



Australian Government

Australian Digital Health Agency

Interoperability and analytics

Benefits of standardised terminology adoption

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TODAY

A healthy pregnancy usually includes **15-20** separate encounters with health care services



Prebirth

Content shared with My Health Record means reduced risk of lost information

Death rates for remote Australians are **40% higher** for coronary heart disease



Adult

Digital tools make it easier to access services remotely

250,000 admitted to hospital due to adverse drug events costing **\$1.4 billion**



Older Adult

Medicines information available via My Health Record reduces safety risk

14% of pathology tests are ordered due to lack of access to patients history



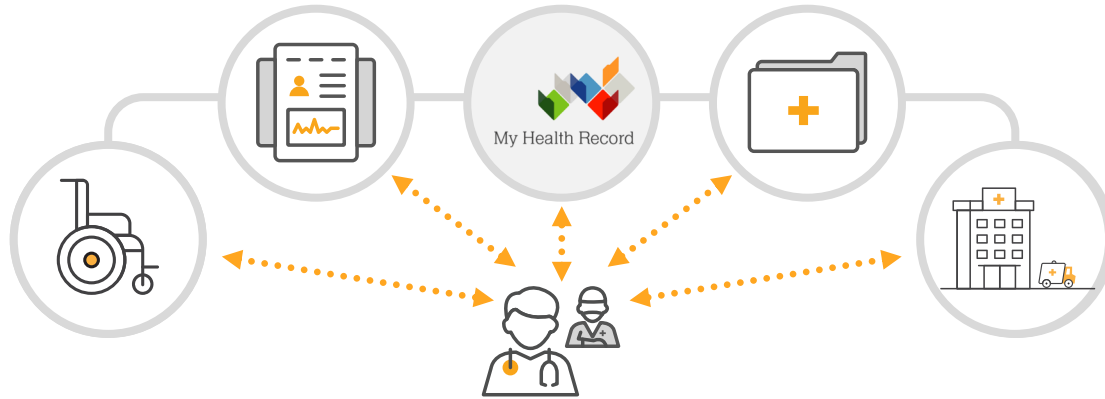
Senior

People and their clinicians will be able to see results of previous tests

FUTURE



Information availability can transform care



Important information about patients' medical histories on admission to acute hospitals cannot be accessed. Hospitals often compensate for this lack of information by repeating patient assessments and investigations on admission. This practice leads to increased cost, delays and frustration on the part of patients and clinicians. Safety risks are increased when clinicians have incomplete medical histories, and when patients undergo unnecessary repeat investigations.

Australian Commission on Safety and Quality in Health Care, *Safety Issues at Transitions of Care* 2017



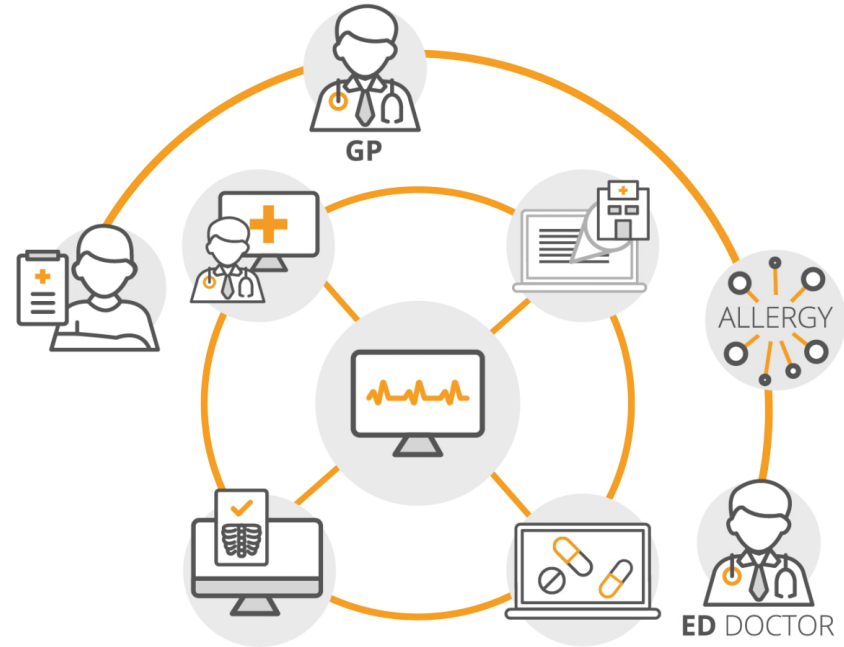
Interoperability for humans and machines

Human readable only exchange can be transformational, however

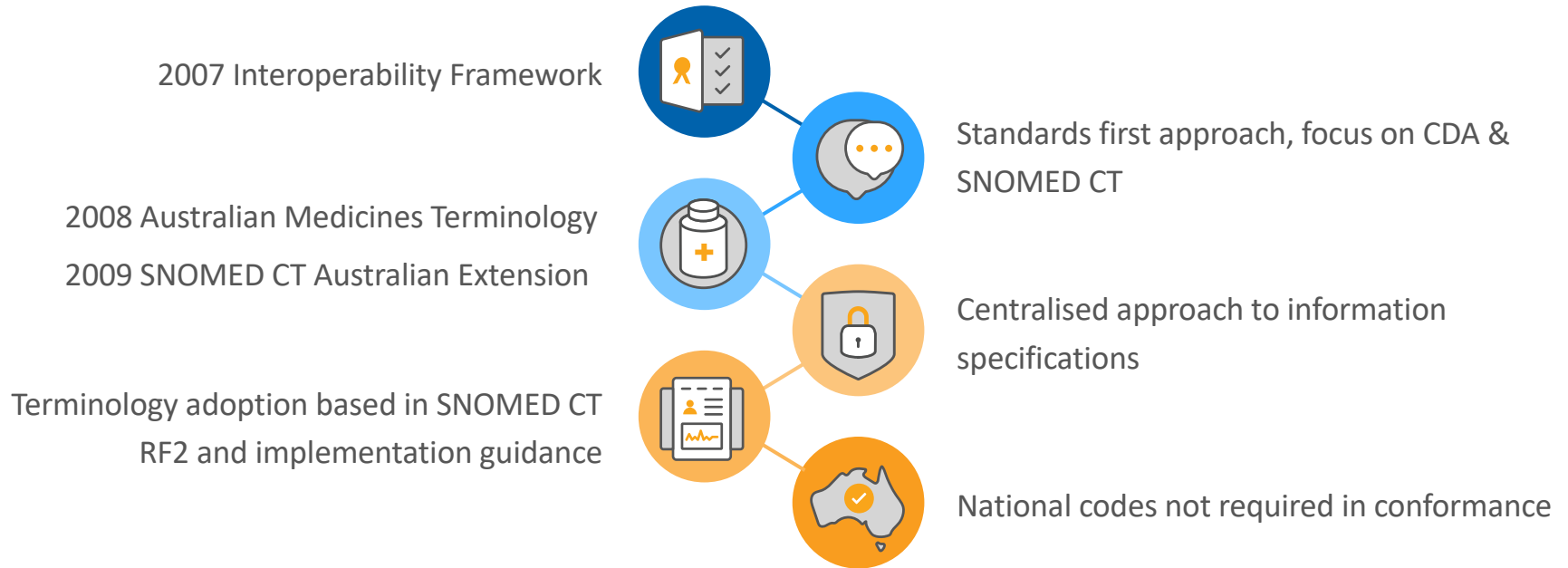
- Overwhelming in volume
- Limited analytics

Full benefit requires shared machinable

- structures (information models, exchange specifications, APIs)
- languages (terminologies and coding systems)



Historical interoperability journey



Barriers



Slow standards development cycle, limits innovation

Variability in adoption of standards

Slow terminology adoption

Difficulty changing existing systems to share and take on exchanged data

Economic incentives for exchange



Recent changes

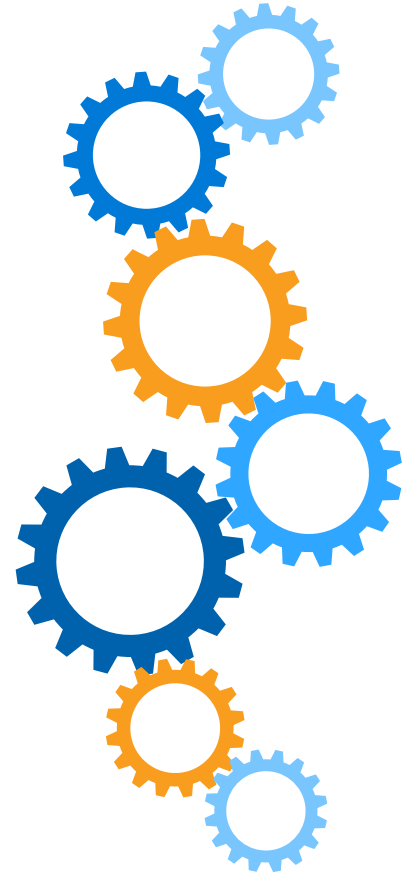
National Clinical Terminology Service was launched in 2016

- services based terminology adoption approach aimed at lowering barriers
- focus on integration of all required national terminologies and coding systems (LOINC, METeOR, ABS, ANZSCO, PBS...)

Increasing shift to community centric development of information specifications and co-design

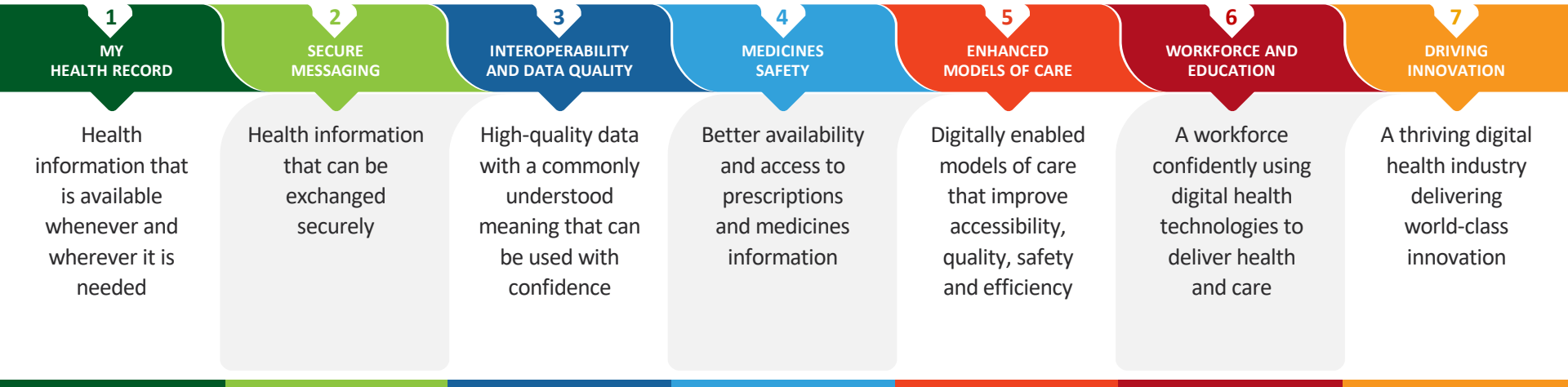
Integrated machinable terminology/information bindings

Acceptance of HL7 v2, CDA, FHIR mixed economy



National Digital Health Strategy – roadmap for delivery

Co-designed with all states and territories and agreed by COAG Health Council



1

MY
HEALTH RECORD

2

SECURE
MESSAGING

3

INTEROPERABILITY
AND DATA QUALITY

4

MEDICINES
SAFETY

5

ENHANCED
MODELS OF CARE

6

WORKFORCE AND
EDUCATION

7

DRIVING
INNOVATION

Framework for Action

- The Framework for Action promotes collaboration and information sharing
- Developed by all Australian governments, industry, and providers
- Acts as a guide for organisations recalibrating their work programs to deliver national priorities
- Priorities for delivery by 2022 include:
 - health information that can be exchanged securely
 - made available when and where needed
 - standardised so that it can be shared in real time.



Interoperability program

- The interoperability program has commenced:
 - 31 PHNs across the nation.
 - 15 co-design workshops across Australia.
 - 33 community meetings.
 - Jurisdictional working groups with every Jurisdiction.
 - Over 150 consumers, more than 100 clinicians and a number of organisation also made a submission.
 - Clear feedback on need to link information to patients, in support of provider to provider exchange.
- Priority for government consensus – phase two co-design implementation



Better connections: National Interoperability Roadmap



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Interoperability program



2019/20 outputs

Commence implementation
of Industry agreed
Community Development
Model for standards

Publication of the National
Health Interoperability
Roadmap following
AHMAC consideration

National Minimum
Content Development for
My Health Record



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Interoperability consultation findings

- Terminology is key to interoperability and digital health outcomes
- Information standards are key to realising the greater benefits desired of digital health
- We need:
 - to adopt sets of standardised national terminologies
 - to consider mandating use of standardised terminology for some use cases
 - interoperability between terminologies and key classifications and coding systems
 - robust community based information exchange standards processes

Specific recommendations to come after AHMAC approval



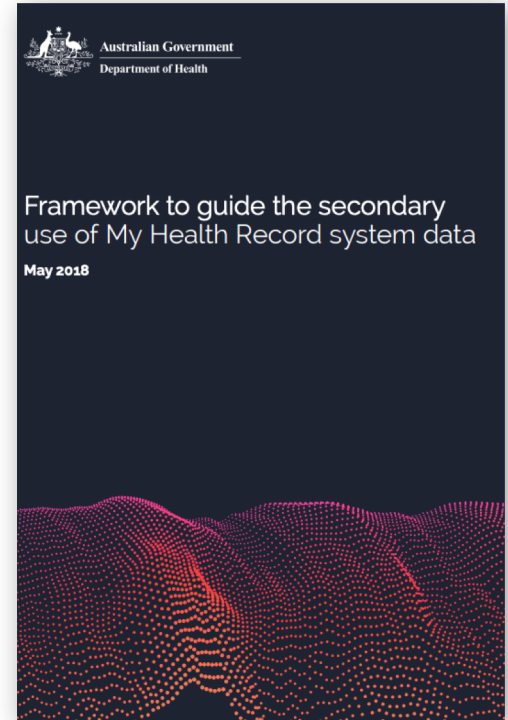
Secondary use framework

‘Secondary use’ of data refers to any application of data beyond the reason for which they were first collected (known as the primary use or purpose)

Purpose of the Framework is to guide the secondary use of My Health Record system data

Consumers can opt out of having their My Health Record data used for secondary purposes

The Australian Digital Health Agency is working with AIHW to assist determining how to best analyse this data



Advanced analytics, the new frontier

As more structured and standardised coded data is collected, demand for analytics has increased

Supported by use of SNOMED CT coded data for reporting, using existing techniques

Limited experience exists with advanced analytics required to deliver desired digital health outcomes – looking forward to more sophisticated techniques

Pockets of standardised coded data exist to trial analytics

- Existing use cases for epidemiological, administrative and funding reporting
- Forward looking needs of clinical excellence divisions



Analytics tools and guidance – lower bar for advanced analytics

Tools, services, and guidance are required to lower the entry bar to advanced analytics

Further research, experience, and development is required

Opportunity to get ahead of industry demands

Requires collaboration from multiple

- terminology/classification/code system owners and communities
- information model/exchange specification producers and communities

This is crucial to delivering on the promises of digital health and health informatics technologies



Further information and support



My Health Record

My Health Record

Web: www.myhealthrecord.gov.au

My Health Record Help line: 1800 723 471
(select 2 for providers)



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Australian Digital Health Agency

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Web: www.digitalhealth.gov.au

Email: help@digitalhealth.gov.au



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My Health Record