

APELON

BECAUSE TERMINOLOGY MATTERS

SNOMED CT for real-world problem- solving

SNOMED CT seems overwhelming



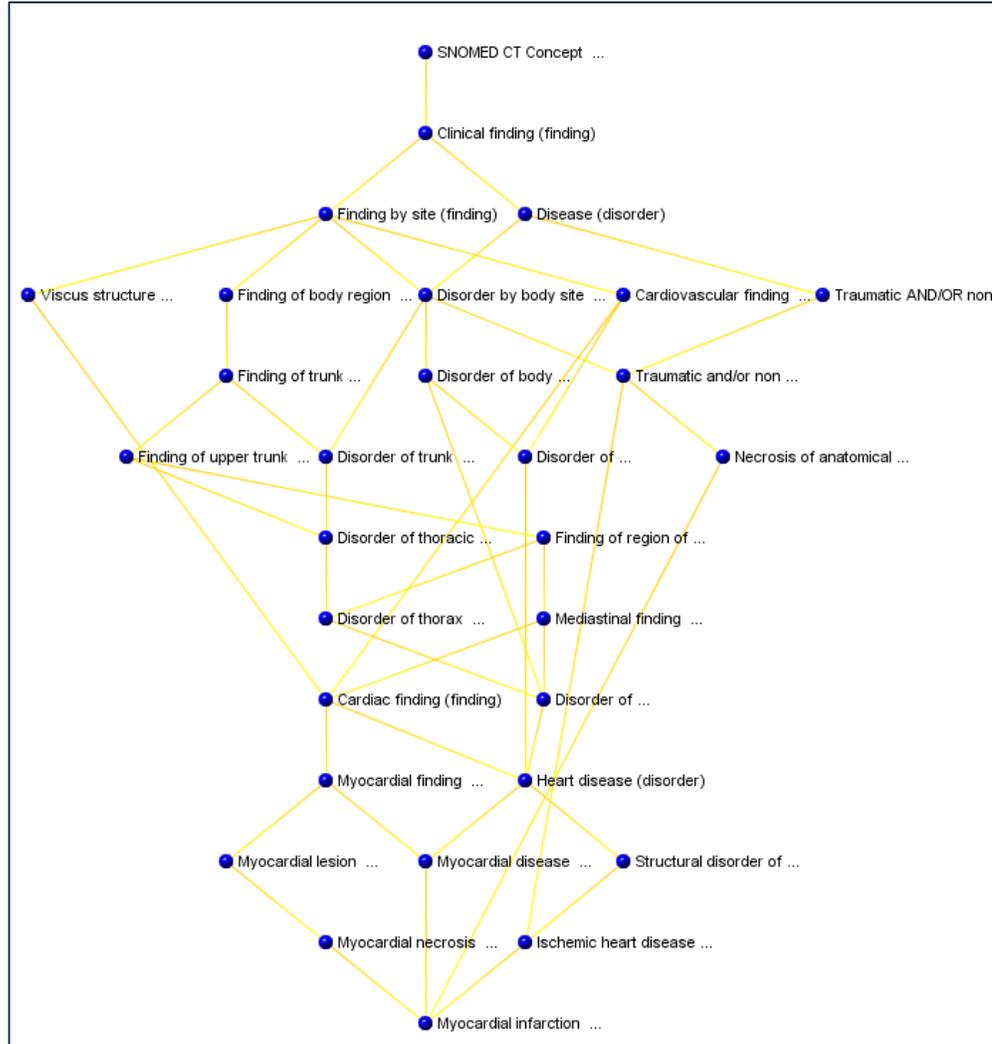
Size of SNOMED CT

- Size
 - 300K concepts
 - 1M+ terms
 - 3M+ relationships
 - 19 Hierarchies



Navigating SNOMED CT

SNOMED CT



ICD-9

- The International Classification of Diseases: 9th revision, Clinical ...
- CLASSIFICATION OF DISEASES AND INJURIES [001-999]
- CHAPTER 7: DISEASES OF THE CIRCULATORY SYSTEM (390-459)
- ISCHEMIC HEART DISEASE (410-414)
- Acute myocardial infarction [410]

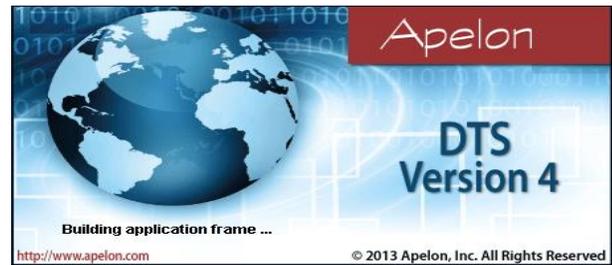
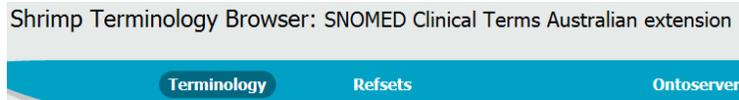


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Specialized Tools to Use SNOMED CT

- Browsers
- Editors
- Queries
- Mapping
- Clinical form creation



There Is Help

- SNOMED CT can be used by all
- Support exists to improve understanding and utilization of SNOMED CT



Subsets in Population Health Management

A population health management vendor scans data passing through an HIE for cases that warrant a healthcare intervention.

17 Categories

- Allergies/Intolerance
- Care Plan Items
- Goals
- Labs
- Diagnoses
- Symptoms

Multiplied By

10 to 100 Measures

- Symptom – Dry Mouth
- Diagnosis – Atrial Fibrillation

Multiplied By

0 to 5 Values

- Present
- Absent
- Mild, Moderate, Severe
- Further intervention required, etc.

Subsets in Population Health Management

- Category + Measure + Value = 1000s of unique Quality Measures
- Find all the relevant codes in 40 healthcare terminology standards – including SNOMED CT

Subsets in Population Health Management

- **The Solution → Subsets**
 - Understand the intent and requirements
 - Focus on the relevant parts of SNOMED CT
 - Intensional/Extensional/Both
 - Allow inclusion and exclusion

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Subsets in Population Health Management

- **The Solution → Subsets**

- Understand the intent and requirements
- Focus on the relevant parts of SNOMED CT
- **Intensional/Extensional/Both**
 - Intensional –
 - give me all the descendants of Heart Disease or
 - give me all concepts of “Sepsis due to xxx”
 - Extensional - My subset will include:
 - Sore throat symptom (finding),
 - No sore throat (situation),
 - Has a sore throat (situation), and
 - Pain in throat (finding)
- Allow inclusion and exclusion

Subsets in Population Health Management

- **The Solution → Subsets**

- Understand the intent and requirements
- Focus on the relevant parts of SNOMED CT
- Intensional/Extensional/Both
- **Allow inclusion and exclusion**

Example: Diagnosis – Heart Disease – present

- include all descendants of the concept Heart disease (disorder) [56265001]
- exclude concepts that reflect no heart diseases such as Electrocardiogram: no heart block (finding) [164899008]

The Value Set Builder

Value Set Builder

File Options Help

Measures Defaults Categories

Namespace: []

Category: Diagnoses

Measure: Asthma^hxAsthma^Yes [New]

Subset: Diagnoses_Asthma^hxAsthma^Yes_0914_jdp [Delete]

Action	Value
Exclusion String	Poisoning by herbal asthma mixture of undetermined intent (disorder)
Exclusion String	prev med prescr alternative treatment for long-term asthma management [308603]
Exclusion String	preventive medicine services asthma discharge plan provided [308620]
Exclusion String	prior use of corticosteroids for asthma [4944]
Exclusion Tree	Asthma daytime symptoms [283079]
Exclusion Tree	asthma effect on sleep [283120]
Inclusion String	*asthma*

Add Remove Up Down Clear

Save Preview Delete Restore

Preview Diff

Sort By: Namespace Concepts (294)

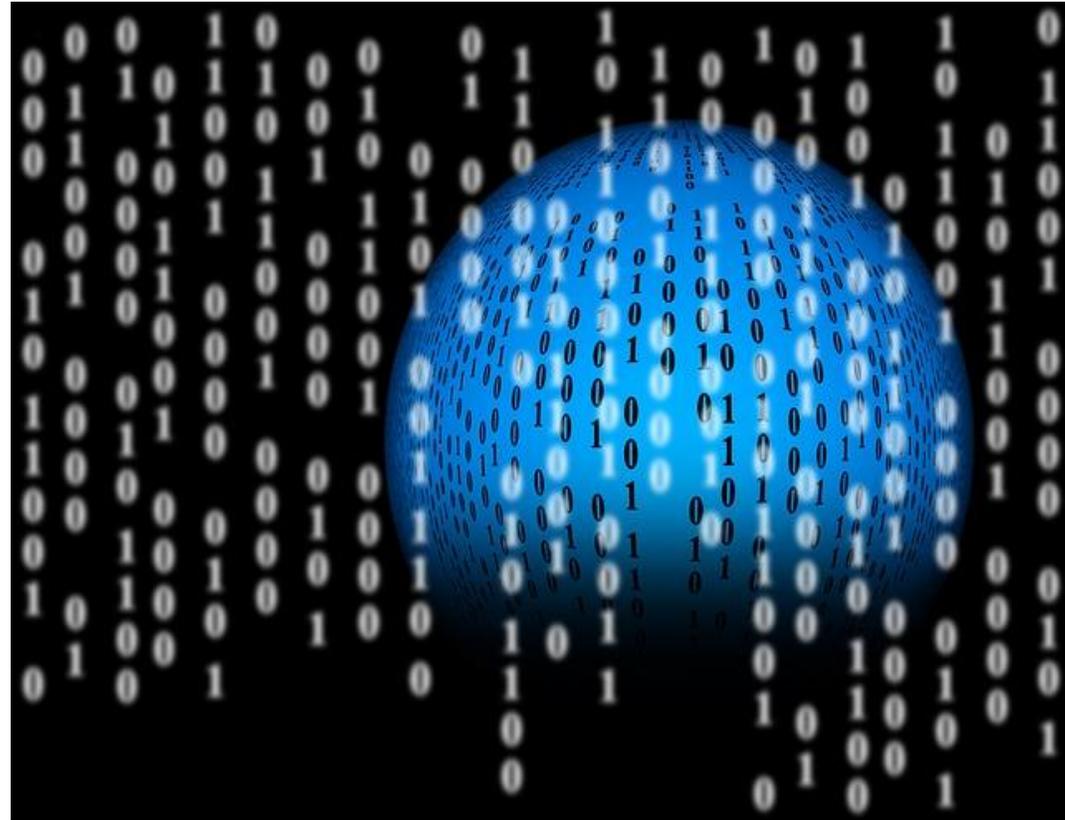
- Chemical-induced asthma (disorder)[SNOMED CT US Edition]
- Childhood asthma (disorder)[SNOMED CT US Edition]
- Chronic asthmatic bronchitis (disorder)[SNOMED CT US Edition]
- Chronic obstructive airway disease with asthma (disorder)[SNOMED CT US Ed
- Colophony asthma (disorder)[SNOMED CT US Edition]
- Cough variant asthma (disorder)[SNOMED CT US Edition]
- Detergent asthma (disorder)[SNOMED CT US Edition]
- Drug-induced asthma (disorder)[SNOMED CT US Edition]
- Exacerbation of asthma (disorder)[SNOMED CT US Edition]
- Exacerbation of intermittent asthma (disorder)[SNOMED CT US Edition]
- Exacerbation of persistent asthma (disorder)[SNOMED CT US Edition]
- Exercise-induced asthma (disorder)[SNOMED CT US Edition]
- Extrinsic asthma with asthma attack (disorder)[SNOMED CT US Edition]
- Extrinsic asthma with status asthmaticus (disorder)[SNOMED CT US Edition]

Set All Clear All Apply Excludes

Preview successfully completed.

SNOMED CT Based Tooling

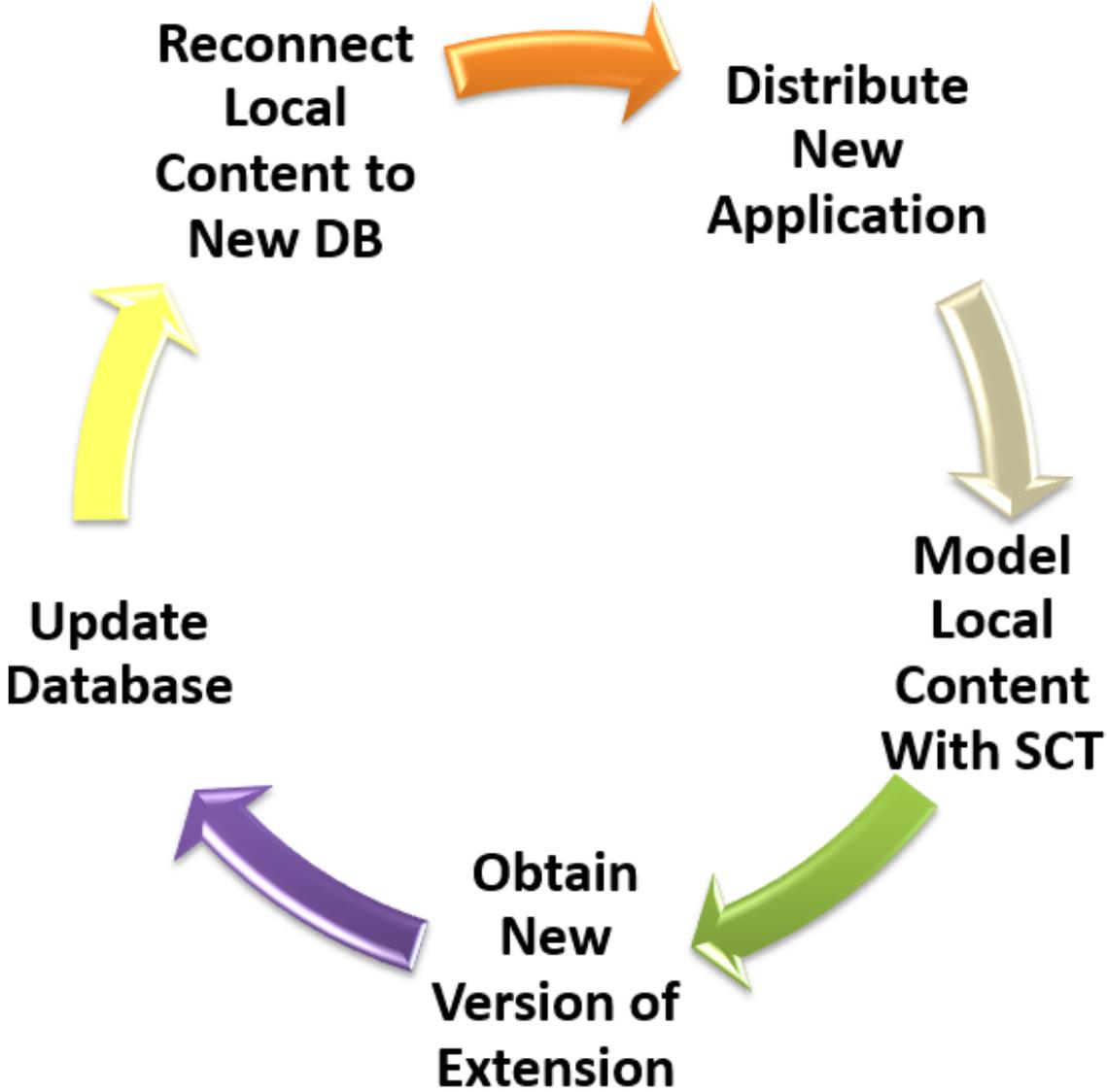
- Any software development has challenges
- Inclusion of SNOMED CT poses extra considerations



Integration of SNOMED CT in Architecture



Content Update Implications



Developing Applications Containing SNOMED CT

- The Lessons Learned
 - Build SNOMED CT into architecture properly
 - Only add the portions of SNOMED CT use case calls for
 - Consider stages of content updates

Development Process

- Use cases
- Requirements
- Specification
- Maintenance Planning

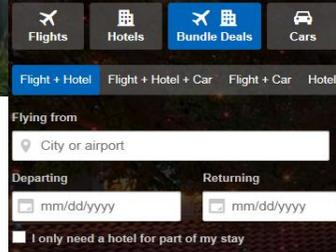
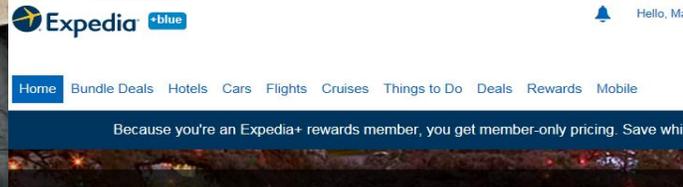


Bridging the Gap

- Understanding and implementing SNOMED CT can be hard
- There is a gap between experts and the average user
- Tools help bridge the gap
- There are more and more resources becoming available to bridge that gap



Bridging the Gap



Questions



We welcome your visit at Booth #5

