

Canadian NPC: Translation of SNOMED CT® - Approaches, Challenges and Lessons Learned

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May 2018 comments

While some of the supporting infrastructure no longer exists at Inforoute, such as the Standards Collaborative, the pCSG (pan-Canadian Standards working groups) and the SIGs (Special Interest Groups), the lessons learned in this document are still valid.

If in the review of this material, there are any questions, please do contact us

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Agenda

Approach

- Goal/Objective
- Scope
- Deliverables
- Guiding Principles
- Application software (tool)
- Human Resources
- Workflow, Roles and Sample Deliverable

Challenges and Lessons Learned

- Key events
- Pilot Phase Evaluation
- Challenges and Lessons Learned

Conclusions

Approach

Goal and Objective

Goal

- Provide Canadians with high quality French SNOMED CT® concepts accepted for use in Canada

Objective

- Translate, as per the funded investment project priorities, specific portions of SNOMED CT® in French

Scope

- Translation of selected concepts; defined targets (numbers) in each project phase
- Update to remain in line with jurisdictional implementation project priorities
- Build linguistic and editorial guidelines specific to SNOMED CT® translation project
- Translation of supporting SNOMED CT® guides and related documentation
- Creation and management of a pan-Canadian Standards “Acceptance” Group (pCSG)
- Liaise with IHTSDO for corrections, editorial guidelines input and (eventually) submissions of extension content
- Contribute to the evolution of IHTSDO translation standards and guidelines through participation in the SIG and PGs
- Maintain a public translation project Forum
- Align translation output with the translation work done for other pan-Canadian terminology standards

Deliverables

- A specified number of high quality French SNOMED CT® concepts accepted for use in Canada to meet the priority requirements of the iEHR and Public Health projects
- French versions of SNOMED CT® guides
- Clearly documented linguistic, terminology translation guidelines and editorial decisions
- Adaptation of a free-ware browser that permits viewing Canadian French and English SNOMED CT® extension content.

Guiding principles

- Concepts are translated based on an onomasiological approach with full consideration of the underlying meaning and context of the original language Fully Specified Name
- Initially, only a translation for a default Preferred Term for each concept will be undertaken*
- The international release of SNOMED CT® is not perfect. The French translations will not be based on corrections that are needed in the core Terminology, but haven't yet implemented.
- Issues regarding ambiguous or problematic concepts will be reported to IHTSDO with a view to improving the quality of SNOMED CT®
 - *Target language (fr-CA) Synonyms are not currently in scope.
 - Will be handled when implementers start to use French SNOMED CT®

HealthTerm: web-based application software

Includes

- SNOMED CT® Browser
- New and modified workflows (Fast-track and Full-path) for Canadian translation processes
- Concordance searching within and across multiple namespaces
- Support for Source documents
 - SNOMED CT® User Guide
 - Terminologia Anatomica
 - Editorial guidelines
 - Register of editorial decisions
 - Form to record queries
 - Other reference documents
- Support for Other Reference Materials

SNOMED CT® Translation Project

Start date = May 12, 2008

CESS
(Translation Supplier)

Translators
4 at the beginning
Increased to 6, then to 9
as of Oct 2008

Quality Control Staff
3 physicians

SME validation
2 since project inception

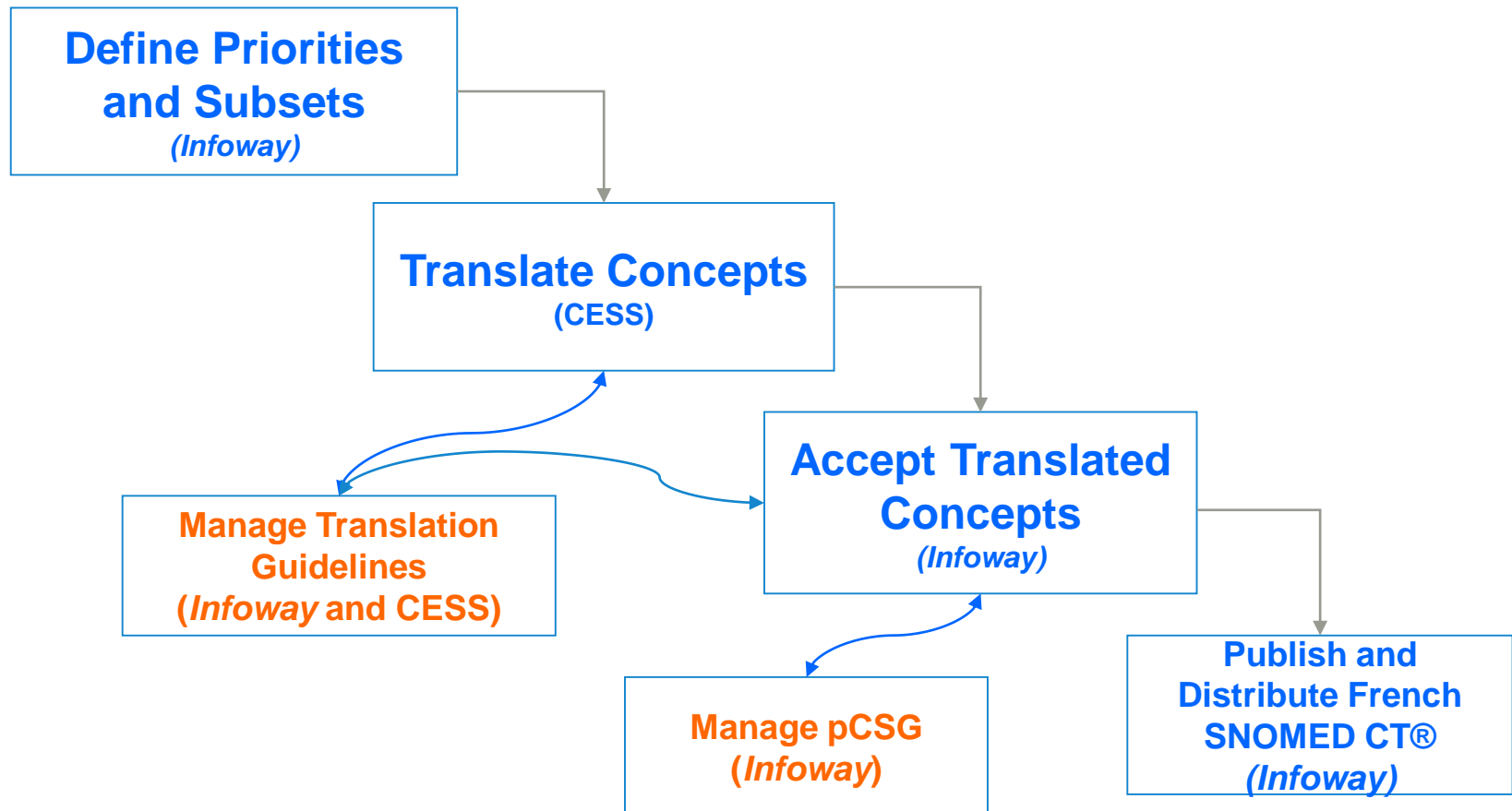
Infoway Review
1 initially
1.5 – 1.75 as of Nov 2008

pCSG
8 initially,
13 as of Nov 2008

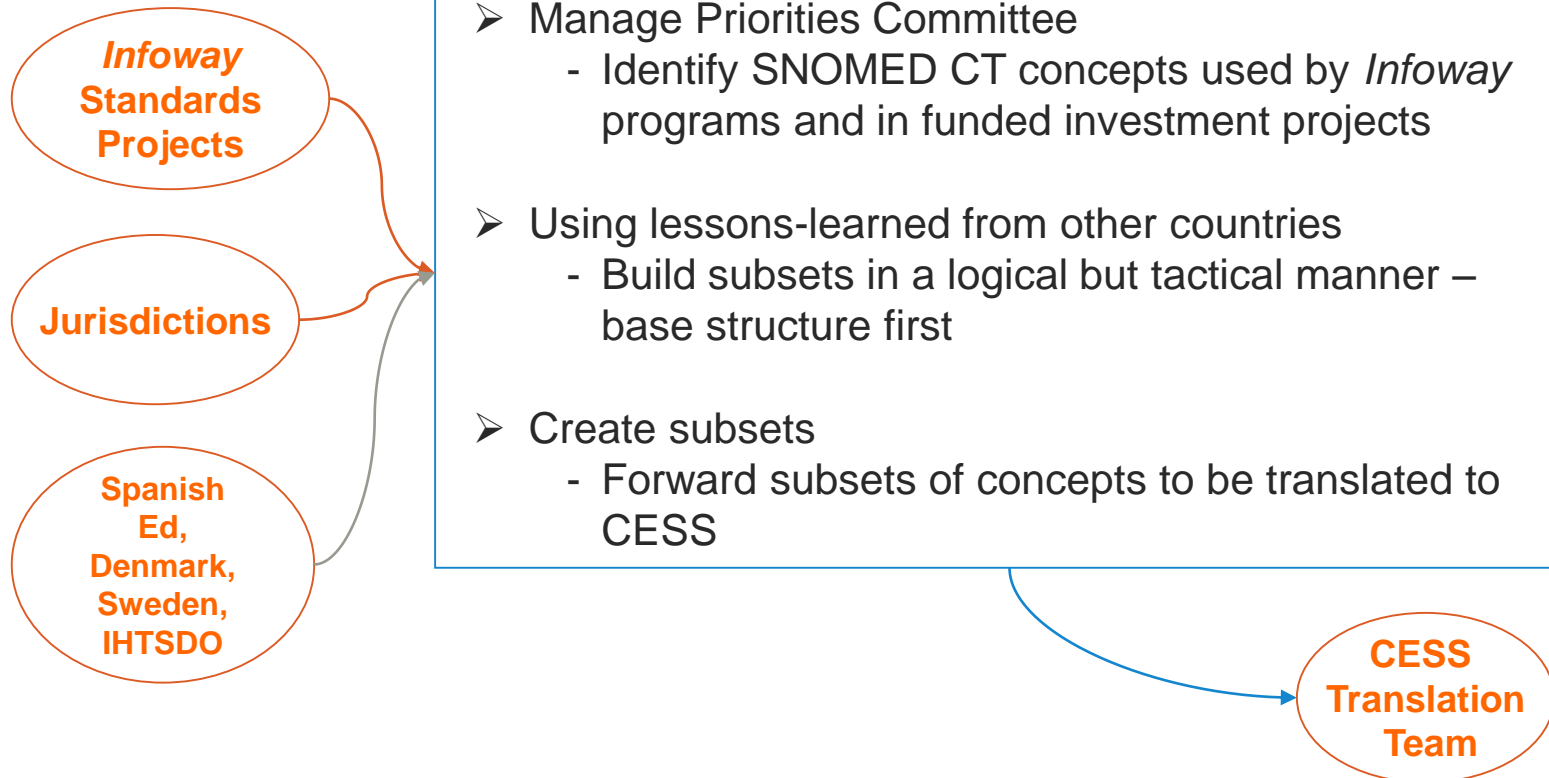
**Total number of resources directly
involved in workflow processes – 28+**

Workflow, Roles

Workflow - At a glance



Define Priorities and Subsets (*Infoway*)



Manage Translation Guidelines (*Infoway and CESS*)

**Infoway
and
CESS**

**Denmark,
Sweden,
IHTSDO**

- Manage Editorial Committee
 - Leverage editorial, linguistic and terminology guidelines from Denmark, Sweden and the IHTSDO
 - Create and update the Canadian French translation project linguistic guidelines
 - Create and update a Register of Editorial Decisions that provide recommendations about linguistic and translation issues

- Communicate/provide the guidelines and decisions to the CESS translation team

**CESS
Translation
Team**

Translate Concepts (CESS Translation Supplier)

**CESS
Translatio
n Team**

- Manage CESS resources
- Create batches from primary subsets and allocate roles
- Translate and decide what workflow should be used: Fast-track or Full-path
- Revise translation
 - Forward to *Infoway* if Fast-track
 - Forward to Quality Control if Full-path
- Quality Control review
 - Ensure editorial and linguistic guidelines are applied
 - Identify editorial and linguistic issues
 - Decide if SME opinion is required
 - Manage SME opinion and feedback
 - Forward concepts to *Infoway*

Infoway

Manage pCSG (*Infoway*)

pCSG Role

Review and accept for use in Canada the French version of SNOMED CT® from the perspective of practicing clinicians in different health care settings

- Provide opinion and feedback to *Infoway*

Infoway

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graph TD; I1([Infoway]) --> B[Manage a pan-Canadian Standards Group (pCSG) for acceptance of French SNOMED CT concepts<br/>- Decide if pCSG opinion is required<br/>- Manage pCSG opinions and feedback]; B --> I2([Infoway]);
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- Manage a pan-Canadian Standards Group (pCSG) for acceptance of French SNOMED CT concepts
 - Decide if pCSG opinion is required
 - Manage pCSG opinions and feedback

Infoway

Accept Translated Concepts (*Infloway* and pCSG)

Infloway

- Receive concepts translated by CESS
 - Decide if translated concepts are acceptable: if so, publish
 - Decide if concept is to be reviewed by pCSG and, if so, assign to a pCSG member(s)
- Ensure editorial and linguistic guidelines are applied
- Identify and resolve editorial and linguistic issues
- Package published descriptions for distribution in Canada by the *Infloway* Standards Collaborative
- Apply procedure for subsequent corrections identified “post-publishing”

pCSG

Standards
Collaborative

Publish and Distribute French SNOMED CT®

(*Infoway*-Standards Collaborative)

Infoway

- Receive published French SNOMED CT concepts
- Prepare distribution content files
- Prepare release description and notification
- Publish on *Infoway* Standards Collaborative (SC) Members website
- Notify Standards Collaborative Members
- Re-distribute, corrected concepts subsequently re-published

SC Members

Sample Deliverable – Adaptation of a free-ware browser

Concept Id

Option Id

Mots - tout ordre

Rechercher

- diabète lipoatrophique
- anémie du diabète
- complication du diabète
- ulcère cutané du diabète
- syndrome diabète-néphrose
- sclérodème associé au diabète
- mononévrite multiple du diabète
- mononeuropathie multiple du diabète
- mononeuropathie isolée du diabète
- diabète avec coma hyperosmolaire
- ulcère de pied du diabète
- coma associé au diabète sucré

- Hiérarchie
- affection du pancréas endocrine
 - trouble du métabolisme du glucose
 - trouble de la régulation glycémique
 - diabète sucré**
 - diabetes mellitus associated with genetic syndrome
 - secondary diabetes mellitus
 - brittle diabetes
 - syndrome d'hyperplasie pinéale et de diabète sucré
 - diabetes mellitus type 2
 - diabetes mellitus type 1
 - neonatal diabetes mellitus
 - diabetes mellitus AND insipidus with optic atrophy AND deafness

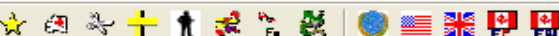
diabète sucré
Type: = constatation clinique)

diabète sucré - Definition

ConceptStatus: **courant**

Descriptions

- Anglais (International)
 - F diabetes mellitus (disorder)
 - P diabetes mellitus
 - S DM - Diabetes mellitus
- Lang: en-GB
 - F diabetes mellitus (disorder)
 - P diabetes mellitus
 - S DM - Diabetes mellitus
- Français (fr-CA)
 - P diabète sucré
- Définition: Primitive
 - est un(e)
 - D trouble du métabolisme du glucose
 - D affection du pancréas endocrine
 - D trouble de la régulation glycémique
 - finding site
 - D structure du pancréas endocrine
 - D structure of digestive system
- Attributs
 - severity
 - degrés de gravité
 - episodicity
 - types d'épisodes
 - clinical course
 - évolution
- Codes
 - SNOMEDID original : DB-61000
 - Code Read (CTV3ID) : C10..



Concept Id 73211009

diabète sucré

(Type:= constatation clinique)

Description Id 12931000077111

Mots - tout ordre

Rechercher diab

- P diabète sucré**
- P diabète médicamenteux
- P diabète lipoatrophique
- P anémie du diabète
- P complication du diabète
- P ulcère cutané du diabète
- P syndrome diabète-néphrose
- P sclérœdème associé au diabète
- P mononévrite multiple du diabète
- P mononeuropathie multiple du diabète
- P mononeuropathie isolée du diabète
- P diabète avec coma hyperosmolaire
- P ulcère de pied du diabète
- P coma associé au diabète sucré

Hierarchie Subtype hierarchy

- C affection du pancréas endocrine
- C trouble du métabolisme du glucose
- C trouble de la régulation glycémique
- **diabète sucré**
 - C diabetes mellitus associated with genetic syndrome
 - C secondary diabetes mellitus
 - C brittle diabetes
 - C syndrome d'hyperplasie pinéale et de diabète sucré
 - C diabetes mellitus type 2
 - C diabetes mellitus type 1
 - C neonatal diabetes mellitus
 - C diabetes mellitus AND insipidus with optic atrophy AND deafness

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Français (fr-CA)

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finding site

Attributs

- severity
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 - D évolution

Codes

- SNOMEDID original : DB-61000
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Challenges and Lessons Learned

Key Events

Elaboration of workflow processes

- Customizations to web-based application software to meet *Infoway's* needs

Gathering of material to be leveraged in the project. Input from:

- CIHI (Canadian Institute for Health Information)
- Experts involved in the production of the Spanish Edition
- Experts involved in the Danish and Swedish translations underway
- IHTSDO Editorial Guidelines and Style Guides
- OQLF (French Language Authority in Canada)

Acceptance test of the "Test" environment

Acceptance test of the "Production" environment

Creation of subsets and batches

- Quebec priorities
- Public Health priorities
- Other jurisdictional priorities
- Contextual, Structural

Quarterly meetings with the pan-Canadian Translation Priorities Committee

- To define and update priorities

Key Events

Application software training

- *Infoway* team

Preparation of training material by *Infoway* for:

- Translation Team (Translators and QC)
- Subject Matter Experts
- pan-Canadian Standards “Acceptance” Group

Training of:

- Translators (by *Infoway*)
- Quality Control members
- Subject Matter Experts (by *Infoway*)

Creation of the Editorial Committee

- Creation of the Linguistic and Terminological Guidelines
- Creation of the Register of Editorial decisions
- Elaboration of mechanisms to report issues, provide guidance and communicate solutions and decisions to the entire team

Application software – bug reporting, problem solving, workflows that required workarounds

Key Events

Pilot Phase evaluation

- CESS Translation team
- *Infoway*
- CareCom

Creation of the pan-Canadian Standards "Acceptance" Group

- Recruitment, selection and management of the Acceptance pCSG members
- Training of the group members (by *Infoway*)

Creation of an internal Policy and Procedures Manual

- Work in progress

Adaptation of a free-ware browser that permits viewing Canadian French and English SNOMED CT® extension content

- Completed

Phase 2.1 - Translation and CQ work concludes April 30th, 2009

- **Concepts translated in this Phase = 30,000**

Subsequent Project Phases - to be determined

- Primarily dependant on iEHR, Public Health and other funded jurisdictional project requirements and priorities

Pilot Phase Evaluation

Evaluation of a four-month Pilot period

Inforoute and the Translation Supplier (CESS) carried out an evaluation at the end of the Pilot period, to identify:

- any required Quality improvements
- any required Performance improvements, and
- any required adjustments to resources, processes, software tools or other needs in both organizations

Challenges and Lessons Learned

Translators' adaptation to the processes

- Roles, working as a team
- Workflows
- Complexities of understanding and translating the SNOMED CT Terminology
 - Concept-based approach to translation, without a traditional textual context
 - Errors and inconsistencies in the International release and ambiguity (of English language)

Translators' adaptation to the tools

- Use of the web-based translation workflow software and working in a centralised environment was a “new experience” for the translators and other experts
- Initial software problems ... bugs that required resolution, workflows that required workarounds

Challenges and Lessons Learned (2)

Maintenance of internal Guidelines

- Maintaining terminological and linguistic consistency

Managing subset selection (create and manage)

- Difficulty obtaining clear priorities from stakeholder groups
 - Some analysis and organization of data required by *Infoway*
- Added complexity of creating subsets that are “down” and “across” hierarchies
- Inability to effectively and automatically eliminate the non-human medicine subset from translation subsets and batches
- Inability to eliminate and automatically eliminate Inactive concepts that still have a status of Current in the International release from translation subsets and batches

Canada - What we would do differently if we started our Translation Project today ...

It was necessary for us to approach translation in a different way than our colleagues in other countries. We needed to -

- create “strategic” subsets that were “domain” or “implementation project” focused. These were driven by the needs of our stakeholders in the
 - o Public Health domain
 - o Quebec Emergency Care Centre’s
 - o Other regions or jurisdictions using French to deliver health care.
- give priority to concepts which occur frequently, link, qualify and/or confer meaning to other concepts
- create small primary subsets that were identical in size and composition to the batches, that could be easily directed to specific translators, reviewers, QC personnel at the Translation Supplier level.
- have the ability prior to acceptance, for *Inforoute* Review to edit concepts
- have the ability prior to acceptance, for *Inforoute* Review to direct specific concepts or samplings of translations (i.e. a %age of Fast-Track, a % age of Full-Path) to one or more members of a pan-Canadian Acceptance Group, for their opinion(s)

Canada - What we would do differently if we started our Translation Project today ...

In an effort to increase efficiency by minimizing the effort required for concepts from the priority areas that should require little or reduced effort, whilst trying to achieve a higher degree of certainty and level of quality for more difficult/complex translations, we introduced a new Fast-Track workflow and a modification to the standard translation workflow in the application software (which we call Full-Path) ...

- Initially, the Fast-track workflow was not well understood/followed
- Initially, the Full-path workflow resulted in “ping-pong”
- The Editorial Guidelines (revised and distributed weekly) were not always followed or understood (e.g. ICS versus Capitalization for other reasons)

In retrospect, we would not change much regarding our approach

- Subject to verification, we believe we’ve met most of our stakeholders requirements for this Phase of the Project

However, our decisions and approach introduced unforeseen additional complexities for all concerned ...

Conclusions

Key Benefits

- Bilingual SNOMED CT® will allow language-independent EHR interoperability
- French SNOMED CT® will be a key enabler for implementing terminology standards at all levels in jurisdictions using French for delivery of health care services
- Adaptation of a free-ware browser permits the viewing of Canadian French, the English SNOMED CT® International content and other Canadian extension content
 - This will assist licensed Members in a practical way to visualize the Terminology including the translated French counterparts
- Active participation in collaborative work with IHTSDO
 - Countries embarking on translation initiatives can leverage the collective experience, wisdom and lessons-learned by others ...and ourselves!

For more information, please contact:
standards@infoway-inforoute.ca

Thank you!