
Support	Walkability				
	Zip code / geography				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Relationship between social determinants of health and SEWB

WIC-K

Social Determinant of Health Domain	Social and Emotional Wellbeing domain
Economic Stability	Body: Influences access to healthcare, nutrition, and living conditions. Mind and Emotions: Affects stress levels and mental wellbeing. Family and Kinship: Provides resources for family wellbeing. Community: Contributes to community resilience. Culture, Land, and Spirituality: Supports cultural and spiritual practices
Education	Body: Enhances health literacy and informed healthcare choices. Mind and Emotions: Develops critical thinking and emotional resilience. Family and Kinship: Empowers families through education opportunities. Community: Promotes civic engagement and collective wellbeing. Culture, Land, and Spirituality: Supports the preservation of cultural heritage and the transfer of cultural knowledge.
Neighborhood Environment	Body: Provides safe and supportive environments for physical health. Mind and Emotions: Reduces stress and promotes mental wellbeing. Family and Kinship: Impacts family dynamics and cohesion. Community: Fosters social interaction and a sense of belonging. Culture, Land, and Spirituality: Reflects and supports cultural practices and spiritual connections
Social Support Networks	Body: Offers emotional support and reduces stress-related health issues. Mind and Emotions: Enhances emotional resilience and wellbeing. Family and Kinship: Promotes supportive family and community relationships. Community: Builds cohesive and resilient communities. Culture, Land, and Spirituality: Maintains cultural practices and social connections
Access to Healthcare	Body: Directly impacts physical health outcomes and disease prevention. Mind and Emotions: Supports mental health and reduces stigma. Family and Kinship: Affects family health and caregiving dynamics. Community: Contributes to community health and emergency preparedness. Culture, Land, and Spirituality: Integrates cultural and spiritual support in healthcare
Food Access	Body: Essential for nutrition, physical health, and disease prevention. Mind and Emotions: Reduces stress related to food insecurity. Family and Kinship: Supports family nutrition and wellbeing. Community: Impacts community health, equity, and resilience. Culture, Land, and Spirituality: Reflects cultural food practices and beliefs

The Gravity Project…

Goal- Develop consensus-driven data standards to support use and exchange of social determinants of health (SDOH) data within the health care sectors and between the health care sector and other sectors.

Canada - SPARK tool

SPARK Tool

Screening for Poverty And Related Social determinants to improve Knowledge of and links to resources (SPARK)

Demographics

1. **Language**
   a) If available, would you prefer your healthcare appointments offered in another language?
   b) If yes, which language?
2. **Born in Canada**
   a) Were you born in Canada?
   b) If no, when did you arrive?
3. **Indigenous Identity**
   a) Do you identify as an Indigenous person?*
   b) If yes, are you Status (Registered or Treaty Indian as defined by the Indian Act of Canada)?*
   c) If yes, Inuk/Inuit, are you a member of an Inuit land claims agreement?*

   **This data must be collected with engagement with local First Nations, Métis, and Inuit governance bodies in accordance with the First Nations OCAP, Métis OCAS, and Inuit Qaujimajatuqangit data governance and sovereignty principles.*
4. **Race**
   In our society, people are often described by their race or racial background. Our race may influence the way we are treated by individuals and institutions, and this may affect our health. Which category(ies) best describes you? Select all that apply.
5. **People with Disabilities**
   Do you currently experience any of the following due to a severe and persistent physical or mental condition? Select all that apply.
6. **Sex at Birth**
   What was your sex at birth?
7. **Gender Identity**
   What is your gender identity?
8. **Sexual Orientation**
   Which category(ies) best describe your sexual orientation? Select all that apply.

? **Descriptors** — Patients can click on a hyperlinked "?" beside each question to learn about each question's purpose, a definition of terms, and why it is being asked.

Optional Questions

1. **Ethnicity**
   What is your ethnic or cultural background? e.g., Chinese, Filipino, Guyanese, Scottish, Somali, Korean
2. **Religion**
   What is your religious or spiritual affiliation? Select all that apply.

Social needs

9. **Education**
   What is your current level of education?
10. **Income/Finances**
    Do you currently have difficulty paying for basic needs?
11. **Food Security**
    Please respond to the following statements:
    a) "Within the past 12 months, we worried whether our food would run out before we could buy or get more."
    b) "Within the past 12 months, the food we bought just didn't last and we could not buy or get more."
12. **Medication Access**
    In the past 12 months, were you unable to get medicine or medical supplies, or did you do anything to make them last longer *because of the cost*?
13. **Housing**
    a) What is your current housing situation?
    b) Who do you live with? Select all that apply.
    c) In the past 12 months, was there a time when you were not able to pay the mortgage or rent on time?
14. **Transportation**
    In the past 12 months, has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? Select all that apply.
15. **Phone and Internet Access**
    Do you currently have consistent access to a phone or the internet?
16. **Utilities**
    In the past 12 months, did you miss making a payment on any utility bills (e.g., electric, gas/oil, water) *because of cost*?
17. **Social Supports**
    a) Do you feel you have people who you can open up to or confide in?
    b) Do you have people to rely on if you needed help?
18. **Employment**
    a) Are you currently employed (this includes self-employed, full-time, part-time or other)?
    If no:
    b) Are you currently looking for work?
    If yes:
    c) Is your main job temporary or part-time (e.g., casual, contract, freelance, short-term, seasonal)?
    d) Do you feel that your current employment could be negatively affected if you raised concerns about your work (e.g., health, safety, rights)?
    e) In the past 12 months, did your income change a lot from month to month?

CIHR IRSC Canadian Institutes of Health Research / Instituts de recherche en santé du Canada

UPSTREAMLAB

Learn more at upstreamlab.org/spark

Sparked HL7 FHIR

Pan-Canadian Health Data Content Framework

Data Content Standard: Open Review

March 2024

Data element name	Data element definition	Data element maturity	Value set (Code System)	Value set examples	Value set maturity
Sociodemographic Information and Equity Stratifiers (continued)					
Indigenous Self-Identification	The person's self-identification as either First Nations, Métis and/or Inuk/Inuit	0: In development	IndigenousIdentityCode (SNOMED CT CA, HL7)	• First Nations • Inuk/Inuit • Métis • Do not know • Not applicable • Asked but declined	1: Draft
Ethnicity	The person's ethnic or cultural background	0: In development	To be confirmed	n/a	n/a
Religious or Spiritual Affiliations	The person's religious or spiritual affiliations	0: In development	To be confirmed	n/a	n/a

Assessments and screening

Social history

The following data elements pertain to information about health behaviours that influence the risk of developing chronic disease (e.g., smoking, alcohol consumption).

Data element name	Data element definition
Type of Social Behaviour	The type of social behaviour that the person is engaging in that increases the possibility of disease or injury, including risk factors such as tobacco use, alcohol use and problematic use of illicit or prescription drugs
Social Behaviour Observation Date	The date that the social behaviour was recorded
Social Behaviour Value	The measured number of times a person engages in a social behavioural activity (e.g., number of alcoholic beverages consumed per week)
Number of Sexual Partners	The number of sexual partners in the last year
Gender of Sexual Partners	The genders of the person's sexual partner(s)
Safer Sex Practices	The method(s) the person uses to prevent the transmission of sexually transmitted and blood borne infections
Type of Sexual Contact	The type of sexual contact (e.g., oral, vaginal, anal)

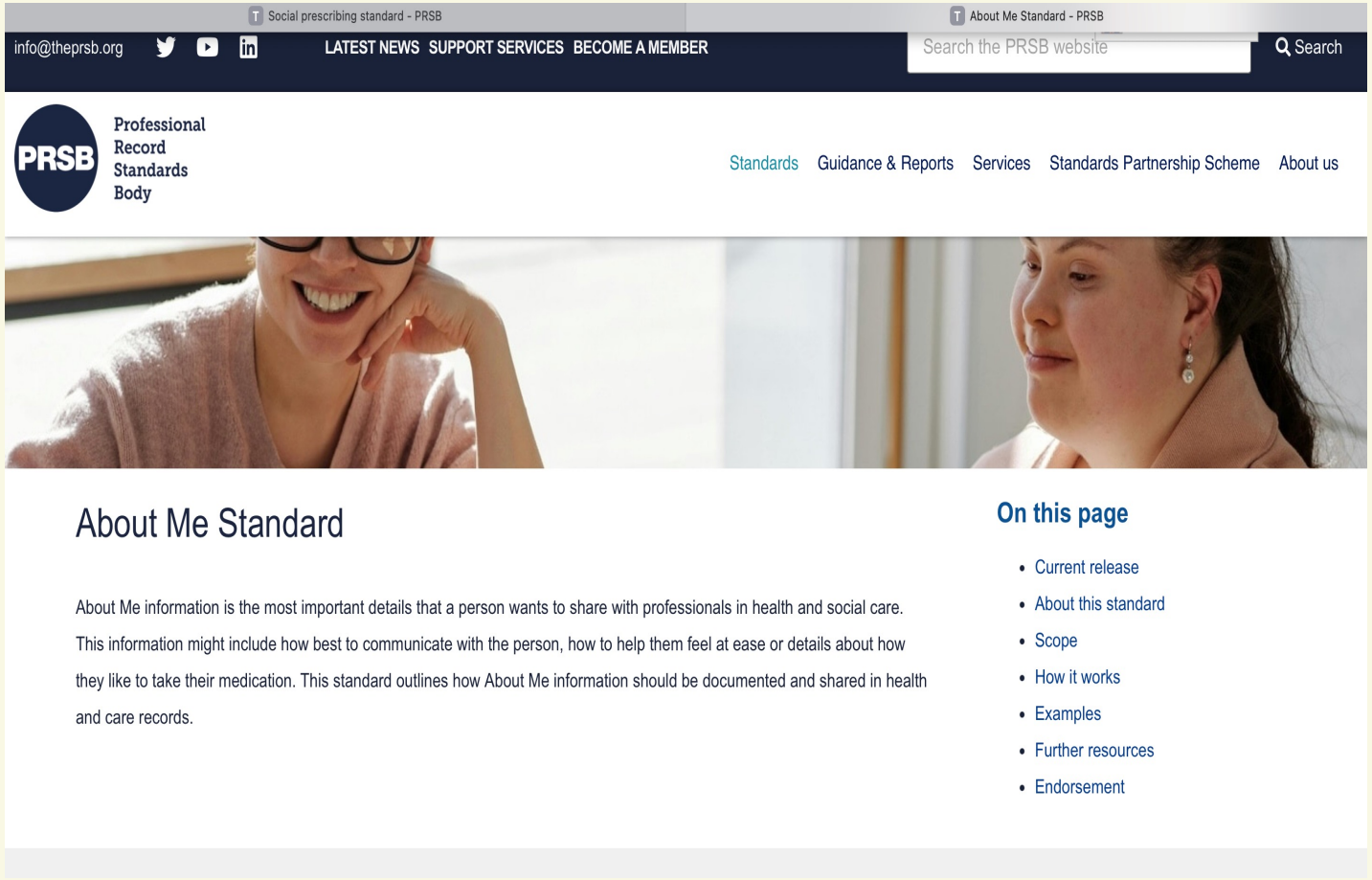
Data element name	Data element definition	Data element maturity	Value set (Code System)	Value set examples	Value set maturity
Employment and Finance Information					
Employment Status	The person's current job status	0: In development	To be confirmed	n/a	n/a
Household Income	The sum of the total incomes of all members of a household	0: In development	To be confirmed	n/a	n/a
Financial Stability	Information about a person's ability to pay for their household's basic needs, including food, water, housing and clothing	0: In development	To be confirmed	n/a	n/a
Housing Information					
Housing Stability	The person's current housing situation, including whether they are housed or unhoused	0: In development	To be confirmed	n/a	n/a
Housing Condition	The physical infrastructure of the residence, including overcrowding, a leaking roof, no bath/shower and no flushing toilet, or a dwelling considered too dark	0: In development	To be confirmed	n/a	n/a
Household Composition	Information about who the person lives with, such as parents, children, spouse or roommates	0: In development	To be confirmed	n/a	n/a
Accessibility Information					
Access to Food	The person's ability or inability to access food over the past 12 months	0: In development	To be confirmed	n/a	n/a
Access to Medication	The person's ability to access or afford medicine	0: In development	To be confirmed	n/a	n/a
Access to Internet	The person's ability to access or afford internet over the past 12 months	0: In development	To be confirmed	n/a	n/a
Access to a Phone	The person's ability to access or afford a telephone over the past 12 months	0: In development	To be confirmed	n/a	n/a

Data element name	Data element definition	Data element maturity	Value set (Code System)	Value set examples	Value set maturity
Accessibility Information (continued)					
Access to Transportation	The person's access to public or private transportation over the past 12 months	0: In development	To be confirmed	n/a	n/a
Access to Utilities	The person's ability to access and afford utilities, such as heat, electricity, water, sewage and waste services over the past 12 months	0: In development	To be confirmed	n/a	n/a
Access to Child Care	The person's ability to access or afford child care in the past year over the past 12 months	0: In development	To be confirmed	n/a	n/a
Social Needs					
Social Supports	The actual or perceived availability of family, friends, neighbours and/or community that a person can confide in or rely on to feel more socially connected and secure	0: In development	To be confirmed	n/a	n/a
Incarceration History	The person's experiences with the judicial system such as spending time in a jail, prison, detention centre or juvenile correctional facility	0: In development	To be confirmed	n/a	n/a

Sparked HL7 FHIR

NHS PRSB – About Me

- What is most important to me
- Who is most important to me
- How I communicate
- How to communicate with me
- My wellness
- Please do
- Please don't
- How to support me
- When to support me



Sparked HL7 FHIR

NHS PRSB – Social Prescribing Standard

PRSB's Social Prescribing Information Standard & How Specialised Tools Can Help

The Professional Record Standards Body (PRSB) has recently published a social prescribing information standard which aims to ensure a standardised approach to collecting, recording and sharing information about social prescribing referrals.

Social prescribing is a non-medical approach to healthcare that aims to address the social, emotional and practical needs of a person. It involves referring people to community-based services or resources that can help to improve their health and wellbeing, such as support groups, social activities or volunteering opportunities.

The information standard was commissioned by NHS England in order to support people providing social prescribing services, individuals referred into social prescribing, and the information needed for secondary purposes such as reporting. The standard has received an Information Standards Notice, making its use a requirement by all models of social prescribing. The image below shows the types of information that services will need to collect and record at different stages of a person's social prescribing referral.

CONTACT	CONVERSATION	INTERVENTIONS	FOLLOW-UP	OUTCOMES
Referral to link worker	Link Worker record	Link Worker record	Link Worker record	Message back to referrer & GP

• Person demographics
• GP details
• Referral details (to/from)
• Presenting needs
• Risks & Safeguarding
 	
Plus supporting information via referral or via shared care record
• About me
• Individual requirements
• Care & support plan
• Relevant problems
• Social context
	• Meetings details
	• Care & support plan incl:
	  • Needs
	  • Strengths
	  • Goals
	  • Actions and activities
	• Updates to person details
	• Meetings summary
		• Referrals
		• Signposting
		• Attendance
			• Meetings details
			• Progress notes
			• Outcome assessments
				• Consent to share
				• Summary
				• Actual Needs
				• Actions & activities
				• Assessments
				• Updated person details
				• Plan and requested actions for GP/ professionals & person

- Non-medical approach to address the social, emotional and practical needs of a person
- Referrals to community-based services or resources

Problem	M	1...1	A condition which needs addressing and so is important for every professional to know about when seeing the person. Problems may include diagnoses, symptoms, and social or behavioural issues		group			
Coded value	R	0...1	The coded value for the problem list.	SNOMED CT : - ^1127581000000103 |Health issues simple reference set|	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Onset date	R	0...1	A date or estimated date that the problem began	Date and time	item			
End Date	R	0...1	The date or estimated date the problem was resolved.	Date and time.	item			
Stage of disease	R	0...1	The stage of the disease where relevant.	Free text	item			
Comment	R	0...*	Supporting text may be given covering the problem.	Free text	item			
Social context	O	0...1	The social setting in which the person lives, such as their household, occupational history, and lifestyle factors.		section	This section includes information about the social setting in which the person lives, such as their household, occupational, and lifestyle factors. Social circumstances includes the person's social background, network and personal circumstances, e.g. housing, and should also include if the person is a carer.		
Household composition	O	0...1	Details of the person's household composition.		group		Event.Record	
Household composition	R	0...1	Description of the household composition e.g. lives alone, lives with family, lives with partner, shared accommodation etc.		group			
Coded value	R	0...1	The coded value of household composition	SNOMED CT: - ^1027891000000106 | Household composition findings simple reference set (foundation metadata concept) |	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Occupational history	O	0...1	The current and/or previous occupation(s) of the person.		group		Event.Record	
Occupational history	R	0...1	The current and/or previous occupation(s) of the person.		group			
Coded value	R	0...1	The coded value for occupational history	SNOMED CT : - ^999001571000000109 | Occupation simple reference set (foundation metadata concept)	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Educational history	O	0...1	Details of the person's educational history.		group		Event.Record	
Educational history	R	0...1	The current and/or previous relevant educational history of the person.	Free text	item			
Lifestyle choices	O	0...1	The lifestyle choices made by the person which are pertinent to his or her health and well-being, e.g. physical activity level, pets, hobbies and sexual habits		group		Event.Record	
Lifestyle choices	R	0...1	The lifestyle choices made by the person which are pertinent to his or her health and well-being, e.g. physical activity level, pets, hobbies and sexual preferences.	Free text	item			
Smoking status	O	0...1	Details of the person's smoking status.		group		Event.Record	
Smoking status	R	0...1	Record of any smoking use by the person.		group			
Coded value	R	0...1	The smoking status of the person.	SNOMED CT:- ^999000891000000102 |Smoking simple reference set (foundation metadata	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Smoking status - details	R	0...1	Further details recorded about the smoking status of the person	Free text	item			
Date stopped smoking	O	0...1	The date the person stopped smoking (if known)		group			
Coded value	R	0...1	The coded value for date stopped smoking.	SNOMED CT:- 160625004 |Date ceased smoking (observable entity)|	item			
Date	R	0...1	The date the person stopped smoking.	Date and time	item			
Alcohol intake	O	0...1	Details of the person's alcohol intake		group		Event.Record	
Alcohol intake	R	0...1	Latest or current alcohol consumption.		group			
Coded value	R	0...1	The coded value of the person alcohol intake	SNOMED CT :- <<219006 |Current drinker of alcohol (finding)| OR <<105542008 |Current non-drinker of alcohol (finding)| OR 783261004 |Lifetime non-drinker of alcohol (finding)| OR 1104551000000109 |Declined to provide information about alcohol use (situation)| OR 371434005 |History of alcohol abuse (situation)|	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Drug/substance use	O	0...1	Details of the person's drug and substance use.		group		Event.Record	
Drug/substance use	R	0...1	Latest or current drug/substance use.		group			
Coded value	R	0...1	The coded value for drug and substance misuse.	SNOMED CT:- <<361055000 |Misuses drugs (finding)| OR <<371422002 |History of substance abuse (situation)| OR <<228368007 |Has never misused drugs (situation)| OR 783241000000102 |Declined to give substance misuse history	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Social circumstances	O	0...1	Details of the persons social circumstances		group		Event.Record	
Social circumstances	R	0...1	A person's social background, network and personal circumstances, e.g. housing. This should include whether the person is a carer.	Free text	item			
Access	O	0...1	Details of access for the person.		group		Event.Record	
Access	R	0...1	Special access requirements e.g. key safe, coded lock, which door to use, stretcher access, etc.	Free text	item			
Dependants	O	0...1	Details of any responsibility the person has for dependants.		group		Event.Record	
Dependants	R	0...1	Provide details of any responsibility the person has for dependants. In the case of children provide date of birth of the child.	Free text	item			
Accommodation status	O	0...1	Details of the type of accommodation where the person lives.		group		Event.Record	
Accommodation status	R	0...1	An indication of the type of accommodation where the person lives. This should be based on the main or permanent residence.		group			
Coded value	R	0...1	The coded value for accommodation status	NHS data dictionary :- Accommodation status	item			
Free text	R	0...1	Free text field to be used if no code is available	Free text	item			
Household environment	O	0...1	Details of the person's household environment.		group	This section includes information about the social setting in which the person lives, such as their household, occupational, and lifestyle factors. Social circumstances includes the person's social background, network and personal circumstances, e.g. housing, and should also include if the person is a carer. 'Smoking status' should be shared using SNOMED CT rather than	Event.Record	
Household environment	R	0...1	Factors in the household which impact the person's health and wellbeing, to include	Free text	item			

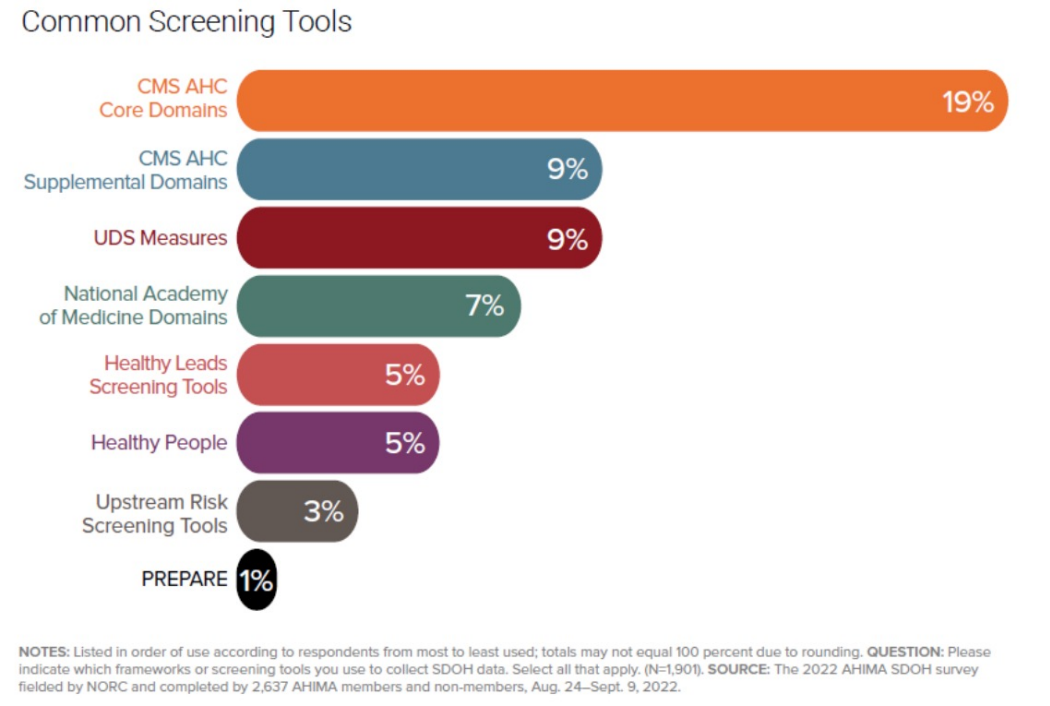
Social Prescribing Information | Referral to Social Prescribing | Message back to GP & Referrer | Provenance Data | +

Sparked HL7 FHIR

AHIMA: Social Determinants of Health Data:

Survey Results on the Collection, Integration, and Use (Feb 2023)

- Lack of standardization and integration of the data into an individual's medical record
- No consensus on which key SDOH domains need to be collected
- No consensus on which screening tools to be used

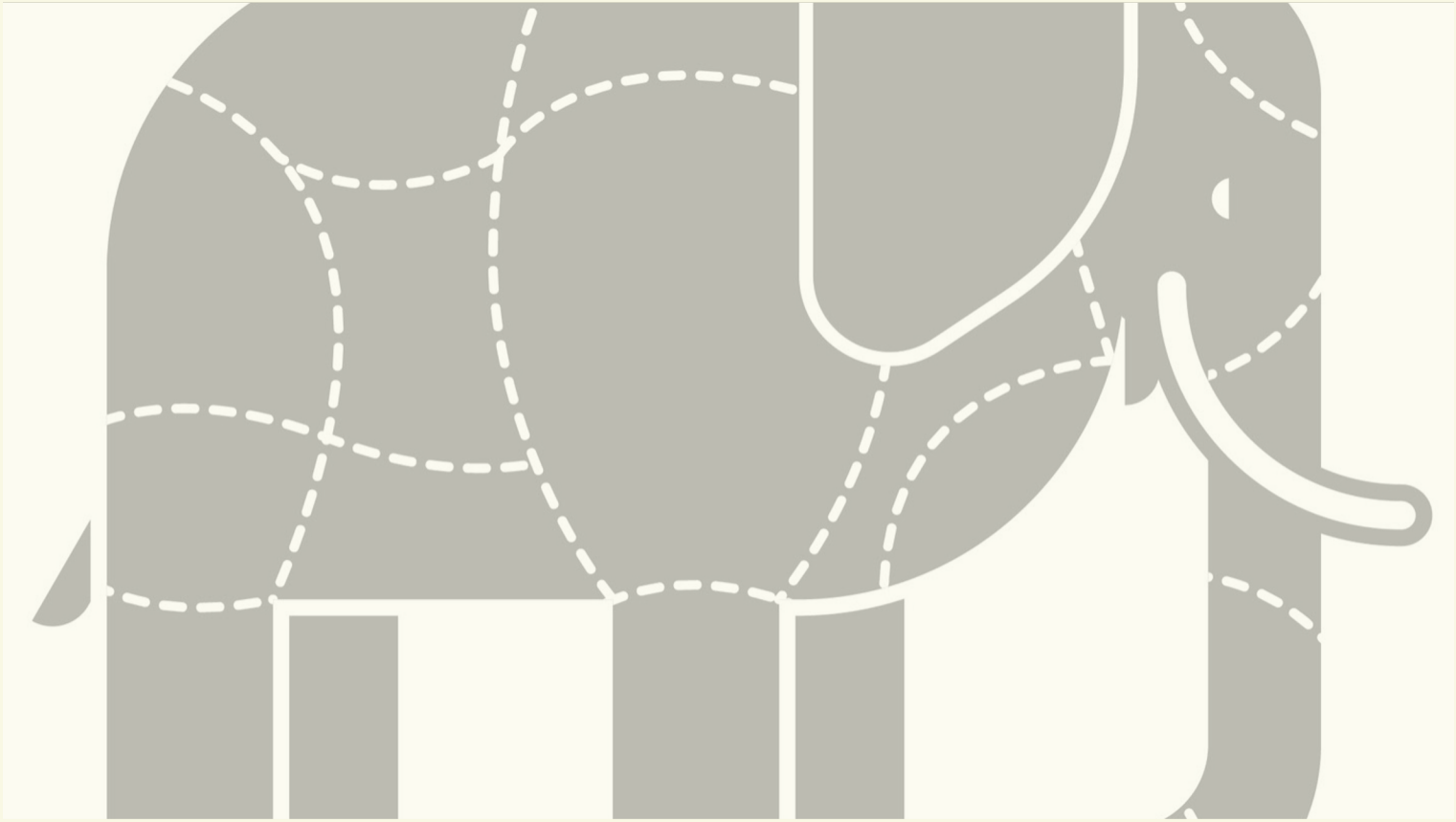


https://ahima.org/media/03dbonub/ahima_sdoh-data-report.pdf

Sparked HL7 FHIR

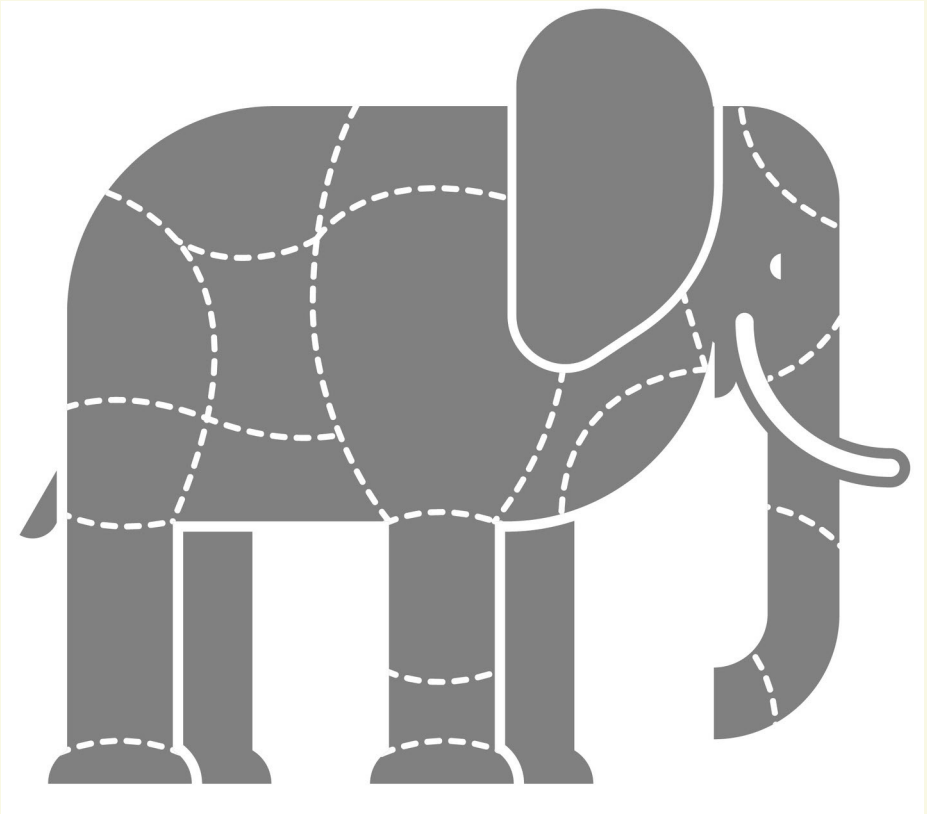

spirituality
issues
phone
neighbourhood
religious
gender
ancestors
worries
hardship
service
abuse
dependants
needs
digital
emotions
smoking
homelessness
country
strengths
birth
education
medication
concern
ethnicity
issue
alcohol
impairment
violence
others
literacy
ability
wish
lifestyle
connection
goal
self
employment
stress
food
spirit
insecurity
transportation
financial
instability
care
utilities
access
prison
partner
family
indigenous
marital
environment
religion
housing
relationship
racism
hope
sexual
personal
child
culture
disability
risk
immigration
safety
body
occupation
language
social
household
health
substance
support
elder
community
cognitive
drug
veterans
identity
mobility
utility
communication
cost
insurance
accommodation
isolation
unemployment
mind
stability
interpersonal
internet
kinship

What do we need in Australia?



SDOH, SEWB, health behaviours data for interoperability

- Develop the roadmap
  - Identify priority use cases and data groups
  - Consider if/when/how to leverage Gravity and other international work
  - Identify and prioritise (information currently poorly reported)
    - Social well-being
    - Emotional well-being
    - Gaps in Physical well-being
      - Exercise/Physical activity
      - Food & nutrition
      - Sexual health
      - Sleep
      - Health risks – exposure, risky behaviour, alcohol and substance use etc



Sparked HL7 FHIR

Activity 1: Most important information/data to support workflow and exchange of information

As a **group** at your table

As a group at your table, fill in the worksheet at your table.

What is the most important SDOH, SEWB and health behaviours information to be defined?	Who does that information need to be shared with?	How will this information be used? (e.g., decision support, reporting assessment information)	What are the policies/inputs that will help scope/should be considered? (e.g. screening tools, assessments)	Which stakeholders should be involved?

Activity 2: Data model gaps – current backlog

SDOH topics in the backlog

Communication capability
Languages spoken

Housing summary
Housing
Housing status
Rurality

Transport summary
Transport access

Education summary
Education level

Living arrangements
Household
Residential setting

Financial summary
Finance
Income
Social economic

Personal safety summary
Childhood trauma
Domestic violence

Health access summary
Access of care
Distance from care
Health literacy/numeracy

Social network
Carer
Next of Kin
Relationships

Health Behaviour topics in the backlog

Food and nutrition summary
Diet
Food security

Alcohol consumption summary

Physical activity summary

Substance use summary

Tobacco smoking summary
Amount
Cessation
Cigarette smoking
Comment
Daily smoking started
Frequency
Overall pack years
Pattern
Previous episodes of use
Quit date
Regular smoking started
Years of smoking

Tobacco smoking summary has been included in AUCDI R1, however is limited to **Overall tobacco smoking status**. All other elements are in the backlog

Vaping summary

Sparked
HL7 FHIR

Activity 2: Data model gaps – SEWB wheel

New concept to AUCDI

How can we include this in data to support interoperability?

Activity 2: Data model gaps – what's missing?

Looking at the SDOH and health behaviours backlog and the SEWB wheel

- As a group
  - Identify **new data points for existing data groups**
    - Record the name of the data group on a post-it note
    - Add names of the data point/s
  - Identify **new data groups that are missing**
    - Record each new data group on a separate post it note.
    - Add names of supporting data point/s, if relevant

As a **group** at your table

HOUSING SUMMARY
- Housing status
- Rural status

Post-it note example:
High level data group = Housing summary
Relevant data points = Housing status, rural status

Sparked HL7 FHIR

Activity 3: Individual prioritisation of SDOH, SEWB, health behaviours

Each person should have 8x **ORANGE** coloured sticker dots

- Identify data groups to be prioritised for SDOH, SEWB, health behaviours data for interoperability
- Place dots on the pages on the data groups on the wall

As an **individual**

Optional

If you identify data groups that should **not** be included, please mark them with a BLACK sticker dot.

Sparked HL7 FHIR

Activity 4: Group prioritisation

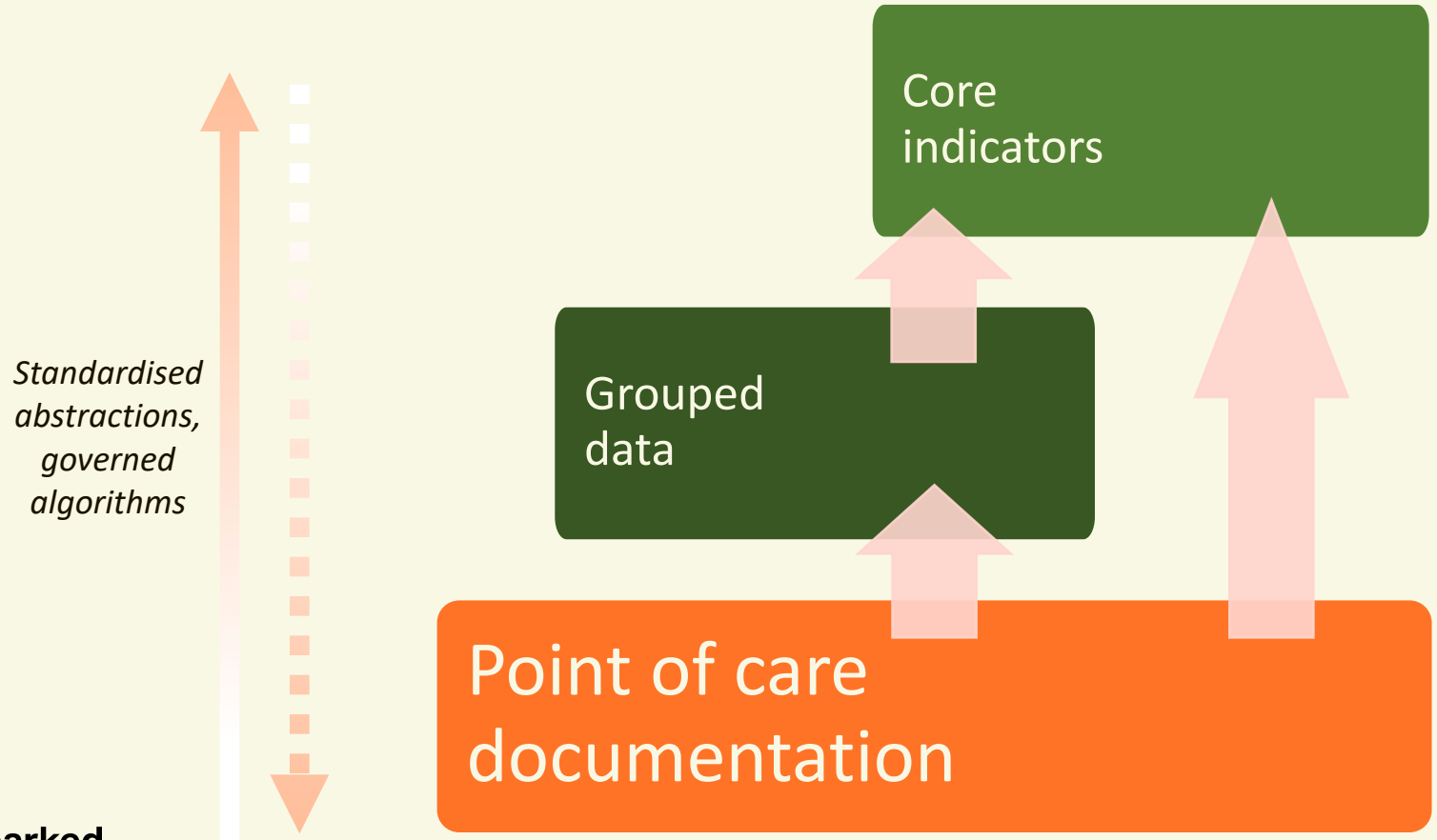
Workshop 4: From little data to big data

- Objective: To explore and identify the key opportunities for AUCDI/SDOH/SEWB to support population health use cases. For example regional and national reporting, quality indicators, etc.

Perspectives

Michael Frost & Stephen Hall
Australian Institute of Health & Welfare
Department of Health & Aged Care

Primary to population use of data

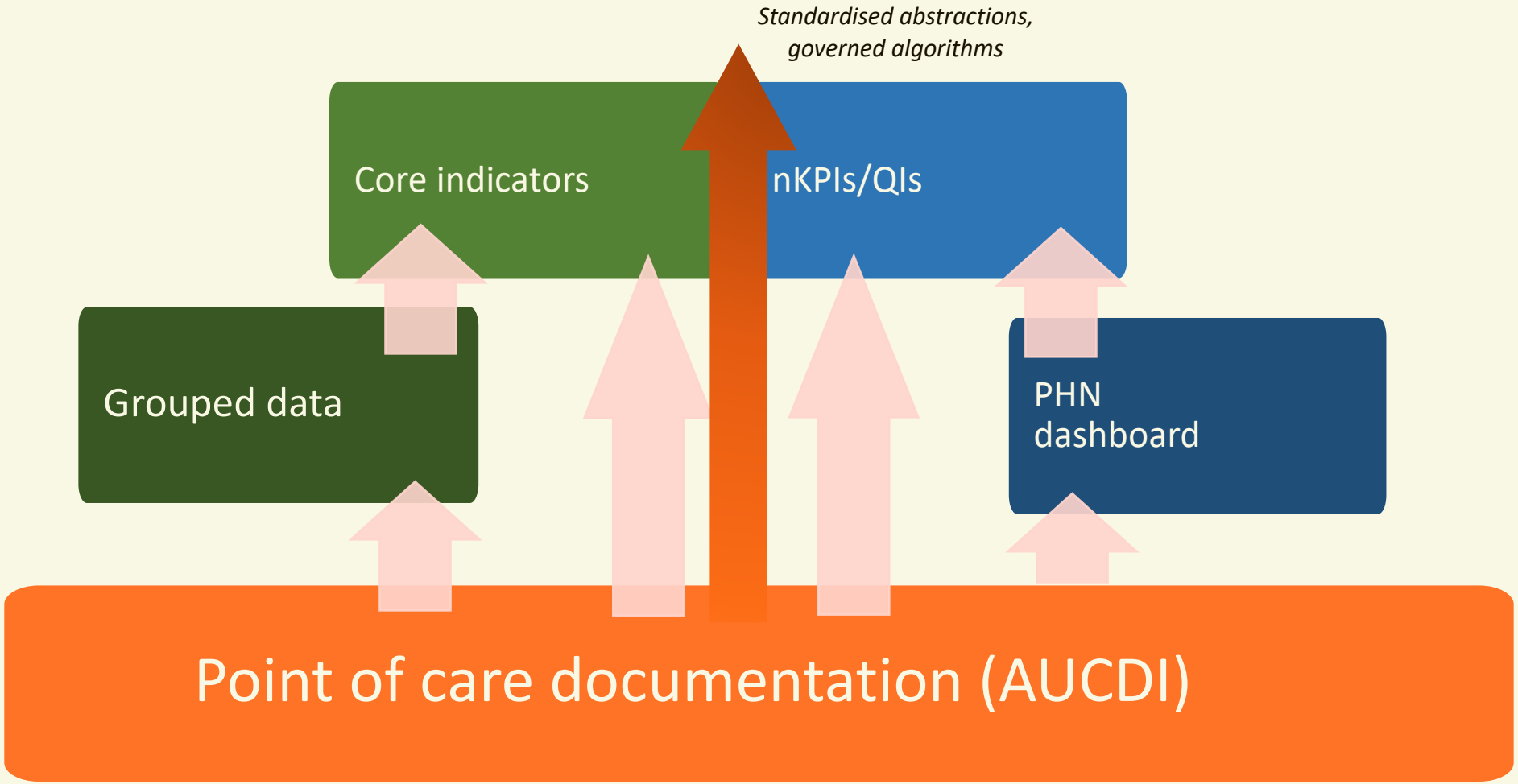


Continuum of data rather than separation by purpose

- Point of care documentation – most granular
- Abstracted, categorised, grouped to coarser grain data

Sparked HL7 FHIR

Primary to population use of data



Sparked HL7 FHIR

Primary to population use of data - AUCDI

Person care

Patients, clinicians, care teams, family and carers

- Clinical care planning coordination and management

Care organisations

Administrators, directors, managers

- Resource allocation
- Quality improvement
- Program planning
- Reporting QI PIP

Population and public health

Local, state, national and other reporting bodies

- Chronic disease management
- Health outcomes
- Disease surveillance
- Health system planning
- Prevention

Sparked HL7 FHIR

Activity 1: Imagine a future…

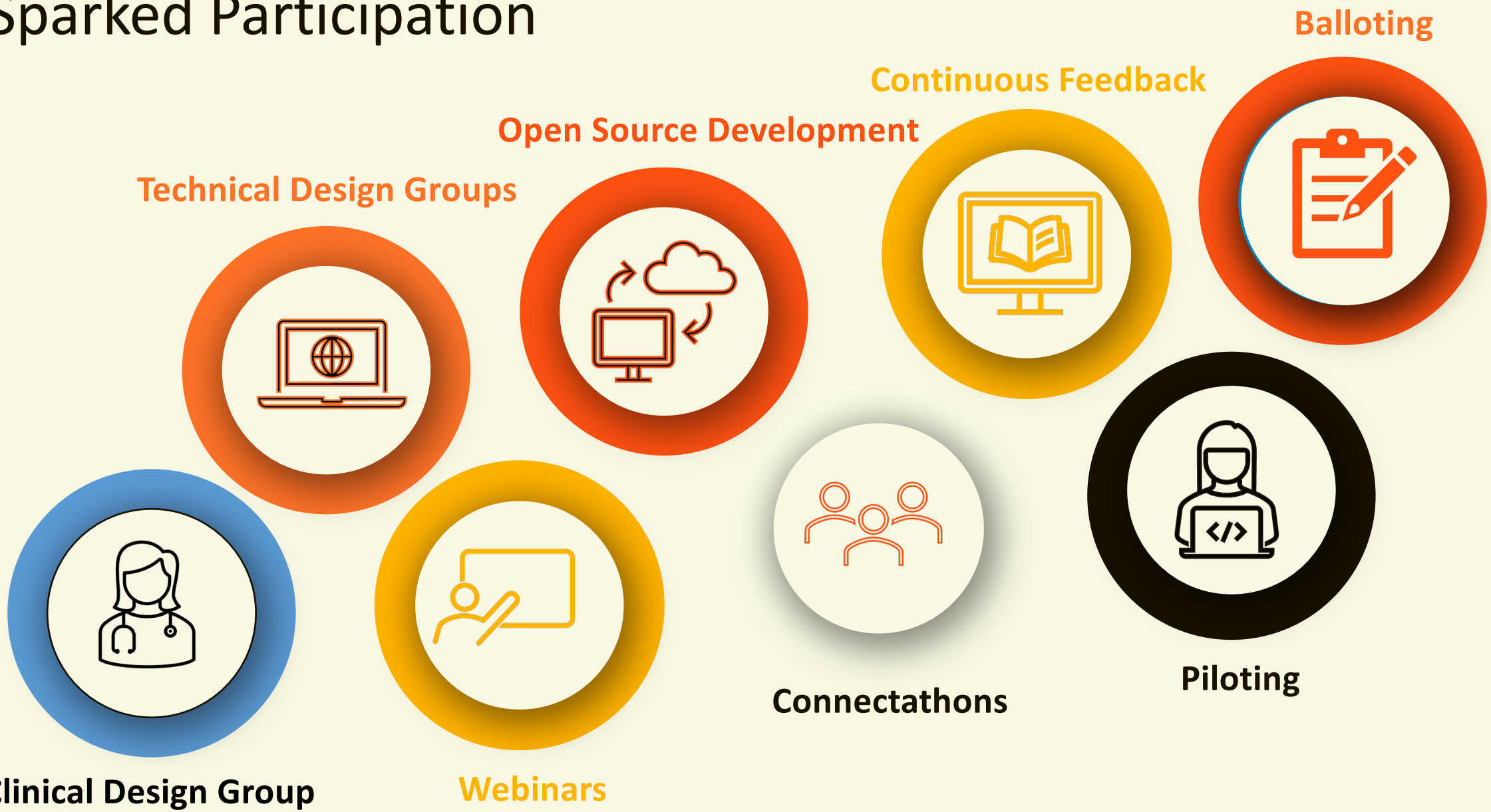
- We are now in a world where core clinical, SDOH, SEWB, health behaviours structured data is available.

- As a group, identify opportunities for improved local, regional and/or national reporting?
  - What data would you use?
  - What indicators would you want to measure?

As a **group**
at your table

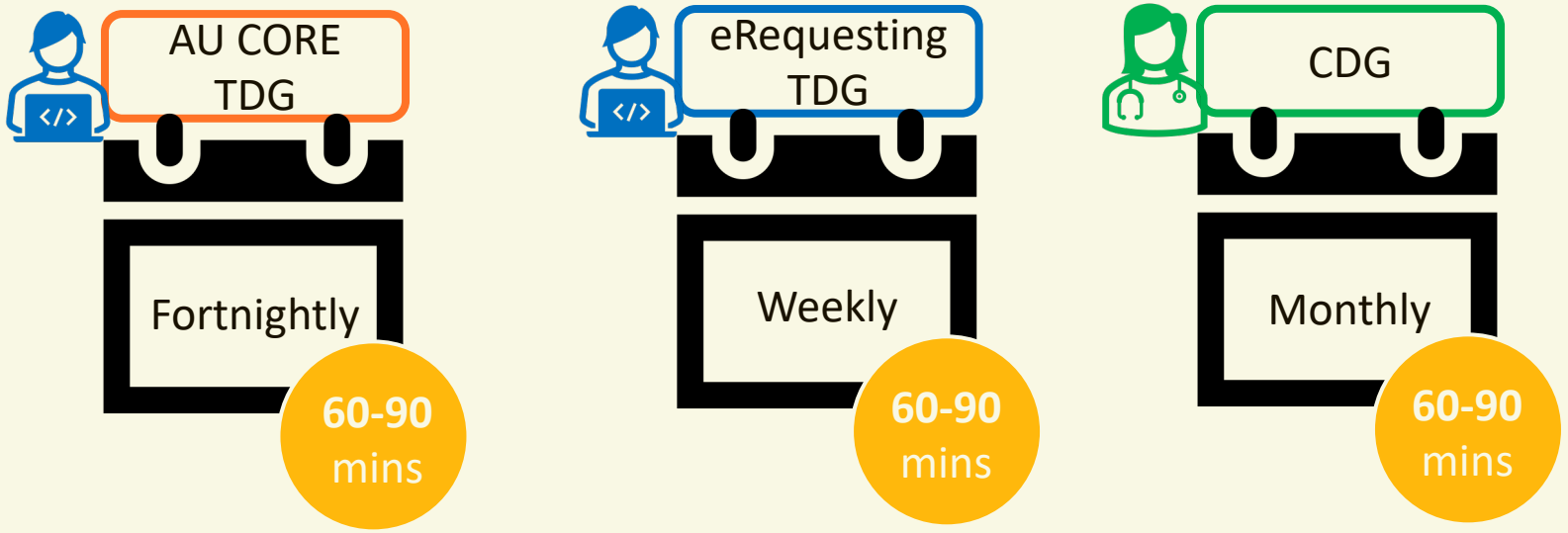
How to get involved?

Sparked Participation



Sparked
HL7 FHIR

Sparked Design Groups



Open-Source Development

Webinars

Ongoing feedback

Connect-athons

TDG AU CORE

TDG eRequesting

CDG

Sparked HL7 FHIR

Upcoming Events 2024

July

- July 15 — AU Core Testing Event F2F, Sydney

August

- Aug 1 — AU Core Testing Event, Melbourne
- Aug 4 — HIC Sparked Workshop, Brisbane
- Aug 13 — CDG, Online
- Aug 20-22 — HL7 Au Connectathon, Brisbane
- Aug 28 — Sparked Webinar, Updates on Sparked Program

September

- Sept 11 -12 — Sparked CDG F2F, CDG & Terminology Workshop, Brisbane

October

- Oct 2 — Sparked Webinar
- Oct 15 — Sparked CDG, Online

November

- Nov 7-8 — Digital Health Summit, Perth
- Nov 19 — Sparked Leadership evening, Melbourne
- Nov 20 — Sparked CDG F2F, Melbourne
- Nov 21 — Sparked TDG F2F, Melbourne

December

- Dec 11 — Sparked Webinar, Updates on Sparked Program
- Dec 12-13 — HL7 Au Connectathon, Melbourne

Sparked HL7 FHIR

Where Next?

- AUCDI R1 – “Core of the Core” Published!
  - On our website
    - AUCDI R1
    - AUCDI Backlog
    - Feedback and Sparked responses
- AUCDI R2 – Scoping (now!) and development
- AUeReq DI- public comment complete, due to be published in October.

Closing Menti

Thank you!

Register for Sparked