



# Standards for eHealth Interoperability

1<sup>st</sup> Feb 2023



# Welcome

Speaker	Content	Room	Time
	<b>Arrival – Tea/coffee</b>	Dr Steevens Board Room	9.00 – 9.25
Theresa Barry	Welcome	Dr Steevens Board Room	9.25 – 9.30
Loretto Grogan CNIO Richard Greene CCIO	<b>Plenary Standards and interoperability in Ireland</b>	Dr Steevens Board Room	9.30 - 10.00
Anne Randorff Hojen SNOMED International Implementation Team Kai Kewley SNOMED International Implementation Team	Introduction to SNOMED CT	Dr Steevens Board Room	10.00 - 11.00
	<b>Tea/coffee</b>		11.00 – 11.15
Ian Green  Anne Randorff Hojen SNOMED International Implementation Team Kai Kewley SNOMED International Implementation Team	SNOMED CT for Clinicians (+ SI clinical engagement)	Dr Steevens Board Room	11.15 – 12.30
	<b>Lunch and networking</b>		<b>12.30 – 13.30</b>
Theresa Barry national Release Centre Manager	'SNOMED in Ireland to date	Dr Steevens Board Room	13.30 - 14.00
Anne Randorff Hojen SNOMED International Implementation Team Kai Kewley SNOMED International Implementation Team	SNOMED in EHR (incl. analytics)		14.00 - 15.30
Project teams	Breakout discussion on current status in Ireland	Breakout	15.30 - 16.30
Theresa Barry	<b>Close and Wrap up</b>		



**POLICYMAKERS**

**MEMBERS**

**COLLABORATION PARTNERS**

**RESEARCH & KNOWLEDGE PRODUCERS**

**VENDORS**

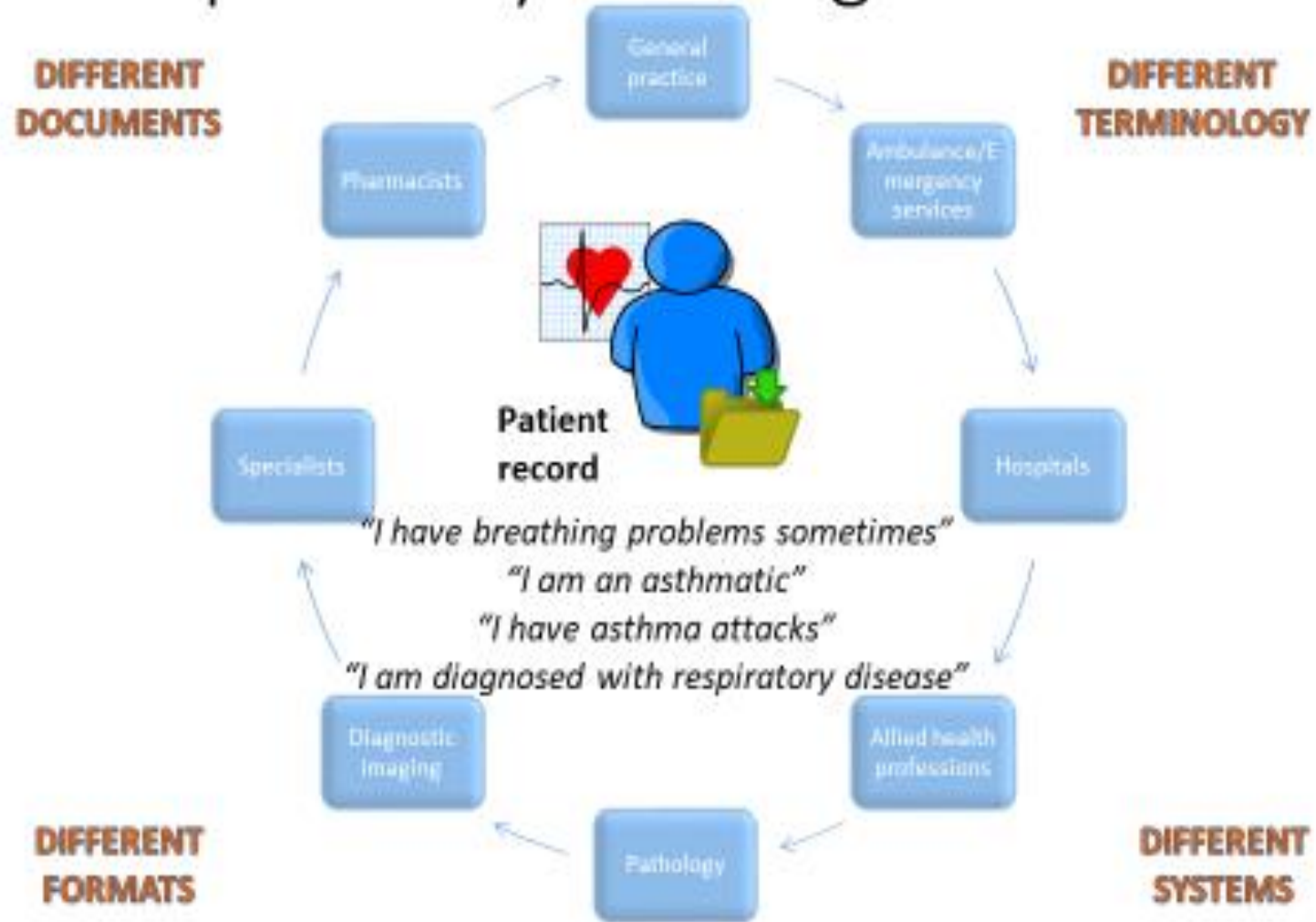
**CARE PROVIDERS**

**IMPLEMENTORS**

**PATIENTS/CITIZENS**

**SNOMED CT**  
The global language of healthcare

# The interoperability challenge





# What would good look like

- **All clinical and medicinal terms are standardised**
- **Vital information can be shared**
- **Comprehensive coverage and greater depth of details and content for all clinical specialities and professionals**
- **Should include diagnosis and procedures, symptoms, family history, allergies, assessment tools, observations, devices.**
- **Clinical decision making is supported**
- **It facilitates analytics/insights to support more extensive clinical audit and research for population health**
- **Reduced risk of misinterpretation or duplications**
- **Supports evidenced based healthcare**



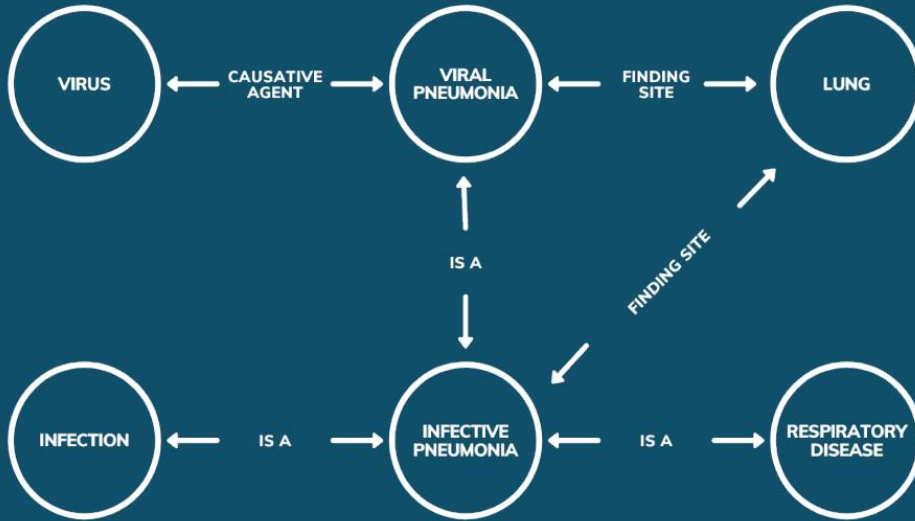
# SNOMED CT

## What is it?

- It is the most comprehensive, multilingual, clinical healthcare terminology in the world.
- It is a resource with scientifically validated clinical content that is released globally, twice per year.
- It enables the consistent representation of clinical content in clinical information systems, health data and analytics platforms, and interoperability solutions.
- It is mapped to other international standards.
- It is adaptable to each country's requirements.
- It is in use in more than eighty countries.

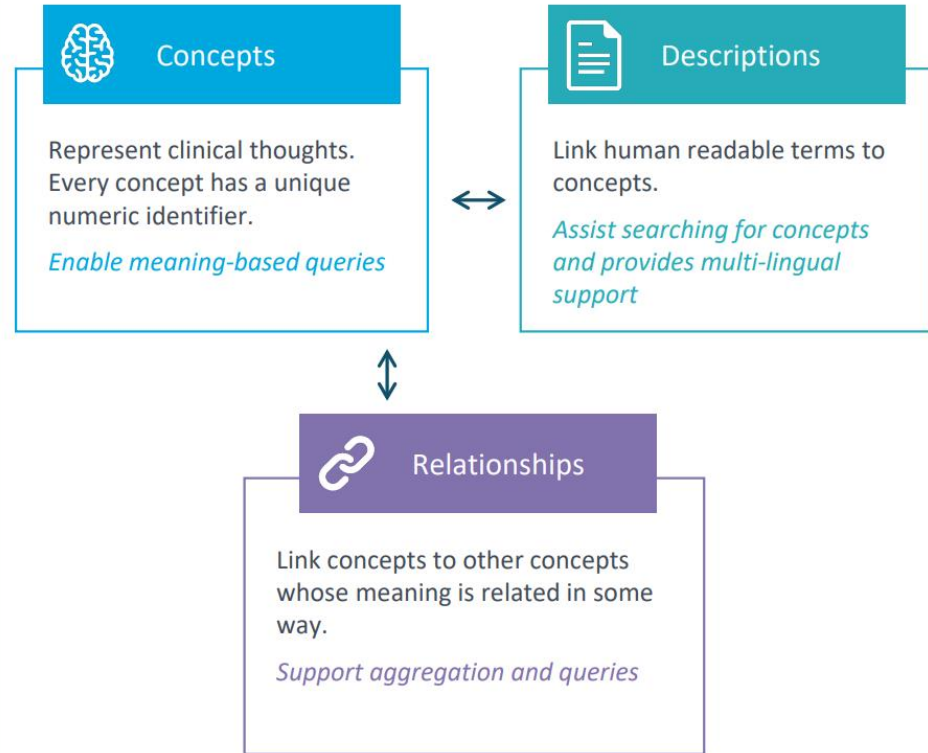


## The SNOMED CT Viral Pneumonia Example



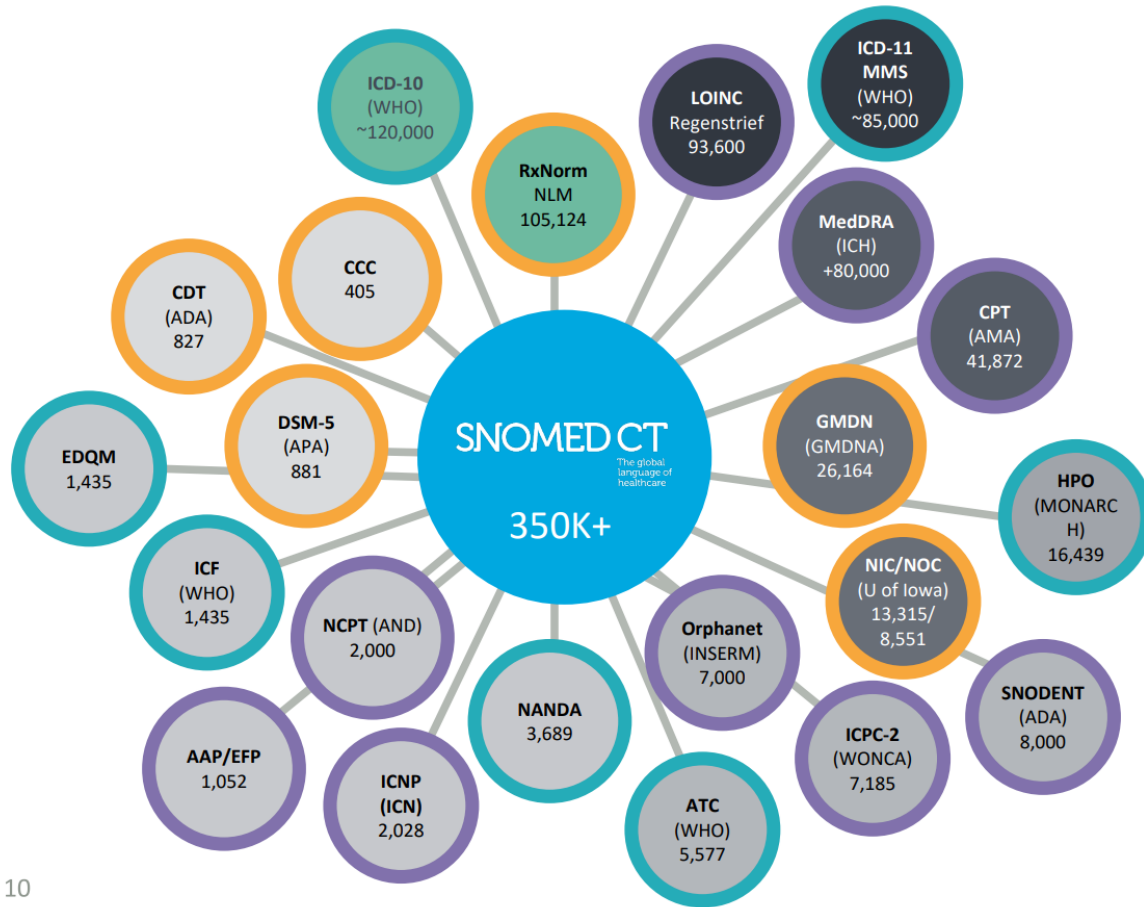
Viral pneumonia is linked through a set of 'is a' relationships, that represent a poly-hierarchy of sub-types. Viral pneumonia 'is a' infective pneumonia. Infective pneumonia 'is a' infection, and similarly infective pneumonia 'is a' respiratory disease. SNOMED CT also links concepts to the applicable part of the body, or a finding site. For example, the viral pneumonia finding site is the lung. Finally SNOMED CT links concepts to a causative agent. For example, the viral pneumonia causative agent is a virus.

## SNOMED CT What is it?



# SNOMED CT

## Is a Core Reference Clinical Terminology



10

### Terminology Standards content volume



# terminologies / # content

#### LEGEND



3	>1,000
4	1,001 - 5,000
4	5,001 - 10,000
1	10,001 - 20,000
2	20,001 - 40,000
2	40,001 - 60,000
1	60,001 - 80,000
1	80,001 - 100,000
1	100,001 - 200,000
2	200,000+
1	300,000+

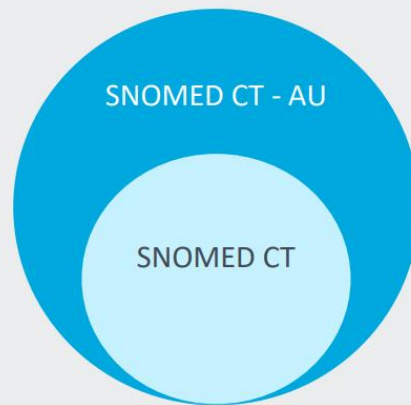
*Note: This diagram is intended to be reflective of SNOMED CT as a core reference terminology. It does not include all the national extensions of SNOMED CT (e.g. Australian Medicines Terminology with 100,000 concepts) that further expand the SNOMED CT hub-and-spoke model.*

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# SNOMED CT

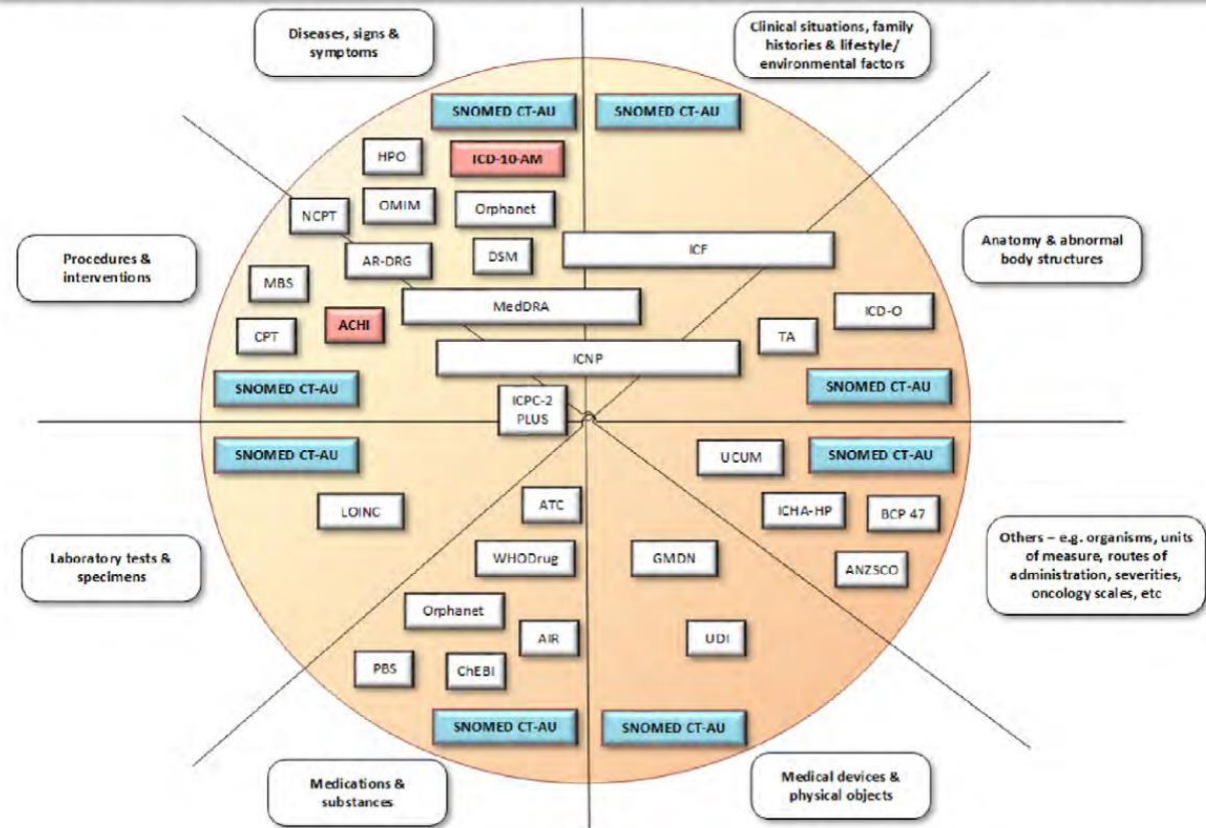
A Core Reference Clinical Terminology – the Australian Example



## SNOMED CT-AU

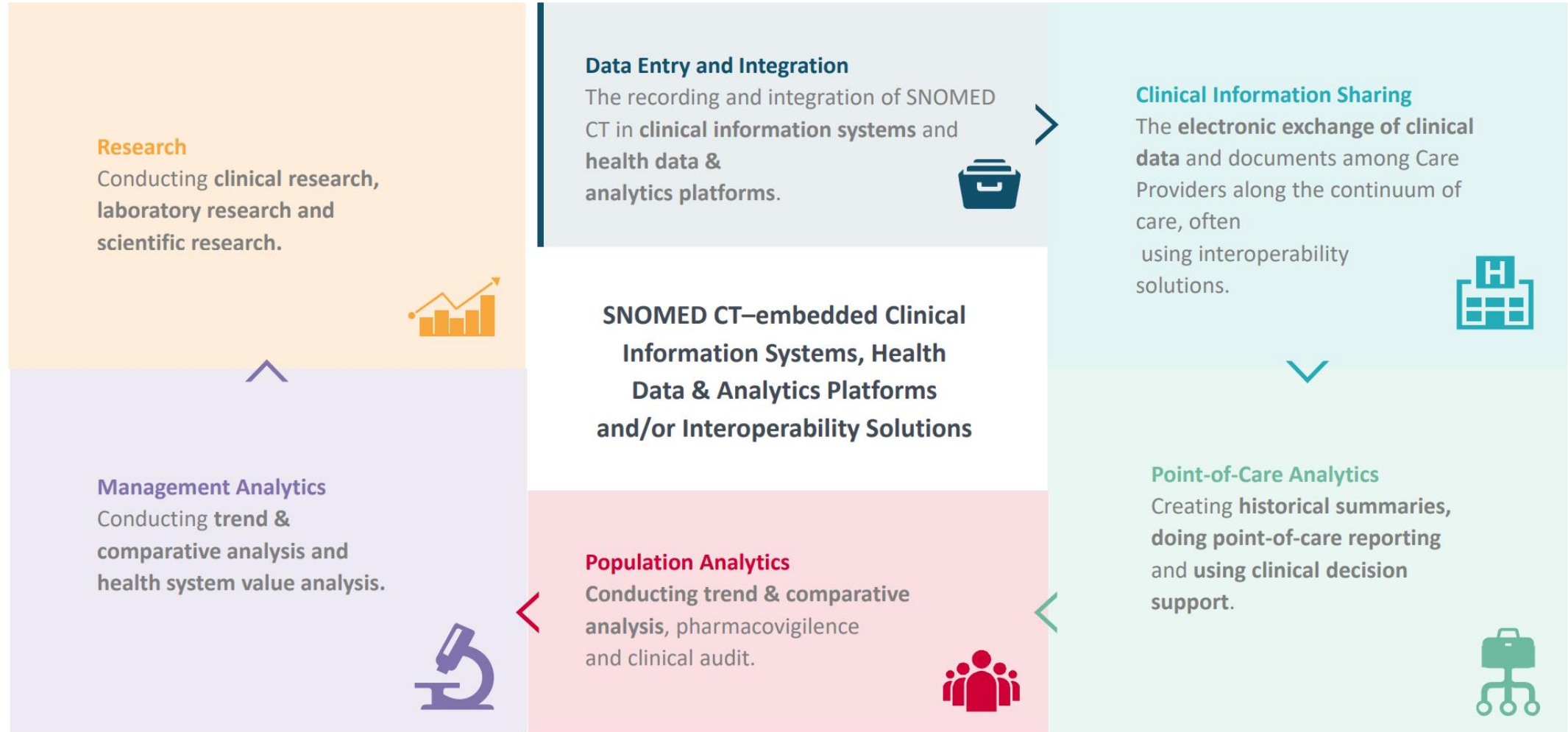
- Australian edition of SNOMED CT
- Includes the Australian Medicines Terminology and >90 reference sets
- Used in all healthcare sectors/settings
- Used for clinician health record documentation
- Released on a monthly basis

ICD-10-AM, SNOMED CT-AU and common clinical classifications, ontologies & code sets used in health



4. Australian Digital Health Agency et al.,, "Terminologies and classifications: SNOMED CT AU and ICD 10 AM use in Australia" PowerPoint presentation, August 2020. See [https://www.healthterminologies.gov.au/library/DH\\_3288\\_2020\\_\\_TerminologyAndClassificationPresentation\\_v2.1.pdf](https://www.healthterminologies.gov.au/library/DH_3288_2020__TerminologyAndClassificationPresentation_v2.1.pdf)

# Where is SNOMED CT used?



**Cimino**

✓ SNOMED CT is “fit for purpose” as a clinical terminology using the Cimino criteria

**AHIMA**

✓ SNOMED CT meets all the AHIMA data quality requirements

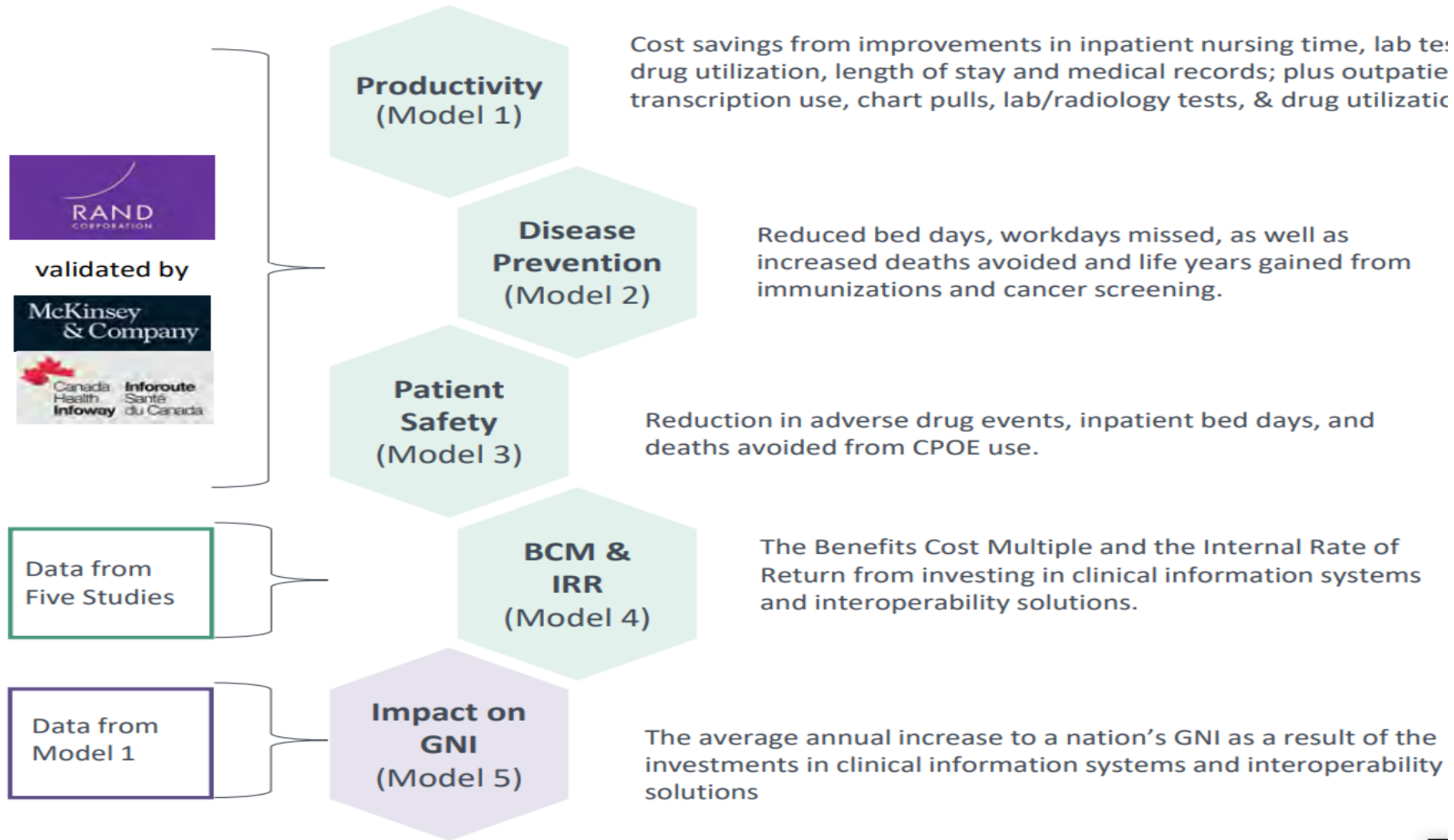
**ASSESS CT**

✓ SNOMED CT meets the clinical terminology suitability requirements of the E.U. community

✓ SNOMED CT is professionally managed and maintained

*“SNOMED CT is the best available core reference terminology for cross-border, national and regional eHealth deployments in Europe”*

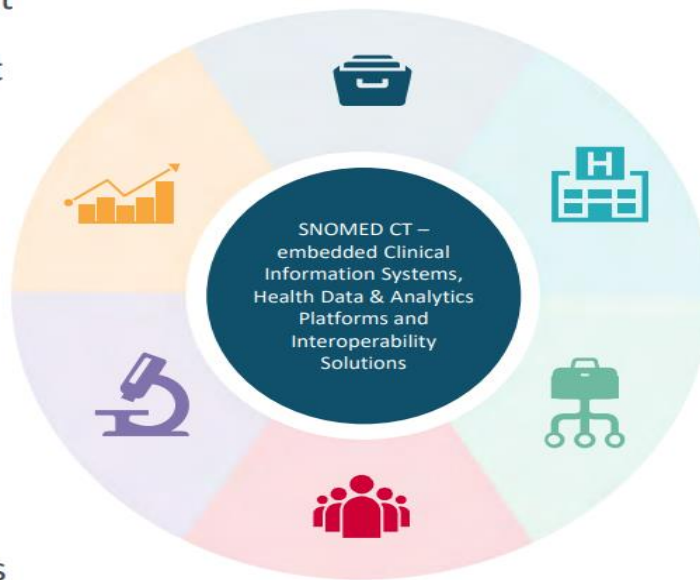
ASSESS CT 2016



# Patient Outcome Benefits across the varied applications of SNOMED CT

## Patient Service Outcome Improvements

- ✓ Patient (Panel) Management
- ✓ Health Record Management
- ✓ Diagnostic Tests
- ✓ Patient Safety
- ✓ Infection Control
- ✓ Referral Management
- ✓ Population Health
- ✓ Data Sharing
- ✓ Efficiencies and Cost Savings



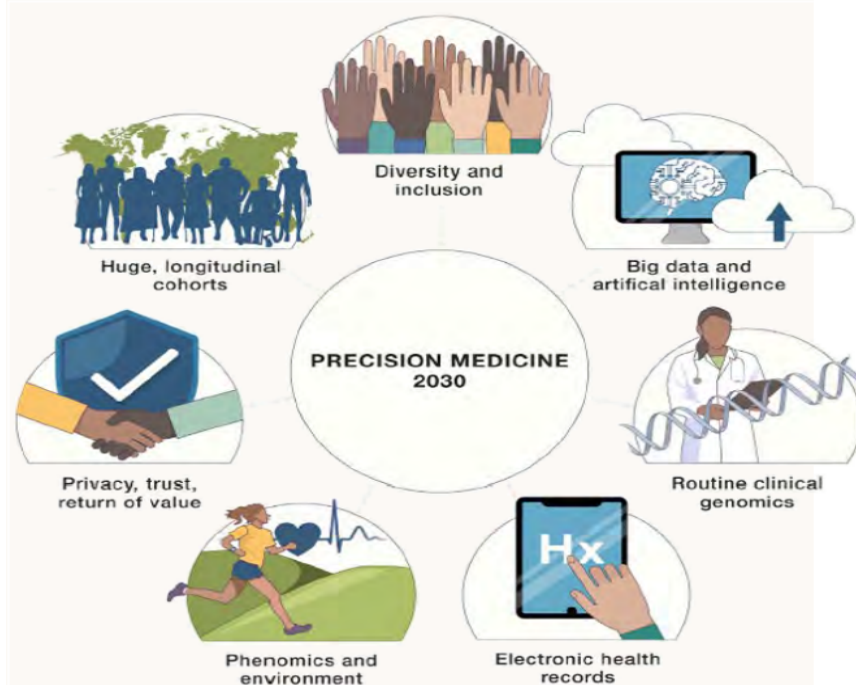
## Patient Health Outcomes Improvements

- ✓ Patient Safety
- ✓ Infection Control
- ✓ Population Health
- ✓ Analytics and Research

# SNOMED CT

## Future Opportunities

### Personalized, Precision Medicine 2030



1. **Huge Interoperable Longitudinal Cohorts** - Over the last 20 years, national cohorts (e.g. UK Biobank), have amassed huge populations with genomic, laboratory, and lifestyle assessments as well as longitudinal follow-up on health outcomes. The breadth and depth of data is staggering, as is the opportunities for discovery.
2. **Diversity and Inclusion** - With a growing depth of data, we have an opportunity to replace adjustments for race and ethnicity with more specific measures.
3. **Big Data and AI** - AI approaches in medicine have been limited by the (un)availability of large, commonly structured datasets. Looking forward, biomedical datasets will become increasingly ready for analyses.
4. **Routine Clinical Genomics** – Moving forward, whole genome approaches will become a routine, early step in the understanding, prevention, detection, and treatment of common and rare diseases.
5. **Electronic Health Records** – Many site-based and national research cohorts now use EHRs and other health data to provide up to decades of disease and treatment information that can be repurposed for research. This use will continue to expand.
6. **Phenomics and Environment** – Continued growth of research and clinical uses for different ways to measure clinical phenotypes, exposures, and lifestyles.
7. **Privacy, Trust and Return of Value** - The utility of precision medicine is dependent on broad participation, and broad participation of large populations requires trust, protection of privacy, and a return of value to the participants.<sup>8</sup>



## SNOMED CT helps New Zealand's Canterbury District Health Board realize its data driven vision

- 30 percent lower emergency department use than the national average
- 30 percent lower acute medical admission rate than the national average
- Held 2019 bed use to same numbers as in 2007 while serving a population that had grown by 80,000
- Identified vertebral fracture patients who had not received care or whose cases had been misclassified
- Saved a year of clinician time by automating previously manual processes
- Interoperable across best-of-breed system
- Ability to link clinical tools via a SNOMED code
- Ability to search for pathways and hierarchies and improved user search experience

[Link](#)

# HSE Drivers for Change in Ireland.



**ePrescription - PHARMACIST**

**What does this mean for a pharmacist working in the country of travel?**

You are a pharmacist trained and authorised to offer electronic cross-border services by your national authority responsible for eHealth. You work in a pharmacy that can provide "My Health @ EU" services.

A patient from another European country visits you and asks to buy medication prescribed by a doctor in their country of residence.

You must first explain to the patient how their health data is being processed cross-border, and then ask them for an identification document.

Depending upon how your own country treats the protection of health data, you may need to ask for the patient's consent to access their data. You can then enter their details in the secure IT system to confirm their identity.

At this point, you can request the ePrescription via the IT system. It will be in the patient's, and in your own, language(s).

It may be that you have to dispense medicine that is branded differently from the one the patient usually receives in their country of residence.

Once you have explained how the medicine is to be taken and have dispensed it, you must make the information available to the country of the patient to prevent several dispensations of the same prescription.

For questions related to reimbursement issues, please consult the [Europa website](#).

**Introduction**  
**Patient Summary**  
**Patient Summary**  
**ePrescription PHARMACIST**  
**ePrescription PATIENT**

The eHealth Digital Service Infrastructure (eHDSI) is an infrastructure ensuring the continuity of care for European citizens while they are travelling abroad in the EU. This gives EU countries the possibility to exchange health data in a secure, efficient and interoperable way. Citizens can easily recognise the availability of the services under the brand "MyHealth @ EU".



## My health @ EU eHealth Digital Service Infrastructure A service provided by the European Union

RELEASE NOTES (Release 3, June 2022)

The eHealth Network guidelines on "ePrescription and eDispensation of Authorised Medicinal Products" are one fine example on how the eHealth Network interoperability efforts shape the way on how health data exchange takes place around EU. This is the case of cross-border exchange of ePrescription and eDispensation documents (in MyHealth@EU, a.k.a. eHDSI) as well as other projects at European or national level that leverage working solutions on top of these guidelines.

Since the release 2 of the eHealth Network ePrescription guidelines (2016), significant evolutions took place. MyHealth@EU services entered in real world operation and ISO IDMP standards have evolved. The release 3, adopted by eHealth Network in June 2022, address some of the limitations faced during real world operation of cross-border ePrescriptions exchange and strengthen semantic interoperability of electronic prescriptions. Main improvements in the new version:

- Change in the name of the guidelines reflecting the scope of prescription and dispensation
- Introduction of Preferred Code systems acknowledging that ISO IDMP implementation is still ongoing and not yet complete
- Removing project specific guidelines to allow for a wider use of the guidelines within the future EHDS

This revision allows for the continuity of the implementation of MyHealth@EU services while setting the scope for future expansion of detail and se aim is to revise the guideline again in 2-3 years' time, once th is more complete and acknowledged.

For further information, please contact the eHealth Network





# HSE In Ireland progress to date

## Data Specification Management Process

17 ref sets

Simple type reference set	 Patient Flow Dataset Ireland (foundation metadata concept)	338
Simple type reference set	 Public health nurse clinical caseload dataset Ireland (foundation metadata concept)	91
Simple type reference set	 Safeguarding Ireland Refset (foundation metadata concept)	110
Simple type reference set	 eServices Ireland Refset (foundation metadata concept)	63

## SNOMED Strategy 3 goals

Rigorous focus on quality

Enable adoption

SNOMED CT Education & Training

**SNOMED Governance Board  
Member Forum and General Assembly  
representatives**



# Ireland Progress to date

Adult oncology daycare nursing discharge SimpleRefset	107 new records added for this brand new refset
Epilepsy Simple Refset	8 new records added for this brand new refset
Breastcheck screening service SimpleRefset	726 new records added for this brand new refset
Nursing Midwifery Quality Care Metrics Dataset SimpleRefset	<i>194 records added/updated, plus 0 record inactivated</i>
Dentistry SimpleRefset	<i>119 records added/updated, plus 2 record inactivated</i>
National Ambulance Service SimpleRefset	<i>860 records added/updated, plus 0 record inactivated</i>
Patient Flow SimpleRefset	<i>91 records added/updated, plus 0 record inactivated</i>
Antimicrobial SimpleRefset	<i>2 records added/updated, plus 1 record inactivated</i>
Chronic Disease Management SimpleRefset	<i>2 records added/updated, plus 1 record inactivated</i>
eServices SimpleRefset	<i>1 records added/updated, plus 1 record inactivated</i>
Gynaecology SimpleRefset	<i>1 records added/updated, plus 1 record inactivated</i>
Lymphodema SimpleRefset	<i>52 records added/updated, plus 1 record inactivated</i>
Make every contact count SimpleRefset	<i>1 records added/updated, plus 1 record inactivated</i>
Safeguarding SimpleRefset	<i>3 records added/updated, plus 2 record inactivated</i>

Pages

Blog

PAGE TREE

- Managed Service FAQ's
- Managed Service Catalogue
- Managed Service Tooling Releases
- Managed Service Release Schedule
- Managed Service Upgrade Schedu

Useful Documentation

Irish NRC

- Irish Authoring Dashboard
- Irish Document Library
- Irish Release Notes
- › Irish Service Review Meetings

Space tools

798 views

## Irish NRC

Created by Terance Shird, last modified by Joe Schofield on 2020-Nov-18



Feidhmeannacht na Seirbhíse Sláinte  
Health Service Executive

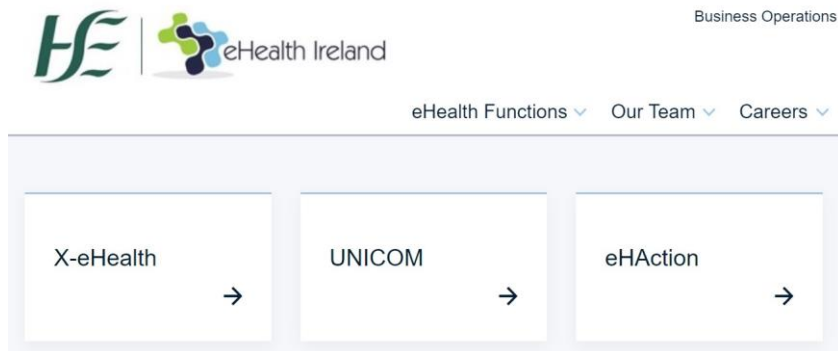
### Services

- RUNNING** Irish Managed Service Authoring Tool
- RUNNING** Irish Members Licensing and Distribution Service
- RUNNING** Reference Set and Translation Service
- RUNNING** SNOMED CT Browser - Irish Extension
- RUNNING** SNOMED International Content Request Service

Group: ap-ie-author

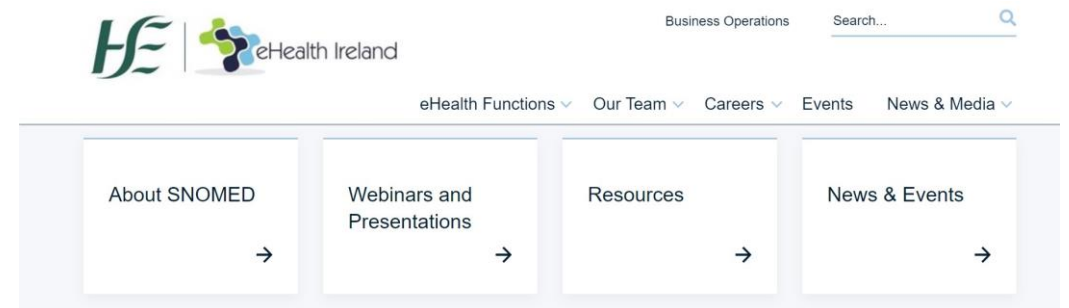
# HSE Links

## [My Health @EU](#)



## [SNOMED Browser](#)

## [SNOMED page on eHealth Ireland](#)



Theresa.barry@hse.ie

Enjoy the rest of the  
day

