Bp Premier
SUMMIT 2025

Please take a seat,
your session starts soon.

Acknowledgement of Country

Best Practice Software acknowledges the Traditional Custodians of Country throughout Australia and recognise their unique cultural and spiritual relationships to the land, waters, and seas and their rich contribution to society. We pay our respects to ancestors and Elders, past, present, and emerging.

Best Practice Software respects Māori as the tangata whenua and Treaty of Waitangi partners in Aotearoa New Zealand.

Right: Ginmine design from corner, radiating outwards.
Designed for the Bp Bundaberg Operations Hub Mural Project, 2021

Artist: Nicole Wone

Addresses themes of: Evolution – Adaptation of Universe and traditional Indigenous beliefs across the globe.

Beginning of time, darkness. Movement in the cosmos. Rainbow Serpent – Creation being. Ancestral lineage without our DNA


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The Future of Healthcare –
FHIR, Standards and Beyond
Dr David Hansen

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The Future of Healthcare – FHIR, Standards and Beyond

Dr David Hansen

David Hansen is CEO and Research Director of the Australian e-Health Research Centre at CSIRO – Australia's national science agency. The AEHRC is CSIRO's digital health research program. With over 150 scientists and engineers across health informatics, biomedical informatics and health services research, the AEHRC is Australia's largest digital health research centre. David is passionate about the role of information and communication technologies in health care and the role of digital health professionals in developing a safe, high quality efficient and sustainable healthcare system.

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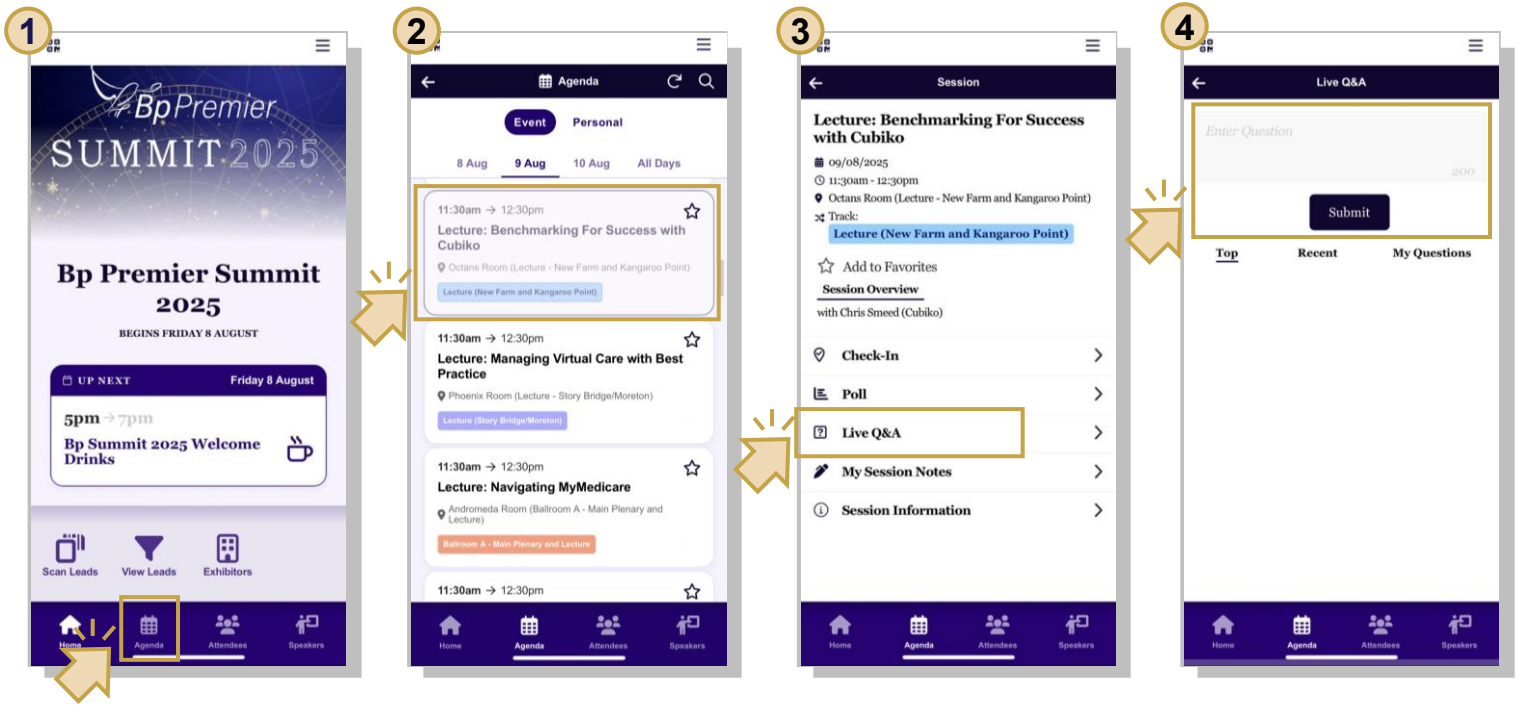
Ask any questions using The Event App

Download the app
By scanning the QR code

The EVENTAPP

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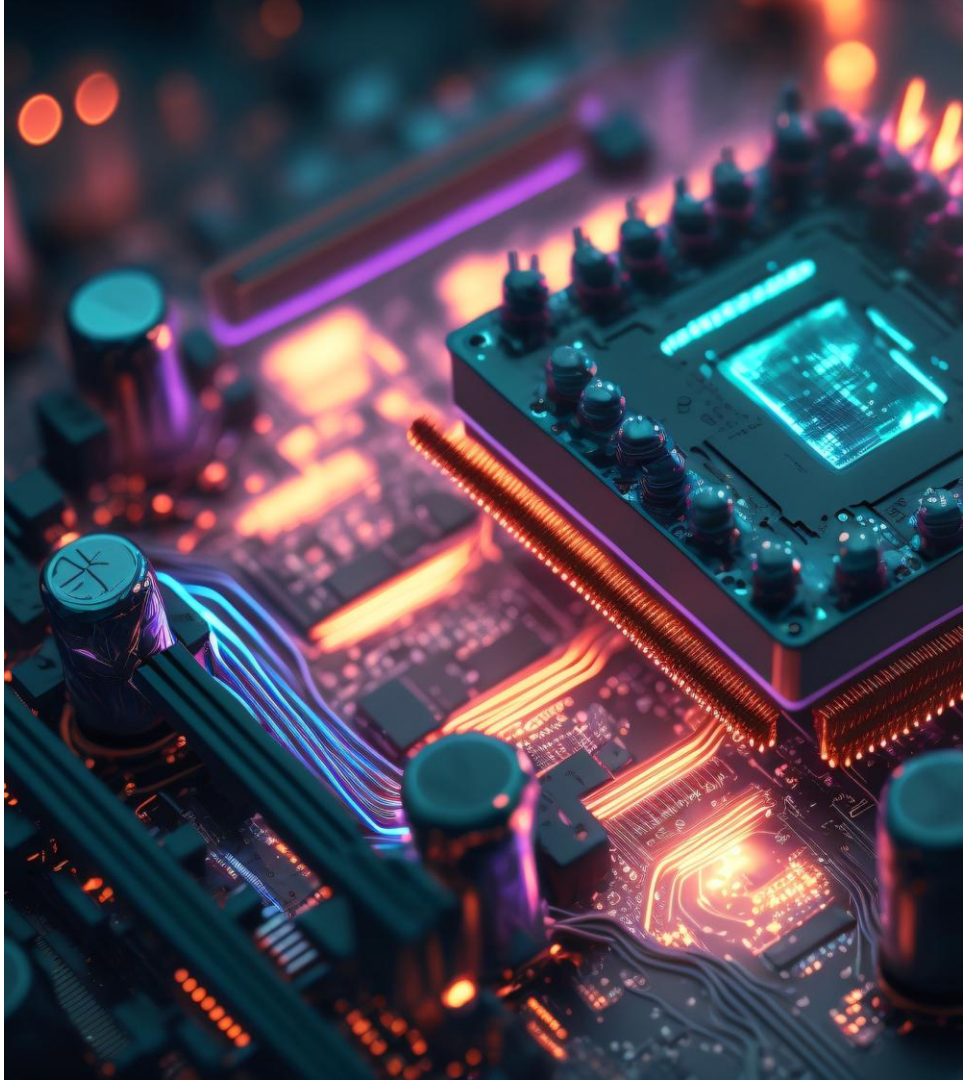
SUMMIT 2025
The Future of Healthcare –
FHIR, Standards and Beyond
Dr David Hansen

Australian e-Health Research Centre

Sparked and Interoperability

Best Practice Summit

David Hansen | August 2025



Australian e-Health Research Centre

Trends in Digital Health

Interoperability

Apps and Personalisation

Cloud

Data Analytics as a Service

Artificial Intelligence and Machine Learning

Australian e-Health Research Centre

CSIRO's National Digital Health Program

- Australia's **first and largest e-health research hub**, opening in 2003
  - Joint venture with Queensland Health + additional investment from CSIRO to grow
  - 150 scientists and engineers and 30 students in Brisbane, Perth, Sydney and Melbourne
- We provide an **evidence base** for the digital transformation of healthcare
- Success built on our **partnerships** with government, clinicians, industry, SMEs, international standards bodies etc

Australian e-Health Research Centre

Our Interoperability Programme

Interoperability is more than just a tech problem

- Technology
- Community
- Ecosystem
  - Workflow
  - Decision support
  - Analytics

Sparked

HL7 FHIR

Sparked

HL7 FHIR

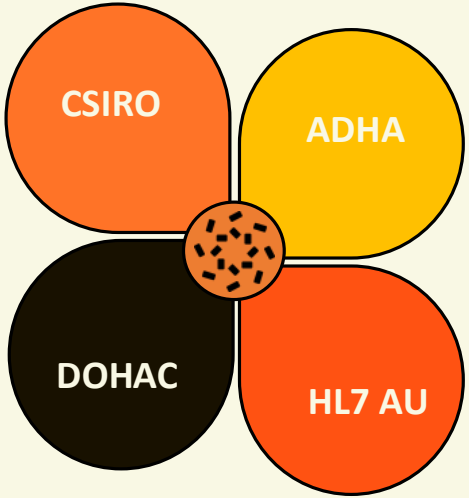
COMMUNITY

comprising **government, technology partners, provider organisations, peak bodies, practitioners, consumers and domain experts**

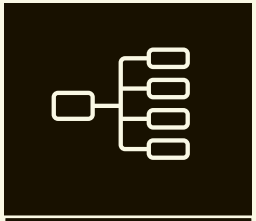
ACCELERATING

the creation and use of national FHIR standards in health care information exchange

Sparked is supported through a partnership



Sparked Accelerator Scope

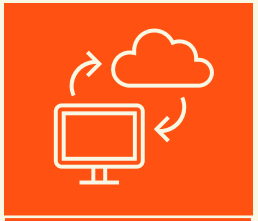


Meaning & Context

Language & Terms

Sharing & Exchange

Testing



Implement

Data for Interoperability (e.g. AU CDI)

- AU CDI - R1 – published
- AU eReqDI – published
- AU CDI R2 – in development
  - Patient Summary
  - Chronic Condition Management
- AU CDI R3 – in planning
  Encounter Record/Summary

Clinical Terminology Value Sets

- SNOMED CT and LOINC Value sets
- RANZCR
- RCPA

FHIR Implementation Guides

- AU Core R1 – published
- AU Core R2 – in development
- AU eRequesting – in development
- AU Patient Summary – in development

Testing & Piloting of FHIR Standards

- Testing of FHIR Standards, supported by infrastructure & tooling

Reference Implementations & Testing Service

- Services that support implementation and testing of FHIR based applications

Sparked
HL7 FHIR

Standards are only as strong as its community

Over 100 Founding Members

Peak Bodies and Colleges

These organisations endorse Sparked's goals and are committed to participating in design groups and HL7 AU Connectathons.

Since our inception, the Sparked community has grown to

1,100+

Sparked
HL7 FHIR

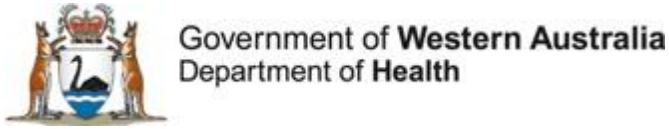

NORTHERN
TERRITORY
GOVERNMENT
NT HEALTH


ACT
Government
Health


Queensland
Government


NSW
GOVERNMENT


VICTORIA


Government of Western Australia
Department of Health

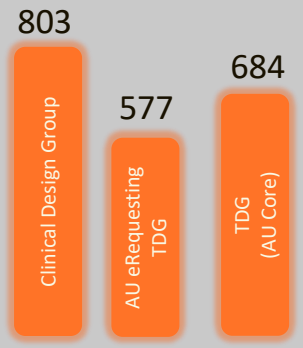

SOUTH AUSTRALIA
Government
of South Australia
SA Health


Tasmanian
Government

Sparked: Igniting the Future of Health Data Exchange Together!

100+	20,000+ hr	1,100+	2,000+	800+
Sparked Founding Members	Community Expert Hours (Aug 2023 – April 2025)	Sparked Community Members	LinkedIn Community	The Sparked Podcast Listeners

Sparked Membership



- **AUeReqDI R1** *[Oct 24]*
- **AUCDI R1** *[Jun 24]*
- **AU eRequesting FHIR IG R1** *[Feb 26]*
- **AU Core FHIR IG R1** *[Jan 25]*
- **Radiology Referral Value Sets** *[Jun 25]*
- **AU Core FHIR IG R2** *[Feb 26]*
- **Pathology Request Value Sets** *[Jun 25]*
- **AU Patient Summary FHIR IG R1** *[Jul 26]*
- **Infrastructure & Tooling**
- **Reference Implementations**

open
collaborative
transparent
consensus-driven

CSIRO ADHA DoHAC HL7 AU

Sparked HL7 FHIR

Aug 24 Sparked Launch

Sept 24 First Face to Face Meetings

Jun 24 AUCDI R1 Published

Jan 25 AU Core FHIR IG R1

Jun 25 AUCDI R2 Published

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

Scope of AUCDI Release 2

★ Patient summary

● Chronic condition management (proposed)

- ★ Problem/Diagnosis
- Biomarkers
- ● Health issue
- ★ Medication use statement
- Vital signs and measurements
- ● Goals
- ★ Adverse reaction risk summary
- ★ Last menstrual period assertion
- ● Service request
- ★ Sex and gender summary
- ★ Pregnancy assertion
- Encounter
- ★ Estimated date of summary

Interventions

- ★ ● Procedure completed
- ★ Vaccination administered event
- ● Psychosocial therapy
- ● Physical assistance
- ● Health education
- ● Medical equipment supply

Social Determinants of Health

- ● Occupation summary
- ● Housing summary
- ● Living arrangement summary
- ● Financial summary
- ● Education summary

Health behaviours

- ● Physical activity summary
- ● Food and nutrition summary
- ● Alcohol consumption summary
- ● Substance use summary
- ● Tobacco smoking summary

Due to be published June 2025

Sparked HL7 FHIR

- Joint CSIRO and DHCRC Report
- Consulted Government, Clinicians, Providers, Industry and researchers
- Highlights the complexity and fragmentation
- Duplication of data requirements
- No standardization of tools and data requirements (multiple assessment tools)
- Challenges with duplication of effort for primary care
- Challenges with differences in Aged Care and My Health Record legislation
- Gaps in Allied Health digitisation and standards
- Current MYHR document requirements are PDF – healthcare moving to FHIR

Sparked HL7 FHIR

Considerations

- A whole of life-course and ecosystem approach- data needs to follow the individual across the health, aged and social care ecosystem
- Standardised the approach to assessment tools and scales
- Standardised approach to data requirements across the health care ecosystem- single provision multiple use
- Address gaps in Allied Health data standards and terminology
- Address digitization of Allied Health Professionals
- Use of auPatient Summary to support transitions of care

Sparked

- ✓ AUCDI- whole of life course and ecosystem
- ✓ AUCDI roadmap includes Functional Status, ADLs etc
- ✓ AU Patient Summary roadmap includes Functional Status, Advance Care Directives
- ✓ Sparked Roadmap to include standard approach to assessments, scales observations
- ✓ Approach to Smart Forms
- ✓ Allied Health Terminology (NCTS)
- ✓ Approach to Careplans/TCAs

Sparked HL7 FHIR

Australian e-Health Research Centre

Interoperability Foundations

Australian e-Health Research Centre

Australian Government
Australian Digital Health Agency

National Clinical Terminology Service (NCTS)

Our vision is to simplify the adoption and meaningful use of clinical terminologies.

We work with the Australian healthcare community to support digital health requirements.

Together, this will improve the delivery of healthcare.

Australian e-Health Research Centre

Our Core Product Family

Ontoserver the world-leading clinical terminology server implementing FHIR terminology services and supporting syndication–based content distribution.

Snapper author FHIR terminology resources and publish them to a FHIR terminology server.

Shrimp the best browser for SNOMED CT, LOINC and FHIR CodeSystems, powered by Ontoserver

Atomio a stand-alone syndication service for managing content distribution

Open Source

FHIR Terminology Transforms tools to transform code systems to FHIR, supporting OWL, CLAML, and a variety of bespoke formats

Pathling Advanced FHIR Analytics – query and transform FHIR data using terminology semantics

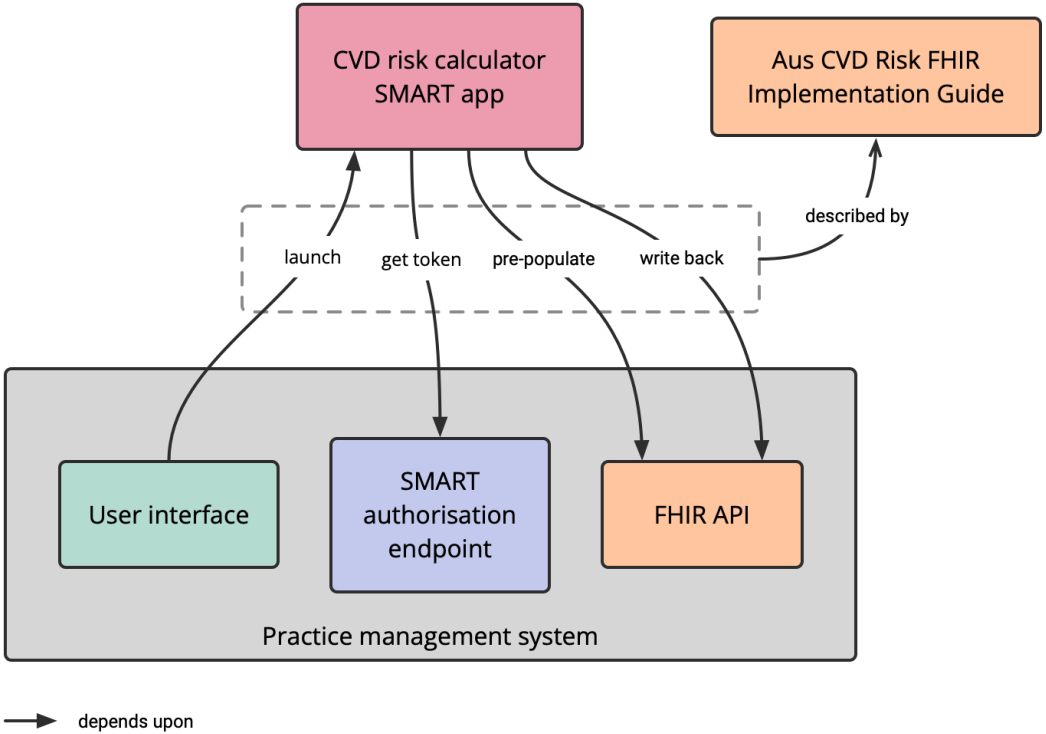
Redmatch transform REDCap forms into FHIR resources

Services

SnoMAP starter map from SNOMED CT concepts to ICD 10-AM

Australian e-Health
Research Centre

Innovation leveraging Sparked



Smart Forms

+

AusCVDRisk

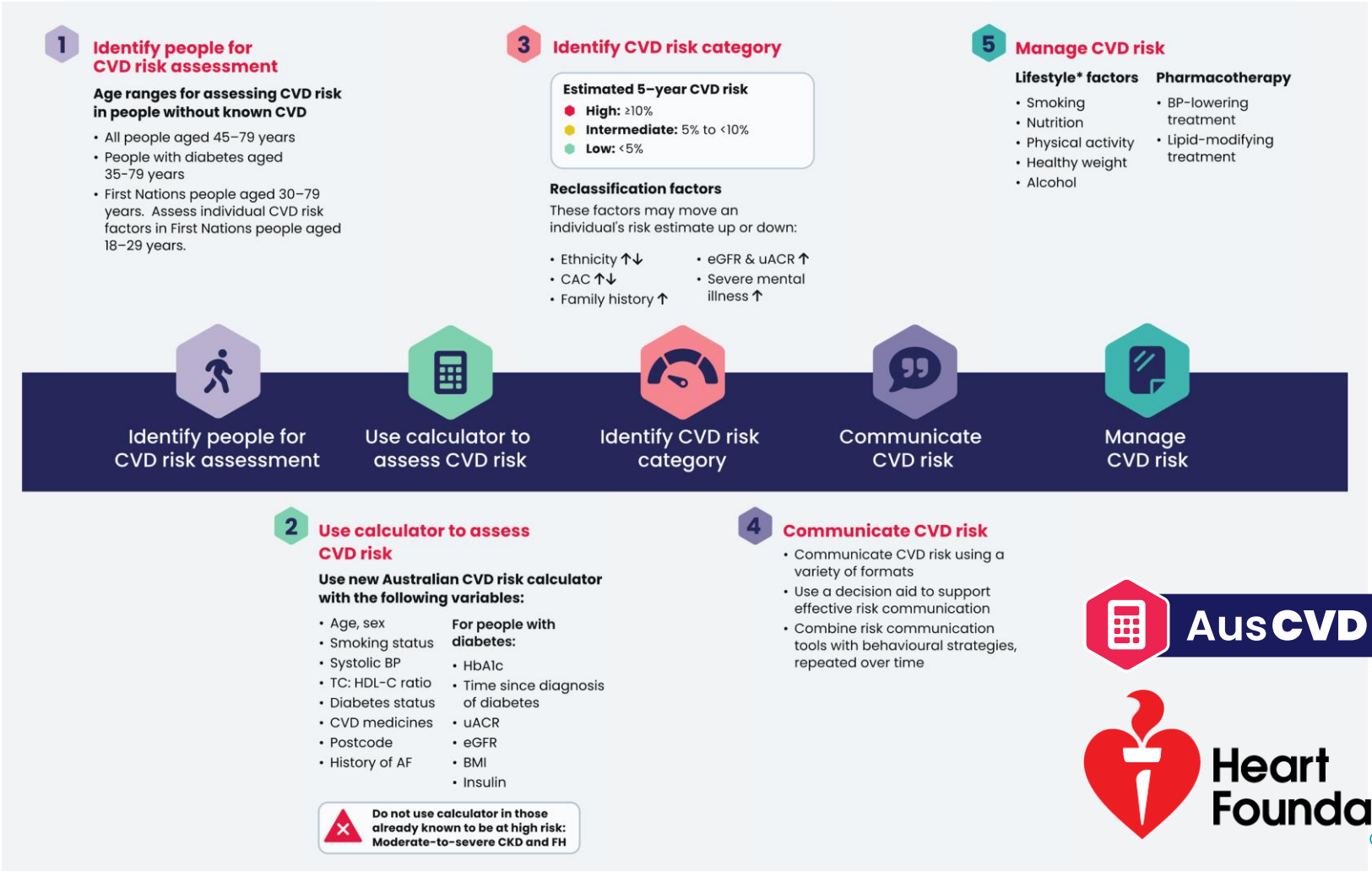
+

Sparked

HL7 FHIR

= **impact**

CSIRO Australian e-Health Research Centre


1
Identify people for CVD risk assessment
Age ranges for assessing CVD risk in people without known CVD
• All people aged 45–79 years
• People with diabetes aged 35–79 years
• First Nations people aged 30–79 years. Assess individual CVD risk factors in First Nations people aged 18–29 years.
3
Identify CVD risk category
Estimated 5–year CVD risk
High: ≥10%
Intermediate: 5% to <10%
Low: <5%
Reclassification factors
These factors may move an individual's risk estimate up or down:
• Ethnicity ↑↓
• CAC ↑↓
• Family history ↑
• eGFR & uACR ↑
• Severe mental illness ↑
5
Manage CVD risk
Lifestyle* factors
• Smoking
• Nutrition
• Physical activity
• Healthy weight
• Alcohol
Pharmacotherapy
• BP-lowering treatment
• Lipid-modifying treatment
Identify people for CVD risk assessment
Use calculator to assess CVD risk
Identify CVD risk category
Communicate CVD risk
Manage CVD risk
2
Use calculator to assess CVD risk
Use new Australian CVD risk calculator with the following variables:
• Age, sex
• Smoking status
• Systolic BP
• TC: HDL-C ratio
• Diabetes status
• CVD medicines
• Postcode
• History of AF
For people with diabetes:
• HbA1c
• Time since diagnosis of diabetes
• uACR
• eGFR
• BMI
• Insulin
Do not use calculator in those already known to be at high risk: Moderate-to-severe CKD and FH
4
Communicate CVD risk
• Communicate CVD risk using a variety of formats
• Use a decision aid to support effective risk communication
• Combine risk communication tools with behavioural strategies, repeated over time
AusCVDRisk
Heart Foundation
Centre

The Sparked Podcast

with Brett Sutton

podcast link here

Register for Sparked

Sparked Podcast

LinkedIn

Australian e-Health Research Centre

Thank you

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aehrc.csiro.au

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Questions & Answers

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Thank you for joining us!

Our Bp Summit Presentations and Resources are available via our Knowledge Base