October Business Meeting 2019
Community Updates
Tuesday October 29, 2019
Global Overview

Liara Tutina
2019 Key achievements to date

- Global Patient Set (GPS) released; use cases and implementation guides finalized.
- Member onboarding policy completed and undergoing approval with GA.
- Successful stakeholder engagements and presentations at MedInfo, HIMSS AsiaPac 2019, HIC 2019, OHDSI China conference.
- Agreement signed for education service delivery in China and in Argentina.
- Terms of reference finalised with German Department of Education.
- Agreement with Brazil finalised for Portuguese translation of the Foundation course.
- Preliminary expressions of interest received for hosting 2022 Expo in APAC.
- User Support Reference Group – gaining momentum with positive feedback from participants.
Key regional activities

**Americas**
- Membership discussions with Paraguay including meeting with Minister of Health.
- Keynote presentation delivered and meeting held with Hospital Italiano in Argentina.
- FDA day participation.

**Asia and Pacific**
- Membership application from Armenia received.
- Stakeholder engagement carried out at HIC 2019 (Australia), HIMSS AsiaPac 2019 (Thailand) and presentation delivered at OHDSI China conference (Shanghai).

**EMEA**
- Working with the African Union on regional licensing agreement for Africa.
- Managed Service discussions with Austria.
Vendor Engagement

- Global license agreement with Roche and Siemens signed.
- Amazon including SNOMED CT in Comprehend Medical product. Ongoing discussions re: broader co-marketing/technical partnerships.
- Working with Nuance who are using SNOMED CT in new Dragon Medical Advisor product. Ongoing discussions re: broader co-marketing/technical partnerships.
- Exploring analytics pilot study opportunities with several vendors/organizations.
- HIC 2019 (Brisbane, Australia) – engagement meetings held with many vendors including Medical Director, Best Practice, Pen CS, Medirecords, Nuance, Clinic to Cloud, Genie, Vmore, Cerner etc.
- Planning for Arab Health (January 2020).
Looking ahead

- Document way forward for working with openEHR.
- Finalise the AMA announcement and deploy Phase 1.
- Complete Managed Service onboarding of New Zealand.
- Complete the vendor maturity assessment.
- Continue business development work and membership discussions as per the regional operational plans.
- Implementation survey.
- Education Delivery agreement in the European Region.
Collaboration

Jane Millar
Collaboration – Standards Organizations

01 HL7 International
- Renewed Agreement
- Updates to HL7 IPS freeset for inclusion in Global patient Set
- Member led work on SNOMED CT binding in FHIR - implementation guide and profiles

02 DICOM
- Updates to DICOM free set for inclusion in Global Patient Set

03 Integrating the Healthcare Enterprise (IHE)
- Updates to IHE free-set for inclusion in Global Patient Set (32 profiles)
- Contribution to IHE IPS profile to use IPS/GPS free-set

04 WHO
- Input to development of a WHO mapping white paper – between terminologies/classifications and WHO classifications
- Exploring options for managing link with ICD-11 and further content alignment work
- Participation in WHO-FIC advisory council and various committees
Collaboration – Standards Organizations

**openEHR**
- Starting to explore options for working together including use of GPS in openEHR archetypes

**ISO**
- Review of ballots and responses ISO TC 215 Health Informatics
- Input to new ISO sub committee for Genomics

**Global Medical Device Nomenclature Agency**
- Adding GMDN content to SNOMED CT where in scope and meets Editorial guidance
- Map to support regulatory requirements

**International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH)**
- Preparing a Collaboration Agreement to support ongoing maintenance, updating and releasing of SNOMED/MedDRA, MedDRA/SNOMED map, post EU WEB RADR 2 project
Collaboration - Clinical

01 International Council for Nursing (ICN)
- Draft principles agreed to support better integration between SNOMED CT and ICNP.
- Agreement being drafted.

02 Institut national de la sante et de la recherche medicale (INSERM)
- Completed inclusion of priority set of Orphanet Rare Disease content in SNOMED CT for July 2019
- Work started on map between SNOMED CT and Orphanet of priority set - for Alpha release post January 2020

03 European Renal Association-European Dialysis and Transplant Association (ERA-EDTA)
- Updates to ERA-EDTA free set (Causes of Death) for inclusion in Global Patient Set

04 Academy of Nutrition and Dietetics (AND)
- Incorporation of NCPT (National Care Process Terminology) into SNOMED CT terminology.
- Maintenance and updating processes of new nutrition content.
- Principles for collaboration agreed and agreement being drafted
Collaboration

01 International Nursing Knowledge Association (NANDA-I)
- Discussions for including NANDA content (nursing diagnoses) in SNOMED CT which would help to align the content of the two terminologies.

02 American Medical Association (AMA)
- Collaboration agreement in place
- Announcement to be made during meeting on a joint initiative

03 Clinical Data Interchange Standards Consortium (CDISC)
- Re-opening discussions re use of SNOMED CT in CDISC standards for clinical trials and clinical research

04 Joint Initiative on SDO Global Health Informatics Standardization (JIC)
- Input as directed through SNOMED International
-Facilitates collaboration with other SDOs
Education & Product Support

Linda Bird
Where do I find it?

01 Visit snomed.org

02 Select SNOMED CT, next Education

Select the “Education” feature box
SNOMED CT courses

Our courses teach you SNOMED CT knowledge and skills through online presentations, practical exercises, assignments, tutorials and assessments.

SNOMED CT Foundation Course

Curso de Fundamentos de SNOMED CT

SNOMED CT Implementation Course (Jan & Jul)

SNOMED CT Authoring Level 1 (Mar & Sep)

4496 Students

3075 Completions

86 Countries
SNOMED CT certifications

Our certifications recognize your competence in performing specific SNOMED CT tasks and are tested via proctored online exams.

- Recognizes your competence in performing basic SNOMED CT authoring tasks
  - Must pass authoring level 1 certification exam
  - Exam is electronically proctored
  - Valid for 3 years

15 Students
4 Countries
15 Completions
SNOMED CT partnerships

SNOMED International is partnering with organizations around the globe to deliver SNOMED CT education in non-English languages

*Education delivery agreements with*

- Hospital Italiano - Spanish
- Digital Health China – Mandarin

*Education translation plans with*

- Finnish NRC & Uni of Eastern Finland
- Swedish NRC
- Brazilian NRC
Member benefits

Each Member is entitled to

01. FREE Foundation Course for all students

02. Membership discount (50%) for all education courses

03. NRC access to 1 FREE enrolment in each course per year

04. NRC access to 1 FREE enrolment in each certification per year
A FREE COURSE!

Visit the SNOMED CT course catalogue

courses.ihtsdotools.org

Discover the answer to this simple question:

“How many products are available on the SNOMED CT Course Catalogue?”

Submit your answer at snomed.org/win

Two free SNOMED CT course enrolments to be won
All entrants will receive a 20% discount voucher - first 50 enrolments only
All vouchers must be used before December 2019
Clinical

Ian Green
Clinical Engagement

**Clinical Reference Groups**
- Active CRG’s – 7 groups
- Active Project groups – 2
- Under development – 4 CRG’s and 1 Project group

**Clinical Education**
Clinical education videos are completed in draft, and have had both internal and external review. Will be finalizing content and professionally recording them in November, for publication.

**Clinical content review**
We have been working with individual and groups of clinicians to review SNOMED CT content, and to provide advice to the authoring team.

**Identifying key clinical conferences**
SNOMED International is actively looking to provide a presence at key international clinical conferences.
Clinical Engagement – Getting involved

**Clinical contacts database**
We have a database of clinicians with up to date clinical knowledge to advise the authoring team on content issues, and also act as the basis for new CRG and project groups – this is added to as we work with relevant clinicians.

**Individual clinicians**
We would encourage clinicians to put their name forward. Further information can be obtained through info@snomed.org

**Joining a Clinical Reference Group (CRG)**
Details of all CRG’s can be found here - https://confluence.ihtsdotools.org/display/CP/Introduction+-+Clinical+Reference+Groups

**Getting SNOMED International support**
For larger projects related to SNOMED CT, or discuss how SNOMED International can support national or international clinical meetings, please email info@snomed.org
Genomics - Current

Genomic Pilot
Pilot based on Genetic Kidney disease is complete, and reports available from Confluence (https://confluence.ihtsdotools.org/display/GR/Genomic+Pilots). The pilot also produced a FHIR value set of phenotype SNOMED CT codes linked to genetic kidney disease, details are available from info@snomed.org. A further pilot will be published in July, 2020, focused on Cardiovascular Disease.

Human Phenotype Ontology (HPO)
Development of a SNOMED CT to HPO map, focused on current content within SNOMED CT release. Creation of the map, will be a joint project between SNOMED, HPO and GA4GH, and publication will be jointly across all three organisations.

European Bioinformatics Institute (EBI)
Working with EBI to include SNOMED CT in Ontology Xref service (OXO), which provides an online resource linking terminologies and classifications with the clinical and genomics spaces.

Orphanet
Inclusion of initial set of Orphanet terms into the SNOMED CT release will be published in the January 2020 release, followed by a SNOMED to Orphanet map. This will support genomic researchers who are looking to leverage clinical EHR data, and also support greater granularity for clinicians recording rare disease data.
Development plans for Genomics

Human Phenotype Ontology (HPO)
Following creation of the SNOMED to HPO map, the two organisations will explore ways of working to allow HPO phenotype content to be added to the International release.

Online Mendelian Inheritance of Man (OMIM)
Alignment and enhancement of phenotype content in the International Release, with discussions on the development of a mapping between SNOMED and OMIM.

Human Disease Ontology (HDO)
HDO provides disease definitions (including mutations) with links to the gene ontology. Development of ways to link SNOMED and HDO to allow SNOMED users to access mutation details, and also to inform the development of SNOMED definitions in line with emerging clinical understanding.

Gene Ontology
Provide a link from SNOMED to Gene Ontology to support genomics data analysis by researchers.

USE CASES
1. Supporting genomics researchers to access of SNOMED EHR data
2. Development of SNOMED disease definitions in line with genomic definitions of disease
Content Strategy

Jim Case
Update on Quality Improvement project

The SNOMED CT quality improvement (QI) initiative was launched in 2017 to improve internal structural consistency of SNOMED CT content through:

- **Improved** adherence to the Machine Readable Concept Model (MRCM)
- **Improved** adherence to editorial policy
- **Application** of a consistent modeling philosophy to current and new content
- **Reduction** of the number of intermediate primitives/Maximized number of sufficiently defined concepts
- **Application** of defined templates to content to reduce the introduction of new modeling errors
- **Leveraging** the use of automated processes to batch refine content
- **Updating** the editorial guide to reflect the more streamlined authoring principles
Current status of phase 1

Focus on Clinical findings with “simple” underlying concept model

67641 SIMPLE Clinical findings in scope

- Completed: 37.7%
- In progress: 8.5%
- Neoplasm: 6.8%
- Group by attributes: 46.9%

31268 first cut Clinical findings

- Completed: 81.6%
- In progress: 18.4%

- 43% completed in April
- 84 Templates created to verify conformance
Content strategic initiatives
Key content strategies for 2020

The focus of the content strategy is to improve the overall delivery of enhanced high-quality clinical content to members. To that end a number of strategic deliverables will be developed over the next year.

Proposed deliverables:

- Definition and agreement on the scope of content for the Clinical Core
- Requirements and certification of external authors for International release
- Development of “content quality” levels
- Content promotion criteria

Objectives:

- Focused effort to represent current clinical knowledge (Clinical core)
- Ongoing maintenance of useful ancillary content (International release)
- Expand coverage of content through Community of Practice contributions (Community content)
- Improved/rapid availability of content in use by the community (Community content)
- Increased coverage and ongoing filling of terminology “gaps” (Promotion process)
Strategy “details”

SNOMED CT Clinical Core

- High level description of scope
- Inclusion/exclusion criteria
- Criteria for expansion

Requirements and certification of external authors

- Education requirements
- Certification requirements
- Definition of approved functions
Strategy “details”

Development of “content quality” levels

- Discussion with MAG for inclusion as content metadata
- Quality level definitions
- Criteria for quality level promotion

Content promotion criteria and process

- Definition of “International usage”
- Compliance with International release editorial policy
- Minimal quality levels requirements
- Component identifier retention/replacement
Editorial Advisory Group
agenda topics
Select EAG discussions

Topic description

- SNOMED CT alignment with upper level ontologies
- Source of truth for Clinical Content
- Clinical Core selection criteria
- Observable vs. Evaluation procedure reconciliation
- Policy on the use of “degree of synonymy” in the International release and extensions
Product & Services
Rory Davidson
Bringing product delivery together to support the strategy
Technical Services

"owlExpression": "SubClassOf(:308557000 :14734007)"

SNOMED CT Browser

Upgraded to incorporate the changes to axioms and to a more scalable terminology server, also supporting a public FHIR Terminology Service interface

OWL

July 2019 International Edition released with the move from stated relationships to using axioms, Managed Service Members content upgraded as well
Authoring Platform

Migrated to authoring with axioms and to using SNOMED International’s Snowstorm terminology server

Innovation Framework

First iteration completed on machine generated ICD-11 map prototyping and SNOMED CT User Interface example

http://snomed.org/ui

Preparation for the next part of the SNOMED CT journey towards a more collaborative and implementable terminology
Content & Mapping

Monica Harry
Content & Mapping team

- Jim Case
- Monica Harry
- Penni Hernandez
- Toni Morrison
- Suzanne Santamaria
- Farzaneh Ashrafi
- Maria Braithwaite
- Paul Amos
- Yongsheng Gao
- Nicki Ingram
- Krista Lilly
- Donna Morgan
- Cathy Richardson
- Phuong Skovgaard
Content maintenance

- Content Request System
  - 80% of requests completed;
  - 978 authored of possible 1217
- QI project – structural improvements
- Substances – cleanup
- Anatomy – ongoing structural improvements
New content additions

- **Nutrition** – Nutrition Care Process International (NCP)
- **CMT** – Kaiser Permanente donation
- **Drugs** – addition of Product roles to support changes in Substances
- **GMDN** – continuous monthly updating
- **ICD-11** – align with latest release
- **ICD-O** aligning to new 3.2 version
Implementation support via mapping

- **ICD-10** maintenance
- **ICD-11** preparations for future map development
- **ICD-O 3.2** monitoring for impact to SCT
- **GMDN** Linkage Table
- **MedDRA** – completed QA of 7400 pilot maps
Publication supported derivatives

- For example:
  - Nursing
  - International Family Practice
  - European Renal Association
  - DICOM
  - International Patient Summary
  - Global Patient Set
Development work

- **Vaccines** – use case and requirements gathering
- **Devices** – proof of concept Breast implant and shunt test models
- **Drugs** – addition of Product roles to support changes in Substances
Other activities

- Project & Clinical Reference Group support
- Editorial Guide updates
Description Logic Enhancements

Yongsheng Gao
Timeline

2014
- Recommendation
- Roadmap
- Consultation

2017
- Requirements
- Evaluation

2018
- DL profile specification
- OWL guide
- OWL refset

2019
- Replace stated relationship file by OWL refset

2020 ~
- Concrete domains
- ...

SNOMED International
SNOMED CT logic profile

SNOMED CT

- Class hierarchy
- Equivalent Classes
- Object Property hierarchy
- Existential restrictions
- Object Intersection

Disjoint Classes
Data Property
Equivalent Properties
Property Chain
Transitive Property
Reflexive Property

EL profile

- Property Domain
- Property Range

OWL DL

- Disjunction
- Universal restrictions
- Negation
Change to authoring process

Authoring (old process) → Convert to OWL and classify → Stated Relationship File (stated view) → Authoring (new process)

Description File → Concept File → OWL Axiom Refset File (stated view) → Relationship File (inferred view)
Release Management

Andrew Atkinson
New Product Releases

- Global Patient Set (GPS)
  - Launched September 2019
  - Freeset so Published in a *New format*
- SNOMED to MEDRA map
  - ALPHA release planned for 2020
- SNOMED to Orphanet map
  - ALPHA release planned for 2020
- Upcoming new Managed Service Releases:
  - Estonia
  - New Zealand
  - Switzerland

- *Feedback requested on all new products!*
International Edition Release updates

❖ Migration to OWL
  ➢ Completed in July 2019 International Edition
  ➢ Positive results
  ➢ Ongoing process - Continued feedback requested

❖ Snowstorm in Production
  ➢ Deployed in the International Authoring Platform now
  ➢ First release due January 2020 International Edition
After significant analysis and collaboration, we have migrated the Derivative products to an Annual Release schedule.

We have also re-aligned the various Product releases to best suite the various dependencies and user requirements.

The following Product Release Schedule has therefore now been implemented, and will continue from 2019 onwards:
January Derivative Product Release schedule

- January cycle (will be dependent upon the January International Edition):
  - SNOMED to GMDN map
  - ICNP Diagnoses + ICNP Interventions
  - SNOMED to MEDRA map (planned new product)
  - SNOMED to Orphanet map (planned new product)
July Derivative Product Release schedule

- July cycle (will be dependent upon the July International Edition):
  - SNOMED to GMDN map
  - Global Patient Set (GPS)
  - DICOM freeset
  - IHE freeset
  - IPS freeset
  - ERA/EDTA freeset
  - GP/FP refset
  - Nursing Activities refset
  - Nursing Health Issues refset
  - Odontogram refset
  - General Dentistry refset
Terminology Release Advisory Group

Tuesday 29th October 2019 – 10:30 to 12:30 + 13:30 to 17:00 (Grand Residence 101)

❖ Wide variety of agenda items, including:
  ➢ Concrete domains
  ➢ Frequent Delivery
  ➢ Release package formats

❖ Please feel free to read and attend if anything interests you:
  ➢ https://confluence.ihtsdotools.org/pages/viewpage.action?pageId=96804891

Observers welcome as always!
Operations

Terance Shird
Technical Operations

Hosting Migration Project

- 78 Systems Migrated
- Significant progress towards Serverless Architecture

Server Operating System Upgrade

- 82 Servers Migrated
- Only few systems remaining
Tooling Update

- OWL
- Snowstorm in Production
  - Public Browser
  - International Authoring Platform
- PHIR Integration
- Autoscaling
  - Classification
  - Reporting
- Various software improvements
  - Refset & Translation Tooling
Members Managed Service

Belgium

Denmark

Estonia

Ireland

New Zealand

Norway

Sweden

Switzerland

United States of America
Members Managed Service Sub-Group

Monday 28 October – 09:00 to 12:30

▪ Content Specific Language Reference Sets
▪ UI design for new Bulk Import feature
▪ Managed Service Specific demo on new Refset & Translation enhancements
▪ Proof of Concept report on NRC Request Management
▪ How to validate and QA extensions

Non Managed Service observers welcome
Tooling Users Advisory Group

Wednesday 30 October 2019 – 09:00 to 10:30 & 13:30 to 15:00

▪ Refset & Translation enhancements Demo
▪ Authoring/Reporting Platform Demo
▪ Feedback from recent SNOMED Browser survey
▪ 2020-25 Roadmap

Observers welcome
Thank you

Catered break: 10:00 – 10:30
Grand Salon Foyer

‘information that inspires conversation’